IN THE MATTER of the Resource Management Act 1991

AND

IN THE MATTER A hearing of application APP-1994001032.01 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 odour 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.

Section 42A Report of TABITHA MANDERSON, Senior Resource Management Planner on behalf of Manawatu Wanganui Regional Council

7 October 2016

A. INTRODUCTION

1. This report provides an analysis of the resource management issues with respect to the proposal by AFFCO New Zealand Limited for a suite of consents sought associated with their meat processing plant in Feilding.

2. The assessment and recommendations contained within this report are intended to help inform the commissioners with their decision.

3. This report has been prepared after consideration of the Assessment of Environmental Effects (including associated reports) and submissions received. The recommendations and conclusions within this report may be reconsidered following the pre-circulation of applicant and submitter evidence and presentations at the hearing.

4. This report should be read in conjunction with the Section 42A reports prepared by Mr Neil Thomas, Dr Dave Horne, Mr Logan Brown, Mr Jon Bell, and Mr Stuart Standen, and the memorandums prepared by Rex Corlett (**Attachment 3** to my report). As well as the Section 99(5) report prepared by Andrew Bashford.

B. QUALIFICATIONS AND EXPERIENCE

5. My name is Tabitha Manderson. I am a Senior Resource Management Planner with the consulting firm Opus International Consultants Limited (Opus), a firm specialising in engineering, environmental science and planning. My qualifications are a Bachelor of Agricultural Science (Massey University), Post-Graduate Diploma in Environmental Agricultural Science (Massey University) and a Master of Applied Science (Natural Resource Management) (Massey University). I have undertaken various Post-graduate papers Planning (Massey University). I am an Associate Member of the New Zealand Planning Institute. I have completed the Making Good Decisions programme, but am not a current certificate holder.

6. I have over 17 years' experience in planning and resource management. I have been employed by Opus as a Senior Resource Management Planner since October 2007. Since joining Opus I have been engaged in various roles, including providing assistance to various Councils to process consent applications as well as preparing consent applications on behalf of clients. I previously worked for Horizons Regional Council in several roles including over three years as a Consents Planner. As a Consents Planner I processed a diverse and complex range of Land Use Consents, Discharge Permits and Water Permits, including those that were decided at Hearings. I have assisted Wanganui District Council with a number of Resource Consent Applications, including other applications associated with the wastewater treatment plant. I have also worked for the Ministry for the Environment, Taranaki Regional Council and the Wanganui District Council.

7. I confirm that I have read the Code of Conduct for Expert Witnesses in the Environment Court Practice Note. I agree to comply with the Code of Conduct. Except where I state that I am relying upon the specified evidence of another person, my evidence in this statement is within my area of expertise. I have not omitted to consider any material facts known to me that might alter, or detract from, the opinions that I express.

C. OUTLINE

8. My report has been prepared and covers the following matters:

   i. a brief outline of the background to this current application;

   ii. a brief description of the proposal;

   iii. a brief description of the site and environment;

   iv. an outline of the notification process;

   v. a summary of the matters raised in submissions made on the consent application;

   vi. an assessment of the environmental effects associated with the activities proposed in the resource consent application;

   vii. an assessment of the proposal against the planning framework including the relevant National Environmental Standards, National Policy Statements, Regional Policy Statements and Regional Plans as they relate to the proposals in the resource consent application;

   viii. an analysis of Part 2 of the Resource Management Act 1991 as it relates to the resource consent application;

   ix. an overall judgement; and

   x. recommendation.

9. I have visited the site and am familiar with the location of the proposed activities.

10. In accordance with section 42A (1A) and (1B) of the RMA, I have minimised the repetition of information included in the application and where I have considered it appropriate, adopted that information.

D. APPLICATION FOR RESOURCE CONSENT

Background

11. AFFCO New Zealand (ANZ) has operated from the Campbell Road site since May 1992. Further background detail is provided in the application on page 7.

12. Applications for discharge permits to land from irrigation and pond seepage and a discharge to water were lodged prior to February 2011. Those applications were placed on hold at the time, pending consideration of cumulative effects on the Oroua River. A new application was lodged in March 2015.

13. Tables 3.1 and 3.2 on pages 7 and 8 of the 2015 application summarise the existing permits associated with the site and consents that are sought to be replaced by these applications.

14. Further details on the background are contained within Section 3 of the application[1].

Application

15. On 31 March 2015 MWRC received the application prepared by Lowe Environmental Impact on behalf of ANZ. The following consents were sought -

- A Discharge Permit to discharge treated wastewater from the AFFCO Meatworks into the Oroua River.
- A Discharge Permit to discharge treated wastewater from the AFFCO Meatworks to Land.
- A Discharge Permit to discharge treated wastewater from the AFFCO Meatworks into Land that may enter groundwater from the existing ponds.
- A Discharge Permit to discharge odour and aerosols to air associated with the application of wastewater to land.
- A Land Use Consent to construct a discharge diffuse structure in the bank of the Oroua River and a new bed level control structure in the Otoku Stream.

16. A term of 35 years has been sought by the applicant.

17. Further information was requested on 29 April 2015. A copy of the information requested under Section 92 is attached in **Attachment 1.**

18. The applicant responded to the further information request on 29 May 2015, also attached in **Attachment 1.**

[1] Application, Section 3, Page 7

E. LOCATION

19. The AFFCO site is located on the south south-eastern outskirts of Feilding township. The wastewater treatment ponds are located on AFFCO owned land. The Oroua River runs along the west of the AFFCO property.

20. An aerial photo of the site and location of the wastewater treatment ponds and land to be irrigated are shown in the Figures in **Appendix A** of the application[2].

One Plan

21. The One Plan 2014 identifies Water Management Zones as a means of managing water quality. The discharge location is within the Oroua (Oroua_12) Water Management zone and Middle Oroua (Oroua_12b) subzone as identified within the One Plan. The values associated with the zone are identified in Schedule B of the One Plan and include the following:

    Zone wide values

    - Life supporting capacity – Hill Country Mixed geology
    - Water Supply
    - Aesthetics
    - Contact Recreation
    - Stockwater
    - Water Supply
    - Industrial Abstraction
    - Flood Control and Drainage
    - Irrigation; and
    - Capacity to assimilate pollution

    Reach specific values

    - Amenity
    - Domestic food supply
    - Water supply take point (AFFCO take upstream of the discharge point)
    - Water supply (entire catchment upstream of AFFCO take point)
    - Site of Significance - Riparian (400 metres downstream of the discharge point)
    - Trout Fishery (Other)

[2] Application Section 1.2 Page 5

Existing Environment

22. A description of the environment has been detailed in Section 4 of the application[3]. A description of the general hydrogeological setting has been covered in Section D in the 42A report of Neil Thomas and the Oroua River in Section E of the Section 42A report of Logan Brown. I do not consider it necessary to repeat this information rather I will highlight the key points below:

    (a) As you move down the catchment of the Oroua River concentrations of chlorophyll a, and periphyton increase, Quantitative Macroinvertebrate Community Index decreases, and nutrient concentrations (DRP and N) increase;

    (b) Peak annual biomass (chlorophyll a) at times occurs outside of the summer months;

    (c) There are 17 aquatic freshwater species have been surveyed as being found in the Oroua catchment, some of which are considered to be at risk (declining);

    (d) Generally groundwater flows towards the Oroua River and some seasonal groundwater flow direction may also occur;

    (e) There are four main soil types across the land irrigation area, with varying hydraulic characteristics across the proposed irrigation area.

23. In terms of considering the existing environment, I note that work undertaken in assessing environmental effects by the applicant assumes that the Feilding Wastewater Treatment plant discharge consents had been granted. In his evidence Mr Brown has noted that State of the Environment monitoring data shows the large effect that the Feilding WWTP has had on the existing environment. He goes on to note that he considers that the Oroua River upstream of the Feilding WWTP remains a valid comparison point.

F. PROPOSED ACTIVITY

24. The proposed applications are for:

    <u>Discharge to Water</u>

    - Discharge of treated meatworks effluent to the Oroua River. Discharge criteria to water determined by flow conditions, with no discharge to the Oroua River during summer (1 December to 31 March) other than during 'emergency' situations.

    <u>Discharge to Land</u>

    - The discharge of treated meatworks effluent to land. Discharge rates determined by most limiting factor of the soil (hydraulic loading or nutrient loading). Low rate application technology to be used. Discharge to occur on up to 140 hectares of land.

[3] Application, Section 4, Page 10-20

Discharge to land where may enter groundwater

- Discharge of 'seepage' from storage ponds where may enter groundwater

Discharge to Air

- Discharge to Air, primarily odour, associated with discharge to land

Land Use Consent

- For construction of discharge diffuse structure in the bank of the Oroua River and a new bed level control structure in the Otoku Stream

G. NOTIFICATION AND SUBMISSIONS

25. The application was notified on 8 June 2015. The notice was served on a number of potentially affected parties. The submission period closed on 9 July 2015.

26. A total of 18 submissions were received within the submission period.

27. A full summary of the submissions is attached in **Attachment 2.** The key points are as follows:

a. A total of 18 submissions were received. All submitters wished to be heard. The following table summarises the positions stated.

	Support	**Oppose**	**Neutral**	**Not stated/No submission**
Discharge to River	2	14	2	
Discharge to Land (irrigation)	14 (5 conditional on more land being irrigated to)	3	1	
Discharge to Land where may enter GW (storage ponds)	4	12	2	
Discharge to Air	7	3	2	4
Land Use Consent	2	10	4	2

b. The following are what I consider to be the key points within the submissions:

i. Cumulative effects in the Oroua River and Manawatu River

ii. Discharge volume – reasoning for increase and opportunities to reduce volumes

iii. Adequacy of water quality monitoring and therefore assessment of water quality and ecosystem values.

iv. Changes (improvements) to discharge components

v. Consideration of alternatives

vi. Manawatu River as a Site of Significance Cultural

vii. Recognition of the Manawatu Estuary

viii. Groundwater monitoring, what should be done

ix. Persistence of contaminants beyond the AFFCO site

x. Adequacy of analysis of seepage and groundwater flow

xi. Adequacy of storage

xii. Land area available for discharge, adequacy of size of land discharge area, preference for full discharge to land

xiii. Lining/permeability of storage ponds

xiv. Feasibility of full land discharge

xv. Riverbed structure facilitates discharge to water

PRE HEARING

28. A pre-hearing meeting was held on 23 September 2015, a report prepared pursuant to Section 99(5) was prepared by the meeting facilitator and with agreement was circulated to all parties. The matters agreed to were that the use of the word "emergency" be removed from Table 2.3 and that the applicant would provide further clarification around how the dilution rates were derived, additional information around storage volumes and further clarity around days of storage. Points of disagreement remained around whether it is appropriate to have any discharge to the river. It was also "agree to disagree" regarding an issue about the whether pasture cover would increase storage capacity.

29. Information prepared by the Applicant in response to this was received by the Regional Council on 15 August 2016 and circulated to all submitters with the Section 99(5) report on 16 August 2016. Essentially a number of matters remained unresolved as outlined the pre-hearing report of 16 August 2015.

H. SECTION 104

30. The provisions of section 104 of the Act must be considered by the consent authority in making a decision on the resource consent application. The applicant has identified some of the relevant provisions within the application[4]. I have expanded on this analysis where appropriate. In my opinion, the matters contained in section 104 that are of relevance to the applications include:

[4] Application, Section 11, Page 63-78

104(1). **Actual and potential environmental effects.** An assessment of the environmental effects has been provided with the application[5] and within the section 42A reports prepared by Logan Bowler, Neil Thomas and Dr Dave Horne. The following assessment of the actual and potential effects of the activity is given below.

b.(i) **National Environmental Standards.** The applicant has provided an assessment against the National Environmental Standards of Drinking Water Regulations (2007). I agree with the **assessment** that there is no known impediment to the application being granted in relation to this NES.

b.(ii) **Other regulations. There** are no other regulations of relevance to this application.

b.(iii) **Relevant National Policy Statements**. – An assessment against the National Policy Statement for Freshwater **Management** (2014) is provided.

b.(v) **Relevant Regional Policy Statements or Proposed Regional Policy Statements**. An **analysis** of the operative Regional Policy Statement (Part I of One Plan) is given below.

b.(vi) **Relevant Regional and District Plans.** I have undertaken an assessment of the proposal against the Operative Regional Plan (Part II of the One Plan) and is given below.

(c) **Other Matters the Consent Authority Considers Relevant.** In this section, I address other relevant **matters**, term and conditions.

I. ACTUAL AND POTENTIAL EFFECTS ON THE ENVIRONMENT

31. Section 3 of the Act encompasses a broad definition of what constitutes environmental effects. The Act requires the consideration of both **actual effects** and **potential future effects**. This includes potential cumulative effects on the environment. In addition, consideration must be given to any potential effect of high probability and any potential effect of low probability which has a high potential impact.

32. In the following sections I will provide an assessment of the actual and potential effects on the environment from the proposal.

[5] Application, Section 8, Page 42-60

Actual and Potential Effects

33. In assessing the actual and potential effects of the proposed activities, I have considered the information from the application, further information provided, the Cultural Impact Assessment and s42A report by Dr Dave Horne, Mr Logan Brown and Mr Neil Thomas. I have summarised what I consider to be the most relevant points from the various technical reports. The following will provide a summary of the findings for the following:

    i. Effects on the water quality and ecology within Oroua River;

    ii. Effects from pond seepage;

    iii. Effects from discharge to land;

    iv. Cultural effects;

    v. Effects on riverbed;

    vi. Effects on air;

    vii. Cumulative Effects on the Manawatu Estuary; and

    viii. Positive Effects.

Effects Assessment

Effects of discharge to water on the water quality within the Oroua River

34. **Appendix G** of the application is the report titled AFFCO (Feilding Meat Processing Plant) discharge to the Oroua River: Water Quality modelling and assessment of effects of proposed discharge regimes. This report outlines an assessment of the current effects of the discharge and undertook modelling for the proposed discharge regime under different scenarios. The report discusses effects against the One Plan water quality targets.

35. From the Executive Summary of the above referenced report, it notes that the current and proposed summer discharges both have flow cuts offs which means the discharge would comply with those targets that have flow cut-offs, specifically DRP, SIN, POM, ScBOD5, water clarity and E.coli. Targets that apply at all times, total ammonia-nitrogen and water clarity change, are also predicted to be complied with.

36. Section 4.3.2 of the report discusses the potential effects on periphyton growth during the summer months (December to March). The report notes that the restriction of discharge during the summer period, apart from when river flow is above three times the median, effectively reduces the risk of any significant adverse effects.

37. Looking at the potential effects from the proposed winter discharge, from the Executive Summary of the report it is noted that the proposed discharge regime is predicted to result in about an 8% increase in total volume and load of contaminants compared to the current discharge, but discusses that the timing of the discharges to the river is different.

38. The modelling presented predicted lesser effects on water clarity and on concentrations of $ScBOD_{5,}$ POM, total ammonia-nitrogen and that these are unlikely to cause any breaches of the One Plan targets and therefore not expected to result in any significant adverse effects associated with those parameters.

39. Dissolved nutrient concentrations (DRP and SIN) are predicted to be 87% less than under the current scenario. The updated figures provided in response to the further information request detail predicted concentrations and changes in concentration for DRP and SIN in relation to the proposed discharge. The proposed discharge does not meet the One Plan target for changes in DRP and concentrations (Figures 1 through 4, Aquanet memo).

40. The further information from the applicant also discusses the predicted concentrations taking into account the recently granted Feilding Wastewater Treatment Plant consent.

41. Overall, the AEE presented by the applicant considers that there is less likelihood of periphyton growth occurring as a result of the proposed discharge regime.

42. The evidence of Mr Brown discusses that there will be a 7.3% increase in the average total DRP load discharged, compared to the current discharge. The timing of the DRP load is shown in Table 14 of his evidence. There is a reduction in loads when flows are below median and below 20th FEP. He also notes that the One Plan targets for DRP will not be met downstream of the proposed discharge. He states that the concentration of DRP in the River will increase when the discharge is occurring, and that concentrations of nutrients are an important contributing factor in periphyton growth.

43. With SIN Mr Brown notes an 11% increase in average total SIN discharge, but as with DRP a reduction when river flows are below median and 20th FEP. The One Plan targets for SIN are not predicted to be exceeded as a result of the discharge, though are currently exceeded further down the catchment. He goes on to caution that solely relying on the One Plan targets for SIN to therefore expect that the periphyton targets will be met may not be realistic. He considers that additional monitoring of periphyton and nutrients would allow for the system to be refined.

44. Mr Brown's evidence discusses potential effects on contact recreation, while noting that generally no discharge to the Oroua River is proposed between 1 December and 31 March which is when people would generally utilise the River for primary contact recreation. The relevant measure in the One Plan is E.coli concentrations.

45. For flows below the 20th FEP and all times of the year when the E. coli One Plan target of 550 mpn/100ml applies. Mr Brown's evidence indicates that current the target for E.coli upstream of the proposed discharge does not meet the One Plan target. While the proposed discharge to river will not be a significant contributor to E.Coli concentrations, it will still be a contributor to a target that is currently exceeded. He notes no treatment for E.coli is proposed in the application.

46. The proposed management regime of the discharge to withhold discharging to the Oroua River during critical low flow periods in the summer will contribute to an improvement in the water quality during these months. There would seem to be some potential for effects to occur outside of these months however, and I have recommended additional conditions with appropriate standards in response to this.

Effects from pond seepage

47. The Application considers the effects on groundwater in Sections 5.6 and 8.5 as well as in additional information provided, in particular Annex 16. The application considers that the main potential effect on groundwater is from seepage from the storage ponds. The permeability of the storage ponds is not known, and the applicant considers that there is not a way of accurately determining this. The rate of pond seepage is discussed in Section 5.6.2 of the application. The applicant has assumed a permeability of $1 \times 10^{-8m/s}$ and a seepage rate of up to $50m^3$/day.

48. The applicant discusses the results of bore monitoring that has been undertaken. From an assessment of the Groundwater Surface Contours the application considers that –

- In the area upstream from the 66 m contour, shallow groundwater movement is seen to be from beneath the left bank of the river towards the river;
- From the 66 m contour, downstream to the 64.5 m contour, the shallow groundwater movement is seen to be parallel to the river;
- Downstream from the 64.5 m contour, the shallow groundwater movement is seen to be away from the river.

49. The application does not consider that the main path of leakage from the ponds enters the surface waters of the Oroua River, but acknowledges there is inadequate data to confirm that most of the contaminant discharge is intercepted by the existing ANZ monitoring bore.

50. Table 8.1 in the application summarizes the results of the shallow groundwater analytes from bores in the vicinity of the ANZ site. This is discussed on pages 47 and 48 of the application. The application states “the absence of a “plume” of elevated parameter concentrations down-gradient from bore 325296C indicates the absence of an effect on shallow groundwater quality that could be considered to be more than minor and/or local.”

51. The application also presents data collected from deeper groundwater samples (Table 8.3) and concludes that there is no evidence of any effect on the deeper groundwater that could be attributed to ANZ’s pond seepage.

52. The applicant proposes to continue a program of groundwater monitoring to provide information on which to base any decision to replace the clay liner with a synthetic one.

53. The evidence of Mr Thomas also discusses the potential seepage from the storage ponds, and he challenges the seepage rate assessed by the applicant. In his opinion a higher seepage rate of 200 m^3/day is possible. In his opinion there has been insufficient evidence in regards to calculating the permeability of the clay liner. I also note the memoradum of Rex Corlett who considers it likely that liner integrity would likely be compromised given the age of the ponds and unknowns regarding it. In my opinion this raises some uncertainty about the potential discharge rates, and therefore contaminants, as a result of seepage from the ponds.

54. Mr Thomas discusses the interpretation of the bore sample results, and his observation is that there is not obvious evidence of widespread contamination spreading beyond the storage ponds, but there are clear effects immediately around the ponds.

55. The location of the monitoring bores and therefore what conclusions can be drawn is also discussed by Mr Thomas. In paragraph 6.11 of his evidence he notes that "some effect from the ponds could bypass the more distant monitoring bores by a more direct pathway towards the Oroua River".

56. The evidence of Mr Brown considers the evidence of Mr Thomas and goes on to note that while the potential contribution from seepage from the ponds reaching the Oroua River is relatively small it does add to the cumulative effect. In his opinion the Oroua River is sensitive to nitrogen inputs. He also adds that the current river monitoring sites would not capture the effects of this discharge as the monitoring is focused on the point source discharge. The understanding that I take from this is that the River is a more sensitive receiving environment than the groundwater environment.

57. The applicant acknowledges that there is a shown effect from the pond seepage in close proximity to the existing ponds. In the opinion of the MWRC experts there is a level of uncertainty in relation to permeability and therefore rate of seepage and how this relates to water quality in the Oroua River as well. Although uncertainty exists, neither of the experts suggests effects or impacts of this are significant. More likely that it is adding to the overall cumulative effects of the receiving environment. I consider that this uncertainty can be addressed through adequate monitoring conditions as recommended.

<u>Effects from discharge to land</u>

58. The effects from the proposed land discharge are outlined in Section 5.5 of the application, including Appendix E.

59. The way in which the irrigation to land is to be managed is determined by the Land Management Unit, a parameter that is most restrictive for each Land Management Unit has been proposed by the applicant. This is detailed in Table 5.3 of the application.

60. Dr Horne agrees that most of the potential effects will be adequately managed by the systems proposed by the applicant.

61. Despite an increase in the irrigation area, full discharge to land is not proposed. The applicant has calculated the volume of storage that would be required to allow for full discharge to land, still allowing for deficit irrigation, and there is a large degree of agreement between this and what Dr Horne has calculated.

62. The applicant predicted a leaching loss in the order of 21kg/ha/year, Dr Horne disagrees with this figure believing it to be more in the order of 50kg/ha/year. Dr Horne goes on to add however, that this is not, in his opinion, particularly problematic. He states that on a typical dairy farm where irrigation occurs would be expected to be in the range of 40 to 60 kg N/ha/yr.

63. The evidence of Mr Thomas has also considered the effects of the discharge to land on groundwater. He draws attention to elevated concentrations of nitrate nitrogen and ammonia in bores around the land discharge area, while noting that although it is difficult to apportion effects it is reasonable to assume the effluent discharges have contributed to those effects.

64. Mr Thomas has given a general estimate of what the groundwater 'discharge' to the Oroua River during times of low flow and what the resultant nitrate nitrogen concentration would be. Mr Brown has commented on this in his evidence, and notes that while based on the current information, the potential contribution of nitrate nitrogen may seem relatively small it does add to the cumulative effect in a River known to be nitrogen sensitive.

65. Based on the evidence presented by the Applicant and MWRC experts the land based irrigation proposal is sound and environmental effects from the proposal, subject to the proposed mitigation including management plan, and recommended conditions, will be no more than minor.

Cultural Effects

66. The application discussed cultural effects in general terms. The application details what consultation has been undertaken (page 80). The submissions received from iwi groups raised concerns with regards to cumulative effects of the proposed discharges, the quality of the Oroua and Manawatu River (and ultimately the marine environment), impacts of fishing productivity, that the Manawatu River is a Site of Significance Cultural, and consultation undertaken.

67. A Cultural Impact Assessment (CIA) was prepared and this identifies three broad concerns for the cultural impacts on Ngati Kauwhata. The three concerns stated are recreational prohibitions, absence of fish life, and impacts on cultural integrity of Ngati Kauwhata. The values these relate to are culture, nutritional properties and spirituality.

68. The CIA outlines how some of the concerns can potentially be measured, considers that conditions should be included to ensure DRP in the discharge will meet One Plan targets, provide for periphyton and macroinvertebrate monitoring and guarantee the discharge will meet the One Plan targets for clarity.

69. In the CIA Ngati Kauwhata acknowledges the improvement compared to the current discharge, but go on to state they cannot support the discharge to water for another 35 years as people will continue to be alienated from the river. The suggestion is that a 10 year term would be appropriate, in line with what was granted for the Feilding WWTP, and that this time be used for the applicant to explore with Ngati Kauwhata, and others including MWRC, options for removing the need for discharge to river completely.

70. It is clear that there will be adverse cultural effects as a result of the discharge in combination with other activities occurring in the River. Subject to the recommended conditions with appropriate standards I consider this will go some way to addressing cultural effects. However I consider it is important to hear from the respective submitters on this being before being satisfied that they have or have not been fully addressed. There are a number of suggestions in the CIA that depending on the applicant's willingness to adopt these would also assist in addressing cultural effects.

Effects on river bed

71. Section 5.9 of the application discusses the proposed river discharge structure. The effects are discussed in Section 8.8, and in particular potential effects on the integrity and functionality of river control works in the area.

72. The proposed structure was discussed during consultation and with Mr Bell as a representative of the Horizons Regional Council Operations Group. The evidence prepared by Mr Bell confirms that subject to recommended conditions, all of which have been adopted by the applicant, he had no concerns with the proposed structure. I consider that subject to the recommended conditions the potential effects of the proposed structure on the river bed will be no more than minor.

Effects on air

73. The application discusses effects on air quality in Section 8.10, the irrigation of effluent to land by spray irrigation is expected to have similar effects to that of applying farm dairy effluent to land. The applicant proposes to develop irrigation operation protocols for decision making with regards to irrigation. This along with buffer margins is expected to ensure potential effects will be no more than minor.

Effects on the Manawatu River and Estuary

74. A number of submissions raise concerns regarding cumulative effects on the Manawatu River and Manawatu Estuary.

75. In his evidence Mr Brown discusses the Manawatu Estuary and the Ramsar status that acknowledges the ecological importance of the area for wading birds, its vegetation and landforms.

76. He goes on to state that with the current state of knowledge it is not possible to model the effects of the proposed discharge on the Manawatu Estuary. He acknowledges that any nutrients discharged into the Oroua River will cumulatively add to the effects on the Manawatu River and ultimately the coastal environment as the final receiving environment.

Positive effects

77. The application notes that the AFFCO site employs over 370 staff and processes in excess of 100,000 cattle-beasts per year. Continuation of the business would be expected to have a positive effect on the local economy.

Conclusion

78. There is general agreement between the experts that the proposal will represent an improvement in potential environmental effects compared to the current discharges.

79. The design of the irrigation of treated wastewater to land is considered to have been designed taking into account the appropriate natural limiting factors of the soils in the irrigation area with appropriate management practices proposed to mitigate potential effects from nutrients applied in the wastewater. It has been identified that the groundwater quality in the area of the land irrigation is considered to be somewhat degraded. There is general agreement that subject to appropriate management it is unlikely to result in deterioration of groundwater quality. Additional monitoring is recommended to provide certainty with regards to this.

80. The discharge to water regime in particular, avoiding the summer low flow period, will avoid potential effects during this period and as a result most One Plan targets will not be exceeded as a result of this discharge. However, there is some disagreement with regards to potential for periphyton growth to occur. Additional monitoring that could be used to fine tune the discharge regime is recommended.

81. It is noted that the annual load of nutrients to the River would increase as a result of the proposal as it is based on increasing production through the plant. It is identified, and of concern to a number of submitters, that cumulative effects in the Oroua River contribute to effects on the Manawatu River and therefore Manawatu Estuary and coastal environment as the final receiving environment. It is considered that it is not currently possible to determine effects on the Estuary from the proposed discharge, other than acknowledging, as above, that cumulative effects will occur.

82. There is a level of uncertainty regarding potential seepage rates, and therefore effects, from the treatment ponds. While there are lesser concerns regarding the potential impact on groundwater, there is concern that this may contribute to nitrogen loadings in the Oroua River, which is considered to be a more sensitive receiving environment. These potential effects are not currently well defined, and would be contributing to cumulative effects. Additional monitoring is recommended to better define these potential effects. The applicant has indicated that further monitoring would be used in future decision making with regards to the existing ponds and whether relining the existing ponds, or contemplating new ponds, is the best practicable option to deal with potential effects.

83. Adverse cultural effects are apparent, particularly taking into account cumulative effects on the Oroua and Manawatu Rivers. The Cultural Impact Assessment received contains a number of useful suggestions with regards to potential monitoring and conditions. I believe hearing from iwi submitters will assist with determining if the cultural effects can be appropriately mitigated.

84. Potential effects on the riverbed and from discharge to air will be no more than minor.

85. On balance, while acknowledging the uncertainty that remains with regards to some effects, I consider that most effects are not significant and that the management regime and mitigation proposed will lessen the impact on the environment. I discuss term of consent, which I believe can be considered as a form of mitigation, in detail in the sections below.

J. NATIONAL ENVIRONMENTAL STANDARDS (NES)

86. Section 104 requires consideration of any NES's that are relevant. The applicant has provided an assessment against the National Environmental Standard for Human Drinking Water in Section 11.2.1 of the application and I concur with the assessment provided.

K. NATIONAL POLICY STATEMENTS

87. Section 104 requires consideration of National Policy Statements that are relevant. In this case the National Policy Statement for Freshwater Management (2014) is relevant. The application provides an assessment on pages 64 and 65.

88. The NPS outlines a number of national values of freshwater where water is valued for a number of uses, including the cleaning, dilution and disposal of waste. Recognising and respecting fresh waters intrisic values, such as safeguarding the life-supporting capacity of water is also noted.

89. In addition to what the application has identified I consider that Policy A3(a) is of particular importance, whereby regional councils may impose conditions on discharge permits to ensure the limits and targets specified pursuant to Policy A1 and Policy A2 can be met.

90. I consider that the proposed changes to the management of the discharge at the site, and taking into account the recommended conditions that the proposal is consistent with the objectives and policies of the NPS.

Operative One Plan

91. The One Plan was made fully operative on 19 December 2014, and contains the relevant Regional Policy Statement and Regional Plan provisions applicable to the application.

Regional Policy Statement

92. Section 104(i)(v) of the RMA requires consideration of a Regional Policy Statement (RPS), in this case part one of the One Plan. The applicant has provided an assessment of the RPS in the application[6]. Rather than repeat the objectives and policies, I have provided commentary of the relevant objectives and policies below and the full text of the provisions are contained within **Attachment 4.**

[6] Application, Section 3.3, Page 20

Chapter 2: Te Ao Māori

93. In addition to the objectives and policies identified in the application, I consider that the relevant Te Ao Māori Objectives and Policies that apply to the proposal are Objective 2-1 and Policies 2-1, and 2-4.

94. It is clear from the submissions that there is an impact on the ability of Iwi to carry out its kaitiakitanga within this environment and the impact the discharge has on the environment and cultural values and practices. Objective 1 requires consideration of the Mauri and natural and physical resources as well as giving particular regard to Kaitiakitanga and recognise and provide for the relationship of hapu and iwi with water. Under Policy 2.4 specific resource management issues identified as being significant are set out. I note this is not intended to be an exhaustive list. Policy 2-4 (a) relates to the management of water quality in the Region and Policy 2.4(d) relates to access to and availability of clean water to exercise cultural activities are considered relevant to this application. Based on the evidence from submissions and the Cultural Impact Assessment cultural activities do not currently occur in the Oroua River, due to water quality. There is a strong preference to have the discharge removed from the River in its entirety. At this stage, based on the submissions, I do not consider that the proposal is fully consistent with the above Objective and Policies but there are recommendations in the CIA received that may go some way to assisting with achieving greater consistency. Further evidence provided at the hearing from all iwi submitters should help with further assessing this Objective and supporting policies.

95. Policy 2-3 is specific around the effects on the mauri of water however it is specific to the effects of water takes and is therefore not assessed here.

Chapter 3: Infrastructure, Energy, Waste, Hazardous Substances and Contaminated Land

96. The applicant has identified provisions within the application[7] (with minor numbering inconsistencies with the RPS). The full text of these provisions is included in **Attachment 4.** I concur with the identification of these provisions and the assessment. As such I do not consider it necessary to repeat here. In summary I consider the main focus of these Objectives and Policies is to require recognition of regionally important infrastructure and the role they play in servicing communities. The evidence of Mr Jon Bell indicates the proposed structures, subject to the proposed conditions, will not impact on the existing flood protection schemes, therefore I consider the proposed structures are not inconsistent with the relevant Objectives and Policies.

[7] Application, Section 11.3.1, Page 65

Chapter 5 Water

97. The applicant has identified the relevant provisions within the application[8]. This addresses the management of fresh water in the Region. Objective 5-1 seeks to manage surface water bodies and their beds in a manner which safeguards their life supporting capacity and recognises and provides for Values in Schedule B. Objective 5-2 (a) seeks to ensure that surface water quality is maintained where existing water quality is at a level that supports the Values in Schedule B and where water quality is not at a sufficient level that water quality is enhanced. I consider the policies that support this objective before turning to sub para of the Objective that relates to groundwater.

98. Policy 5-1 identifies Water Management Zones and Values, Table 5.2 identifies the individual values and management objectives associated with them. Policy 5-2 identifies water quality targets which must be used to inform surface water quality management.

99. As mentioned above, the discharge location is within the Middle Oroua Zone. The values associated with this zone are set out in Schedule B of the One Plan and described in Section E above. The intention of the framework is to manage resources so that water quality is maintained or enhanced depending on existing water quality. This is to ensure the characteristics and values associated with the Water Management Zone are protected from inappropriate use and development.

100. Within the Middle Oroua Zone the One Plan targets are not met for DRP, E.coli, and visual clarity. Only one round of QMCI monitoring has occurred and the 20% change was not met (current discharge). There is currently not enough data to assess the periphyton target. In very general terms most of the targets apply during low flow conditions, though some apply at all flows.

101. Policy 5-3 requires ongoing compliance where water quality targets are met.

102. Policy 5-4 requires enhancement where water quality targets are not met in the existing water quality.

103. On the whole I consider that the proposal is largely consistent with policies 5-3 and 5-4 in relation to the direct discharge to water. I do note the difference of opinion as to the potential for periphyton growth to still occur which could impact on some of the identified Values to some degree. It has however been noted that this should be able to be managed so I am comfortable that this is not inconsistent with the policies.

104. As noted in the effects section it is considered, particularly by Mr Thomas, that the existing ponds will be contributing nutrient loads (predominantly nitrogen) to the Oroua River. At best given the contribution does come from existing ponds the contribution may be the same, as is inferred by the applicant, however I note that the proposal is to allow for increased production. Accordingly there is uncertainty with regards to the scale of the contribution in the longer term so I cannot give an opinion on whether or not this component of the proposal is consistent the objective and supporting policies, but consider it unlikely to be consistent at this stage.

[8] Application, Section 3.3.3, Page 22

105. Objective 5-2(b) seeks to manage groundwater such that is maintained or where it is degraded as a result of human activity, groundwater quality is enhanced. This is supported by Policy 5-6. Again the emphasis in this Policy is that groundwater is maintained or enhanced where groundwater quality is degraded.

106. From the monitoring information collected by the applicant and based on the evidence of Mr Thomas it is clear there is an effect on groundwater as a result of human activity. The application on page 69 states that "While a degradation in groundwater quality in the immediate vicinity of the ponds has been demonstrated in Section 8.5 above, no degradation in groundwater quality has been found in down-gradient bores on neighbouring properties that can be attributed to the pond seepage". It is demonstrated that there is an effect and groundwater has been degraded, albeit on a limited spatial scale.

107. Policy 5-6 (b) allows for an exception to be made to requiring enhancement if the discharge better meets the purpose of the RMA and the best practicable option (BPO) for the treatment and discharge system has been adopted.

108. I set out the definition of BPO in paragraph 116 below. The applicant has noted it would be expensive to reline the existing ponds but not provided further detail beyond this statement. The memorandum from Rex Corlett sets out some of the processes that would need to be undertaken to determine feasibility of relining the existing ponds. I am not aware of whether there has been much consideration given to construction of new ponds. I remain uncertain as to whether the continued use of the existing ponds, with unknown permeability, is the best practicable option.

109. Policy 5-7 addresses land use activities affecting groundwater and surface water quality. This Policy essentially requires the establishment of 'targeted' catchments where intensive farming requires active management through regulation in the regional plan. The subject site is not within a targeted WMSZ and the dairy farming operation is not a new activity, additional consent is not required under Policy 5-8.

110. Policy 5-9 identifies the matters that must be managed from point source discharges to water. This includes considering the extent the discharge will adversely affect the values for the water management zone. I will consider each of the matters listed under Policy 5-9 in the following:

111. In assessing Para (a) it is considered that the impact of the activity on the Schedule B Values will generally be no more than minor, the notable exception to this is the uncertainty with regards to cultural effects.

112. In assessing Para (b) I note that the proposed discharge, in combination with the other discharges, does not meet the water quality targets for DRP and E.Coli (not during low flows) and may contribute some nitrogen to SIN further downstream.

113. Para (c) requires regard to be had to the extent to which the activity is consistent with contaminant treatment and the discharge with best management practices. No upgrade to the treatment system itself is proposed, remaining reliant on treatment through existing aerobic and anaerobic ponds. The increase in discharge to land I do consider to be consistent with this Policy, as it is my understanding that the discharge to land is a form of treatment (i.e the nutrients will be used) and the land treatment system component of the proposal is considered to be of a very high standard. However, when discharge to the river is occurring there is little in the way of improvement in treatment. The panel will need to consider whether this is best management practice particularly given the concerns from a number of submitters regarding cumulative effects and it has been calculated the annual nutrient loads to the Oroua River would increase as a result of the proposed increase in production. I consider it questionable that continuing to use storage ponds of unknown permeability is consistent with best management practice. For comparison, and as identified by a number of submitters, dairy farmers in the Region who wish to increase herd numbers are required to demonstrate that the permeability standard of storage ponds can be met. Territorial Authorities in the Region are also being required to demonstrate compliance with the permeability of wastewater treatment facilities. However, I do agree with the applicant that there needs to be balance against potential environmental effects and cost of upgrading the ponds.

114. In relation to Para (d) no improvements to the quality of the discharge are proposed, other than discharging during higher river flows so I do not consider this to be relevant.

115. The discharge is not temporary so Para (e) is not relevant.

116. Para (g) requires consideration of whether it is appropriate to adopt the best practicable option. The RMA definition of best practicable option is as follows –

Best practicable option, in relation to a discharge of a contaminant or an emission of noise, means the best method for preventing or minimising the adverse effects on the environment having regard, among other things, to—

a) The nature of the discharge or emission and the sensitivity of the receiving environment to adverse effects; and

b) The financial implications, and the effects on the environment, of that option when compared with other options; and

c) The current state of technical knowledge and the likelihood that the option can be successfully applied:

The applicant has discussed a process regarding the optimisation process. Some detail is given as to other methods that were considered (Appendix E of the application). The panel will need to consider whether the best practicable option has been selected. The applicant may be able to present further evidence in this regard.

117. Policy 5-10 relates to how point source discharges to land must be managed. The applicant has assessed this on page 71 of the application and I generally concur with this.

118. Policy 5-24 addresses activities in rivers or lakes and their beds with a Value of Flood Control and Drainage. I note that the conditions recommended by Mr Bell were adopted in full by the applicant. Subject to the conditions being imposed to adequate avoid adverse effects on the value of Flood Control and Drainage I consider the proposal consistent with this Policy.

119. Objective 7-1 and supporting policies 7-1, 7-2 and 7-3 set out ambient air quality standards for the Region and detail how discharges to air will be regulated. I agree with the assessment in the application (pages 67 and 72).

L. REGIONAL PLAN – ONE PLAN PART II

Rule Assessment

120. The applicant provides an assessment against the Rules in the Regional Plan in Section 7.5 of the application. I agree with the assessment provided and that the applications are assessed as a Discretionary Activity.

121. I note that there is no rule in the One Plan that expressly permits the discharge into or onto land of meatworks effluent for treatment and storage.

Objectives and Policies of the Operative Regional Plan

122. The following is an assessment of the proposal against the Objectives and Policies of the Regional Plan being Part II of the One Plan. The applicant has identified some of the relevant Objectives and Policies within the Application[9]. Rather than repeat the objectives and policies, I have provided commentary of the relevant objectives and policies below and the full text of the provisions are within **Attachment 4.**

123. Chapter 12 sets out general objectives and policies, and Policy 12-5 deals with consent durations. The applicant has sought a term of 35 years. Dealing with each of the elements of this policy in turn below.

a) Under this policy consents are generally granted for the term sought by the applicant, other than when providing for a term set under (b) or for other identified reasons makes this inappropriate. Accordingly, I give consideration to the matters set out under (b).

b) Under this paragraph consideration must be given to common catchment expiry dates. Consents should expire or have the ability to be reviewed on these dates and every 10 years thereafter. The common catchment expiry for the Oroua is 1 July 2019. As this date is within 3 years the policy states that an expiry date of 1 July 2029 may be granted. To grant a date beyond this the panel must consider the following criteria set out in (i) through (iv), I have assessed each of these below.

[9] Application, Section 11.4, Page 72-77

(i) I am not aware of directly relevant codes of practice or good practice guidelines directly for meatworks effluent.

(ii) In balancing environmental protection and investment by the applicant, as noted previously there is an element of uncertainty with regards to the scale of potential effect, particularly on the Oroua River, as a result of the unknown permeability of the storage ponds. I have not seen evidence as to what the investment made by the applicant in relation to the storage ponds or overall asset management. This information would assist with making a more informed overall judgement.

(iii) Under this paragraph the use of review conditions to address matters of contention is able to be considered. I address this further in section L below.

c) Under this paragraph the policy gives direction as to matters that can be considered when determining a shorter consent duration, the most relevant subsection in my opinion is (iv) where compliance history can be taken into account. Based on the evidence of Mr Standen the applicant generally has a good compliance history, although there was a significant breach of conditions of resource consent 4219/1 which resulted in a prosecution.

124. Policy 12-6 details the situations where consent review conditions are considered to be appropriate.

125. Chapter 14 relates to Discharges to Land and Water. Objective 14-1 seeks to manage discharges and land use activities in a manner which safeguards the life supporting capacity of water and provides for the Values associated with waterbodies, provides for the objectives and policies of Chapter 5 and avoids, remedies or mitigates adverse effects of discharges to land on surface or groundwater. The applicant provides an assessment on page 72 and 73.

126. The supporting policies 14-1 and 14-2 set out what needs to be considered when making decisions including an assessment against the objectives and policies of Chapter 5, as I have done this above I do not repeat these here.

127. Policy 14-3 requires consideration of Industry-based standards and may accept compliance with those standards as being adequate to avoid, remedy or mitigate adverse effects. As noted previously I am not aware of any standards that relate directly to meatworks effluent. It is in my opinion useful to compare to farm dairy effluent storage systems. The memorandum from Rex Corlett notes that the IPENZ Practice Note 21: Farm Dairy Effluent Pond Design and Construction sets out good practice. The applicant acknowledges that the treatment ponds likely have a permeability of less than 1×10^{-9} m/s, this standard is used in a number of other rules in the Operative Plan. If relining or new ponds were to be considered I would consider it appropriate to take guidance from the IPENZ Practice Note 21.

128. The applicant considers that the proposed design is consistent with all the best practicable options listed in Policy 14-4. I agree that these have largely been met, however as discussed previously while having identified the storage size that would be required to allow for full discharge to land to occur I have not seen sufficient evidence to agree that this can be fully discounted as being too expensive, as can be considered when applying the best practicable option assessment. Given the interest of many of the submitters to remove discharges from the river in entirety, the applicant may wish to present further consideration of this.

129. Policy 14-8 provides guidance on monitoring requirements for consent holders. I understand that there is already telemetry installed for monitoring of the point source discharge, continued use of this is appropriate in accordance with (c). Para (d) requires that monitoring of the discharge before it enters surface water the receiving environment monitoring must align with the Regional Council's environmental monitoring programme where reasonably practicable, this has been taken into account in my recommended conditions.

M. OTHER MATTERS THE CONSENT AUTHORITY CONSIDERS RELEVANT

Manawatu River Accord

130. The goal of the Accord is to *improve the mauri of the Manawatu River catchment, such that it sustains fish species, and is suitable for contact recreation, in balance with the social, cultural and economic activities of the catchment community.*

131. AFFCO are signatories of the Accord, though I note that currently no actions exist for them.

132. In considering appropriate conditions and length of term I consider there is a good deal of alignment between the One Plan policies and the Accord. It is clear that economic concerns must be balanced against other concerns. This is one reason why I consider it appropriate to investigate with more certainty the effects of seepage from the pond and balance the findings against the cost of further mitigation. The other recommended conditions, including conditions with standards, support the intent of the Accord.

Consideration of Term

133. The RMA requires a term to be imposed on Section 15 discharge permits. In this case, the applicant has applied for a term of 35 years. Policy 12-5 as discussed above gives guidance as to what the panel needs to consider in making its determination.

134. In making a recommendation about term I believe there are a number of options the panel could consider.

135. To grant the term sought by the applicant, the panel has to consider the best practicable option and how close the proposal is to this, that sufficient improvement has been shown in relation to the water quality targets and the subsequent effects of Values, including cultural values, associated with the Oroua River as well as cumulative effects on the Manawatu River.

136. The panel would need to be comfortable with the level of uncertainty of effects, potentially on the Oroua River, from the storage ponds because of their unknown permeability. And that these could be addressed adequately through consent conditions.

137. Additional monitoring has been recommended in relation to better determining the environmental effects from the seepage from the ponds. The applicant has indicated they would consider lining ponds if environmental effects were demonstrated, but has not indicated what they would consider to be an effect that would result in warranting relining the existing pond.

138. Requiring a review condition that specified the storage ponds need to be lined subject to groundwater monitoring or surface water monitoring reaching a specified limit is something that can be considered in my opinion. However, while the applicant has indicated they will consider the ongoing monitoring in their decision making with regards to relining the existing ponds, they have not indicated what they consider a trigger value would be. And at this stage the experts from MWRC have not given an opinion on this. This is something that could be given more consideration and potentially discussed prior to the hearing or during the hearing.

139. However, the reasonableness of imposing a condition requiring that ponds be relined must be considered as well. The applicant has stated they believe that this option would come at considerable expense, but not provided any detail regarding this. The memorandum from Rex Corlett provides some useful guidance as to what would be a factor in costing up such an exercise, but also acknowledges he does not have sufficient information to make a more informed opinion as to potential cost. It is also uncertain as to whether it can practically be achieved.

140. I have considered whether a 'cleaner' way of dealing with this uncertainty in relation to the discharge consent for the seepage from the ponds is to grant this consent for a shorter duration. A term of 5 years I believe would be adequate to gather sufficient monitoring data as well as determine if upgrades (e.g. lining) or new storage/treatment facilities would need to be constructed.

141. However there is an element of interconnectedness with the consent applications that must be considered. That is, the discharge to land relies on the storage provided by the ponds to enable the irrigation to land under ideal conditions.

142. For the discharge to river, based on the improvements that will result in terms of the optimised discharge management I am comfortable that a term longer than 5 years can be granted. I consider that a term of approximately 13 years to 1 July 2029 could be appropriate in light of the uncertainty of adverse cultural effects, pond seepage and overall impact on the river and the policy guidance given in relation to considering consent duration to align with the common catchment expiry date.

143. I note that the CIA recommends a 10 year term to align with the recent Feilding WWTP decision.

144. Another option to consider if the panel were of a mind to align terms between the seepage consent and the discharge to land from irrigation consent is to consider a review condition that allows for a financial contribution should monitoring demonstrate an adverse effect from the seepage, but it was still considered that the economic cost was too high or it was not physically feasible to reline the existing storage ponds and new storage/treatment ponds were not considered. While I am aware of other consents that have had conditions imposed that required a financial contribution, or other offset mitigation, these have generally been imposed with the agreement of the applicant. If the panel wished to see an example of such a condition I can provide examples, but have not recommended this at this stage.

Conditions

145. The applicant has proposed a suite of conditions, I have used as a basis and attached these in **Attachment 5**.

146. Where my recommendations differ from that proposed by the applicant I have provided comment as to why.

Regional Growth Study

147. The Regional Growth Study completed in 2015 indicates a desire to see an increase in pastoral production across the region, including from red meat production. The applicant has applied to increase discharge volumes to allow for growth at the plant. I think it is reasonable to allow for potential increase in volumes through the plant as a result of increased pastoral production in the region provided effects can be avoided, remedied or mitigated.

Compliance History

148. For completeness, Mr Standen has provided a summary of the compliance history of the AFFCO Plant under Permits 4226, 6191 and 4219/1.

N. STATUTORY ASSESSMENT

Part 2 of the Resource Management Act 1991 – Purpose and Principles

Section 8: Treaty of Waitangi

149. Section 8 of the Act requires the consent authority to take into account the principles of the Treaty of Waitangi. The Court of Appeal (New Zealand Māori Council Case 54/87) identified four major principles, which are:

a. **The Essential Bargain** – the exchange of Kāwanatanga (in Article 1) for the protection of tino rangatiratanga (in Article 2).

b. **The Principles of Tino Rangatiratanga and Kāwanatanga** – the guarantee to Iwi and Hapū of full chieftainship or authority over their lands, resources and taonga, and therefore the control and management of tribal resources according to Māori cultural preference, as balanced against the Crown's right to make law and govern.

c. **The Principle of Partnership and Good Faith** – the shared obligation of both Treaty partners to meet their respective commitments and to act reasonably and in good faith to one another.

d. **The Principle of Active Protection** – the Crown's obligation to actively protect the interests of Māori in their land and resources.

150. The application details consultation they undertook prior to the application being lodged, the applicant also commissioned the Cultural Impact Assessment prepared on behalf of Ngati Kauwhata.

151. The submission received from Tanenuiarangi Manawatu Inc noted an expectation that the applicant provide an analysis of cultural effects. I would anticipate that an opinion would be expressed at the hearing as to whether the CIA prepared adequately addresses the concerns of this iwi.

152. The submission from Te Roopu Taiao o Ngati Whakatere supported the application to land subject to meaningful consultation with downstream iwi.

153. I consider that a further update will be provided from the applicant and/or submitters prior to or at the hearing that will be useful to allow for further assessment against Section 8.

Section 7: Other Matters

154. Section 7 sets out other matters which the decision maker must have had particular regard to when making a decision on an application for resource consent. Of particular relevance to this application are sections 7(a), (aa), (b), (c), (d), (f) and (h).

155. Regarding section 7(a) and (aa), they require a decision maker to have particular regard to kaitiakitanga and the ethic of stewardship. This is discussed in a number of the submissions received and the CIA prepared. The CIA contains a number of suggestions which are considered would assist in relation to these sections, but I note that most of these are directed at the Regional Council and go beyond what can be imposed as a consent condition. However, in the CIA it was noted that the applicant has shown willingness to support some of these actions and it would be of assistance to the panel to have this expanded on as to the applicants' position on these matters.

156. Section 7 (b) requires the efficient use and development of natural and physical resources. The land irrigation system has been designed taking into account the natural characteristics of the predominant soil type to determine the LMUs, I consider this to be an efficient use of a natural resource. The existing infrastructure, including the storage pond system, is a physical resource and the continued use of the storage pond can be seen as being efficient, however as little is known regarding the actual physical condition of the ponds beyond anecdotal observations I do not currently have an opinion as to whether this is suitable development of the physical resource. Further certainty should be sought in regards to this, and this is reflected in the additional monitoring conditions I have recommended.

157. Sections 7 (c) (d) and (f) outline the maintenance and enhancement of amenity values, the intrinsic value of ecosystems and the maintenance and enhancement of the environment. There is general agreement that some environmental improvements will be gained as a result of the proposal, allowing that there is some uncertainty with regards to some effects in particular the seepage from the ponds. However, given the ponds have been in existence for some time the maintenance of the environment, from this element of the proposal, should be achieved. I am comfortable that subject to the recommended conditions the proposal is not contrary to these sections.

158. Part (h) requires regard to be had to the protection of the habitat of trout and salmon. A number of conditions have been recommended that will assist with the protection of habitat.

<u>Section 6: Matters of National Importance</u>

159. Section 6 of the Act sets out the matters of national importance which are to be recognised and provided for when considering applications for resource consent. In terms of this proposal, I consider that (a), (d), and (e) to be relevant.

160. Part (a) seeks to preserve and protect the natural character of rivers and their margins from inappropriate use. The discharge of the wastewater into the Oroua River has the potential to have an impact on the natural character and amenity. However, it is an existing discharge and the proposed changes represent an improvement during low flow periods particularly, but does represent an overall increase in annual nutrient loadings to the Oroua River and therefore additional cumulative effects on downstream waterbodies. On the basis that the discharge does not occur during low flows it is considered that the proposal is not inconsistent.

161. Section 6(d) requires recognition of public access to rivers. I do not consider that there is anything in the proposal that would restrict public access any more than the current situation.

162. Section 6(e), relates to the relationship between Maori and water and their culture and traditions associated with. The connection between the River and Maori is noted through the submissions and is of considerable importance. Some of these matters may be addressed through the anticipated improvement in water quality. However, additional clarity may be provided by the respective iwi at the Hearing that would assist to determine whether these relationships are provided for.

Section 5: Purpose

163. Section 5 states that the purpose of the Act is to promote sustainable management of natural and physical resources. Section 5(2) of the Act then proceeds to state that:

"sustainable management" means managing the use, development, and protection of natural and physical resources in a way, or at a rate, which enables people and communities to provide for their social, economic, and cultural well-being and for their health and safety while:-

(a) sustaining the potential of the natural and physical resources (excluding minerals) to meet the reasonably foreseeable needs of future generations;

(b) safeguarding the life-supporting capacity of the air, water, soil and ecosystems; and

(c) avoiding, remedying or mitigating any adverse effects of activities on the environment.

164. In this case, I consider that all aspects of Section 5 are relevant.

165. The application proposes to increase the volumes being discharged to land and will manage the discharge to land in accordance with the natural characteristics of the land which will sustain the potential use, while safeguarding the life-supporting capacity of the soil and avoiding adverse effects.

166. It is anticipated that the life-supporting capacity of the water will be adequately safeguarded particularly as the discharge to river will not occur during low flows and subject to the recommended conditions.

167. A number of the potential adverse effects to water in particular are avoided by the proposal to not discharge to the Oroua River during times of low flows. Other potential effects can be adequately mitigated through the proposed management of the system and recommended consent conditions. I note that length of term granted is a form of mitigation that is important to consider and has been taken into account when I have discussed a recommended term for the various activities.

Section 105

168. Section 105 requires the applicant to consider the effects of the discharge on the receiving environment, reasons for the proposed choice and consideration of alternatives.

169. The applicant provides an outline of alternatives considered in Section 6 of the application. In Appendix B of the conceptual design report (Appendix E of the application) it is noted that 19 scenarios were considered, but the detailed workings of the sensitivity analysis were not presented in this report. I think this demonstrates that the applicant has looked at alternatives, but economic analysis has not been presented.

Section 107

170. Section 107 of the RMA notes the restrictions on the granting of a discharge permit. A consenting authority shall not grant a discharge if, after reasonable mixing, the contaminant discharged is likely to give rise to any of the following:

a) The production of conspicuous oil or grease files, scums or foams, or floatable or suspended materials;

b) Any conspicuous change in the colour or visual clarity;

c) Any emission of objectionable odour;

d) The rendering of freshwater unsuitable for consumption by farm animals;

e) Any significant adverse effects on aquatic life.

171. The discharge is located in the Oroua River and conditions have been recommended that address the effects listed above.

172. Subject to the recommended conditions I am comfortable that the discharge would not give rise to the effects listed in Section 107.

O. OVERALL JUDGEMENT

173. I consider the purpose of the RMA is to enable activities, subject to ensuring the effects on natural and physical resources are managed in a sustainable manner while protecting the benefits and life supporting capabilities the resource provides, for future generations. The following outlines the matters I consider necessary when considering an overall judgement of the application.

174. The applicant has demonstrated that there will be an improvement to water quality during low flow periods, by further restricting discharge to the Oroua River compared to the current situation. However, the proposed increase in production results in an overall increase in total annual load going to the Oroua River.

175. A land irrigation system with an increased area is proposed, resulting in more irrigation to land. The type of system proposed is using established technology and systems, and the design is considered to be of an excellent standard. Provided this system is adequately managed environmental effects would be no more than minor.

176. In relation to land irrigation, a number of submitters express a strong preference that all discharges go to land. There is a large degree of agreement between the experts as to the storage that would be required to still allow for a system that would adequately manage potential environmental effects. The existing treatment ponds do not have the known capacity to meet this storage requirement. I have not seen evidence to determine whether this is the best practicable option going forward. I note that the proposal put forward by the applicant is for a discharge to the River to occur and this needs to be considered on its merits and full discharge to land cannot be required as part of this process.

177. There is an element of uncertainty regarding volumes and therefore potential effects from the seepage from the storage ponds. The applicant has presented what they believe would be the seepage volume based on an assumed permeability; the MWRC experts do not fully agree with this. There is also uncertainty regarding the final receiving environment of contaminants, nitrogen reaching the Oroua River would be contributing to a nitrogen sensitive receiving environment.

178. I consider it is questionable as to whether continuing to use ponds of unknown integrity for such a large volume of effluent can be considered good practice and whether this should be allowed to continue for an extended period. This, in my opinion, is not consistent with what is being required of other businesses (e.g. dairy farmers) in the Region who wish to increase production. I do however acknowledge that the size of the ponds and attempting to 'bring them up to standard' would present a number of challenges and the reasonableness of requiring this, needs to be weighed up against potential environmental benefits.

179. I also currently do not have sufficient information to have an opinion as to whether the best practicable option has been proposed. This is in relation not just to the permeability of the storage ponds but also the treatment system itself. The application does not provide detail on assessment of options to improve the treatment within the ponds, which might assist with improvements to the discharge quality during times when discharge to water is occurring.

180. There is also an element of uncertainty with regards to what extent the cultural concerns have been fully addressed or can be addressed through conditions of consent. I consider that the term of consents would be a factor, as indicated in the Cultural Impact Assessment received.

181. I consider there is little impediment to the discharge to air being granted, nor the land use consents. Noting that the main objection to the land use consent from the submitters comes from the fact it will be used to facilitate the discharge to the River.

182. Overall, based on expert evidence, I am comfortable that all consents can be granted. However, given the areas of uncertainty that remain I am currently undecided as to what the most appropriate term to recommend is. I disagree with the 35 year term sought. I would anticipate that on presentation of additional evidence at the hearing I would be in a position to recommend a term to the panel at that time.

P. CONCLUSION

183. I have considered the application, the submissions and Section 42A reports. In particular I have considered the following:

- The actual and potential effects of the activities identified within the AEE;
- The matters raised in the written submissions;
- The statutory framework being the NPS for Freshwater Management, the Regional Policy Statement and Regional Plan; and
- Part 2 of the RMA.

184. The proposal will result in some environmental improvements compared to the current discharge regime. The system has been designed taking into account much of the directive given by the relevant Objectives and Policies of the One Plan. However, I remain of the opinion that due to the uncertainties outlined above the length of term sought by the applicant is not appropriate.

185. Overall, as stated above, I am of the opinion that subject to appropriate conditions and with due consideration given to the term of consent, as a form of mitigation, the consent applications can be granted.

Q. RECOMMENDATION

186. Based on the above, I recommend that subject to the conditions included in Attachment 5 the applications be granted.

187. However, due to the uncertainties I have outlined above I would anticipate that on presentation of additional evidence at the hearing I would be in a position to recommend a term to the panel at that time. I would be happy to provide supplementary evidence including a revised recommendation, or make such a recommendation having heard what is presented at the hearing.