

**BEFORE THE ENVIRONMENT COURT
AUCKLAND**

ENV-2020-AKL-AT

I MUA I TE KOOTI TAIAO

IN THE MATTER

of an appeal under
Clause 14 of the First
Schedule of the Resource
Management Act 1991

BETWEEN

**Director-General of
Conservation**
Appellant

AND

**Waikato Regional
Council**
Respondent

**NOTICE OF APPEAL BY THE DIRECTOR-GENERAL OF
CONSERVATION**

Dated: 8 July 2020

Department of Conservation
Solicitor acting: V Tumai
Email: vtumai@doc.govt.nz
Telephone: 027 536 6862

**Notice of appeal to Environment Court against decision on the
Proposed Waikato Regional Council Plan Change 1: Waikato
and Waipā River Catchments**

Clause 14(1) of Schedule 1, Resource Management Act 1991 (the Act)

To: The Registrar
Environment Court
AUCKLAND

1. I, the Director-General of Conservation, appeal against parts of a decision of the Waikato Regional Council (the Council) on the following plan change:
 - 1.1. Proposed Waikato Regional Council Plan Change 1: Waikato and Waipā River Catchments.
2. The Proposed Waikato Regional Council Plan Change 1: Waikato and Waipā River Catchments (the Plan Change) is a plan change to the Waikato Regional Plan that seeks to give effect to obligations to restore and protect the Waikato and Waipā Rivers, the National Policy Statement for Freshwater Management and Te Ture Whaimana o Te Awa Waikato Vision and Strategy for the Waikato River.
3. I made a submission on the Plan Change.
4. I am not a trade competitor for the purposes of section 308D of the Resource Management Act 1991 (the Act).
5. I received notice of the decision on 22 April 2020.
6. The decision was made by the Council.
7. The parts of the decision that I am appealing are the parts of the Council's decision as set out in the second column of Table 1 Appended to this Notice of Appeal under the heading "*Provision reference (decisions version)*".

8. The reasons for the appeal are set out in the third column of Table 1 appended to this Notice of Appeal under the heading “Reasons”.
9. In addition to the reasons set out in Table 1, the general reasons in support of the appeal are that the parts of the decision appealed:
 - 9.1 do not promote the sustainable management of natural and physical resources as required by Part 2 of the Act,
 - 9.2 do not implement the Council’s functions under s 30 of the Act,
 - 9.3 do not give effect to the NPS-FM,
 - 9.4 do not give effect to the Vision and Strategy for the Waikato River and the Waikato-Tainui Raupatu Claims (Waikato River) Settlement Act 2010.
 - 9.5 do not give effect to the Waikato Regional Policy Statement
 - 9.6 in the case of policies, do not give effect to the objectives of the plan and plan change
 - 9.7 in the case of methods, do not implement or achieve the policies and objectives of the plan and plan change, and/or
 - 9.8 do not represent best resource management practice.
10. I seek the following relief:
 - 10.1. The relief specified in fourth column of Table 1 appended to this Notice of Appeal under the heading “Relief sought”; and
 - 10.2. such further orders, alternative relief, consequential amendments or other amendments as are considered appropriate or necessary to address the concerns and reasons set out in this Notice of Appeal and appended Table 1.



Natasha Hayward

Director – Permissions, Planning & Land
Department of Conservation

Acting pursuant to delegated authority on behalf of the Director-General of Conservation¹

8 July 2020

Address for service of appellant:

Director-General of Conservation

Department of Conservation
Level 4, 73 Rostrevor Street, Hamilton 3204
Private Bag 3072, Hamilton 3240

Contact persons

Angus Gray, Resource Management Planner
Telephone: 027 621 8195
Email: agray@doc.govt.nz

And

Victoria Tumai, Solicitor – Legal Services
Telephone: 027 5366 862
Email: vtumai@doc.govt.nz

Attachments

A copy of my submission has been forwarded to the Environment Court with this notice of appeal. If any party served with this notice requires a copy of the submission to be served on them, please contact the appellant at the address for service given above and provide an email address so that this document can be forwarded electronically.

Advice to recipients of copy of notice

How to become a party to proceedings

You may be a party to the appeal if you made a submission or a further submission on the matter of this appeal.

To become a party to the appeal, you must,—

- within 30 working days after the period for lodging a notice of appeal ends, lodge a notice of your wish to be a party to the proceedings (in [form 33](#)) with the Environment Court and serve copies of your notice on the relevant local authority and the appellant; and

Your right to be a party to the proceedings in the court may be limited by the trade competition provisions in section 274(1) and Part 11A of the Resource Management Act 1991.

¹ A copy of the Instrument of Delegation will be provided on request and may be inspected at the Director-General's office at Conservation House (*Whare Kaupapa Atawhai*, 18-32 Manners Street, Wellington 6011).

You may apply to the Environment Court under section 281 of the Resource Management Act 1991 for a waiver of the above timing requirements (see form 38).

Advice

If you have any questions about this notice, contact the Environment Court in Auckland, Wellington, or Christchurch.

Table 1: Decisions of the Waikato Regional Council on the Plan Change which are appealed by the Director-General of Conservation

Appeal point	Provision reference (decision version)	Reason(s) for appeal	Relief sought
1.	Objective 1	This objective has a greater focus on the human aspects of health and wellbeing of the Waikato and Waipā rivers than the intrinsic aspects. There is lack of provision for, or recognition of, the need to restore and protect ecosystem health. Ecosystem health is a compulsory national value under the NPS FM. Without an objective which seeks to achieve ecosystem health, Plan Change 1 (PC1) will not adequately provide for ecological health, ecosystem processes, indigenous species habitats and biological diversity. Including reference to ecosystem health will give effect to the NPS FM and Te Ture Whaimana by taking a more holistic approach. The health and wellbeing of the awa includes regenerating and preserving fisheries, invertebrates and plant life, as well as ecological integrity.	Retain the objective with amendments as follows (additions underlined, deletions strikethrough): <i>“In relation to the effects of nitrogen, phosphorus, sediment and microbial pathogens on water quality <u>and ecosystem health</u>, the health and wellbeing of the Waikato and Waipā Rivers, including all springs, lakes and wetlands within their catchments, is both restored over time and protected, with the result that in particular, they are safe for people to swim in and take food from at the latest by 2096”.</i>
2.	Objective 2	PC1 lacks provision for, or recognition of the need to also restore and protect ecosystem health. Ecosystem health is a compulsory national value under the NPS FM. PC1 does not adequately provide for ecological health, ecosystem processes, indigenous species habitats and biological diversity. Including reference to ecosystem health will give effect to Te Ture Whaimana by taking a more holistic approach. The health and wellbeing of the awa includes ecological values including regenerating and preserving fisheries, invertebrates and plant life, as well as ecological integrity.	Retain Objective 2 with the following amendments (additions underlined, deletions strikethrough): <i>“Progress is made over the life of this Plan towards the restoration and protection of the health and wellbeing, <u>including ecosystem health</u>, of the Waikato and Waipā River catchments in relation to-nitrogen, phosphorus, sediment and microbial pathogens by <u>ensuring the short term</u> numeric water quality values <u>attribute states</u> in Tables 3.11-1 (a)-(d) being <u>are met</u> no later than 10 years after Chapter 3.11 of this Plan is operative.”</i>

Appeal point	Provision reference (decision version)	Reason(s) for appeal	Relief sought
		The health and wellbeing of the awa includes ecosystem health and this should be explicitly mentioned.	
3.	New Objective A	<p>It is necessary to include an objective in the plan to address the ‘mountains to sea’ integrated nature of catchments. The PC1 must ensure that freshwater ecosystems from the mountains to the sea are restored and consideration of estuaries as part of the catchment are vital to achieving this. This integrated and holistic approach is consistent with Te Ture Whaimana. Sediments and nutrients for the Region ultimately accumulate at the Waikato Estuary.</p> <p>Coastal waters and estuaries are adversely affected by land management practices and discharges in the catchments that flow into those coastal waters. The decision to omit reference to the estuary and coastal waters in the objectives and policies leaves a significant gap in the management of coastal waters and does not give effect to the New Zealand Coastal Policy Statement 2010.</p>	<p>Include a new objective which provides for the integrated management of freshwater resources which recognises the interactions between freshwater and the coastal environment, from the mountains to the sea as follows:</p> <p><i><u>“The integrated management of land, land use and development, freshwater, the coastal environment and associated ecosystems is required to ensure the restoration and protection of the health and wellbeing of the Waikato and Waipā River catchments.”</u></i></p>
4.	Policy 1	<p>The narrow focus on riverine and peat lake catchments is inappropriate and will not contribute to the protection or restoration of the values of dune and volcanic lakes in the Waikato and Waipā River catchments, both of which are also highly sensitive to nutrients.</p> <p>Table 3.11-2 inappropriately focusses on an already limited number of contaminants affecting water quality in the sub-catchments, and that the approach of focussing and narrowing the focus to even fewer attributes within the sub-catchments is inappropriate and may not account for cumulative and downstream inputs. The Director-General of Conservation is concerned with the lack of technical</p>	<p>Retain the policy with amendments as follows (additions underlined, deletions strikethrough):</p> <p><i>“Manage farming land uses to reduce diffuse discharges of nitrogen, phosphorus, sediment and microbial pathogens, by:</i> <i>a. Requiring a general improvement in farming practice to reduce diffuse discharges of those contaminants; and</i> <i>b. Focusing priority action on those farming practices that reduce those contaminant(s) set out in Table 3.11-2; and</i> <i>c. Enabling, through permitted activity rules, low intensity farming and horticultural activities (not including commercial vegetable production), with low risk of diffuse discharge of contaminants to water bodies, and requiring resource consents for all other activities; and</i></p>

Appeal point	Provision reference (decision version)	Reason(s) for appeal	Relief sought
		<p>background or clear scientific justification supporting the criteria used by the Panel to reprioritise Table 3.11-2 for individual contaminants on a sub-catchment basis.</p> <p>The phrase ‘general improvement’ is ambiguous, uncertain, and lacking in guidance as to what constitutes an appropriate level of improvement that will achieve the sub catchment and cumulative catchment water quality outcomes.</p>	<p><i>d. Requiring a greater level of scrutiny, by resource consents, of those farming activities (including commercial vegetable production) that diffusely discharge into sub-catchments that include riverine or peat <u>all</u> lakes identified on Map 3.11-1 in accordance with Policy 15; and</i></p> <p><i>e. Requiring the timely implementation of Farm Environment Plans to reduce diffuse discharges of those contaminants.”</i></p> <p>And</p> <p>Amend the policy to provide greater specificity on what constitutes an acceptable level of ‘general improvement’, and including reference to how the improvement contributes to sub-catchment and cumulative catchment outcomes.</p>
5.	Policy 2	<p>The policy encourages “general exclusion” of farmed stock from waterbodies but does not provide guidance on how stock exclusion is to be undertaken, this should be clarified with a reference to the requirements of Schedule C.</p>	<p>Retain Policy 2 with amendments to (additions underlined, deletions strikethrough):</p> <ul style="list-style-type: none"> • Ensure policy seeks to encourage and support stock exclusion in a way that avoids adverse effects on freshwater values and water quality. • Include a reference to achieve the requirements of Schedule C in sub-clause (d) and (e) as follows: <p><i>“d. Generally excluding farmed cattle, horses, deer and pigs from rivers, streams, drains, wetlands, lakes and springs <u>in accordance with the requirements of Schedule C</u>; and</i></p> <p><i>e. Where farmed cattle, horses, deer and pigs are not excluded from rivers, streams, drains, wetlands, lakes and springs:</i></p> <p><i>i. Ensuring adverse effects of stock on waterbodies are minimised, including by the identification and management of critical source areas, ensuring that access of stock to waterbodies does not cause conspicuous pugging and exacerbated erosion; and</i></p> <p><i>ii. Imposing consent conditions to require mitigation measures to address any damage to aquatic habitat and discharge of contaminants resulting from stock access to those waterbodies; and</i></p>

Appeal point	Provision reference (decision version)	Reason(s) for appeal	Relief sought
			<i>iii Ensuring that the environmental outcomes of stock exclusion, outlined in Schedule C, are achieved by another means.”</i>
6.	Policy 4	Table 3.11-2 inappropriately focusses on an already limited number of contaminants affecting water quality in the catchments, and that the individual sub-catchment approach may not account for cumulative or downstream inputs. The Director-General considers the existing focus on the management of nitrogen, phosphorus, E.Coli, and sediment is already narrow and will not achieve outcomes for ecosystem health. This policy further narrows that focus to potentially a single contaminant in individual sub-catchments. This is likely to result in continued degradation of other contaminants within sub catchments and does not consider cumulative or downstream inputs.	<p>Retain Policy 4 with amendments as follows (additions underlined, deletions strikethrough):</p> <p><i>“Where a Farm Environment Plan is required to assist in achieving Policies 1, 2 and 3, it shall be prepared, monitored and reviewed as follows:</i></p> <p><i>a. If a property is used for dairy farming, commercial vegetable production, or has a stocking rate of more than 18 stock units per hectare and/or more than 5% in arable cropping, use an appropriate decision support tool in accordance with Schedule B of this Chapter, to quantify the Nitrogen Leaching Loss Rate for the property; and</i></p> <p><i>b. Identify land most vulnerable to diffuse discharges of nitrogen, phosphorus, sediment and microbial pathogens including critical source areas for overland flow of phosphorus, sediment and microbial pathogens; and</i></p> <p><i>c. Take a risk-based approach to managing land use, including adaptive management, to reduce diffuse discharges of nitrogen, phosphorus, sediment and microbial pathogens; and</i></p> <p><i>d. Identify suitable mitigating actions appropriate to the land, its use, risk assessment and the short-term numeric water quality values specified in Table 3.11-1 for the sub-catchment(s) within which the land is located and downstream catchments; and</i></p> <p><i>e. Prioritise actions and timing of those farming practices that will reduce the contaminant(s) set out in Table 3.11-2, having regard to any relevant sub-catchment or collective management plan in terms of those priority actions; and</i></p>

Appeal point	Provision reference (decision version)	Reason(s) for appeal	Relief sought
			<p><i>f. Take account of any off-property mitigation within the sub-catchment (e.g. from a sub-catchment collective approach or other Farm Environment Plans) of the effects of diffuse discharge; and</i></p> <p><i>g. Set out clear, specific and time bound actions and practices; and</i></p> <p><i>h. Enable Farm Environment Plans to be updated so that continuous improvement, new technologies and mitigation practices can be adopted, such that where necessary diffuse discharges of nitrogen, phosphorus, sediment and microbial pathogens further reduce to assist in meeting the objectives of this Chapter.”</i></p>
7.	Policy 5	<p>This policy as worded does not adequately include the principles which underpin good biodiversity offsetting. The gains of the offset should be additional to any water quality improvements that are already required under PC1 (additionality). The offsetting and compensation should also be managed to secure outcomes that last at least as long as the impacts and preferably in perpetuity (permanence).</p> <p>The policy also allows for the prioritisation of contaminants through reference to Table 3.11-2 which is against the intention of achieving Te Ture Whaimana.</p>	<p>Retain Policy 5 with amendments as follows (additions underlined, deletions strikethrough):</p> <p><i>“Provide for offsetting and compensation that better achieves the objectives of Te Ture Whaimana o Te Awa o Waikato where:</i></p> <p><i>a. There is an overall reduction in the relevant sub-catchment(s) of the diffuse discharge of each of nitrogen, phosphorus, sediment and microbial pathogens from the property(s), <u>and</u></i></p> <p><i><u>b. net environmental benefit can be demonstrated, and</u></i></p> <p><i>c. or</i></p> <p><i>b. There is a sufficient reduction in the diffuse discharge of nitrogen, phosphorus, sediment and microbial pathogens from the property(s) so that the positive benefits <u>improvements to restore and protect to restoration and protection of the health and wellbeing of the Waikato and Waipā Rivers permanently and demonstrably exceed those already required by Chapter 3.11. the adverse effects from any increases in the diffuse discharge of any of those contaminants, provided any increases are not of a contaminant that Table 3.11 2 identifies as a priority for reduction in that sub-catchment.</u></i></p>

Appeal point	Provision reference (decision version)	Reason(s) for appeal	Relief sought
8.	Policy 12	The benefits of any offsetting or compensation proposal must be additional to any measures that would otherwise have already occurred as a result of PC1. Without this principle there may not be a net-gain in water quality, which may result in further degradation at the sub-catchment, FMU, or catchment scale. This will not result in achieving the objective of the plan, or Te Ture Whaimana.	<p>Retain Policy 12 with amendments as follows (additions underlined, deletions strikethrough):</p> <p><i>“a. When considering resource consent applications for point source discharges of nitrogen, phosphorus, sediment and microbial pathogens to water or onto or into land in the Waikato or Waipā River catchments, require demonstration that the proposed discharge represents the Best Practicable Option at the time resource consent is being considered, to prevent or minimise the adverse effects of the discharge.</i></p> <p><i>b. Where, despite the adoption of the Best Practicable Option, there remain residual adverse effects, measures should be proposed at an alternative location(s) to the point source discharge, for the purpose of ensuring positive effects on the environment sufficient to offset or compensate for any residual adverse effects of the discharge(s) that will or may result from allowing the activity, provided that:</i></p> <ul style="list-style-type: none"> <i>i. the primary discharge does not result in the discharge having either significant adverse effects on aquatic life or toxic adverse effects; and</i> <i>ii. the measure relates to the contaminant(s) giving rise to the residual adverse effects; and</i> <i>iii. the measure occurs upstream within the same sub-catchment in which the primary discharge occurs and if this is not practicable, then upstream within the same Freshwater Management Unit or a Freshwater Management Unit located upstream; and</i> <i>iv. <u>the measure demonstrates environmental gains in addition to those already required by Chapter 3.11, in the absence of the offset or compensation;</u> and</i> <i>v. it remains in place for the duration of the adverse residual effect in perpetuity and is secured by consent condition or another legally binding mechanism; and</i> <p><i>c. For the purpose of establishing if a discharge will have a residual adverse effect, relevant considerations include:</i></p> <ul style="list-style-type: none"> <i>i. the extent to which any replacement discharge(s) fails to reduce the contaminant load of an existing discharge</i>

Appeal point	Provision reference (decision version)	Reason(s) for appeal	Relief sought
			<p><i>proportionate to the decrease required to achieve the short-term numeric water quality values in Table 3.11-1 or the steady progression towards the 80-year water quality attribute states in Table 3.11-1, including at downstream monitoring sites; and</i></p> <p><i>ii. in respect of a new discharge, whether any new discharge will increase the load of nitrogen, phosphorus, sediment and microbial pathogens to either the Waikato River or Waipā River catchments; and in either case</i></p> <p><i>iii. where the discharge is associated with the damming or diversion of water, whether it will exacerbate the rate or location of those contaminants that would otherwise have occurred without the damming or diversion, and if so, the extent of such increase or exacerbation.”</i></p>
9.	Policy 13	<p>The policy requires protection where the receiving environment is of “high water quality” but does not define this. There is no guidance on how high water quality is to be measured.</p> <p>It is also unclear what constitutes a high level of contaminant reduction, how this is to be measured, and what level of reduction is appropriate.</p>	Provide clarity on the terms “high water quality” and “high level of contaminant reduction”, how these are to be measured, and what level of contaminant reduction is necessary to ensure it is achieved.
10.	Policy 15	The narrow focus on riverine and peat lake catchments is inappropriate and will not contribute to the protection or restoration of the values of dune and volcanic lakes in the Waikato and Waipā River catchments, both of which are also highly sensitive to the effects of contaminants. All lakes are sensitive owing to their longer residence time which allows for efficient nutrient recycling. Once lakes area degraded, they are highly resistant to any mitigation measures. The policy is inconsistent with objective 1 of PC1 which refers to all lakes.	<p>Retain policy 15 with the following amendments (additions underlined, deletions strikethrough):</p> <p><i>“Contribute to restoration and protection of riverine and peat <u>all</u> lakes by:</i></p> <p><i>a. The reduction of both diffuse and point source discharges of nitrogen, phosphorus, sediment and microbial pathogens entering the catchments of those lakes consistent with achievement of the numerical water quality values for lake Freshwater Management Units in Table 3.11-1; and ...”</i></p>
11.	Policy 17	The inclusion of a policy for the protection of the values of wetlands is supported, however there needs to be greater clarity provided on what the	Retain Policy 17 with the following amendments (additions underlined, deletions strikethrough):

Appeal point	Provision reference (decision version)	Reason(s) for appeal	Relief sought
		<p>significant values and uses of wetlands are. The Policy also needs to make specific reference to restoring and protecting the Ecosystem Health of wetlands.</p> <p>The significant values of wetlands include, but are not limited to:</p> <ul style="list-style-type: none"> • Ecosystem health, including habitat for indigenous biodiversity, ecological processes and water quality • Natural form and character • Wai tapu • Mahinga kai • Recreation <p>The policy also needs to specify that action is required to improve wetland values and that ultimately, this needs to be achieved through a reducing in the input of contaminants into wetlands.</p>	<p><i>“Contribute to restoration and protection of the significant values and uses of wetlands, other than Whangamarino, including their ecosystem health, natural form and character, wai tapu, mahinga kai and recreation, and their ecosystems by maintaining, and where degraded, improving the values of wetlands in relation to by reducing the inputs of the effects of nitrogen, phosphorus, sediment and microbial pathogen discharges.”</i></p>
12.	Implementation Method 3.11.3.1	<p>The retention of implementation method 3.11.3.1 is supported as it provides clear guidance that existing lake management plans, information and data should be used to improve the water quality, ecosystem health and management of pests in lakes.</p> <p>However, despite the title of the implementation method referring to Whangamarino Wetland, there is no reference the Whangamarino and its existing Catchment Management Plan and the priority for its implementation within this method.</p>	<p>Retain the implementation method 3.11.3.1 with amendments that ensure specific reference to Whangamarino wetland and in particular, the priority implementation of the Lake Waikare and Whangamarino Wetland Catchment Management Plan, within the body of the implementation method.</p>
13.	Implementation method 3.11.3.2	<p>Implementation method 3.11.3.2 is supported to the extent that it will lead to the development of sub-catchment plans. However, there is a lack of clarity from the method about the instances where these plans are “shown to be required” and further clarification is needed so that it is clear to plan users</p>	<p>Retain implementation method 3.11.3.1 with amendments to:</p> <ul style="list-style-type: none"> • Provide clarity around when a sub-catchment plan is required, • Include reference to Implementation method 3.11.3.1 to ensure lakes and wetlands within sub-catchments

Appeal point	Provision reference (decision version)	Reason(s) for appeal	Relief sought
		when sub-catchment plans are required (e.g., where sub-catchments are degraded or contributing to cumulative degradation) including a cross reference to the importance of consideration of lakes and wetlands in sub-catchment planning.	are specifically included in sub-catchment scale planning,
14.	Implementation method 3.11.3.3	<p>Implementation method 3.11.3.3 is supported as it requires the clear and transparent collection of information about Freshwater Management Units. However the method should be extended to require the co-ordinated monitoring of wetland, estuarine and coastal environments.</p> <p>A risk management approach is needed for all hard-bottomed streams in the PC1 sub-catchments to ensure they do not exceed national bottom lines in the NPS FM. During expert conferencing, experts identified key steps to determine areas where there is a risk of periphyton effects as:</p> <ol style="list-style-type: none"> 1. Determine the sites which have hard-bottomed substrates and their contributing sub-catchments, 2. Assess nutrient concentrations to determine whether there is a risk of periphyton growth occurring at these sites (e.g., dissolved inorganic nitrogen >1.1mg/L and dissolved reactive phosphorus >0.018mg/L – approach 5B in the nutrient attribute document or alternatively the draft NPS FM 1mg/L DIN and 0.018mg/L DRP), 3. Implement a monitoring programme to assess periphyton biomass and cover at these sites, 4. Assess exceedance of thresholds spatially and temporally. <p>An attribute state should be included (as an addition to Table 3.11-1b) that does not exceed the national bottom line for chlorophyll a. Dissolved</p>	<p>Retain implementation method 3.11.3.3 with amendments to:</p> <ul style="list-style-type: none"> • ensure the co-ordinated monitoring of wetland, estuarine and coastal environments, • ensure periphyton growth is monitored where there is a risk of nuisance periphyton growth in accordance with steps 1-4 in the previous column, • ensure monitoring of dissolved oxygen • include direct reference to nutrients (N and P) at the sub-catchment scale in subclause d • Include monitoring of macrophyte cover in tributary sub-catchments

Appeal point	Provision reference (decision version)	Reason(s) for appeal	Relief sought
		<p>Oxygen is critical to aquatic life more DO monitoring needs to be undertaken within the sub-catchments. DO is a functional indicator that reflects trophic state. DO directly links managed attributes (N&P) to the goals in the vision and strategy and should also be included in Tables 3.11-1.</p>	
16.	Implementation method 3.11.3.4	<p>Implementation method 3.11.3.4 is supported to the extent that it requires the monitoring and evaluation of the implementation of the plan change and directs how this will be achieved. However, the method does not contain specific requirements for the frequency of reporting and this should be clarified as a requirement for 3-yearly reporting. Additional narrative and numeric attributes are sought to provide for ecosystem health and direct the 'marrying' of the contaminant monitoring and Regional Ecological Monitoring of Streams (REMS) data proposed in clause b. It is also sought that additional attributes be included which provide the basis for assessing against ecosystem health and meeting bottom lines in the NPS FM including:</p> <ul style="list-style-type: none"> • Deposited sediment • dissolved oxygen • statistical methods to determine if water quality is maintained/improved • monitoring of additional sub-catchments not monitored • additional temperature monitoring • periphyton and nuisance submerged macrophyte risk assessment and dissolved nutrient status of tributaries • MCI 	<p>Retain implementation method 3.11.3.4 with amendments to:</p> <ul style="list-style-type: none"> • Require 3-yearly review and monitoring towards the progression of achieving the water quality values and giving effect to Te Ture Whaimana in subclause a, • Include specific methods for monitoring or further development of attributes for: <ul style="list-style-type: none"> • Dissolved oxygen monitoring and establishment of baseline reference condition and a bottom line for lowland sites; • Statistical methods to determine if water quality is being maintained or improved; • Monitoring of additional sub-catchments; • Monitoring of MCI • Monitoring of deposited sediment • The need to review N and P short-term attribute states; • Monitoring and investigation of TN and TP thresholds for the Waikato Estuary; • Monitoring and reporting on submerged macrophytes as key indicators of ecosystem health (noting that a bottom line for nuisance submerged macrophytes can be included now and LakeSPI is included as an NPS FM attribute); • Additional temperature monitoring; and • A periphyton risk assessment of hard substrate sites in wadable tributaries, their nutrient status (and that of contributing sub-catchments), periphyton monitoring at these sites and

Appeal point	Provision reference (decision version)	Reason(s) for appeal	Relief sought
			assessment of periphyton against national bottom lines at these sites.
17.	New implementation method	A new implementation method is sought which provides for the benchmarking of wetland nutrient and sediment status by 2023. This step is considered to be a critical requirement in the review of the performance of Chapter 3.11. It should provide for 10 yearly assessment of changes in wetland nutrient and sediment status, and will inform future target setting.	A new implementation method that requires the benchmarking of the nutrient and sediment characteristics of wetlands to provide a current state against which the performance of the provisions of Chapter 3.11 can be evaluated that reads: <i>“Waikato Regional Council, working with others, will: a. undertake the benchmarking of wetland soil nutrients, surface water quality, sub-catchment sediment and nutrient inputs and wetland vegetation for all natural wetlands across the Waikato and Waipā River catchments by 2023; and b. prioritise the improvement of degraded wetland systems by identifying methods and requiring actions to reduce the inputs of contaminants”.</i>
18.	New implementation method	A new implementation method is recommended to establish a method for determining the short and long term water quality attribute states in sub-catchment where current state is not known. It is recommended that current state be determine following 5 years of annual monitoring of water quality and that short-term and 80-year attribute states be established following this and implemented through a future plan change.	Include a new implementation method to describe the method by which short-term water quality attribute states will be set for sub-catchments with little or no current water quality monitoring data that reads: <i>“For sub-catchments where current water quality attribute states are unknown, the current state shall be determined following 5 years of annual monitoring of water quality. Once current state has been determined, a short-term water quality attribute state shall be set which reflects 20% of the improvement from current state required to achieve the 80-year attribute state. These current and short-term water quality states will then be included in Tables 3.11-1 (a) – (d) through a plan change as soon as practicable”.</i>
19.	Rule 3.11.4.3	Permitted activity status for farming activities and their associated discharges, where the requirements of Rule 3.11.4.1 (4) and (5) are not met, is not appropriate. Non-compliance with subclause 4 provides that feedlots or sacrifice paddocks can be used while non-compliance with subclause 5 allows for cropping in excess of 5% to occur. These activities can be sources of significant sediment and nutrient	Delete subclause 3B of Rule 3.11.4.3 entirely.

Appeal point	Provision reference (decision version)	Reason(s) for appeal	Relief sought
		runoff and need to be carefully managed to ensure that the minimum requirements of 20% improvement in the 80 year targets specified in Table 3.11-1 can be achieved.	
20.	Rule 3.11.4.4	<p>Aa controlled activity status for activities subject to rule 3.11.4.4 is inappropriate, given that there is no ability for the Council to decline an application for a controlled activity and the triggers for activity status allow for:</p> <ul style="list-style-type: none"> • Non-compliance with stock exclusion requirements of Schedule C, • Activities with moderate Nitrogen Leaching Rates • Drystock farming over 18 stock units <p>A restricted discretionary activity for these activities is more appropriate to ensure that the minimum requirements of 20% improvement in the 80 year targets specified in Table 3.11-1 can be achieved and that consent is not granted in the instance where this is not demonstrated.</p> <p>Setbacks from waterbodies are a key requirement to ensuring that the water quality attributes are achieved however the matters of control refer to the “environmental outcomes of stock exclusion requirements” but the Plan Change does not specify what these are.</p>	<p>Amend Rule 3.11.4.4 to specify a restricted discretionary activity status in place of a controlled activity status for activities in 4A and 4B as well as the following specific amendments:</p> <ul style="list-style-type: none"> • Ensure all lake FMU are included in the matters where discretion is to be reserved in (vi) • Ensure further guidance is provided for plan users around what healthy lake environments are and the land use activities and discharges that are likely to have the greatest impact on each lake type.
21.	Rule 3.11.4.8	Rule 3.11.4.8 is uncertain and ambiguous in its application and needs to be clarified to ensure that its application can be clearly understood by all plan users.	<p>That rule 3.11.4.8 be more clearly worded to ensure it is clear to all plan users when the rule applies.</p> <p>Words to the achieve this could be <i>“For the use of land for commercial vegetable production on land which is additional to that regulated by, that does not comply with one or more rules in Rule 3.11.4.5, including...”</i> or similar/alternative wording is sought that would clearly outline to plan users when the rule applies.</p>
22.	Schedule A	Schedule A sets out requirements for registration of properties with the Waikato Regional Council. From the notified version of the plan change, the	Amend Schedule A to ensure it applies to all properties 2 ha or greater, as originally set out in the notified version of the schedule.

Appeal point	Provision reference (decision version)	Reason(s) for appeal	Relief sought
		<p>minimum land area required to be registered has increased in size from 2ha to 4.1ha which has the effect of excluding properties between 2-4ha in size from being registered. The reason for this change is not clear and the change is not supported as it reduces the number of properties and subsequently, the area of land, registered with the Council. The amendment to the required size of property for registration means properties under 4.1ha in size do not need to comply with the requirements of Chapter 3.11.</p>	
23.	Schedule B	<p>Schedule B relates to the requirement to determine a Nitrogen Leaching Loss Rate (NLR) for any property which is 20ha or larger. The ability of a property to utilise a choice of farming year and subsequent relevant version of Overseer or other model (as provided for under 3.) to determine the NLR is inappropriate as this approach will result in an inability to accurately compare NLRs between Overseer versions, thereby undermining the effectiveness of the plan change to achieve its objectives..</p>	<p>Amend Schedule B so that:</p> <ul style="list-style-type: none"> • A single farming year and version of Overseer (or other directly comparative model) be used in determining the NLR OR • The farming year to be utilised in establishing the NLR is: <ul style="list-style-type: none"> • the highest modelled annual nitrogen leaching loss for the property of any year between 2015/16 to 2019/20; or • where evidence can be provided, as part of the calculation under Schedule B, that clearly demonstrates action(s) implemented that show a consistent trend of reduction of nitrogen leaching from the property) (since the highest annual leaching loss was determined), the 2019/2020 farming year is to be used; and • Where the differences between any versions of Overseer or any other model utilised to determine the NLR are clearly identified, a precautionary approach to setting an NLR that best reflects the N leaching from the property is applied, taking account of the differences in modelling.
24.	Schedule C	<p>The use of setbacks as a mechanism for achieving the water quality values set in Table 3.11-1</p>	<p>Amend Schedule C to:</p>

Appeal point	Provision reference (decision version)	Reason(s) for appeal	Relief sought
		<p>recognises the multiple environmental benefits that can be achieved through riparian management, including stock exclusion and setbacks for cultivation and winter grazing/sacrifice paddocks. However, the setbacks distances included in Schedule C are not sufficient to achieve the removal of fine sediment before entering a waterbody and do not appear to be based on sound scientific evidence.</p>	<ul style="list-style-type: none"> • Include a statement at the beginning of the schedule which identifies the multiple environmental benefits that can be achieved from riparian management including stock exclusion to guide plan users. This statement should read <i>“Environmental outcomes that can be achieved from the exclusion of stock and from requiring setbacks for activities such as fertiliser application, sacrifice paddocks and winter forage crop grazing and cultivation include</i> <ul style="list-style-type: none"> • <i>nutrient and contaminant interception and processing,</i> • <i>shading from vegetated riparian areas,</i> • <i>input of wood and leaves to stream ecosystems, and</i> • <i>enhanced fish and invertebrate habitat.”</i> • Correct the error in 2(a) to reflect the 10m setback for wetlands as outlined in the decision of the hearing panel. • Remove reference in 2(a) to Table 3.7.7 and requiring the setback of 10m to apply to all wetlands 50m² in size and over. • Increase requirements for stock exclusion setbacks in sub clause 2(b) to require: <ul style="list-style-type: none"> • 10m setbacks from the edge of bed of all lakes • 10m setbacks from the edge of the bed for all permanent rivers and streams • 3m setbacks from the edge of the bed for all intermittent/ephemeral rivers and streams • Increase the requirements for cultivation setbacks from waterbodies in subclause 10 from 5m to the following: <ul style="list-style-type: none"> • 10m from the edge of the bed for all lakes • 10m from the edge of bed for all permanent rivers and streams

Appeal point	Provision reference (decision version)	Reason(s) for appeal	Relief sought
			<ul style="list-style-type: none"> 10m from the edge of the bed of all natural wetlands.
25.	Schedule D1	<p>The guidance provided through Schedule D1 for permitted farming activities is supported. However, amendments need to be made to ensure the interpretation and implementation of the Schedule is clear to all plan users. In particular:</p> <ul style="list-style-type: none"> The purpose statement needs to be revised to ensure that it is focussed on achieving the outcomes sought in Chapter 3.11 through the objectives and policies in addition to achieving the minimum standards in part D. Schedule d1 should be further amended to require the removal of redundant drains and drains from wetlands given the effect of drains in exacerbating water quality impacts, including phosphorus release <p>The use of the term of “material increase” in Part E (b) is uncertain and ambiguous and needs to be clarified.</p>	<p>Amend Schedule D1 as follows:</p> <ul style="list-style-type: none"> Replace the Part B purpose statement to ensure that it is focussed on achieving the outcomes sought in Chapter 3.11 through the objectives and policies, in addition to achieving the minimum standards in part D with wording which states: <i>“The purpose of an FEP is to manage land use activities in a way that reduces the diffuse discharge of contaminants from farming activities and achieves the water quality attribute states in Tables 3.11-1(a) – (d).”</i> Require the identification and removal of redundant drains and drains from wetlands to be included in Farm Environment Plans Include a definition of “material increase” to the Plan Change which clarifies the intent of Part E (b).
26.	Schedule D2	<p>There are a number of amendments to the Schedule that are necessary to ensure that FEPs are effective in their role as a key tool for implementing the objectives and policies of PC1 and improving the health and wellbeing of the Waikato and Waipā River catchments over the coming 10 years and 80 years into the future.</p> <p>The following amendments will enable Schedule d2 to give effect to the objectives and policies of the plan change.</p> <ul style="list-style-type: none"> Goal 1. Provide greater recognition of the sensitivity of lakes, when compared to rivers, to the impact of contaminants within a sub-catchment. This should 	<p>Amend Schedule D2 as follows:</p> <ul style="list-style-type: none"> Replace the Part B (1) purpose statement to ensure that it is focussed on achieving the outcomes sought in Chapter 3.11 through the objectives and policies in addition to achieving the minimum standards in part D with wording which states <i>“The purpose of an FEP is to manage land use activities in a way that reduces the diffuse discharge of contaminants from farming activities and achieves the water quality attribute states in Tables 3.11-1(a) – (d).”</i> Revise Goal 1 to ensure it is clear for all plan users that the management of farming activities needs to be managed for the most sensitive waterbody/receiving environment within the sub-catchment i.e. any lake with wording that states:

Appeal point	Provision reference (decision version)	Reason(s) for appeal	Relief sought
		<p>require contaminant reductions to take account of the most sensitive waterbodies within a catchment i.e. lakes. Also including reference to the existing best practice guidance (“For Peat’s Sake”²) for Waikato peat lake catchments. These catchments are particularly important due to their global uniqueness and the highly vulnerable nature of peat lake ecosystems.</p> <ul style="list-style-type: none"> • Specifically include urine and faeces from animals when referencing to sources of nitrogen and phosphorus in Goal 2 and associated principles to ensure that these key contributors to diffuse nutrients discharges are appropriately recognised. • Require redundant drains to be identified and removed as part of the FEP recognising their contribution to contaminant runoff. • Refer to contaminant management under Goal 3 and associated policies rather than nitrogen or nutrient management/loss which are currently included to ensure that contaminant management is the wider focus of FEPs and not just nitrogen. • Strengthen the requirements of Goal 4 and associated principles to require that all contaminant sources are identified and a specific plan is in place to ensure contamination from the source is reduced to a level is commensurate with the discharge risk. • Require a principle associated with Goal 4 that recognises the need for setbacks for 	<p><i>“To manage farming activities in a way that minimises the loss of contaminants that potentially affect water quality, from the farm, <u>taking into account the need to maintain ecosystem health in the most sensitive waterbodies in the sub-catchment including any lakes</u>”.</i></p> <ul style="list-style-type: none"> • Include a new principle to Goal 1 that states: <i>“<u>Manage farming activities within Peat Lake FMUs in accordance with the good management practice guidance contained in ‘For Peat’s Sake’</u>”.</i> • Amend Principle 5 (Goal 2) to specifically reference that sources of nutrients and phosphorus includes the urine and faeces of animals as follows: <i>“<u>Manage the amount and timing of nutrient inputs, taking account of all sources of nitrogen and phosphorus, including from the urine and faeces of animals to match plant requirements and minimise risk of losses to water.</u>”</i> • Amend Goal 3 and associated principles 9 a and b to refer to “contaminant management” rather than nitrogen management or nutrient loss as follows: <i>“<u>To farm in accordance with the nitrogen contaminant management requirements of Chapter 3.11 or any requirement specified in a resource consent.</u>”</i> <i>“9. a. Where land is used for farming (except for commercial vegetable production) to farm in a manner that achieves the nutrient <u>contaminant</u> loss reductions required in Policy 2 of Chapter 3.11; or b. Where land is used for commercial vegetable production, to farm in a manner that achieves the nutrient <u>contaminant</u> loss reductions required in Policy 3 of Chapter 3.11.”</i> • Include an additional principle to Goal 4 requiring that all on farm contaminant sources are identified

² <https://www.waikatoregion.govt.nz/environment/natural-resources/land-and-soil/managing-land-and-soil/managing-peat/>

Appeal point	Provision reference (decision version)	Reason(s) for appeal	Relief sought
		<p>more than stock exclusion as a way of managing contaminant discharge (including fertiliser application, crop grazing, cultivation and sacrifice paddocks).</p> <ul style="list-style-type: none"> • Amend Principle 13 (Goal 5) to provide clarification to all plan users about what the “intended environmental outcomes of Schedule C” are to ensure that any alternative approach is effective in achieving the intended outcomes. • Amend Goal 6 and associated principles to require that redundant man-made drainage channels are identified and reinstated to their original state, recognising their contribution as contaminant pathways to surface waterbodies • Include an additional principle to Goal 7 to specifically require effluent storage ponds to be lined in recognition of the significant discharge of N and P from storage ponds to shallow groundwater and adjacent waterbodies and appropriately mitigate these risks. • Part E – include a requirement for 3-yearly reviews of FEPs to provide clear tracking of progress towards the short-term water quality outcomes 	<p>and a plan for contaminant reduction from each source is developed as follows: <u>“Identify all on farm contaminant sources and implement specific, time based, strategies to reduce the risk of contaminants entering waterbodies”.</u></p> <ul style="list-style-type: none"> • Add an additional principle to Goal 4 which specifically require setbacks from the edge of waterbodies from the activities described in Schedule C including cultivation, sacrifice paddocks and winter forage crop grazing and fertiliser application that states: <u>“Specify the location and distance of setbacks from waterbodies on the farm to achieve compliance with Schedule C”.</u> • Add an additional principle to Goal 6 which requires the identification of any redundant man-made drainage channels to be retired and restored to their pre-excavated state as part of any Farm Environment Plan developed under Schedule D2 as follows: <u>“Identify any man-made drainage channels that can and will be retired and restored to their pre-excavated state”.</u> • Include an additional principle to Goal 7 to specifically require effluent storage ponds to be lined in recognition of the significant discharge of N and P from storage ponds to shallow groundwater and adjacent waterbodies and appropriately mitigate these risks as follows: <u>“Ensure effluent storage facilities are sealed to restrict the seepage of effluent. The permeability of the sealing layer must not exceed 1x10-9m/s.”</u> • Part E – remove clause 2 and replace it with a clause that requires a 3-yearly review of all FEPs as follows: <u>“In accordance with 3-yearly review intervals or other such review requirements set out in the conditions of any resource consent.”</u>

Appeal point	Provision reference (decision version)	Reason(s) for appeal	Relief sought
27.	Table 3.11-1 Explanatory note	<p>Amendments to the Explanatory note included for Table 3.11-1 are required to implement the objectives and policies of the plan change:</p> <ul style="list-style-type: none"> • Remove the example included at paragraph 2, and replace it with an explanation which outlines how the 20% short term improvement in water quality needs to be applied • Amend paragraph 3 to ensure that the frequency that will be used to determine whether attributes states are achieved e.g. Ammonia maximum should be evaluated based on annual maximums., • Remove paragraph 4 as it is not consistent with the evidence presented to the hearing panel regarding lag times and this explanation undermines the short term attribute states. <p>For the sub-catchments not currently included in Tables 3.11-1, short-term water quality attribute states for these sub-catchments should be development. For the sub-catchments where little or no monitoring data currently exists 5 years of monitoring data should be used to determine current state of the sub-catchment water quality and to determine the 20% improvement required in the short term between the current state and the 80-year attribute states required to give effect to Te Ture Whaimana.</p>	<p>Amend the explanatory note to Table 3.11-1 as follows;</p> <ul style="list-style-type: none"> • Retain paragraph 1 in its entirety • Remove paragraph 2 and replace it with the following: <u>“Where water quality is to be maintained – current, short term and 80-year attribute states in Tables 3.11-1(a) - (d) are the same, to reflect that there is to be no decline in water quality. Where water quality is to be improved from the current state – the short-term attribute state is represented as 20% of the improvement from current state required to achieve the 80-year attribute state”.</u> • Remove paragraph 3 and replace it with the following: <u>“The achievement of the attribute states in Table 3.11-1 will be determined through analysis of monitoring data in accordance with the required assessment frequency specified in the table or in the implementation methods for each attribute”.</u> • Remove paragraph 4 entirely • Retain paragraph 5 entirely.
28.	Table 3.11-1 general	<p>The separation of the Tables in 3.11-1 into clearly identifiable tables for subsets of the attributes applicable for each sub-catchment is supported. However, there are only 62 of the 74 sub-catchments listed in the 3.11-1 tables and the tables should include current, short term and 80-year attribute states for all sub-catchments subject to PC1. For some of these sub-catchments there is little</p>	<p>Amend Tables 3.11-1 as follows:</p> <ul style="list-style-type: none"> • Include attribute states for all 74 sub-catchments that are subject to PC1 • Assign short-term and 80-year water quality attribute states for all sub-catchments where there is available monitoring data in a manner that is consistent with the methods used to assign attributes states for the other sub-catchments

Appeal point	Provision reference (decision version)	Reason(s) for appeal	Relief sought
		<p>or no current monitoring data, however given the long term and integrated nature of the improvements required to water quality over the entire PC1 area, these sub-catchments should include as a minimum, long term attribute states in a manner consistent with the methods used to assign long term attributes states for the other sub-catchments so as to give effect to Te Ture Whaimana over the entire PC1 area.</p> <p>Setting all of the DRP attribute states (short term and 80 year) at the current state concentrations is unlikely to provide for downstream TP attributes to be met, particularly in the middle and lower Waikato and Whangamarino where significant reductions in TP are needed over time and many contributing sub-catchments have very elevated DRP concentrations. DRP (and dissolved inorganic nitrogen or DIN) may also have significant adverse effects on ecosystem health within the tributary sub-catchments themselves. 80 year attribute states for DRP are needed in tributaries (along with DIN), with short term attributes states calculated as 20% of the difference between current state and the 80 year state where water quality improvement is needed. It is only appropriate to set short term and 80 year DRP attribute states at the current level where water quality is to be maintained, ecosystem health is provided for and reductions are not needed to meet cumulative downstream TP concentrations.</p> <p>Significant adverse effects on aquatic life and ecosystem health can occur at nitrogen and phosphorous concentrations much less than toxicity levels. Additionally, the risk of periphyton growth in hard-bottomed streams is greatly increased (with subsequent adverse effects on dissolved oxygen). Furthermore, the attribute states for dissolved</p>	<ul style="list-style-type: none"> • Include the Pungarehu Canal/Stream monitoring site for sub-catchment 13 Waikare in Tables 3.11-1 with associated short-term and 80 year attribute states, consistent with the application of attribute states in all other sub-catchments. • Ensure that there are no toxic effects on aquatic life including within tributaries. • Ensure downstream nitrogen and phosphorous attribute states can be met by the nutrient concentrations contributed by the sub-catchments for both short term and 80 years water quality attribute states. • Ensure adverse effects on aquatic life and ecosystem health (such as nuisance periphyton proliferation and low dissolved oxygen) are managed within the tributary sub-catchments through including DIN and DRP attribute states for all sub-catchments. • Include new numeric attributes for planktonic cyanobacteria in the lower Waikato FMU mainstem sites (Waikato at Huntly-Tainui Br, Waikato at Mercer Br and Waikato at Tuakau Br) consistent with national bottom lines in the NPS FM (or better). • Include new narrative attributes for deposited sediment and MCI with 80-year targets that improve the proportion of stream length (over the whole of the Waikato and Waipā catchments using the REMS monitoring programme and data) in a ‘poor’ state for these attributes and include short term attributes that are 20% of the 80-year targets • Include new numeric 80-year attributes for dissolved oxygen and periphyton that are at least consistent with the national bottom lines in the NPS FM. • Include a narrative attribute in one of the Tables 3.11-1 that recognises the impacts of deposited sediment on ecosystem health and seeks improvement over time in

Appeal point	Provision reference (decision version)	Reason(s) for appeal	Relief sought
		<p>nitrogen (DIN) and phosphorus (DRP) in the sub-catchments have not been calculated in a way which takes account of their cumulative contribution to nitrogen and phosphorous at the FMU and catchment scales or sensitive downstream waterbodies.</p> <p>Deposited sediment has a major impact on aquatic life and currently, the plan change does not account for ecosystem health in tributaries. Sediment is one of the four contaminants proposed to be managed by PC1. Water clarity and deposited sediment have separate and cumulative adverse effects on ecosystem health and indigenous species habitats. As a result, there is a need to introduce a narrative attribute to require an improvement in deposited sediment over time to the proportion of stream length which currently exceeds the 'poor' threshold for fine sediment (silt and sand) of approximately 50% cover.</p> <p>A narrative attribute where the proportion of stream length (calculated using REMS monitoring) that exceeds 'poor' MCI condition improves over time is also sought.</p>	<p>streams that currently exceed a 'poor' threshold for fine sediment of approximately 50% cover.</p> <ul style="list-style-type: none"> • Include a narrative attribute in one of the Tables 3.11-1 that recognises the impacts of poor MCI condition on ecosystem health, and requires improvement over time in the length of stream across the Waikato and Waipā River catchments where there is poor MCI condition. In addition, short-term attribute states should be set to achieve 20% improvement of the 80-year attribute states. <p>Where relevant data is not available to include in the table(s), include an additional method in the plan to require that data is gathered and subsequently included in the table(s) by way of a plan change as soon as practicable.</p>
29.	Table 3.11-1(a)	The Director-General is supportive of the attributes states for E. coli and clarity as included and seeks to ensure that all sub-catchments within the PC1 area are included in the table with relevant 80-year water quality attribute states and current and short term attribute states where current data is available to include these.	<p>Ensure that all sub-catchments within the PC1 area are represented in Table 3.11-1(a) with a minimum 80-year attribute state included and current and short-term attribute states where data is available to include these.</p> <p>Where relevant data is not available to include in the table(s), include an additional method in the plan to require that data is gathered and subsequently included in the table(s) by way of a plan change as soon as practicable.</p>
30.	Table 3.11-1(b)	The short-term and 80-year attribute states for nitrate and ammonia are generally appropriate to manage potential toxicity effects on aquatic life.	<p>Amend Table 3.11-1(b) as follows:</p> <ul style="list-style-type: none"> • Ensure that all sub-catchments within the PC1 area are represented in the table, with a minimum 80 year

Appeal point	Provision reference (decision version)	Reason(s) for appeal	Relief sought
		<p>However, amendments to the water quality attributes are required that take account of the following:</p> <ul style="list-style-type: none"> • Ensure all sub-catchments within the PC1 area are included in the table with relevant 80-year water quality attribute states and current and short term attribute states where current data is available to include these. • The method of determining achievement of the attribute state for ammonia (maximum) is based on the average of 5 annual maxima. This method is inconsistent with the NPS FM ammonia toxicity attribute where the maximum amount of ammonia in each band is associated with known toxicity effects and is an absolute threshold over an annual period. Using the average of five maxima may allow for greater toxicity effects in some years than anticipated when the attribute states were set, as the maxima in some years may exceed the toxicity threshold. 	<p>attribute state included and current and short-term attribute states where data is available to include these.</p> <ul style="list-style-type: none"> • Remove the footnote for ammonia maximum (footnote 8) which states that this is the average of five annual maxima. Ammonia and nitrate toxicity attributes should be assessed annually consistent with the NPS FM.
31.	Table 3.11-1(c)	<p>The TN attribute states contained in table 3.11-1(c) are supported. However, all sub-catchments within the PC1 area should be included in the table with relevant 80-year water quality attribute states where current data is available to include these. The manner in which Chlorophyll-a and Total Phosphorus (TP) bands have been adopted does not consistently follow the NPS FM attribute states and bands in many cases.</p> <p>As a result, TP attributes states should be based on the NPS FM bands, using a consistent band across all three indicators of trophic state (chlorophyll a, TN and TP), rather than modelled relationships between attributes. Maximum TP for each sub-</p>	<p>Amend Table 3.11-1(c) as follows;</p> <ul style="list-style-type: none"> • Ensure that all sub-catchments within the PC1 area are represented in the table, with a minimum 80-year attribute state included and current and short-term attribute states where data is available to include these. • Maximum TP for each sub-catchment should be set to ensure consistency with the TP and Chlorophyll-a band in the NPS FM and be consistent with the integrated management of TP to achieve a Chlorophyll-a attribute state based on all the inputs into the lower river. • Attribute states for dissolved nitrogen and phosphorous in the sub-catchments should be

Appeal point	Provision reference (decision version)	Reason(s) for appeal	Relief sought
		<p>catchment should be set to ensure consistency with the TP and Chlorophyll-a band in the NPS FM. In addition, the approach to TP/Chlorophyll-a used assumes that Chlorophyll-a concentrations are corrected so as not to account for the TP and Chlorophyll-a discharged from Lakes Whangape and Waikare into the lower river. This approach assumes that the discharge of Chlorophyll-a from the lakes will be managed in the sub-catchment of those lakes. This approach in PC1 does not manage the lower Waikato catchment in an integrated way, that accounts for and manages all the inputs into the lower river.</p> <p>Attribute states for dissolved nitrogen and phosphorous should be set at a level that will ensure any potential toxicity effects are addressed, as well as to require management of nitrogen and phosphorous in the tributaries to ensure downstream nitrogen and phosphorous attributes states are met. Downstream nutrient requirements need to be 'back-calculated' up into the tributaries to ensure they can meet their attribute states over time.</p> <p>There is also a need to manage the occurrence of planktonic cyanobacteria, which poses risks to public health, by including National Objective Framework numeric attribute states and a bottom line for the mainstem of the lower Waikato River to provide for safe recreational and mahinga kai use.</p>	<p>recalculated in a way which does not contribute to the mainstem total nitrogen (TN) and total phosphorous (TP) concentrations (or any sensitive downstream environments such as lakes or Whangamarino Wetland) to be exceeded in the short term or 80 years.</p> <ul style="list-style-type: none"> • Include attribute states in Table 3.11-1c for planktonic cyanobacteria from the NOF framework in Appendix 2 of the NPS FM for the lower Waikato mainstem sub-catchments (Waikato at Huntly. Waikato at Mercer Br, Waikato at Tuakau Br and lakes.) <p>Where relevant data is not available to include in the table(s), include an additional method in the plan to require that data is gathered and subsequently included in the table(s) by way of a plan change as soon as practicable.</p>
32.	Table 3.11-1(d)	<p>Short term attribute states for all lake sub-catchments should be added to table 3.11-1(d) to ensure that the water quality in lake sub-catchments is improved at least an equivalent amount to the short-term improvements required.</p>	<p>Amend Table 3.11-1(d) to:</p> <ul style="list-style-type: none"> • Revise the 80-year attribute states for lakes, for those lakes where current data is available, to ensure ecosystem health is provided for. • Ensure for all lakes where there is no current data available, that 80-year attribute states are set, as a minimum, at the National Bottom Line.

Appeal point	Provision reference (decision version)	Reason(s) for appeal	Relief sought
		<p>For those lakes where data is available to provide for a specific 80-year attribute state to ensure ecosystem health of the lake ecosystem is the long-term goal. For those lakes where data is not currently available, the 80-year target should be set to at least the National Bottom Line.</p>	<ul style="list-style-type: none"> • Include short-term targets for all lakes that, as a minimum, represent a 20% of the improvement from current state required to achieve the 80-year attribute state.
33.	Table 3.11-2	<p>Table 3.11-2 is a new addition to Chapter 3.11 from the version originally notified. The table identifies priority contaminants individually in each sub-catchment. However:</p> <ul style="list-style-type: none"> • The prioritised contaminants and the criteria for prioritisation in the table have no technical background and have not been peer reviewed to ensure a robust scientific approach to their development has been used. • Prioritisation of contaminants at sub-catchment level does not appropriately take account of the effect of individual sub-catchment water quality cumulatively on downstream environments. • There is a general lack of clarity around the intention of prioritising contaminants and a possible unintended consequence that measures to reduce a single contaminant in a sub-catchment may be prioritised over water quality improvements generally. • There is a risk that the sub-catchment, individual contaminant prioritisation approach in Table 3.11-2 will not result in the improvements needed to meet the water quality targets. 	Delete Table 3.11-2 and references to the table in Chapter 3.11 in its entirety.
34.	Table 3.11-3 & Map 3.11-2	The approach to prioritising water quality improvements in sub-catchments through the use of application dates for when resource consents are required by is supported.	<p>Amend Table 3.11-3 and Map 3.11-2:</p> <ul style="list-style-type: none"> • Increase priority of sub-catchment #3 Whakapipi to Year 1 from Year 2 to recognise the priority improvements needed to Lake Otamatearua.

Appeal point	Provision reference (decision version)	Reason(s) for appeal	Relief sought
		<p>The additional protection provided to Lake sub-catchments and the sub-catchments within the Whangamarino Wetland Catchment is also supported. Two important priority sites have been omitted however. These are;</p> <ul style="list-style-type: none"> • Sub-catchment 3 Whakapipi where Lake Otamatearoa is located. This is a vulnerable dune lake as identified in the Waikato Shallow Lakes Management Plan. • Sub-catchment 58 Waiotapu at Campbell contains Lake Ngahewa, also identified as vulnerable in the Waikato Shallow Lakes Management Plan as well as the degraded Lake Tutaeinanga and vulnerable Lake Ngapouri. 	<ul style="list-style-type: none"> • Increase priority of sub-catchment #58 Waiotapu at Campbell from year 4 to year 1, to recognise the improvements required in Lakes Tutaeinanga, Ngapouri and Ngahewa.