
In the matter of: Clause 6 of Schedule 1 – Resource Management Act
1991 – Submission on publicly notified plan change –
Proposed Waikato Regional Plan Change 1 – Waikato
and Waipa River Catchments

And: **Wairakei Pastoral Ltd**

Submitter

And: **Waikato Regional Council**

Local Authority

Submission on publicly notified proposal for plan change

Dated: **8 March 2017**

Counsel:

RJ Somerville QC / T Daya-Winterbottom

Solicitors:

Harmos Horton Lusk, Auckland

Form 5

**SUBMISSION ON PUBLICLY NOTIFIED PROPOSAL FOR
PLAN CHANGE**

Clause 6 of Schedule 1, Resource Management Act 1991

To: Waikato Regional Council (**local authority** or **WRC**)

Name of submitter: **Wairakei Pastoral Ltd**

Submission on Plan Change 1

- 1 This is a submission on the following plan change:
 - 1.1 Proposed Waikato Regional Plan Change 1 – Waikato and Waipa River Catchments (**PC1**).

Wairakei Pastoral

- 2 Wairakei Pastoral Ltd (**WPL**) could not gain an advantage in trade competition through this submission.
- 3 WPL is a wholly New Zealand owned company and is the freehold owner of the 25,690ha Wairakei Estate (**Estate**) north of Taupo shown edged black on the **attached** location map. The Estate is located partly in Sub-catchments 66, 72, 73 and 74 (see Map 3.11-2 as notified). It is committed to sustainable management, and has a long-term interest in and inter-generational vision for the management of the Estate. WPL is also a very environmentally aware and responsible corporate citizen.
- 4 The Estate's success is due to long-term values, mixed land use and valued partnerships with WPL's like-minded lessees. These include Landcorp Farming Ltd, Mercury Energy Ltd and Fiber Fresh Feeds Ltd.
- 5 The mixed land use encompasses a variety of activities, including, ovine and bovine dairy farming and dry-stock farming, geothermal energy generation, lucerne cropping, and beef and sheep grazing carried out by both WPL and its lessees.
- 6 The management of the Estate seeks to achieve an appropriate balance between commercial and environmental sustainability, including the planned set-aside of up to 5,000ha or 20% of the Estate for ecological and landscape protection, and to safeguard slope stability on erosion prone land. Beyond that, current and

ongoing development of the Estate makes a significant and sustained contribution to the local and regional economies.

- 7 All riparian and wetland areas have dedicated management plans to enhance and encourage their growth and development. These areas are protected with over 250km fencing (with a further 200km identified to follow). WPL has permanently retired 750ha of riparian areas with a further 500ha identified for future retirement. The targeted average setback along the Waikato River is 75m, with several areas exceeding 150m.
- 8 In particular, as part of the commitment to riparian management stock are excluded from all water bodies within the Estate; riparian margins are progressively planted over time with native species and kept pest and weed free; and variable setbacks between 10m - >50m are achieved from water bodies (depending on topography) in all livestock and pastoral farming areas on the Estate.
- 9 The WPL management team is based at Broadlands and covers a range of disciplines, including, business and farm planning, estate management and land economy, geographic information systems and cartography, natural resources planning, and soil conservation.
- 10 WPL has an acute awareness of the environmental challenges and has established and maintained an Estate wide monitoring programme and employs a dedicated environmental team (as noted above) to ensure the enhancement and development of its existing good management practices.
- 11 For example, in the development of its environmental management plans and monitoring programmes WPL has taken into account the views of hapu and iwi, both at a local and regional level, to ensure that the appropriate cultural issues are addressed and properly provided for. A number of the measures taken on the Estate such as stock exclusion fencing and the establishment of riparian strips along waterways respond directly to known hapu and iwi sediment controls and water quality concerns.

The submission

- 12 Key WPL submission points are:
 - 12.1 WPL applauds the investment made by WRC in the collaborative approach for preparing PC1 and strongly supports the sub-catchment approach to addressing water quality issues in PC1, but considers that a number of specific amendments are required (**words coloured red**) to ensure that PC1 gives effect to this approach within the 10 year life of the plan change in an efficient and effective way. In summary:

- (a) These amendments are based on an adaptive management and mitigation approach (founded on sound science and risk assessment).
 - (b) They are designed to expedite both short term and long term improvements in water quality and restoration and protection of water quality at scale at an enterprise level or sub-catchment level.
 - (c) This is achieved (primarily) by focusing on activity categories for farming, commercial vegetable production, and land use change; and by ensuring that the sub-catchment approach in PC1 is firmly and consistently embedded throughout all relevant PC1 provisions.
- 12.2 For the purpose of giving effect to the National Policy Statement for Freshwater Management 2014 (**NPS-FM 2014**) the stretch of the Waikato River catchment between the Lake Taupo control gates and Ohaaki-Ohakuri should be typified as a "river".
- 12.3 Existing freshwater quality in this stretch of the Waikato River (e.g. for the Estate) is generally consistent with Attribute State A for all relevant values and attributes pertaining to rivers, namely, nitrate, ammonia, and *E.coli*.
- 12.4 To the extent that the local authority has a discretion to set freshwater objectives regarding total nitrogen or total phosphorus for this stretch of the Waikato River, there is limited information that could support the exercise of such discretion.
- 12.5 Objectives, policies and methods (including rules) designed for managing water quality in the stretch of the Waikato River above Ohaaki-Ohakuri should therefore be focused on "maintaining" overall freshwater quality in the sub-catchment. This accords with the objective of protecting the health of the river in the Vision and Strategy.
- 12.6 The specific provisions as amended by the WPL submission are (when compared with PC1 as notified) the most efficient and effective way of achieving sustainable management, and providing opportunities for economic growth and employment. They will give effect to the Vision and Strategy for the Waikato River, and are consistent with the Collaborative Stakeholder Group's (**CSG**) policy selection criteria.
- 12.7 The long-term planning objectives for the Estate are well aligned with the Vision and Strategy for the Waikato River.

Analysis of PC1 (as noted above) has highlighted several areas where WPL considers that amendments can be made which not only focus on achieving the Vision and Strategy, but also allow for a greater participation by properties and enterprises to take actions (at scale) which will bring about the behavioural and farming changes required to meet the objectives of the Vision and Strategy.

- 12.8 The Estate is operated as a single enterprise, managing the individual farming and other activities of the lessees via the terms and conditions of their leases. The size and scale of the Estate means that a sub-catchment approach is the most appropriate way to manage the natural resources to benefit both the productivity of the land and also the ecological function of the environment. This requires careful planning for farm layout and operation together with ongoing performance monitoring to ensure water quantity and quality objectives are maintained.
- 12.9 WPL therefore supports a sub-catchment based approach that will allow the Estate and other properties and enterprises in the region to act in the best interests of the environment through the ability to undertake collective mitigations and maintain economic productivity goals through efficiently managing the finite natural resources that are available within each sub-catchment.
- 12.10 In particular, the amendments sought to PC1 by the WPL submission will ensure that the sub-catchment approach is given full effect in both the short and long term without unduly restricting sustainable development, will encourage collaboration between properties in single and multiple ownership to establish enterprises, will foster integrated management, and will reduce compliance costs.
- 13 The specific provisions of PC1 that this submission relates to are:
- 13.1 The whole proposal in its entirety; and
- 13.2 Without limitation, the specific provisions referred to in Appendices A, C, and D (**attached**) of this submission.
- 14 WPL's submission is:
- Provisions supported or opposed*
- 14.1 WPL **supports** or **opposes** the specific provisions as detailed in Appendices A, B, C, and D (**attached**) of this submission, and wishes to have them amended as detailed in these Appendices.

Reasons for the submission

14.2 The reasons for the submission are:

- (a) PC1 as notified will not promote sustainable management of natural and physical resources in accordance with pt 2 of the Resource Management Act 1991 (**RMA**).
- (b) PC1 as notified is not within the functions of regional councils as provided for in s 30 of the RMA.
- (c) The objectives of PC1 (as notified) are not the most appropriate way to achieve sustainable management.
- (d) The provisions in PC1 (as notified) are not the most appropriate way to achieve the objectives.
- (e) PC1 as notified will not promote opportunities for economic growth or employment.
- (f) The evaluation report for PC1 does not (in relevant part) comply with the requirements of s 32 of the RMA.
- (g) The evaluation report is not (fully) supported by evidence of probative value.
- (h) PC1 as notified does not comply with relevant provisions in pt 5 of the RMA, including: s 63, s 65, s 66, s 67, s 68, s 69 and s 70.
- (i) PC1 as notified is not consistent with or does not give effect to the NPS-FM 2014.
- (j) PC1 as notified is not consistent with or does not give effect to the operative regional policy statement (**RPS**).
- (k) PC1 as notified is not consistent with remaining provisions in the operative Waikato Regional Plan (**WRP**) that are not proposed to be changed.
- (l) PC1 as notified (in respect of controls on land) will render interests in land incapable of reasonable use.
- (m) PC1 as notified does not comply with relevant provisions in schedule 1 of the RMA.

- (n) The rules in PC1 as notified are not clear and simple, or capable of consistent application.
- (o) PC1 as notified does not achieve the key WPL submission points included in paragraph 12 (above) of this submission.
- (p) The detailed reasons included in Appendix A (**attached**) of this submission.

Decisions sought

- 15 WPL seeks the following decisions from the local authority:
 - 15.1 The specific provisions be amended or deleted or retained or substituted as sought in Appendices A, B, C, and D (**attached**) of this submission.
 - 15.2 Such alternative, consequential or further relief as may be required either to promote sustainable management or to give effect to this submission.
- 16 WPL wishes to be **heard** in support of its submission.
- 17 WPL agrees to participate in mediation or other alternative dispute resolution.

 Trevor Daya-Winterbottom

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8 March 2017

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APPENDIX A

A1. Specific provision

- 1 Map 3.11-1.

Submission

- 2 WPL **supports** the specific provisions in relevant part and **opposes** them in relevant part, and wishes to have them amended as detailed below.

Reasons for the submission

- 3 The River FMU boundaries shown on Map 3.11-1 are not hydrologically coherent with river sub-catchments included in Table 3.11-1.

- 4 In particular, Sub-catchment 66 has water flowing into it from several large tributaries and can be split into Sub-catchments 66A and 66B to provide greater resolution for land management and achieving the Vision and Strategy objectives.

Decision sought

- 5 Map 3.11-1 should be amended by subdividing Sub-catchment 66 into Sub-catchments 66A and 66B (as illustrated on the map in Appendix D **attached** to this submission) and by amending Table 3.11-1 accordingly.

A2. Specific provision

- 6 Section 3.11 Waikato and Waipa River Catchments – Background and Explanation.

Submission

- 7 WPL **supports** the specific provisions in relevant part and **opposes** them in relevant part, and wishes to have them amended as detailed below.

Reasons for the submission

- 8 WPL generally supports the collaborative approach outlined in this section. Notwithstanding this support, a number of amendments/additions are required to clarify the intent of the approach that has been developed through the collaborative approach. In particular, WPL seeks clarification as to whether over-allocation has occurred at each sub-catchment and FMU level (which does not appear to be the case for all water bodies in every sub-catchment), and that addressing land use change

effects will be focused on priority sub-catchments with higher risks. WPL seeks clarification that the Stage 1 approach provides for a sub-catchment approach to be adopted before the priority dates referenced (inter alia) in Rule 3.11.5.4, where an adaptive management and mitigation approach is adopted for the sub-catchment to manage key contaminant losses through input loads and identified mitigation.

- 9 This is an important point, because the "current understanding" in PC1 is focused exclusively on preventing land use change, whereas changes in the management approach can also achieve a better environmental outcome without restricting land use change.
- 10 A sub-catchment-scale approach encourages a 'local' perspective, which can identify opportunities for concentrated investment in sub-catchment-wide interventions (infrastructure, remediation, mitigation) to interrupt contaminant pathways, revive natural ecosystems and re-establish ecosystem-services.
- 11 Overall, this submission demonstrates a sound alternative to PC1 as notified from an economic perspective, because it moves the planning regime ahead of that envisioned in PC1 and is therefore able to propose a better economic alternative than that which could be achieved out of the notified PC1. PC1 as notified provides a holding pattern for land uses across the region. During this ten year period there is little or no opportunity for landowners to move towards a far more efficient mix of land uses that have the potential to improve their collective economic performance. Thus from an economic perspective PC1 (as notified) can be considered a second best alternative. The amendments made to PC1 by this submission will therefore advance its implementation by ensuring that the sub-catchment management approach developed by PC1 can become a practical reality. This will be less financially disruptive for properties and enterprises, it will provide for land use to be reconfigured and improve allocative efficiency by aligning land use more closely with optimal biophysical outcomes, and provide a catalyst for early movers and a powerful financial incentive for others to make early progress too.

Decision sought

- 12 The Background and Explanation in Section 3.11 should be amended by deleting (strikethrough) and inserting the words coloured red as follows:
- 13 Paragraph two regarding "Water quality and National Policy Statement for Freshwater Management":

Current water quality monitoring results show that while there is variability across the Waikato and Waipa River catchments, there are adverse effects on water bodies associated with discharges of nitrogen,

phosphorus, sediment and microbial pathogens. The CSG concluded that (generally) from a water quality point of view, over-allocation has occurred within the FMU's while in some water bodies current water quality is high. Some water bodies in the Waikato and Waipa River catchments are therefore not able to assimilate further discharges of nitrogen, phosphorus, sediment and microbial pathogens, without adversely affecting community-held values. Achieving the numeric, long-term freshwater objectives in Chapter 3.11 will require reductions in diffuse and point source contaminants.

- 14 Paragraph one regarding "Full achievement of the Vision and Strategy will be intergenerational":

The CSG has chosen an 80-year timeframe to achieve the water quality objectives of the Vision and Strategy. The timeframe is intergenerational and more aspirational than the national bottom lines set out in the NPS FM because it seeks to meet the higher standards of being safe to swim in and take food from over the entire length of the Waikato and Waipa Rivers and catchment. Based on the information currently available, the CSG has concluded full achievement of the Vision and Strategy by 2096 is likely to be costly and difficult. The 80-year timeframe recognises the potential 'innovation gap' that means full achievement of water quality requires technologies or practices that are may not yet be available or economically feasible. In addition, the current understanding is that achieving water quality restoration requires a considerable amount of land to be changed from land uses with moderate and high intensity of discharges to land use with lower discharges (e.g. through reforestation mitigation) within high-risk sub-catchments. Whereas in other sub-catchments it will be more appropriate to focus on applying mitigation methods via consent conditions, rather than simply preventing land use change.

- 15 Paragraph four (introductory sentence, bullet point three and new bullet point four) regarding "Full achievement of the Vision and Strategy will be intergenerational":

The Stage 1 approach to reducing contaminant losses from pastoral farm land implemented by Chapter 3.11 requires:

...

- a property or enterprise scale nitrogen reference point to be established by modelling current nutrient losses from each property or enterprise, with no property or enterprise being allowed to exceed its reference point in the future and higher dischargers being required to reduce their nutrient losses; or
- the introduction of a refined sub-catchment based nitrogen cap.

- 16 Paragraph eight regarding "Full achievement of the Vision and Strategy will be intergenerational":

In the short term (i.e. Stage 1 = 10 years), land use change from tree cover to animal grazing, or any livestock grazing other the dairy or

arable cropping to dairy, or any land use to commercial vegetable production, will be constrained (but not prohibited). Provision has been made for some flexibility of land use for Māori land that has not been able to develop due to historic and legal impediments. As these impediments have had an impact on the relationship between tangata whenua and their ancestral lands, with associated cultural and economic effects, Chapter 3.11 seeks to recognise and provide for these relationships. These constraints on land use change are interim, until a future plan change introduces a second stage (i.e. 10 – 80 years), where further reductions in discharges of sediment, nutrients and microbial pathogens from point sources and activity on the land will be required. This second stage will focus on land suitability and how land use impacts on water quality, based on the type of land and the sensitivity of the receiving water. Methods in Chapter 3.11 include the research and information to be developed to support this.

- 17 PC generally to consistently refer to “property or enterprise” throughout.

A3. Specific provision

- 18 Section 3.11.1 Values and uses for the Waikato and Waipa Rivers:

18.1 Section 3.11.1.1 Mana Atua – intrinsic values:

- (a) History.
- (b) Ecosystem health.
- (c) Natural form and character.

18.2 Section 3.11.1.2 Mana Tangata – Use values:

- (a) Wai tapu.
- (b) Geothermal.
- (c) Mahinga kai.
- (d) Human health for recreation.
- (e) Transport and tauranga waka.
- (f) Primary production.
- (g) Water supply.
- (h) Commercial, municipal and industrial use.
- (i) Electricity generation.

- (j) Mitigating flood hazards.

Submission

- 19 WPL **supports** the specific provisions in relevant part and **opposes** them in relevant part, and wishes to have them amended as detailed below.

Reasons for the submission

- 20 The values and uses in Section 3.11.1 are designed to provide background to the freshwater objectives in subsequent sections of PC1. However, there are no express links between this section and subsequent sections to explain the specific relationship between particular values and uses and particular freshwater objectives (i.e. policies and rules).
- 21 For clarity of interpretation and transparency, PC1 should be amended by inserting such express links via explanatory text or advice notes (similar to Chapter 3.3 of the WRP – which includes express links between the methods and the policies implemented by each method).

Decision sought

- 22 PC1 should be amended by inserting express links (via explanatory text or advice notes) between Section 3.11.1 and subsequent sections to explain the specific relationship between particular values and uses and particular freshwater objectives (i.e. policies and rules).

A4. Specific provision

- 23 Section 3.11.2 Objective 1 Long-term restoration and protection of water quality for each sub-catchment and FMU.

Submission

- 24 WPL **supports** the specific provisions in relevant part and **opposes** them in relevant part, and wishes to have them amended as detailed below.

Reasons for the submission

- 25 This objective as notified does not recognise that there are parts of the Waikato and Waipa River Catchments where water quality is high. In these sub-catchments, the objective should be to maintain this high water quality consistent with the Vision and Strategy. WPL seeks amendments to this objective to clarify that the approach taken under PC1 will reflect the water quality in each sub-catchment. WPL also considers that the second part

of the objective should be amended to clarify that it is the management of discharges that will achieve the outcomes sought.

- 26 These amendments will provide a greater level of certainty for the ongoing management of the Waikato and Waipa River Catchments where the requirements for each sub-catchment are tailored to meet the freshwater objectives.

Decision sought

- 27 Objective 1 should be amended by inserting the words coloured red as follows:

Objective 1: Long-term maintenance, restoration and/or protection of water quality as relevant for each sub-catchment and Freshwater Management Unit/Te Whāinga 1: Te whakaoranga tauroa me te tiakanga tauroa o te kounga wai ki ia riu kōawaawa me te Wae Whakahaere i te Wai Māori.

By 2096, the management of discharges of nitrogen, phosphorus, sediment and microbial pathogens to land and water result in achievement of the restoration and protection of the 80-year water quality attribute targets in Table 3.11-1.

A5. Specific provision

- 28 Section 3.11.2 Objective 2 Social, economic and cultural wellbeing is maintained long-term.

Submission

- 29 WPL **supports** the specific provisions in relevant part and **opposes** them in relevant part, and wishes to have them amended as detailed below.

Reasons for the submission

- 30 WPL considers that there is a need to strengthen this objective to ensure that the social and economic wellbeing of the community is recognised as important, and that the economic benefits experienced are measurable. This is consistent with Objective (j) in the Vision and Strategy, and is important to ensure the community is not burdened with costs it cannot sustain over the 80-year timeframe to achieve the Vision and Strategy outcomes. Should the costs be too great, a review of the outcomes would be required. WPL also considers that this objective needs to be amended to be consistent with the

amendments sought for Objective 1, for the reasons given above.¹

Decision sought

- 31 Objective 2 should be amended by inserting the words coloured red as follows:

Objective 2: Social, economic and cultural wellbeing is recognised and maintained in the long term/Te Whāinga 2: Ka whakaūngia te oranga ā-pāpori, ā-ōhanga, ā-ahurea hoki i ngā tauroa.

Waikato and Waipa communities and their economy experience measurable benefits from the maintenance, restoration and/or protection as relevant of water quality in the Waikato River catchment, which enables the people and communities to continue to provide for their social, economic and cultural wellbeing.

A6. Specific provision

- 32 Section 3.11.2 Objective 3 Short-term improvements in water quality in the first stage of restoration and protection of water quality for each sub-catchment and FMU.

Submission

- 33 WPL **supports** the specific provisions in relevant part and **opposes** them in relevant part, and wishes to have them amended as detailed below.

Reasons for the submission

- 34 Objective 3 as notified is not consistent with providing for the continued operation and development of regionally significant primary production activities as required by RPS Policy 4.4. Additionally, the overall effects on the environment (including water quality) of providing for regionally significant primary production activities can be satisfactorily avoided, remedied or mitigated within each sub-catchment or collectively in each FMU. WPL also considers that greater definition is required to ensure that 10% of the required change from current water quality towards achieving the 80-year freshwater objectives is an *overall* improvement, and not necessarily a 10% reduction of each freshwater objective.
- 35 The management of the Waikato and Waipa River Catchments will require specific reporting for each FMU and sub-catchment to track the performance of each sub-catchment to reach the freshwater objectives. Initially some of the changes sought may

¹ See A4 above.

only be observed at an FMU scale as biophysical systems respond to property, enterprise and sub-catchment level actions.

Decision sought

- 36 Objective 3 (second paragraph) should be amended by inserting the words coloured red as follows:

Actions put in place and implemented by 2026 to reduce discharges of nitrogen, phosphorus, sediment and microbial pathogens, are sufficient to achieve an overall ten percent of the required change between current water quality and the 80-year water quality attribute targets in Table 3.11-1. A ten percent change towards the long term water quality improvements is indicated by the short term water quality attribute targets in Table 3.11-1 within each sub-catchment.

A7. Specific provision

- 37 Section 3.11.2 Objective 4 People and community resilience.

Submission

- 38 WPL **supports** the specific provisions in relevant part and **opposes** them in relevant part, and wishes to have them amended as detailed below.

Reasons for the submission

- 39 WPL supports the adaptive management approach proposed, but considers that adaptive management approaches will also be relevant in the long term and that the Objective should not limit adaptive management to just the short term.

Decision sought

- 40 Objective 4 (first paragraph) should be amended by deleting the words coloured red as follows:

A staged approach to change enables people and communities to undertake adaptive management to continue to provide for their social, economic and cultural wellbeing ~~in the short term~~ while:

A8. Specific provision

- 41 Section 3.11.2 Objective 5 Mana Tangata – protecting and restoring tangata whenua values.

Submission

- 42 WPL **supports** the specific provisions in relevant part, and wishes to have them retained or amended as detailed below.

Reasons for the submission

- 43 This objective is important to give effect to objectives b, c, and m of the Vision and Strategy.

Decision sought

- 44 Objective 5 should be retained as notified or amended by similar wording to like effect.

A9. Specific provision

- 45 Section 3.11.2 Principle Reasons for Adopting Objectives.

Submission

- 46 WPL **supports** the specific provisions in relevant part and **opposes** them in relevant part, and wishes to have them amended as detailed below.

Reasons for the submission

- 47 PC1 provides generally for a sub-catchment based approach to the risk assessment of contaminant discharges associated with farming activities and commercial vegetable production as a "cost-effective" mitigation measure designed to achieve the Vision and Strategy over an 80-year timeframe. Objectives 1 and 3 seek to achieve long-term and short-term contaminant reductions in order to restore and protect water quality in each sub-catchment.
- 48 Likewise, Policies 1 and 2 refer expressly to managing and reducing "sub-catchment-wide" diffuse discharges. Implementation methods 3.11.4.5(a) and (b) and 3.11.4.7(b)(i) and (ii) also refer expressly to sub-catchment scale planning and information gathering. While, Policy 7, and Implementation methods 3.11.4.7(a) and 3.11.4.8(b) refer expressly to allocating diffuse discharges, gathering information and scientific data to support diffuse discharge allocation, and managing diffuse discharges to meet the freshwater objectives in Objective 1 at an "enterprise-level". PC1 is also replete with references to "sub-catchment",² and "enterprise".³

² See: Objectives 1 and 2; Reasons for adopting Objective 6; Policies 1, 2, 3, 4, 8, 9, 11 and 15; Implementation methods 3.11.4.5, 3.11.4.7, 3.11.4.9, 3.11.4.10 and 3.11.4.11; Rules 3.11.5.3, 3.11.5.4 and 3.11.5.5; Schedule B; Schedule C; Schedule 1; Table 3.11-2; Maps 3.11-1 and 3.11-2; and the definitions of "enterprise", "property" and "sub-catchment" in the Glossary of Terms.

³ See: Policies 2, 3, 7 and 9; Implementation methods 3.11.4.5 and 3.11.4.8; Rules 3.11.5.1, 3.11.5.2, 3.11.5.3, 3.11.5.4, 3.11.5.5 and

- 49 The definition of "sub-catchment" in the Glossary of Terms defines sub-catchments by reference to Map 3.11-2 and, more importantly, clarifies that sub-catchments are "used as the basic spatial unit for analysis or modelling".
- 50 However, notwithstanding the sub-catchment approach PC1, does not (as notified) include a consistent suite of policies and methods (including rules) that are designed to achieve and implement this strategic direction. Likewise, notwithstanding the ability for an enterprise to manage diffuse discharges across land in multiple ownership, PC1 does not (as notified) include a consistent suite of policies and methods that are designed to achieve and implement this strategic direction. These are significant omissions, and they will impede the cost-effective management and reduction of diffuse discharges. Accordingly, this submission seeks to amend PC1 by making a series of amendments designed to encourage collaboration between multiple owners to establish enterprises to manage and reduce diffuse discharges at enterprise level or scale, and where practicable at sub-catchment level or scale. These amendments are consistent with the *Section 32 Evaluation Report* prepared by WRC. Relying on future plan changes would be overly constraining and would not promote sustainable management.
- 51 WPL considers the reasons for adopting Objective 4 should be amended by inserting a new final paragraph at the end of the reason to provide for sub-catchment level resource consent applications to made by an enterprise.
- 52 WPL also consider paragraph two of the reasons for adopting Objective 3 should be amended to clarify that the consequential amendments made to the WRP by PC1 now define farming related discharges in other sections of the WRP as point source discharges while retaining the permitted activity status for these activities.
- 53 While encouraging participation in Certified Industry Schemes is laudable, it is not within the functions, powers and duties of WRC under the RMA or the LGA to develop such schemes. Accordingly, PC1 will need to be amended by a subsequent variation or plan change in order to incorporate any relevant Certified Industry Scheme by reference.⁴
- 54 WPL supports Objectives 1 and 3 for introducing a clear framework of water quality performance indicators for an adaptive management approach to deliver the Vision and Strategy for restoring and protecting the health of the Waikato

3.11.5.7; Schedule B; Schedule C; Schedule 1; Table 3.11-2; and the definitions of "75th percentile nitrogen leaching value", "enterprise" and "Good Management Practice" in the Glossary of Terms.

⁴ See A24 and A37 below.

and Waipa Rivers. WPL believes the use of unambiguous freshwater objectives increases certainty and confidence for sub-catchment management.

Decision sought

- 55 Section 3.11.2 should be amended as follows:
- 56 Inserting a new final paragraph (words coloured red) at the end of the reasons for adopting Objective 4:

Reasons for adopting Objective 4

...

Encouraging enterprises to apply for sub-catchment management resource consent applications for farming activities and commercial vegetable production, associated diffuse discharges, and land use change, will provide a key method (alongside participation in any relevant Certified Industry Schemes) for achieving clear and enduring improvements in water quality.

- 57 Inserting the words coloured red in paragraph two of the reasons for adopting Objective 3:

Reasons for adopting Objective 3

...

Point source discharges are currently managed through permitted activity rules and existing resource consents, and further action required to improve the quality of these discharges will occur on a case-by-case basis at the time of consent renewal (where relevant), guided by the targets and time limits set in Objective 1.

A10. Specific provision

- 58 Section 3.11.3 Policy 1 Manage diffuse discharges of nitrogen, phosphorus, sediment and microbial pathogens.

Submission

- 59 WPL **supports** the specific provisions in relevant part and **opposes** them in relevant part, and wishes to have them amended as detailed below.

Reasons for the submission

- 60 Policies 1 and 2 require reductions in "sub-catchment-wide" contaminant discharges.

61 In order to implement the amendments sought above by WPL to the objectives to provide for maintenance as a management option where high water quality already exists, and to provide for a sub-catchment approach to managing diffuse discharges an amendment is sought to the policy (first sentence).⁵

62 In addition, WPL considers that there is a need to amend Policy 1 by inserting a new final paragraph to provide for sub-catchment resource consent applications to be made by an enterprise in order to implement this policy at sub-catchment level.

Decision sought

63 Policy 1 should be amended (words coloured red) as follows:

64 Policy 1 (first paragraph) should be amended to read:

Manage and require maintenance and/or reductions as relevant in sub-catchment-wide discharges of nitrogen, phosphorus, sediment and microbial pathogens, by:

65 By inserting a new final paragraph:

Encouraging enterprises to apply for sub-catchment management resource consents for farming activities and commercial vegetable production, associated diffuse discharges, and land use change.

A11. Specific provision

66 Section 3.11.3 Policy 2 Tailored approach to reducing diffuse discharges from farming activities.

Submission

67 WPL **supports** the specific provisions in relevant part and **opposes** them in relevant part, and wishes to have them amended as detailed below.

Reasons for the submission

68 Policies 1 and 2 require reductions in "sub-catchment-wide" contaminant discharges. In particular, Policy 2 focuses on diffuse discharges and requires reductions to be achieved by taking "a tailored, risk based approach" implemented via Farm Environment Plans that include monitoring and auditing provisions and require stock exclusion from water bodies within defined periods. The degree of contaminant reduction under Policies 2(d) and 3(g) is required to be "proportionate to the

⁵ See A4 above.

scale of water quality improvement required in the sub-catchment”.

- 69 Consistent with the sub-catchment-wide approach, Policy 2 also emphasises that the tailored approach to reducing diffuse discharges from farming activities is to be managed across multiple properties and across one or more enterprises.
- 70 In order to adopt a sub-catchment approach there is a need to amend Policy 2. The amendments requested delete paragraph (b) of this policy as it is unnecessary, renumber paragraph (c) and insert a new paragraph (c) encouraging enterprises to apply for sub-catchment resource consents, substitute paragraph (d) to introduce the need for an adaptive management and mitigation approach for the sub-catchment and outline how this approach will work in practice, and insert a new paragraph (e) that clarifies mitigation actions and timeframes.

Decision sought

- 71 Policy 2 should be amended by deleting (strikethrough), substituting and inserting the words coloured red and renumbering the paragraphs in the policy as follows:

- 72 Notified paragraph (b):

~~Requiring the same level of rigour in developing, monitoring and auditing of mitigation actions on the land that is set out in a Farm Environment Plan, whether it is established with a resource consent or through Certified Industry Schemes; and~~

- 73 Renumber notified paragraph (c) as paragraph (b).

- 74 A new paragraph (c):

~~Encouraging enterprises to apply for sub-catchment management resource consent applications for farming activities and commercial vegetable production, associated diffuse discharges, and land use change; and~~

- 75 Notified paragraph (d):

~~Requiring the degree of reduction in diffuse discharges of nitrogen, phosphorus, sediment and microbial pathogens to be proportionate to the amount of current discharge (those discharging more are expected to make greater reductions), and proportionate to the scale of water quality improvement required in the sub-catchment; and~~

~~Where an adaptive management and mitigation approach for sub-catchment management is developed, assess and calculate risk based input loads for each contaminant at a refined sub-catchment level. The input loads will be proportional to the~~

Objective 1 freshwater objectives related to nitrogen, phosphorus, sediment and microbial pathogens for the surface waters that each refined sub-catchment is connected to. The input load for nitrogen will replace the Nitrogen Reference Point where an enterprise based consent for sub-catchment management is sought, proportional to the properties or enterprises collectively managed under existing Nitrogen Reference Point(s) values; and

76 Renumber notified paragraph (e) as (f).

77 A new paragraph (e):

Identifying mitigation actions that are to be set out to achieve Objectives 1 and 3 and implemented within either a Sub-catchment management plan; Farm Environment Plan; an associated resource consent; or in specific requirements established by participation in any relevant Certified Industry Scheme; and

78 A new paragraph (g):

Enterprises that reduce nitrogen, phosphorus, sediment and microbial pathogens are enabled.

A12. Specific provision

79 Section 3.11.3 Policy 3 Tailored approach to reducing diffuse discharges from commercial vegetable production systems.

Submission

80 WPL **supports** the specific provisions in relevant part and **opposes** them in relevant part, and wishes to have them amended as detailed below.

Reasons for the submission

81 Consistent with the sub-catchment approach in PC1, Policy 3 also emphasises that the tailored approach to reducing diffuse discharges from commercial vegetable production is to be managed across multiple properties and across one or more enterprises.

82 Clarification is required to paragraph (d) to ensure that the 10% decrease in the diffuse discharge of nitrogen is during Stage 1 and will be achieved by a tailored approach as opposed to a tailored 'reduction'.

Decision sought

83 Policy 3 should be amended by deleting (strikethrough) and inserting the words coloured red as follows:

84 Paragraph (d):

A 10% decrease in the diffuse discharge of nitrogen during Stage 1 and a tailored reduction approach in the diffuse discharge of phosphorus, sediment and microbial pathogens is achieved across the sector through the implementation of Best or Good Management Practices; and

A13. Specific provision

85 Section 3.11.3 Policy 4 Enabling activities with lower discharges to continue or to be established while signalling further changes may be required in future.

Submission

86 WPL **supports** the specific provisions in relevant part and **opposes** them in relevant part, and wishes to have them amended as detailed below.

Reasons for the submission

87 Policy 4 seeks to manage sub-catchment-wide diffuse discharges in a way that enables both existing and new activities to continue "provided that cumulatively the achievement of Objective 3 is not compromised".

88 WPL supports the sub-catchment approach to managing lower discharges.

89 WPL also considers that it is appropriate to encourage and clarify the role of an enterprise to manage lower discharges activities at a sub-catchment level. Policy 4 should therefore also be amended by inserting a new paragraph two to provide for sub-catchment management resource consent applications to be made by an enterprise in order to implement this policy at sub-catchment level.

Decision sought

90 Policy 4 should be amended by inserting a new paragraph two (words coloured red) as follows:

Enabling enterprises to apply for sub-catchment management resource consent applications which include lower discharges from farming activities and commercial vegetable production, associated diffuse discharges, and land use change, will provide a key method (alongside participation in any relevant Certified Industry Schemes) for achieving clear and enduring improvements in water quality in order to meet (inter alia) Objectives 1 and 3 while allowing existing activities to continue and enabling new activities to be established.

A14. Specific provision

- 91 Section 3.11.3 Policy 5 Staged approach.

Submission

- 92 WPL **supports** the specific provisions in relevant part and **opposes** them in relevant part, and wishes to have them amended as detailed below.

Reasons for the submission

- 93 WPL considers that it is appropriate to encourage and clarify the role of an enterprise in achieving the freshwater objectives regarding Objective 3 (Stage 1) and Objective 1 (later stages) sought through the staged approach.

- 94 This policy should therefore be amended by inserting a new final paragraph to provide for sub-catchment resource consent applications to be made by an enterprise in order to implement this policy at sub-catchment level. Beyond that, Objective 4 draws the link between a staged approach to change and adaptive management. Accordingly, this policy should be strengthened by emphasising this link.

Decision sought

- 95 Policy 5 should be amended by inserting new penultimate and final paragraphs (words coloured red) as follows:

Ensuring that resource consent applications for farming activities and land use change include an appropriate assessment of risk and uncertainty based on sound adaptive management criteria.

Encouraging enterprises to apply for sub-catchment management resource consent applications for farming activities and commercial vegetable production, associated diffuse discharges, and land use change, will provide a key method (alongside participation in any relevant Certified Industry Schemes) for implementing a staged approach to achieving the freshwater objectives in Table 3.11-1.

A15. Specific provision

- 96 Section 3.11.3 Policy 6 Restricting land use change.

Submission

- 97 WPL **supports** the specific provisions in relevant part and **opposes** them in relevant part, and wishes to have them amended as detailed below.

Reasons for the submission

- 98 WPL generally supports the need to carefully manage land use change in the Waikato and Waipa River Catchments, but considers that land use change should be enabled where the Stage 1 freshwater objectives in Table 3.11-1 are met through adaptive management and mitigation. WPL supports the sub-catchment approach to managing diffuse discharges.
- 99 WPL also considers that the readability of the policy can be improved by numbering notified paragraphs one and two as two separate parts to Policy 6 as (a) and (b).
- 100 Furthermore, WPL considers that Policy 6 can be strengthened by inserting a new policy (c) to expressly provide the criteria for sub-catchment management resource consent applications by an enterprise. This addition will provide clarity and direction on how the sub-catchment approach should be implemented and for meeting the outcomes of Objectives 1 and 3. Defined terms are bolded – see consequential amendments to the Glossary of Terms below.⁶

Decision sought

- 101 Policy 6 should be amended by numbering the paragraphs and inserting the words coloured red as follows:

Policy 6: Restricting land use change/Te Kaupapa Here 6: Te here i te panonitanga ā-whakamahinga whenua

- a. ...
- b. Land use change consent applications that demonstrate **clear and enduring decreases in existing diffuse discharges of nitrogen, phosphorus, sediment or microbial pathogens** how the freshwater objectives in Objective 3 and Table 3.11-1 can be achieved will generally be granted.
- c. Sub-catchment land use change consent applications will generally be granted where:
- i. It is made by an enterprise for properties in a sub-catchment following a collaborative process to seek participation from all stakeholders with an interest in the land area in any sub-catchment.
 - ii. It is supported by an adaptive management and mitigation approach for the sub-catchment which determines the suitability of the land for development including the risk of contaminant discharges from that land and the sensitivity of the receiving water bodies.

⁶ See A52 below.

- iii. The enterprise has prepared a Sub-catchment Management Plan in accordance with the criteria set out in [new] Schedule 2 of Chapter 3.11 with actions which demonstrate how the enterprise will achieve Objective 3 and specifically the Table 3.11-1 freshwater objectives.

A16. Specific provision

- 102 Section 3.11.3 Policy 7 Preparing for allocation in the future.

Submission

- 103 WPL **supports** the specific provisions in relevant part and **opposes** them in relevant part, and wishes to have them amended as detailed below.

Reasons for the submission

- 104 Consistent with the sub-catchment approach, Policy 7 also emphasises that the allocation of diffuse discharge allowances is to be managed at property or enterprise-level.
- 105 WPL considers that the intent of the policy could be clearer to improve its readability, by ensuring that the policy provides for allocation in the short-term before 2026 rather than only in the future.
- 106 WPL also considers that it is appropriate to encourage and clarify the role of an enterprise to manage activities such as farming and associated diffuse discharges at a sub-catchment level. This policy should be amended by inserting a new final paragraph to provide for sub-catchment management resource consent applications to be made by an enterprise.
- 107 Further, WPL considers that this policy needs to provide direction for enterprises to manage allocation within a farming group or at a sub-catchment level. Accordingly, paragraph (d) should be deleted and substituted by new paragraphs (d) – (g).

Decision sought

- 108 Policy 7 should be amended by deleting (strikethrough) and inserting the words coloured red as follows:

Preparing for allocation ~~in the future~~

Through the Stage 1 period, engage with key stakeholders and resource users to determine a sub-catchment approach to actively manage ~~Prepare for further~~ diffuse discharge reductions and any future property or enterprise-level allocation of diffuse discharges for adoption into enterprise based sub-catchment management

~~consents of nitrogen, phosphorus, sediment and microbial pathogens that will be required by subsequent regional plans, by implementing the policies and methods in this chapter. To ensure this occurs support this engagement, WRC will collect information and undertake research to support this, including collecting information about current discharges, developing appropriate modelling tools adaptive management and mitigation approaches (including Decision Support Tools) to estimate contaminant discharges, and researching the spatial variability of land use and contaminant losses and the effect of contaminant discharges in different parts of the catchment that will assist in defining 'land suitability' for allocation.~~

...

~~Future allocation decisions should take advantage of new data and knowledge.~~

- d. Allow the flexibility for discharges to move between uses and increase incentives for efficient land use; and
- e. Apply an equitable base allocation in standardised amounts for discharges to land, that is a proportion of the available resource; and
- f. The ability to respond to changing environmental circumstances; and
- g. In accordance with Te Mana o Te Wai.

~~Encourage enterprises to apply for sub-catchment management resource consent applications for farming activities and commercial vegetable production, associated diffuse discharges, and land use change - where an adaptive management and mitigation approach for the sub-catchment provides information and monitoring results that can define 'land suitability' consistent with the principles for allocation during the current plan period.~~

A17. Specific provision

109 Section 3.11.3 Policy 8 Prioritised implementation.

Submission

110 WPL **supports** the specific provisions in relevant part and **opposes** them in relevant part, and wishes to have them amended as detailed below.

Reasons for the submission

111 Policy 8 seeks to prioritise resource management by focusing (inter alia) on sub-catchments where the gap between current water quality and the long-term freshwater objectives in Table 3.11-1 is greatest, and discharges that exceed the 75th percentile nitrogen leaching value. This policy is designed to

implement (inter alia) Policies 2 and 9 via Farm Environment Plans.

- 112 WPL considers that it is appropriate to encourage and clarify the role of an enterprise to manage activities such as farming and associated diffuse discharges at a sub-catchment level. This policy should be amended by inserting a new final paragraph to provide for sub-catchment resource consent applications to be made by an enterprise in order to implement this policy at sub-catchment level.

Decision sought

- 113 Policy 8 should be amended by inserting the words coloured red as follows:
- 114 A new final paragraph:

Providing for enterprises to apply for sub-catchment management resource consent applications for farming activities and commercial vegetable production, associated diffuse discharges, and land use change, in advance of the priority dates and events in Rule 3.11.5.4 and Table 3.11-2 will positively assist in achieving a tailored approach to sub-catchment mitigation and implementing Policies 2 and 9.

A18. Specific provision

- 115 Section 3.11.3 Policy 9 Sub-catchment (including edge of field) mitigation planning, co-ordination and funding.

Submission

- 116 WPL **supports** the specific provisions in relevant part and **opposes** them in relevant part, and wishes to have them amended as detailed below.

Reasons for the submission

- 117 Policy 9 provides for sub-catchment planning. In particular, Policies 9(c) and (d) encourage "cost-effective" mitigation and collaboration between "multiple farming enterprises" to reduce diffuse discharges.
- 118 While WPL fully supports the sub-catchment approach proposed in this policy, WPL considers that it is appropriate to encourage and clarify the role of an enterprise to manage activities such as farming and associated diffuse discharges at a sub-catchment level.
- 119 This policy by should be amended by inserting a new final paragraph to provide for sub-catchment resource consent

applications to be made by an enterprise in order to implement this policy at sub-catchment level.

Decision sought

- 120 Policy 9 should be amended by inserting new final paragraph (words coloured red) as follows:

Encouraging enterprises to apply for sub-catchment management resource consent applications for farming activities and commercial vegetable production, associated diffuse discharges, and land use change, will provide a key method (alongside participation in any relevant Certified Industry Schemes) for achieving clear and enduring improvements in water quality by implementing adaptive management and mitigation measures in accordance with Policy 6(c).

A19. Specific provision

- 121 Section 3.11.3 includes policies regarding point-source discharges, namely:

121.1 Policy 10 Provide for point source discharges of regional significance.

121.2 Policy 11 Application of Best Practicable Option and mitigation or offset of effects to point source discharges.

121.3 Policy 12 Additional considerations for point source discharges in relation to water quality targets.

121.4 Policy 13 Point sources consent duration.

Submission

- 122 WPL **supports** the specific provisions in relevant part and **opposes** them in relevant part, and wishes to have them amended as detailed below.

Reasons for the submission

- 123 The consequential amendments are made to the WRP in Part D of PC1 amend the rules in Chapter 3.5 of the WRP regarding farm effluent discharges by inserting the term "point-source" into rules 3.5.5.1, 3.5.5.2, 3.5.5.3, 3.5.5.4, 3.5.5.5 and 3.5.5.6. Policies 10, 11, 12 and 13 in Chapter 3.11 will therefore now be relevant when deciding resource consent applications for these activities.
- 124 Notwithstanding these amendments designed to ensure that a consistent and integrated approach is taken to managing discharges, no policies are included to guide decision-making

regarding diffuse discharges from farming activities. This is a significant omission and these policies require amendment to close this gap.

- 125 Additionally, Policy 10(b) does not give full effect to Policy 4.4 in the operative RPS by providing for the continued operation and development of significant primary production activities. Again, this is a significant omission.
- 126 Policy 11 requires consent holders to adopt the best practicable option to avoid or mitigate adverse effects. In particular, Policies 11(c) and (d) provide for "offset measures" to occur via consent conditions within either the same sub-catchment or FMU.

Decision sought

- 127 Policies 10, 11, 12 and 13 should be amended by deleting (strikethrough) and inserting the words coloured red as follows:

Policy 10: Provide for diffuse or point source discharges of regional significance/Te Kaupapa Here 10: Te whakataui i ngā rukenga i ngā pū tuwha e noho tāpua ana ki te rohe

When deciding resource consent applications for diffuse or point source discharges of nitrogen, phosphorus, sediment and microbial pathogens to water or onto or into land, provide for the:

- a. Continued operation of regionally significant infrastructure; and
- b. Continued operation and development of regionally significant industry and primary production.

Policy 11: Application of Best Practicable Option and mitigation or offset of effects to diffuse or point source discharges/Te Kaupapa Here 11: Te whakahāngai i te Kōwhiringa ka Tino Taea me ngā mahi whakangāwari pānga; te karo rānei i ngā pānga ki ngā rukenga i ngā pū tuwha

Require any person undertaking a diffuse or point source discharge of nitrogen, phosphorus, sediment or microbial pathogens to water or onto or into land in the Waikato and Waipa River catchments to adopt the Best Practicable Option to avoid or mitigate the adverse effects of the discharge, at the time a resource consent application is decided. Where it is not practicable to avoid or mitigate all adverse effects, an offset measure may be proposed in an alternative location or locations to the diffuse or point source discharge, for the purpose of ensuring positive effects on the environment to lessen any residual adverse effects of the discharge(s) that will or may result from allowing the activity provided that the:

- a. Primary discharge does not result in any significant toxic adverse effect at the point source discharge location on the environment; and

...

Policy 12: Additional considerations for diffuse or point source discharges in relation to water quality targets/Te Kaupapa Here 12: He take anō hei whakaaro ake mō ngā rukenga i ngā pū tuwha e pā ana ki ngā whāinga ā-kounga wai

Consider the contribution made by a diffuse or point source discharge to the nitrogen, phosphorus, sediment and microbial pathogen catchment loads and the impact of that contribution on the likely achievement of the short term targets in Objective 3 or the progression towards the 80-year targets in Objective 1, taking into account:

- a. The relative proportion of nitrogen, phosphorus, sediment or microbial pathogens that the particular diffuse or point source discharge contributes to the catchment load; and

...

Policy 13: Diffuse or point sources consent duration/Te Kaupapa Here 13: Te roa o te tukanga tono whakaaetanga mō te pū tuwha

...

A20. Specific provision

128 Section 3.11.3 Policy 14 Lakes Freshwater Management Units.

Submission

129 WPL **supports** the specific provisions in relevant part, and wishes to have them retained or amended as detailed below.

Reasons for the submission

130 This policy is important for achieving Objectives 1 and 3.

Decision sought

131 Policy 14 should be retained as notified or amended by similar wording to like effect.

A21. Specific provision

132 Section 3.11.3 Policy 16 Flexibility for development of land returned under Te Tiriti o Waitangi settlements and multiple owned Maori land.

Submission

- 133 WPL **supports** the specific provisions in relevant part and **opposes** them in relevant part, and wishes to have them amended as detailed below.

Reasons for the submission

- 134 WPL considers that the management practices for addressing the effects from diffuse discharges need to be supported by a robust adaptive management and mitigation approach. The management approaches proposed for Policy 6(c) are examples of how an adaptive management and mitigation approach for the sub-catchment can support assessments for suitability of land for development into new types of land uses and allocation.⁷

Decision sought

- 135 Policy 16 paragraph (i) should be amended by deleting (strikethrough) and inserting the words coloured red as follows:

~~Best Adaptive management and mitigation approaches for the sub-catchment are developed and implemented to support the management practice actions for nitrogen, phosphorus, sediment and microbial pathogens for the proposed new type of land use; and ...~~

A22. Specific provision

- 136 Section 3.11.3 Policy 17 Considering the wider context of the Vision and Strategy.

Submission

- 137 WPL **supports** the specific provisions in relevant part, and wishes to have them retained or amended as detailed below.

Reasons for the submission

- 138 This policy is important for achieving the objectives in the Vision and Strategy, and relevant strategies to achieve these objectives.

Decision sought

- 139 Policy 17 should be retained as notified or amended by similar wording to like effect.

⁷ See A15 above.

A23. Specific provision

- 140 Section 3.11.4 Implementation method 3.11.4.1 Working with others.

Submission

- 141 WPL **supports** the specific provisions in relevant part, and wishes to have them retained or amended as detailed below.

Reasons for the submission

- 142 This provision is consistent with key themes in PC1 as amended by this submission.

Decision sought

- 143 Implementation method 3.11.4.1 should be retained as notified or amended by similar wording to like effect.

A24. Specific provision

- 144 Section 3.11.4 Implementation method 3.11.4.2 Certified Industry Scheme.

Submission

- 145 WPL **supports** the specific provisions in relevant part and **opposes** them in relevant part, and wishes to have them amended as detailed below.

Reasons for the submission

- 146 While Certified Industry Schemes are laudable, developing and approving these schemes is outside the functions, powers and duties of WRC under the RMA or the LGA.

- 147 Developing and approving Certified Industry Schemes is more properly a function of relevant industry groups or national government (e.g. Standards NZ).

Decision sought

- 148 Implementation method 3.11.4.2 should be deleted, and the subsequent implementation methods should be renumbered accordingly.

A25. Specific provision

- 149 Section 3.11.4 Implementation method 3.11.4.3 Farm Environmental Plans.

Submission

- 150 WPL **supports** the specific provisions in relevant part and **opposes** them in relevant part, and wishes to have them amended as detailed below.

Reasons for the submission

- 151 Preparing parameters and minimum requirements and developing a certification process for professionals to develop, certify and monitor Farm Environment Plans is outside the functions, powers and duties of WRC under the RMA or the LGA.
- 152 Developing such a certification process is more properly a function of relevant industry groups or national government (e.g. Standards NZ).

Decision sought

- 153 Implementation method 3.11.4.3 should be amended by deleting (strikethrough) and inserting the words coloured red as follows:

~~Waikato Regional Council will prepare parameters and minimum requirements for the development of a certification process for professionals to develop, certify and monitor Farm Environment Plans in a consistent approach across the region.~~ A Farm Environment Plan will be prepared by ~~a certified~~ an appropriately qualified or experienced person as per the requirements outlined in Schedule 1, and will assess the risk of diffuse discharges of nitrogen, phosphorus, sediment and microbial pathogens and specify actions to reduce those risks in order to bring about reductions in the discharges of those contaminants. ~~Waikato Regional Council will develop guidance for risk assessments, auditing and compiling Farm Environment Plans.~~

Waikato Regional Council will take a risk based approach to monitoring Farm Environment Plans, starting with more frequent monitoring and then moving to monitoring based on risk assessment. Robust third party audit (independent of the farmer and **Certified Farm Environment Planner Plan author**) and monitoring will be required.

A26. Specific provision

- 154 Section 3.11.4 Implementation method 3.11.4.4 Lakes.

Submission

- 155 WPL **supports** the specific provisions in relevant part, and wishes to have them retained or amended as detailed below.

Reasons for the submission

- 156 This provision is consistent with Policy 14.

Decision sought

- 157 Implementation method 3.11.4.4 should be retained as notified or amended by similar wording to like effect.

A27. Specific provision

- 158 Section 3.11.4 Implementation method 3.11.4.5 Sub-catchment scale planning.

Submission

- 159 WPL **supports** the specific provisions in relevant part and **opposes** them in relevant part, and wishes to have them amended as detailed below.

Reasons for the submission

- 160 Implementation method 3.11.4.5 focuses on developing sub-catchment scale plans, including, identifying “cost-effective measures” to reduce contaminant discharges “at a property, enterprise and sub-catchment scale” in a coordinated way in response to any current water quality decline.
- 161 Consistent with achieving Objectives 1 – 4 and implementing Policies 2 and 9, this implementation method should be amended by inserting a new clause (b) with numbering to be reordered accordingly. The new clause (b) introduces the need for an adaptive management and mitigation approach to prepare an accounting framework for future decision making at a sub-catchment scale. A new final paragraph is required to provide for sub-catchment management resource consent applications to be made by an enterprise.

Decision sought

- 162 Implementation method 3.11.4.5 should be amended by inserting the words coloured red as follows:
- 163 A new paragraph (b):

Resource consent applicants should adopt an adaptive management and mitigation approach for the sub-catchment for modelling and measuring diffuse discharges from individual properties, enterprises and sub-catchments in relation to current and proposed land uses, biophysical properties, and the climate and natural capacity of the landscape to attenuate contaminant losses.

164 Renumber notified paragraphs (b) to (g) as (c) to (h).

165 A new final paragraph (i):

In the interim, providing for enterprises to apply for sub-catchment management resource consent applications for farming activities and commercial vegetable production, associated diffuse discharges, and land use change, in advance of the priority dates and events in Rule 3.11.5.4 and Table 3.11-2 will positively assist in achieving a tailored approach to sub-catchment mitigation and implementing Policies 2 and 9.

A28. Specific provision

166 Section 3.11.4 Implementation method 3.11.4.6 Funding and implementation.

Submission

167 WPL **supports** the specific provisions in relevant part, and wishes to have them retained or amended as detailed below.

Reasons for the submission

168 This provision is consistent with key themes in PC1 as amended by this submission.

Decision sought

169 Implementation method 3.11.4.6 should be retained as notified or amended by similar wording to like effect.

A29. Specific provision

170 Section 3.11.4 Implementation method 3.11.4.7 Information needs to support future allocation.

Submission

171 WPL **supports** the specific provisions in relevant part and **opposes** them in relevant part, and wishes to have them amended as detailed below.

Reasons for the submission

- 172 Implementation method 3.11.4.7 focuses on gathering information and scientific data to support setting “property or enterprise-level diffuse discharge limits”. In particular, this method focuses on establishing the quantum of contaminants that can be discharged at sub-catchment and FMU scale while meeting the freshwater objectives in Table 3.11-1; and adopting an adaptive management and mitigation approach (monitoring and modelling) for measuring discharges from “individual properties, enterprises and sub-catchments” to ensure that they are within these freshwater objectives.
- 173 WPL considers that this implementation method should be amended to provide the framework for the allocation of diffuse discharges in sub-catchments, once an appropriate an adaptive management and mitigation approach has been developed for the sub-catchment.
- 174 WPL also considers that the focus of this method should not be information needs, but the development of an adaptive management and mitigation approach for the sub-catchment to determine the framework for the allocation of diffuse discharges. This approach is directly linked to the implementation of Policy 7, with the amendments sought through this submission.⁸

Decision sought

- 175 Implementation method 3.11.4.7 should be amended by deleting (strikethrough) and inserting the words coloured red as follows:

3.11.4.7 ~~Adopting an adaptive management and mitigation approach for sub-catchments for information needs to support any future~~ allocation of diffuse discharges.

Gather information and commission appropriate scientific research to inform ~~the development and implementation of any future~~ a framework for the allocation of diffuse discharges including:

- a. Implementing processes that will support the ~~development of an adaptive management and mitigation approach for the setting of property or enterprise-level diffuse discharge limits in the future~~ each sub-catchment.
- b. Researching: ...

⁸ See A16 above.

A30. Specific provision

- 176 Section 3.11.4.8 Implementation method 3.11.4.8 Reviewing Chapter 3.11 and developing an allocation framework for the next Regional Plan.

Submission

- 177 WPL **supports** the specific provisions in relevant part and **opposes** them in relevant part, and wishes to have them amended as detailed below.

Reasons for the submission

- 178 Implementation method 3.11.4.8 focuses on developing allocation frameworks to reduce manage contaminant discharges at a "property or enterprise-level".
- 179 WPL considers that adopting an adaptive management and mitigation approach for the sub-catchment will provide an opportunity to develop an allocation framework for sub-catchments. The review of Chapter 3.11 should recognise this opportunity.

Decision sought

- 180 Implementation method 3.11.4.8 should be amended by inserting a new paragraph (b) and renumbering notified paragraphs (b) etc (words coloured red) as follows:

The Waikato Regional Council will:

- a. Develop discharge allocation frameworks for individual properties and enterprises based on information collected under Method 3.11.4.7, taking into account the best available data, knowledge and technology at the time; ~~and~~
- b. Monitor and review any adaptive management and mitigation approach for the sub-catchment developed to determine a discharge allocation regime for the relevant sub-catchment as part of Stage 1; and
- c. ...

A31. Specific provision

- 181 Section 3.11.4 Implementation method 3.11.4.9 Managing the effects of urban development.

Submission

- 182 WPL **supports** the specific provisions in relevant part, and wishes to have them retained or amended as detailed below.

Reasons for the submission

- 183 This provision is consistent with the consequential amendments to the WRP in Part D of PC1.
- 184 WPL supports a sub-catchment scale approach to water quality issues, and considers that addressing the effects of urban development at a sub-catchment level is critical in order to support and complement the allocation framework being developed to manage the effects of rural activities.

Decision sought

- 185 Implementation method 3.11.4.9 should be retained as notified or amended by similar wording to like effect.

A32. Specific provision

- 186 Section 3.11.4 Implementation method 3.11.4.10 Accounting system and monitoring.

Submission

- 187 WPL **supports** the specific provisions in relevant part and **opposes** them in relevant part, and wishes to have them amended as detailed below.

Reasons for the submission

- 188 Implementation method 3.11.4.10 focuses on (inter alia) establishing accounting and monitoring systems for each FMU, particularly in relation to sub-catchments that are not represented in the WRC monitoring network; and establishing information and accounting systems for managing diffuse discharges at a property or enterprise scale.
- 189 While WPL supports the intent of paragraph (d), it considers an amendment is required to clarify that management is required at a sub-catchment level.

Decision sought

- 190 Implementation method 3.11.4.10 (paragraph (d)) should be amended by inserting the words coloured red as follows:

- d. An information and accounting system for the diffuse discharges from properties and enterprises that supports the management of nitrogen, phosphorus, sediment and microbial pathogens diffuse discharges at an enterprise or property scale or sub-catchment level.

A33. Specific provision

- 191 Section 3.11.4 Implementation method 3.11.4.11 Monitoring and evaluation of the implementation of Chapter 3.11.

Submission

- 192 WPL **supports** the specific provisions in relevant part and **opposes** them in relevant part, and wishes to have them amended as detailed below.

Reasons for the submission

- 193 Implementation method 3.11.4.11 focuses on research being carried out by WRC to "identify methods to measure at sub-catchment, property and enterprise level" the contribution made to reducing contaminant discharges during the plan period.
- 194 WPL considers that an adaptive management and mitigation approach will provide an opportunity to research and measure actions that contribute to reductions in the discharge of contaminants at the sub-catchment level. The monitoring and evaluation of Chapter 3.11 should recognise this opportunity.

Decision sought

- 195 Implementation method 3.11.4.11 should be amended by deleting (strikethrough) and inserting the words coloured red as follows:

b. Research and identify methods including an adaptive management and mitigation planning approach developed for the relevant sub-catchment to measure actions at a sub-catchment, property and enterprise level, and their contribution to reductions in the discharge of contaminants.

...

d. Collate data on the number of land use resource consents issued under the rules of this chapter, the number of Farm Environment Plans completed, compliance with the actions listed in Farm Environment Plans, Nitrogen Reference Points for properties and enterprises, and nitrogen discharge data reported under Farm Environment Plans, and the actions for discharge allocation for the relevant sub-catchment.

e. Work with industry to collate information on the functioning and success of any Certified Industry Scheme adaptive management and mitigation approach developed by an enterprise.

A34. Specific provision

- 196 Section 3.11.4 Implementation method 3.11.4.12 Support research and dissemination of best practice guidance to reduce diffuse discharges.

Submission

- 197 WPL **supports** the specific provisions in relevant part and **opposes** them in relevant part, and wishes to have them retained or amended as detailed below.

Reasons for the submission

- 198 This provision is consistent with Policy 11 but is over-ambitious (at least) in the short term, and should be amended to refer to good management practice.

Decision sought

- 199 Implementation method 3.11.4.12 should be amended by deleting references to "best" management practices and substituting them with references to "good" management practices.

A35. Specific provision

- 200 Section 3.11.5 Rule 3.11.5.1 Permitted Activity Rule – Small and Low Intensity farming activities.

Submission

- 201 WPL **supports** the specific provisions in relevant part, and wishes to have them retained or amended as detailed below.

Reasons for the submission

- 202 Rule 3.11.5.1 provides for small and low intensity farming activities undertaken on a single property which is less than or equal to 4.1 hectares in area.

- 203 This provision is generally consistent with Policy 4. But it is for note that PC1 does not include any provisions that would require resource consent where, cumulatively, contaminant discharges in a sub-catchment exceed the relevant water quality targets (similar to Rule 3.3.4.23 and Section 3.3.3 Policy 8(3) in the

WRP that regulate non-qualifying “permitted” takes to prevent over-allocation). Likewise PC1 does not include any relevant conditions, standards or terms to ensure that properties and enterprises conform with the methods in Chapter 3.3 of the WRP regarding water quantity.

Decision sought

- 204 Rule 3.11.5.1 should be retained as notified or amended by similar wording to like effect.

A36. Specific provision

- 205 Section 3.11.5 Rule 3.11.5.2 Permitted Activity Rule – Other farming activities.

Submission

- 206 WPL **supports** the specific provisions in relevant part, and wishes to have them retained or amended as detailed below.

Reasons for the submission

- 207 Rule 3.11.5.2 provides (inter alia) for other farming activities on a property or enterprise that is greater than 20 hectares in area, but limits the diffuse nitrogen discharge allowance to whichever is the lesser of the Nitrogen Reference Point (**NRP**) or 15kg nitrogen/hectare/year for the property or enterprise.
- 208 This provision is generally consistent with Policy 4. But it is for note that PC1 does not include any provisions that would require resource consent where, cumulatively, contaminant discharges in a sub-catchment exceed the relevant water quality targets (similar to Rule 3.3.4.23 and Section 3.3.3 Policy 8(3) in the WRP that regulate non-qualifying “permitted” takes to prevent over-allocation). Likewise PC1 does not include any relevant conditions, standards or terms to ensure that properties and enterprises conform with the methods in Chapter 3.3 of the WRP regarding water quantity.

Decision sought

- 209 Rule 3.11.5.2 should be retained as notified or amended by similar wording to like effect.

A37. Specific provision

- 210 Section 3.11.5 Rule 3.11.5.3 Permitted Activity Rule – Farming activities with a Farm Environment Plan under a Certified Industry Scheme.

Submission

- 211 WPL **supports** the specific provisions in relevant part and **opposes** them in relevant part, and wishes to have them amended as detailed below.

Reasons for the submission

- 212 While Certified Industry Schemes are laudable, developing and approving these schemes is outside the functions, powers and duties of WRC under the RMA or the LGA.
- 213 Developing and approving Certified Industry Schemes is more properly a function of relevant industry groups or national government (e.g. Standards NZ).
- 214 The rule will therefore be redundant until such time as a Certified Industry Scheme is approved by a relevant industry group or national government, and a subsequent variation or plan change may be required to incorporate the scheme into the regional plan by reference - unless other submissions request that specific extant schemes should be incorporated by reference now.

Decision sought

- 215 Rule 3.11.5.3 should be deleted; or
- 216 A variation or plan change should be prepared to incorporate any relevant Certified Industry Scheme into the WRP by reference.
- 217 Consequential amendments should also be made throughout PC1 to insert (where relevant) the words "any relevant" before references to "Certified Industry Scheme(s)".⁹

A38. Specific provision

- 218 Section 3.11.5 Rule 3.11.5.4 Controlled Activity Rule – Farming activities with a Farm Environment Plan not under a Certified Industry Scheme.

Submission

- 219 WPL **supports** the specific provisions in relevant part and **opposes** them in relevant part, and wishes to have them amended as detailed below.

⁹ E.G.: Section 3.11.2; Policies 2 and 3; Implementation method 3.11.4.11; Rule 3.11.5.4; and Schedule 1.

Reasons for the submission

- 220 Rule 3.11.5.4 references the priorities for implementing the management of land and water resources determined in accordance with Policy 8 and Table 3.11-2, and also provides a NRP to be produced by a property or enterprise subject (inter alia) to preparing a Farm Environment Plan when making a resource consent application. This rule also allows diffuse nitrogen discharges to be increased over and above the property or enterprise's NRP where "suitable mitigations are specified" in the resource consent application.
- 221 This rule should be amended to provide a consent trigger for sub-catchment management applications by an enterprise to avoid the situation where consent cannot be granted for what could otherwise be regarded as "permitted activities" before any one of the notified priority dates and events.

Decision sought

- 222 Rule 3.11.5.4 should be amended by inserting the words coloured red and renumbering the standards and terms as follows:

Except as provided for in Rule 3.11.5.1 and Rule 3.11.5.2 the use of land for farming activities (excluding commercial vegetable production) where that land is not registered to a relevant Certified Industry Scheme, and the associated diffuse discharge of nitrogen, phosphorus, sediment and microbial pathogens onto or into land in circumstances which may result in those contaminants entering water is a permitted activity until the point in time or event (whichever occurs first) specified below:

- 1 Resource consent is granted to an enterprise for sub-catchment land use change and farming activities and associated diffuse discharges in conformance with Policy 6(c);
- 2 1 January 2020 for properties or enterprises in Priority 1 sub-catchments listed in Table 3.11-2, and properties or enterprises with a Nitrogen Reference Point greater than the 75th percentile nitrogen leaching value;
- 3 1 January 2023 for properties or enterprises in Priority 2 sub-catchments listed in Table 3.11-2;
- 4 1 January 2026 for properties or enterprises in Priority 3 sub-catchments listed in Table 3.11-2.

....

A39. Specific provision

- 223 Section 3.11.5 Rule 3.11.5.5 Controlled Activity Rule – Existing commercial vegetable production.

Submission

- 224 WPL **supports** the specific provisions in relevant part and **opposes** them in relevant part, and wishes to have them retained or amended as detailed below.

Reasons for the submission

- 225 Rule 3.11.5.5 provides (inter alia) for sub-catchment level information regarding commercial vegetable production to be provided to WRC.
- 226 This provision may require similar amendments to those made to the rules regarding farming activities to ensure that the provisions pertaining to commercial vegetable production are practicable, and can be given effect to in a way that will implement key themes in PC1.

Decision sought

- 227 Rule 3.11.5.5 should be amended consistent with the amendments made to the rules regarding farming activities by this submission or by similar wording to like effect.

A40. Specific provision

- 228 Section 3.11.5 Rule 3.11.5.6 Restricted Discretionary activity rule – the use of land for farming activities.

Submission

- 229 WPL **supports** the specific provisions in relevant part and **opposes** them in relevant part, and wishes to have them amended as detailed below.

Reasons for the submission

- 230 The rule should be amended to provide for sub-catchment management applications to be made by an enterprise (consistent with the amendments made to the policies and methods above)¹⁰ as a restricted discretionary activity by inserting new Rules 3.11.5.6.A and 3.11.5.6.C, and by inserting links to Policies 6(b) and 10-13 regarding the interpretation of renumbered Rule 3.11.5.6.B.

¹⁰ See A10, A11, A13, A14, A16, A17, A18, A27, and A38 above.

Decision sought

- 231 Rule 3.11.5.6 should be amended by inserting the words coloured red and renumbering the notified provisions as follows:

Rule 3.11.5.6 Restricted Discretionary activity rule – the use of land for farming activities

- A. The use of land by an enterprise for sub-catchment farming activities and the associated diffuse discharges of nitrogen, phosphorus, sediment and microbial pathogens onto or into land in circumstances which may result in those contaminants entering water is a **restricted discretionary activity** (requiring resource consent) subject to the following requirements:

A Sub-catchment management plan (prepared in accordance with [new] Schedule 2) is to be provided to the Waikato Regional Council at the time when the resource consent application is lodged.

Waikato Regional Council restricts its discretion under Rule 3.11.5.6.A over the following matters:

- i. Conformance with Policy 6(c);
 - ii. Cumulative effects on water quality in the relevant sub-catchment(s);
 - iii. The content of the **Sub-catchment management plan** prepared for the relevant sub-catchment by the relevant enterprise in accordance with the requirements of [new] **Schedule 2**;
 - iv. The need for and content of a Farm Environmental Plan;
 - v. The adoption of an adaptive management and mitigation approach to manage diffuse discharges of nitrogen, phosphorus, sediment and microbial pathogens;
 - vi. The term of the resource consent having regard to Policy 13;
 - vii. The time frame and circumstances under which the consent conditions may be reviewed.
- B. The use of land for farming activities that does not comply with the conditions, standards or terms of Rules 3.11.5.1 to 3.11.5.5 and the associated diffuse discharge of nitrogen, phosphorus, sediment and microbial pathogens onto or into land in circumstances which may result in those contaminants entering water is a **restricted discretionary activity** (requiring resource consent).

Waikato Regional Council restricts its discretion under Rule 3.11.5.6.B over the following matters:

- i. Cumulative effects on water quality of the catchment of the Waikato and Waipa Rivers.
 - ii. The diffuse discharge of nitrogen, phosphorus, sediment and microbial pathogens.
 - iii. The need for and content of a Farm Environment Plan.
 - iv. The term of the resource consent having regard to Policy 13.
 - v. The monitoring, record keeping, reporting and information provision requirements for the holder of the resource consent.
 - vi. The timeframe and circumstances under which the consent conditions may be reviewed.
 - vii. The matters addressed by Schedules A, B and C.
- C. The use of land for farming activities and the associated diffuse discharge of nitrogen, phosphorus, sediment and microbial pathogens onto or into land in circumstances which may result in those contaminants entering water that does not comply with the conditions, standards or terms of Rules 3.11.5.6.A or 3.11.5.6.B is a **discretionary activity** (requiring resource consent) subject to the following requirements:

A Sub-catchment management plan (prepared in accordance with [new] Schedule 2) is to be provided to the Waikato Regional Council at the time when the resource consent application is lodged.

Notification:

Consent applications under Rules 3.11.5.6.A, 3.11.5.6.B, and 3.11.5.6.C will be considered without notification, and without the need to obtain written approval of affected persons.

Advisory note:

The assessment of any applications under these rules shall take into account the matters identified in Policies 6(b) and 10 - 13 of Section 3.11.3.

A41. Specific provision

- 232 Section 3.11.5 Rule 3.11.5.7 Non complying activity rule – Land Use Change.

Submission

- 233 WPL **supports** the specific provisions in relevant part and **opposes** them in relevant part, and wishes to have them amended as detailed below.

Reasons for the submission

- 234 This rule should be amended to provide a hybrid rule for sub-catchment land use change as restricted discretionary and discretionary activities, and all other land use changes as a non-complying activity.
- 235 There is also a credible argument for also amending the rule further to provide for land use change regarding Maori land in conformity with Policies 6(a) and 16 as a discretionary activity. Beyond that, while WPL has no expertise in developing Maori land, there is no reason why such land use change could not be provided for as a restricted discretionary activity if other submitters are able to draft appropriate criteria for the exercise of restricted discretion.

Decision sought

- 236 Rule 3.11.5.7 should be amended by deleting (strikethrough) and inserting the words coloured red and renumbering the notified provisions as follows:
- A. Any of the following sub-catchment changes in the use of land by an enterprise from that which was occurring at 22 October 2016 within the subject land area:
1. Woody vegetation to farming activities; or
 2. Any livestock grazing other than dairy farming to dairy farming; or
 3. Arable cropping to dairy farming
- is a **restricted discretionary activity** (requiring resource consent) subject to the following requirements:
- A Sub-catchment management plan (prepared in accordance with [new] Schedule 2) is to be provided to the Waikato Regional Council at the time when the resource consent application is lodged.
- Waikato Regional Council restricts its discretion over the following matters:
- i. Conformance with Policy 6(c);

- ii. The content of the **Sub-catchment management plan** prepared for the sub-catchment by the relevant enterprise in accordance with the requirements of [new] **Schedule 2**;
 - iii. The need for and content of a Farm Environmental Plan;
 - iv. The adoption of an adaptive management and mitigation approach to manage diffuse discharges of nitrogen, phosphorus, sediment and microbial pathogens;
 - v. The term of the resource consent having regard to Policy 13;
 - vi. The time frame and circumstances under which the consent conditions may be reviewed.
- B. Any changes in the use of land that enables the development of tangata whenua ancestral lands in conformity with Policies 6(a) and 16 is a **restricted discretionary activity / discretionary activity** (requiring resource consent).
- C. Any sub-catchment changes in the use of land by an enterprise from that which was occurring at 22 October 2016 within the subject land area that does not conform with the matters in Rule 3.11.5.7.A, where prior to 1 July 2026 the change exceeds a total of 20 hectares, is a **discretionary activity** (requiring resource consent) subject to the following requirements:

A Sub-catchment management plan (prepared in accordance with [new] Schedule 2) is to be provided to the Waikato Regional Council at the time when the resource consent application is lodged.

Notification

Consent applications under Rules 3.11.5.7.A, 3.11.5.7.B, and 3.11.5.7.C will be considered without notification, and without the need to obtain written approval of affected persons.

- D. ~~Notwithstanding any other rule in this Plan,~~ Except as provided for in Rules 3.11.5.7.A, 3.11.5.7.B and 3.11.5.7.C any of the following changes in the use of land from that which was occurring at 22 October 2016 within a property or enterprise located in the Waikato and Waipa catchments, where prior to 1 July 2026 the change exceeds a total of 4.1 hectares:

...

A42. Specific provision

237 Section 3.11.5 Rules.

Submission

- 238 WPL **supports** the specific provisions in relevant part and **opposes** them in relevant part, and wishes to have them amended as detailed below.

Reasons for the submission

- 239 Rules 3.11.5.4, 3.11.5.5 and 3.11.5.6 provide for resource consent to be granted for farming activities and commercial vegetable production (and associated diffuse discharges) as controlled or restricted discretionary activities for periods of up to 25 years or longer.
- 240 However, no express provision is made for the transfer of such consents under PC1. As a result, discretionary activity resource consent would be required for any transfer to another site or to any person by virtue of the default rule in s 87B(1)(b) of the RMA. This position is not consistent with the controlled and restricted discretionary rules in PC1. Express provision should therefore be made for such transfers, similar to the provision made for the transfer of water take permits in Section 3.4.4 of the WRP.
- 241 Establishing a NRP for properties and enterprises is a key theme running through Policies 2 and 3 that provide for a tailored approach to reducing diffuse discharges from farming activities and commercial vegetable production, Objective 4 and Policy 5 that provide for a staged approach to sub-catchment management, and Implementation method 3.11.4.11 regarding monitoring and evaluation of the implementation of PC1. These provisions will be given effect to through (inter alia) Rules 3.11.5.4 to 3.11.5.6 that provide for the grant of resource consent for farming activities and commercial vegetable production, and the new rules for these activities requested by WPL in this submission. The correlation between the NRP as referenced in these rules and the grant of any resource consents pursuant to these rules will effectively vest management or ownership rights of the NRP (or any refined sub-catchment input loads) in the consent holder.
- 242 The provision made for enterprises in PC1 will encourage landowners to collaborate in managing contaminant discharges, and will enable the short and long term freshwater objectives to be achieved at scale and in a way that reduces compliance and implementation costs both for land owners and WRC. To ensure that these economic and environmental results can be achieved in practice, the transfer rules in PC1 need to provide for the merger of consents to ensure that properties and enterprises can collaborate and combine, and allow them to split or break-up where managing discharges together is no longer practicable. These situations will inevitably result in the amalgamation or

subdivision of the NRP. WPL considers that these transactions will be inherently commercial and that they should not be subject to regulation under the RMA, apart from ensuring that the environmental effects of any amalgamation or subdivision of the NRP (and associated contaminant discharges) are the same or similar in character, intensity and scale before and after transfer.

Decision sought

- 243 Section 3.11.5 should be amended by inserting two new rules (words coloured red) as follows:

Rule 3.11.5.8 – Permitted Activity Rule – Transfer of Discharge Permits pertaining to the merger of properties or enterprises to form an enterprise or to the split or break-up of an enterprise in the same sub-catchment

The transfer of part or all of any resource consent for farming activities or commercial vegetable production and the associated diffuse discharge of contaminants granted pursuant to Rules 3.11.5.4, 3.11.5.5 or 3.11.5.6 to another property or enterprise for another site is a **permitted activity** subject to the following conditions:

1. The transfer does not worsen the actual or potential effect of any discharges on the environment; and
2. The transfer does not result in any discharges that contravene a national environmental standard; and
3. Both sites are in the same sub-catchment; and
4. Written notice of the transfer is given to Waikato Regional Council; and
5. A Farm Environment Plan or a Sub-catchment management plan (as relevant) has been prepared in accordance with Schedule 1 or [new] Schedule 2 by the transferee.

Rule 3.11.5.9 – Controlled Activity Rule – Transfer of Discharge Permits pertaining to the merger of properties or enterprises to form an enterprise or to the split or break-up of an enterprise in the same Freshwater Management Unit

The transfer of part or all of any resource consent for farming activities or commercial vegetable production and the associated diffuse discharge of contaminants granted pursuant to Rules 3.11.5.4, 3.11.5.5 or 3.11.5.6 to another property or enterprise for another site is a **controlled** subject to the following conditions:

1. The transfer does not worsen the actual or potential effect of any discharges on the environment; and

2. The transfer does not result in any discharges that contravene a national environmental standard; and
3. Both sites are in the same Freshwater Management Unit as defined by this Plan; and
4. Written notice of the transfer is given to Waikato Regional Council; and
5. A Farm Environment Plan or a Sub-catchment management plan (as relevant) has been prepared in accordance with Schedule 1 or [new] Schedule 2 by the transferee.

A43. Specific provision

244 Section 3.11.5 Schedule A – Registration with Waikato Regional Council.

Submission

245 WPL **supports** the specific provisions in relevant part, and wishes to have them retained or amended as detailed below.

Reasons for the submission

246 This provision is consistent with key themes in PC1 as amended by this submission.

Decision sought

247 Schedule A should be retained as notified or amended by similar wording to like effect.

A44. Specific provision

248 Section 3.11.5 Schedule B – Nitrogen Reference Point.

Submission

249 WPL **supports** the specific provisions in relevant part and **opposes** them in relevant part, and wishes to have them amended as detailed below.

Reasons for the submission

250 Schedule B requires a property or enterprise “with a cumulative area greater than 20 hectares” to produce an NRP using either OVERSEER or some other model. In particular, Table 1 clarifies that an enterprise may include “non-contiguous properties that ... are in the same sub-catchment”.

- 251 WPL does not consider that OVERSEER is necessarily the most appropriate choice of the various alternatives (e.g. APSIM and SPASMO) that can be used to model the nitrogen (**N**) leaching and phosphorus (**P**) runoff from properties. WPL understands that it is the most widely used model but that in itself does not justify its choice as the most appropriate means of calculating the N leaching and P runoff from properties.
- 252 Additionally, any other models approved by the Chief Executive of WRC will not be incorporated into PC1 by reference in accordance with the requirements of Part 3 of Schedule 1 of the RMA, unless a subsequent variation or plan change is prepared. Thus any other models approved by the Chief Executive would (absent a variation or plan change) not have the same weight as the OVERSEER Model when resource consent decisions are made in the future.
- 253 All appropriate models (e.g. APSIM and SPASMO) should therefore be referenced in PC1.
- 254 Beyond that, the NRP is not consistent with best practice under the NPS-FM 2014 because it does not take into account any currently planned (as at 22 October 2016) or consented future land use.

Decision sought

- 255 Schedule B should be amended by deleting (strikethrough) and inserting the words coloured red as follows:

- 256 Paragraph (c):

The Nitrogen Reference Point must be calculated using either the current version of the OVERSEER or the APSIM or the SPASMO Model ~~(or any other model approved by the Chief Executive of the Waikato Regional Council).~~

- 257 Paragraph (d):

The Nitrogen Reference Point data shall comprise the electronic output file from either the OVERSEER or the APSIM or the SPASMO Model ~~or other approved model~~, and where the OVERSEER Model is used, it must be calculated using the OVERSEER Best Practice Data Input Standards 2016, with the exceptions and inclusions set out in Schedule B Table 1.

- 258 Paragraph (f):

The reference period is the two financial years covering 2014/2015 and 2015/2016 (including any currently planned or consented future land use), except for commercial vegetable production in which case the reference period is 1 July 2006 to 30 June 2016.

A45. Specific provision

259 Section 3.11.5 Schedule C – Stock exclusion.

Submission

260 WPL **supports** the specific provisions in relevant part, and wishes to have them retained or amended as detailed below.

Reasons for the submission

261 Schedule C regarding stock exclusion from water bodies provides for this occur on a sub-catchment basis in accordance with the priority dates referenced in paragraph (4).

262 This provision is consistent with Policy 1 and managing diffuse discharges from farming activities.

Decision sought

263 Schedule C should be retained as notified or amended by similar wording to like effect.

A46. Specific provision

264 Section 3.11.5 Schedule 1 Requirements for Farm Environment Plans.

Submission

265 WPL **supports** the specific provisions in relevant part and **opposes** them in relevant part, and wishes to have them amended as detailed below.

Reasons for the submission

266 Schedule 1 pertaining to the requirements for Farm Environment Plans prepared by a property or enterprise, provides that such plans must include an “assessment of the risk” of diffuse discharges associated with farming activities having regard to the freshwater objectives in Table 3.11-1.

267 While paragraph 1 refers to both “property or enterprise” the remainder of Schedule 1 does not use consistent terminology, e.g. the introduction to paragraph 2 refers only to a “property” in relation to risk assessment, while paragraph 2(e) refers only a “farm enterprise” in relation to nutrient budget calculation. Accordingly, Schedule 1 should be amended to provide for consistent references to a “property or enterprise” throughout.

- 268 Paragraphs 2(e) and 5(a) should also be amended to ensure that other appropriate predictive models are incorporated into the plan by reference. A new paragraph 6 should also be inserted to provide for the review of Farm Environment Plans to bring them into synch with any relevant Sub-catchment management plan.
- 269 Beyond that, Certified Industry Schemes are referenced in Schedule 1. While these Schemes are laudable, developing and approving these schemes is outside the functions, powers and duties of WRC under the RMA or the LGA.

Decision sought

- 270 Schedule 1 should be amended by deleting (strikethrough) and inserting the words coloured red as follows:

- 271 Paragraph 2(e):

A description of nutrient management practices including a nutrient budget for the farm enterprise calculated using either the ~~model current version of the OVERSEER or the APSIM or the SPASMO Model~~ in accordance with the ~~OVERSEER relevant use protocols, or using any other model or method approved by the Chief Executive Officer of Waikato Regional Council.~~

- 272 Paragraph 5(a):

Actions, timeframes and other measures to ensure that the diffuse discharge of nitrogen from the property or enterprise, as measured by the five-year rolling average annual nitrogen loss as determined by the use of ~~either the current version of the OVERSEER or the APSIM or the SPASMO Model~~, does not increase beyond the property or enterprise's Nitrogen Reference Point (~~as calculated in accordance with paragraph (f) of Schedule B~~), unless other suitable mitigations are specified; or

- 273 A new paragraph 6:

Farm Environment Plans will be subject to review within the period of 6 months following the preparation of any relevant Sub-catchment management plan pertaining to a property or enterprise to ensure that Farm Environment Plans are not inconsistent with relevant Sub-catchment management plans.

- 274 Schedule 1 should also be amended to provide for consistent references to a "property or enterprise" throughout, and all references to Certified Industry Schemes should be amended to refer to "any relevant Certified Industry Scheme".

A47. Specific provision

- 275 Section 3.11.5 Schedule 2 Certification of Industry Schemes.

Submission

- 276 WPL **supports** the specific provisions in relevant part and **opposes** them in relevant part, and wishes to have them amended as detailed below.

Reasons for the submission

- 277 While Certified Industry Schemes are laudable, developing and approving these schemes is outside the functions, powers and duties of WRC under the RMA or the LGA.
- 278 Developing and approving Certified Industry Schemes is more properly a function of relevant industry groups or national government (e.g. Standards NZ).

Decision sought

- 279 Schedule 2 should be deleted, and as a consequence the new schedule regarding Sub-catchment management plans (sought by this submission)¹¹ should be numbered as Schedule 2.

A48. Specific provision

- 280 Section 3.11.6 Table 3.11-1 Short-term and long-term numerical water quality targets for the Waikato and Waipa River catchments (and explanatory note).

Submission

- 281 WPL **supports** the specific provisions in relevant part and **opposes** them in relevant part, and wishes to have them amended as detailed below.

Reasons for the submission

- 282 The freshwater objectives in Table 3.11-1, together with the Objectives in Chapter 3.11, are designed to guide decision-making under the RMA. They are generally (e.g for the Waikato River adjacent to the Estate) the same as the current state of water quality so that there will be no short-term or long-term decline in water quality. In several of the tributary sub-catchments, the freshwater objectives are set in a way that will require a reduction in contaminant discharges in order to meet the 80 year long-term freshwater objectives.
- 283 While generally supported, this approach is problematic because it uses lake attributes (chlorophyll a, total nitrogen (**TN**) and total phosphorus (**TP**)) and a non-NPS-FM 2014 attribute

¹¹ See A52 below.

(clarity), and applies them to the Waikato River (but not its tributaries or the Waipa catchment). However, the impoundment of the river by the Waikato hydro scheme has modified nutrient-phytoplankton dynamics, such that the relationship between nutrients and chlorophyll a in the river below the Taupo control gates is generally similar to that observed in lakes. However, there remains some variability in this relationship and whilst there is a strong positive relationship at the sub-catchment scale, at a site scale the sites immediately below Lake Taupo (between Taupo control gates and Ohaaki Bridge) do not show a positive relationship between nutrients and chlorophyll a. However, at the Ohakuri tailrace site and most sites downstream of this point, there is a strong positive relationship between TP and chlorophyll a concentrations, indicating that the river is probably functioning as a lake below this location.

- 284 The hydro lakes in the Waikato River are more aligned with a polymictic lake as they are frequently mixed by incoming water flows. This is recognised in some of the technical work undertaken to support the development of the NPS-FM 2014, where the hydro lakes were included, but were treated as 'polymictic' lakes (Verberg, 2012).
- 285 Therefore, from an appearance and an ecological function perspective, the Waikato River can be considered to change from a riverine system to a lacustrine system somewhere within the Ohaaki-Ohakuri reach. Based on the ecological functioning of the river at Ohaaki, the application of the NPS-FM 2014 freshwater objectives for lakes is questioned, as the river at this location has the physical and ecological characteristics of a river. This approach also lends weight to the need to subdivide Sub-catchment 66 into Sub-catchments 66A (Tahorakuri) as riverine and 66B (Ohakuri) as lacustrine. This is consistent with the rationale for not applying the NPS-FM 2014 freshwater objectives to the tributaries of the Waikato River and the Waipa catchment (Waikato River Authority, 2016).
- 286 PC1 also asserts that reductions in diffuse nitrogen discharges will be required as result of the time lag between discharges entering groundwater and subsequently reaching the Waikato River. While this will generally be around 20 years for most of Sub-catchments 56, 58, 62, 65, 66A, 66B, 72, 73, and 74, specific lag effects will in practice differ (i.e. longer) in each sub-catchments due to variation in hydrology and other factors - e.g. geothermal influence. These factors should be taken into account (as a matter of best practice) when gathering information from properties and enterprises and applying an adaptive management and mitigation approach.
- 287 Accordingly, a nuanced approach is required to managing farming activities and commercial vegetable production, regulating land use change, and setting freshwater objectives to

give effect to the provisions in relevant statutory planning instruments.¹²

- 288 Beyond that, PC1 does not include consistent cross-references to the freshwater objectives in the NPS-FM 2014. For example, the terms "objectives", "limits" and "targets" are used interchangeably in Section 3.11.6. A more consistent approach would be to refer to them throughout as "freshwater objectives". PC1 also lacks appropriate cross-referencing between the sub-catchment identification numbers in Table 3.11-2 and the sub-catchment names in Table 3.11-1.
- 289 Overall, the 10 year freshwater objectives in Table 3.11-1 do not appear to include lag effects, this may be due to a lack of any relevant data regarding lag times in the WRC s 32 report or supporting documents. Similarly, the 80 year freshwater objectives do not appear to explicitly include mitigations. The attribute values selected for the freshwater objectives do not include an allowance for uncertainty of measurement so that they could be regarded (with confidence) as a robust reporting framework. For the reasons given above, the freshwater objectives in the table are not repeatable or representative as freshwater objectives under the NPS-FM 2014.

Decision sought

- 290 PC1 should be amended to use consistent cross-referencing to the freshwater objectives throughout the proposal.
- 291 Table 3.11-1 should be amended by including a new first column which identifies and links the Sub-catchment name with the relevant Sub-catchment number as shown in manuscript on the copy of Table 3.11-1 in Appendix C **attached** to this submission.
- 292 Table 3.11-1 should also be amended by substituting the short-term and long-term numerical freshwater objectives for Sub-catchments 56, 58, 59, 62, 65, 66B, 72, 73 and 74 by the alternative freshwater objectives also shown in manuscript in the table in Appendix C referred to above.
- 293 Table 3.11-1 should be further amended by inserting an additional row to provide freshwater objectives for Sub-catchment 66A (Tahorakuri) also shown in manuscript in the table in Appendix C referred to above, as a consequence of subdividing Sub-catchment 66.

¹² It is for note that, the regulatory approach in Table 3.11-1 and related PC1 provisions is inconsistent with Chapter 3.3 of the WRP (Implementation method 3.3.4.8) that involves managing flow for freshwater takes in a way that naturalises the flow of the Waikato River and its tributaries above Karapiro Dam to remove the influence of the Waikato hydro scheme.

A49. Specific provision

- 294 Section 3.11.6 Table 3.11-2 List of sub-catchments showing Priority 1, Priority 2, and Priority 3 sub-catchments.

Submission

- 295 WPL **supports** the specific provisions in relevant part and **opposes** them in relevant part, and wishes to have them amended as detailed below.

Reasons for the submission

- 296 As a consequence of subdividing sub-catchment 66 to create Sub-catchments 66A and 66B, the table should be amended to provide for both new sub-catchments as Priority 3 sub-catchments.

Decision sought

- 297 Table 3.11-2 should be amended by deleting the row pertaining to sub-catchment 66 and inserting two new rows in substitution to list new Sub-catchments 66A and 66B as Priority 3 sub-catchments.

A50. Specific provision

- 298 Section 3.11.6 Map 3.11-2 Healthy Rivers Wai Ora sub-catchments.

Submission

- 299 WPL **supports** the specific provisions in relevant part and **opposes** them in relevant part, and wishes to have them amended as detailed below.

Reasons for the submission

- 300 As a consequence of subdividing sub-catchment 66 to create Sub-catchments 66A and 66B, the map should be amended to provide for both new sub-catchments. This amendment is illustrated on the map in Appendix D **attached** to this submission.

Decision sought

- 301 Map 3.11-2 should be amended to show the subdivision of Sub-catchment 66 into two new Sub-catchments 66A and 66B and coloured appropriately to reflect their priority level.

A51. Specific provision

- 302 Amendments to Section 5.1.5 of the WRP – Conditions for Permitted Activity Rule 5.1.4.11 Soil Disturbance, Roading and Tracking and Vegetation Clearance.

Submission

- 303 WPL **supports** the specific provisions in relevant part, and wishes to have them retained or amended as detailed below.

Reasons for the submission

- 304 This provision is consistent with key themes in PC1 as amended by this submission.

Decision sought

- 305 Consequential amendments to the WRP should be retained as notified or amended by similar wording to like effect.

A52. Specific provision

- 306 Amendments to the Glossary of Terms in the WRP.

Submission

- 307 WPL **supports** the specific provisions in relevant part and **opposes** them in relevant part, and wishes to have them amended as detailed below.

Reasons for the submission

- 308 WPL strongly supports the sub-catchment based approach to regulating contaminant discharges associated with farming activities and commercial vegetable production in PC1. It also supports the provision made for enterprises that will encourage land owners to collaborate in managing contaminant discharges. These approaches will enable the short and long term freshwater objectives to be achieved at scale and in a way that reduces compliance and implementation costs both for land owners and WRC. Building on these approaches WPL seeks that a number of new definitions should be included in the Glossary to ensure that these approaches can be fully implemented in practice. Accordingly, WPL seeks the inclusion of new definitions regarding "Adaptive management", "Decision Support Tool", "Mitigation measures", and "Sub-catchment management plan". As a consequence of these amendments new Schedules 2-4 need to be inserted into PC1 as set out in Appendix B of this submission to give effect to these definitions.

- 309 The consequential amendments to the WRP in Part D of PC1 amend the rules in Chapter 3.5 of the WRP regarding farm effluent discharges by inserting the term "point-source" into Rules 3.5.5.1, 3.5.5.2, 3.5.5.3, 3.5.5.4, 3.5.5.5 and 3.5.5.6 in the WRP.
- 310 Notwithstanding these amendments, the amended definition of point-source discharges inserted into the Glossary of Terms does not include any reference to discharges associated with farming activities activities. This is a significant omission that should be rectified.
- 311 Amend the Glossary of Terms to insert the following new definitions as a consequence of the defined terms used in Policy 6(c). The definition of "point source" is also amended to be consistent with the consequential amendments made in Part D of PC1 regarding the provisions in Chapter 3.5 of the Plan.

Decision sought

- 312 The Glossary of Terms should be amended by inserting the words and new definitions coloured red as follows:

Adaptive management means the approach to avoiding, remedying or mitigating any actual or potential adverse effects on the environment that addresses risk or uncertainty arising from consented sub-catchment-wide land use change and farming activities and associated contaminant discharges carried out by an enterprise as detailed in **Schedule 3**, namely:

- a) The need for good baseline information about the receiving environment;
- b) Whether consent conditions provide for effective monitoring of adverse effects using appropriate indicators;
- c) That thresholds are set to trigger remedial action before the effects become overly damaging; and
- d) That any effects that might arise can be remedied before they become irreversible.

Decision Support Tool means an information and accounting framework that can be used to assist with analysis and decision-making processes within an enterprise (or property) that supports the management of diffuse discharges from properties of nitrogen, phosphorus, sediment and microbial pathogens at a sub-catchment scale.

Mitigation measures means the measures (as detailed in **Schedule 4**) to be undertaken by an enterprise to ensure that the actual effects of carrying out sub-catchment-wide land use

change and farming activities and associated contaminant discharges are within the scope of the AEE that accompanied the original resource consent application.

Point-source discharge: For the purposes of Chapters 3.5 and 3.11, means discharges associated with farming land use, and discharges from a stationary or fixed facility, including the irrigation onto land from consented industrial and municipal wastewater systems.

Sub-catchment management plan means a plan for the relevant part of a PC1 sub-catchment (Map 3.11-2) prepared following a collaborative process involving iwi and other stakeholders, that identifies water quality issues and principles and management actions (including Decision Support Tools) required to manage these issues.

- 313 As a consequence insert into PC1 new Schedules 2, 3 and 4 (as set out in Appendix B **attached** to this submission) to give effect to the new definitions referred to above.

A53. Specific provision

- 314 Consequential amendments to the WRP.

Submission

- 315 WPL **supports** the specific provisions in relevant part, and wishes to have them retained or amended as detailed below.

Reasons for the submission

- 316 This provision is consistent with key themes in PC1 as amended by this submission.

Decision sought

- 317 Consequential amendments to the WRP should be retained as notified or amended by similar wording to like effect.

APPENDIX B

- 1 The following new Schedules should be inserted into PC1 as a consequence of the amendments made to the Glossary of Terms:¹³

Schedule 2 Requirements for a Sub-catchment management plan

The purpose of a **Sub-catchment management plan** is to identify the current water quality in a sub-catchment (within Table 3.11-2), whether water quality is required to be maintained, protected or restored, and methods to achieve the relevant outcome required.

In the Waikato and Waipa River Catchments, water quality outcomes and values have been determined through the Vision and Strategy.

Sub-catchment-management plans will take a proactive, prioritised and integrated 'whole of sub-catchment' approach to managing each sub-catchment's land and water, identify specific issues and include actions to:

- Maintain or improve water quality;
- Conserve soil;
- Restore and protect important biodiversity habitats;
- Meet iwi aspirations for the Waikato River.

Sub-catchment management plans are prepared by an enterprise and are intended to provide clear guidance including management actions for the preparation of **Farm Environment Plans** (as required by Schedule 1).

A Sub-catchment management plan shall as a minimum:

- a) Identify the current water quality and water quality issues at a sub-catchment level that need to be managed to achieve the Objectives to be met;
- b) Provide details of any Decision Support Tools required to measure, model, and predict discharges from individual properties and enterprises within the sub-catchment, and how they can be related to the Table 3.11-1 freshwater objectives;
- c) Establish the principles for allocation (consistent with Policy 7) of an input load based nutrient cap at the refined sub-catchment level through the development of a relationship between land use suitability and the Table 3.11-1 water quality attribute targets for the sub-catchment;

¹³ See A52 above.

- d) Provide for the management of nitrogen, phosphorus, sediment and microbial pathogen losses in the sub-catchment through mitigation measures to be undertaken by the consent holder to ensure that the actual or potential environmental effects of carrying out the allowed land use change (including any effects from subsequent farming activities) meet Objectives 1 and 3;
- e) Provide direction for the preparation and independent auditing of Farm Environment Plans to ensure farming activities operate at Good Management Practice (**GMP**) levels or better and other mitigation options;
- f) Provide an adaptive management approach (consistent with Schedule 3) to monitor and respond to actual or potential adverse effects of the land use change on the environment (including any effects from subsequent farming activities) and associated diffuse discharges;
- g) Provide independent validation for the predictive performance and accuracy of any Decision Support Tool;
- h) Provide direction for how any proposed land use changes are to be carried out in stages;
- i) Include a robust monitoring programme (real-time, reporting of contaminant losses in a suitable digital format) designed to monitor the actual or potential environmental effects of carrying out the land use change (including any effects from subsequent farming activities) over a period of 25 years from the grant of consent;
- j) Require annual monitoring and mitigation reports to be prepared by the consent holder and submitted to the Waikato Regional Council (in accordance with consent conditions proffered by the enterprise) within the period of three months after each anniversary of the grant of consent.

Schedule 3 Adaptive Management Approach

The purpose of an **Adaptive Management Approach** is to allow a flexible approach to the management of natural resources and to apply a learning cycle for each decision making step. Adaptive management is underpinned by predictive modelling to test a range of hypothetical options for their relative impacts on the current state.

A management process is then informed by the stepwise learning from changes in state modelling against the predicted outcomes. This allows informed or guided decisions rather than random exercises. Adaptive management is often required when complex ecological systems are being managed and management decisions cannot wait for final research results.

To achieve the Vision and Strategy for maintaining, protecting and restoring the health and wellbeing of the Waikato River (through Objectives 1 and 3), management at a sub-catchment level is required. To meaningfully reduce input loads and meet the water quality targets, a range of mitigation actions will be required, reinforced where appropriate by Decision Support Tools.

An Adaptive Management Approach is required to ensure that mitigations and predictions do not lead to unintended consequences for the environment and communities, or delay vital actions from being taken to achieve the Objectives. Such consequences may lead to financial costs for a community and a loss of confidence in mitigation actions. However, because predictive analysis is carried out by modelling, an Adaptive Management Approach will need to allow for adjustment of the speed at which mitigation tools are used in terms of their actual effect on water bodies. Thus depending on the available data, properties and enterprises may need to adapt their programme by accelerating or decelerating the use of mitigation depending on the monitoring results. Consent conditions should therefore provide the flexibility to achieve these outcomes.

When preparing a Sub-catchment management plan (or Farm Environmental Plan) the plan should include the following features of adaptive management (where appropriate):

- a) The existing environment is established by robust baseline monitoring;
- b) The extent of the environmental risk (including the gravity of the consequences if the risk is realised) is tested by the Decision Support Tools;
- c) Effects that might arise can be remedied before they become irreversible;
- d) The plan(s) provide for effective monitoring of adverse effects using appropriate indicators;
- e) Thresholds are set to trigger remedial action(s) before the effects become overly damaging;

- f) Where advanced mitigation is undertaken, it is staged and plans require certain criteria to be met before the next stage can proceed;
- g) Where land use change is undertaken, it is staged and any management plans require certain criteria to be met before the next stage can proceed; and
- h) There is a real ability to remove all or some of the land development that has occurred if the monitoring results demonstrate criteria are not met.

Schedule 4: Farm Mitigations for Catchment Management

The objective is to get every farm performing at Good Management Practice (**GMP**) level as a starting point. It is appropriate that GMP is implemented, and these are considered necessary before any additional mitigation can be provided.

The mitigation tools should be chosen by the relevant property or enterprise as to which is both practical and economic as part of either a Farm Environmental Plan or a Sub-catchment management plan.

The scheduled mitigations can be used in limiting the amount of each of the four key contaminants (in the input loads for land use management) from becoming discharges to groundwater and water bodies in the Waikato River system.

Mitigation of effects to water bodies of the four key contaminants from agricultural land have been divided based on whether they are modelled in OVERSEER[®] or APSIM or SPASMO.

Many management and mitigation practices serve the benefit of reducing effects for a range of contaminants, and may be included in more than one table. For example, riparian planting can reduce sediment, phosphorus and pathogens from entering water bodies.

The summary tables below identify management and mitigation tools, and indicate if they can be incorporated into OVERSEER[®], or APSIM or SPASMO as appropriate.

Microbial Pathogens

The objective of limiting the numbers of pathogens directly affecting the water is to reduce the number of animals depositing urine and faeces into water bodies either directly or indirectly by across ground transfer.

Microbial Pathogens	SPASMO, APSIM and OVERSEER [®]	Other Mitigation Tools
Good Management Practice	<p>Note: OVERSEER does not directly consider pathogens.</p> <p>Intensive Winter Grazing</p> <p>Intensive winter grazing adjacent to any river, lake, artificial water course, or wetland, will employ a (minimum) 5m vegetative strip from which stock are excluded, is maintained around the water body.</p>	<p>Fencing off all water ways to limit stock access.</p> <p>Providing bridges for stock to use when crossing the water bodies.</p>

Mitigation		<p>Good irrigation management to avoid 'flushing' faecal matter; such as avoid high effluent application rates on High Risk Soils (free draining, preferential flow, slopes).</p> <p>Establish riparian vegetation or grass strips to filter pathogens from water entering the waterway.</p> <p>Use of dung beetles to reduce in paddock pathogens from water entering the waterway.</p> <p>Use of riparian strips in highly vulnerable areas.</p> <p>Provision of wetlands in highly vulnerable areas (if waterfowl are present E.coli may increase).</p>

Phosphorus (P)

The objective of limiting the amount of P is to limit the amount which is left on the surface of the soil which is then available to be washed directly into the water bodies and to limit the amount of soil which can be washed directly into the water bodies carrying P with it.

Phosphorus	SPASMO, APSIM and OVERSEER®	Other Mitigation Tools
Good Management Practice	<p>Fertiliser applied in accordance with the Code of Practice for Nutrient Management (with emphasis on fertiliser use) 2013.</p> <p>Having all fertiliser applications to the farm applied by an accredited fertiliser applicator.</p> <p>Matching phosphorus application to optimum crop and animal production.</p>	<p>Focus on critical source areas - Control runoff from tracks, feed pads, races to prevent phosphorus entering waterways (use cut-offs/water berms).</p> <p>Minimise erosion - suitable pasture/crop cover (height and density), pole planting hill slopes, fence off stream banks/steeper slopes.</p> <p>Manage soil erosion to prevent soil entering waterways (pole planting steep slopes, minimise time cropped areas are fallow, ensuring grassed headlands are used).</p> <p>Avoid overgrazing and pugging</p>

		especially close to waterways. Grazing winter crops such that overland flow is through the crop i.e. the last break is parallel to the waterway.
Mitigation	Provision of riparian strips in highly vulnerable areas. Provision of wetlands in highly vulnerable areas. - Maintain Olsen P within target for soil type (e.g. Pumice soils Olsen P of 35 – 45, Sedimentary and Ash soils Olsen P of 20 – 30).	The introduction of dung beetles to improve soil drainage and bury faeces.

Nitrogen (N)

Nitrogen is transported from below the root zone through the soil to water bodies. The objective of limiting the amount of leaching through the soil profile is to limit the amount of N within the root zone that is then able to be washed through by excess moisture. The amount of excess N within the root zone comes from the application of N fertilisers and from the high concentration of N in the urine of cattle. The prime time when leaching occurs is during the winter months when the soil profile is full of moisture. Therefore, some of the following mitigation techniques are aimed at reducing the total amount of N in the soil while some are designed to reduce the amount of N in the soil during the late autumn and winter period.

Nitrogen	SPASMO, APSIM and OVERSEER®	Other Mitigation Tools
Good Management Practice	Fertiliser applied in accordance with the Code of Practice for Nutrient Management (with emphasis on fertiliser use) 2013. Limiting the total amount of Nitrogen fertiliser applications to a prescribed limit and none applied within the effluent disposal area or during the	Storage ponds/tanks should be of sufficient size to store effluent over the winter months and during periods where soil moisture is above field capacity. Effluent blocks sized correctly to ensure efficient use of nutrients. Improve the efficiency of effluent management systems

	<p>winter months.</p> <p>Having all fertiliser applications to the farm applied by an accredited fertiliser applicator.</p> <p>Matching nitrogen application to optimum crop and animal production.</p> <p>Irrigation Management</p> <p>Irrigation application depth and uniformity are self-checked annually in accordance with relevant IrrigationNZ Pre-Season Checklist and IRRIG8Quick Irrigation Performance Quick Test.</p> <p>Irrigation applications are undertaken in accordance with property specific soil moisture monitoring, or a soil water budget, or an irrigation scheduling calculator.</p>	<p>in order to meet minimum requirements.</p>
<p>Mitigation</p>	<p>Farm Management Practises</p> <p>Winter grazing off.</p> <p>Reduction of the total amount of N applied and nil application in the Autumn and adjustment of the seasonal stocking rate to meet the feed profile.</p> <ul style="list-style-type: none"> • Reduce annual fertiliser use to <150 kg N/ha/year. • Efficient use of N. Aiming for best response from N fertiliser by changing timing/rate/type of N fertiliser. <p>Farm Systems Change</p> <p>Reduction of the overall stocking rate to achieve reductions in N leaching.</p>	<p>Farm Management Practises</p> <p>Use of Gibberellic acid.</p> <p>Using low nitrogen, high energy/tannin supplements.</p> <p>Land use change</p> <p>Land use change of part of a property to a lower leaching land use.</p> <p>Land use change of whole of a property to a lower leaching land use.</p>

	<p>Change of land use, partial or total area.</p> <p>Use cut and carry winter crops that can be fed on a feed pad rather than winter grazed crops.</p> <p>Time off farm or pasture – use of feed pad/ herd home, especially in autumn/winter.</p> <p>Culling cows early in autumn.</p> <p>Additional Infrastructure</p> <p>Feed pad to feed all supplements.</p> <p>Restrict cow grazing on pasture in the Autumn by use of a feed pad.</p> <p>Herd Home to restrict the amount of pasture grazing by livestock.</p> <p>Land use change</p> <p>Land use change of part of a property to a lower leaching land use.</p> <p>Land use change of whole of a property to a lower leaching land use.</p>	
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Sediment

Sediment carries with it phosphorus and other compounds that can have a negative effect on aquatic life and appearance (colour/clarity) of the water body. The objective of applying good management practice is to reduce the amount of sediment entering waterways that will have a negative effect on aquatic life, appearance, and recreational use.

Contaminant		Other Mitigation Tools
Good Management Practice	<p>SPASMO, APSIM and OVERSEER</p> <p>Note: OVERSEER does not directly measure or report the effect of sediment control activities.</p>	<p>Keeping a decent pasture/crop cover, limiting any bare soil patches.</p> <p>Avoid overgrazing and pugging especially close to water bodies.</p> <p>Cultivation</p> <p>For all cultivation, adjacent to any river, lake, or artificial watercourse or a wetland, a 2m (minimum) uncultivated vegetative strip is maintained around the water body.</p> <p>Use of earth decanting bunds for broad acre horticultural production lands.</p>
Mitigation		<p>Establish riparian vegetation or grass strips to filter sediment from overland flow entering the waterway.</p> <p>Fencing off waterways including stream banks.</p> <p>Focus on critical source areas - Control runoff from tracks, feed pads, races to prevent phosphorus entering waterways (use cut-offs/water berms).</p> <p>Minimise erosion - suitable pasture/crop cover (height and density), pole planting hill slopes, fence off stream banks/steeper slopes.</p> <p>Manage soil erosion to prevent soil entering waterways (pole planting steep slopes, minimise time cropped areas are fallow, ensuring grassed headlands are used).</p> <p>Grazing winter crops such that overland flow is through the crop i.e. the last break is parallel to the waterway. Winter grazing off.</p>

APPENDIX C

Manuscript amendments to Table 3.11-1

Upper Waikato River Freshwater Management Unit

SUB
CATCHMENT
NUMBER

Site	Attributes																				
	Annual Median Chlorophyll a (mg/m ³)		Annual Maximum Chlorophyll a (mg/m ³)		Annual Median Total Nitrogen (mg/m ³)		Annual Median Total Phosphorus (mg/m ³)		Annual Median Nitrate (mg NO ₃ -N/L)		Annual 95 th percentile Nitrate (mg NO ₃ -N/L)		Annual Median Ammonia (mg NH ₄ -N/L)		Annual Maximum Ammonia (mg NH ₄ -N/L)		95 th percentile E. coli (E. coli/100mL)		Clarity (m)		
	short term	80 year	short term	80 year	short term	80 year	short term	80 year	short term	80 year	short term	80 year	short term	80 year	short term	80 year	short term	80 year	short term	80 year	short term
Waikato River Ohaaki Br	1.5	1.5	13	13	134	134	10	10	0.04	0.04	0.09	0.07	0.01	0.01	0.01	0.01	70	70	3.8	3.8	
Waikato River Ohakuri Tailrace Br	5.0	4.0	11	11	211	211	26	21	0.10	0.08	0.20	0.15	0.01	0.01	0.02	0.02	15	15	3.4	3.4	
Waikato River Whakamaru Tailrace		5		25	260	160	20	20	0.101	0.101	0.230	0.230	0.003	0.003	0.010	0.010	60	60	2.0	3.0	
Waikato River Waipapa Tailrace	4.1	4.1	25	25	318	160	25	20	0.164	0.164	0.320	0.320	0.007	0.007	0.017	0.017	162	162	2.0	3.0	
Pueto Stm Broadlands Rd Br									0.45	0.45	0.53	0.53	0.01	0.01	0.02	0.01	90	90	1.8	3.0	
Torepatutahi Stm Vaile Rd Br									0.50	0.50	0.80	0.80	0.01	0.01	0.02	0.02	220	220			
Waiotapu Stm Homestead Rd Br									1.7	1.0	2.5	1.5	0.11	0.03	0.18	0.05	280	280			

73

66 B

74

72

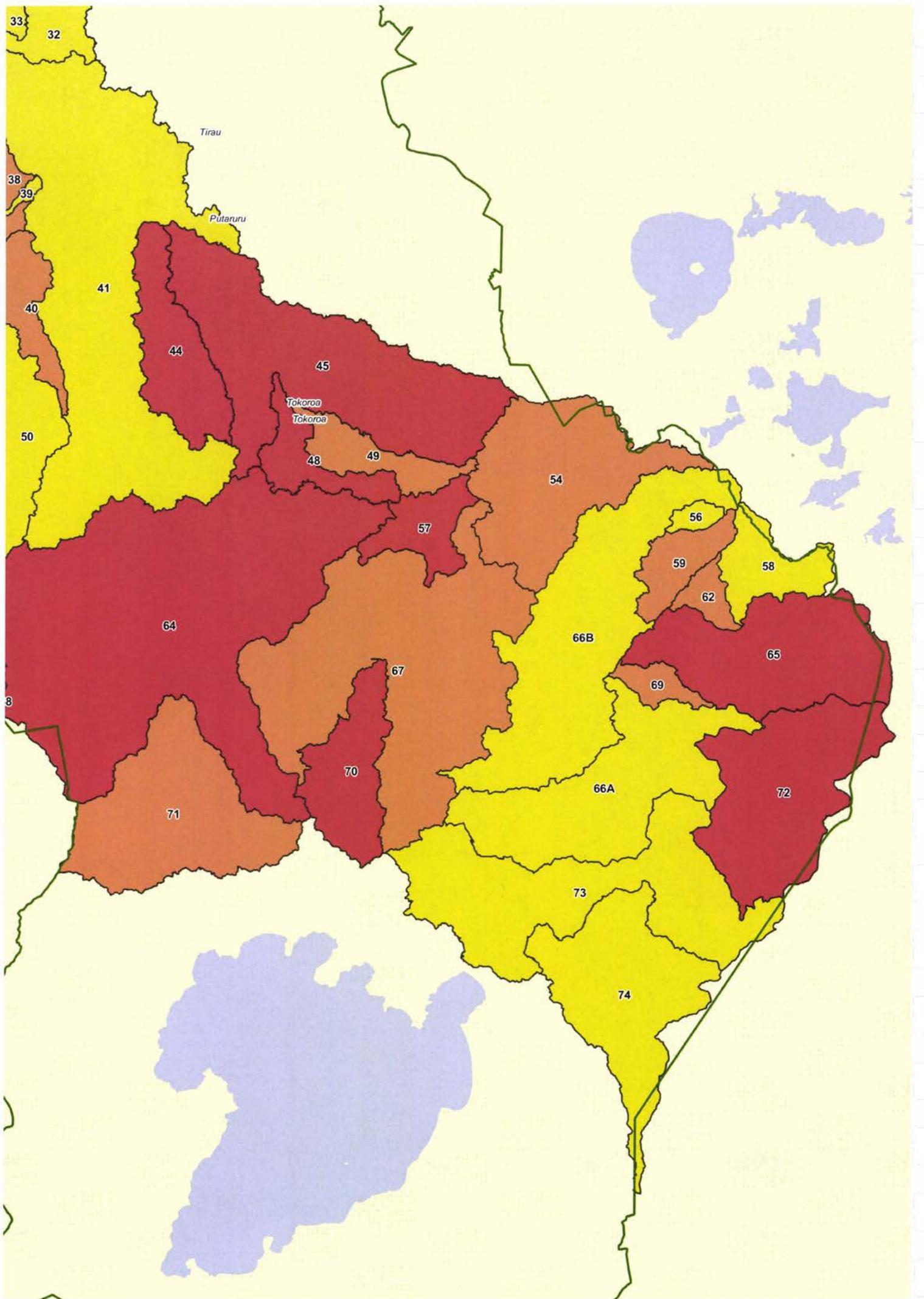
66 A

66 A Waikato River (Tahorukuri)

0.15 0.10 0.34 0.23 0.01 0.01 0.04 0.03 50 30 3.6 4.0

APPENDIX D

Map illustrating the amendments required to Map 3.11-2 to subdivide Sub-catchment 66 into Sub-catchments 66A and 66B



ATTACHMENT

Location map of the Estate



Taupo

- Legend
- Wairakei Estate
 - Water Body
 - State Highway

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