

IN THE MATTER of the Resource Management Act 1991 (the Act)

AND

IN THE MATTER of the Environment Canterbury

(Temporary Commissioners and Improved Water Management) Act
2010

AND

IN THE MATTER of proposed Plan Change 6 to
the Canterbury Land and Water Regional Plan

**REPORT AND RECOMMENDATIONS
OF THE
HEARING COMMISSIONERS**

Date: 4 August 2016

Hearing Commissioners

Retired Judge Gordon Whiting

Chairman

Andrew Fenemor

Hearing Commissioner

Dr Jane Kitson

Hearing Commissioner

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Section 1 - Background and Factual Context

Introduction¹

- [1] Plan Change 6 (“**PC6 Wairewa**”) proposes changes to the Canterbury Regional Council’s Land and Water Regional Plan (“**LWRP**”) in accordance with Policy 4.9 of that Plan and Appendix 2 to the Canterbury Regional Policy Statement (“**RPS**”). The Plan Change reflects the community goals for fresh water management of water in the Wairewa Catchment that have been developed under the Canterbury Water Management Strategy and are set out in the Zone Implementation Programme Addendum (“**ZIP Addendum**”) developed by the Banks Peninsula Zone Committee.
- [2] PC6 Wairewa seeks to amend Section 10 (Banks Peninsula sub-region) of the LWRP to introduce fresh water outcomes, limits and provisions for the Wairewa catchment. The Plan Change also seeks to amend the LWRP Map series (“**the planning maps**”) as they apply to the catchment.
- [3] We the undersigned have been appointed by the Canterbury Regional Council (“**the Council**”) as independent commissioners to hear and make recommendations to the Council on the Plan Change.

Relationship of Plan Change 6 with the LWRP

- [4] The LWRP is the Council’s plan for the integrated management of land and water resources within the Canterbury region. The LWRP operates at two levels:
 - (a) the region-wide section contains the Objectives, Policies and Rules that apply across the region; and
 - (b) sub-region sections 6-15 implement the Objectives in the LWRP in the most appropriate way for each of those sub-regions.
- [5] PC6 Wairewa does not propose any changes to the region-wide Objectives, Policies and Rules in Sections 3, 4 and 5 of the LWRP respectively. This means relevant provisions in those sections will continue to apply to the Wairewa Catchment. As an example, the overarching LWRP Policies and Rules relating to vegetation clearance and earthworks in parts of the Catchment designated as High Soil Erosion Risk Areas will continue to apply.
- [6] The Plan Change does not address the water issues in the Catchment on its own. The Policies, Rules and limits proposed in PC6 Wairewa form part of a wider package of action for achieving the improvements in the lake and rivers that the Zone Committee and community wants to achieve. Many of those actions would be enabled but not required by

¹ This Introduction is taken from the Council officers’ reports; as it is non-contentious we do not propose to specifically reference specific matters unless there is contention arising from any such matter

PC6 Wairewa. No part of PC6 Wairewa applies to the Coastal Marine Area. This is addressed by the Regional Coastal Environment Plan (“**RCEP**”).

The Wairewa Catchment

- [7] The substantive changes proposed in PC6 Wairewa only apply to a single catchment within the Banks Peninsula Sub-region, being the Wairewa Catchment. This is the area from Mean High Water Springs at Birdlings Flat to Mt Fitzgerald and Mt Sinclair to the north, High Bare Peak to the west and Saddle Hill/Wainui Pass to the east.
- [8] The water bodies in the catchment are Te Roto o Wairewa/Lake Forsyth and the Ōkana, Ōkuti and Takiritawai rivers. The catchment includes the townships of Little River, Birdlings Flat and Cooptown. Te Roto o Wairewa is the main water body, fed by the above named rivers, and exits via a gravel bank into the sea in the vicinity of the small community of Birdlings Flat. State Highway 75 leading to Akaroa and part of the Little River Rail Trail follow the north-western shore of the lake.
- [9] Wairewa used to be, and still is, important for providing tuna and other mahinga kai as food for Kati Irakehu and Kati Mako, which are the Kai Tahu hapū (sub-tribes) that have mana whenua (tribal authority) over Wairewa and its surrounding takiwā.² The Lake is a tribal tāonga (treasure) to the mana whenua.
- [10] Deforestation of the surrounding hills has led to erosion and silting up of the Lake. At times the Lake is in a hypertrophic state (saturated with phosphorus and nitrogen), leading to corresponding poor water quality, excessive algal growth with impacts on recreational, cultural and amenity uses.³ This decline in water quality has been known since the early 1900s. So far, attempts at opening up the Lake to the ocean to rectify the problem have had limited success.

PC6 Wairewa – an overview

- [11] PC6 Wairewa is the culmination of an extensive collaboration process ushered in by the Canterbury Water Management Strategy. This process involved consultation and community participation aimed at reaching a consensus on how to best manage the fresh water resources in the Wairewa Catchment. The Banks Peninsula Zone Committee commenced a community engagement process from April 2013,⁴ The ZIP Addendum was agreed by the Committee on 21 October 2014. It contained recommendations, which form the basis for the provisions in PC6 Wairewa, and was received and endorsed by the Council on 6 November 2014 leading to a draft Section of the LWRP for notification. .
- [12] PC6 Wairewa was publicly notified on 6 October 2015. It has gone through a series of iterative changes. Following submissions, amendments in response were made by Council

² Statement of evidence, Iaeon Cranwell at [2]

³ s32 Report at [4.1.3]

⁴ See s42A Report at [5.18] ff

officers to the notified version, resulting in a version dated 1 March 2016 which accompanied the s 42A Report.

- [13] Following the receipt of evidence and rebuttal evidence we noted that the Council’s version dated 1 March 2016 was in turn sought to be amended in many respects, particularly by Ngāi Tahu. It was apparent to us from reading the documentation that the objectives sought were similar, but the planning pathways to achieve those objectives diverged. Accordingly, we directed the planning witnesses for the Council and Ngāi Tahu to caucus. This resulted in a joint statement of expert planning witnesses dated 18 April 2016. As a consequence, when the hearing opened the issues were considerably narrowed to approximately 14 issues.
- [14] The hearing was held at Lincoln on 19 and 20 April, with the Council’s reply presented on 22 April.
- [15] During the course of the hearing it became apparent to us that many of the remaining issues were capable of being settled by a continuation of the collaborative process. We accordingly directed further caucusing to take place between the parties. When the Council officers came to present the “Officers’ Reply” dated 22 April 2016, all but one of the issues had been adequately resolved.
- [16] We attach as Appendix B our recommended version of PC6 Wairewa, which contains the latest agreed amendments, as endorsed by us, and some amendments made by us. In this report, where we refer to the PC6 Wairewa provisions, we refer to the provisions as contained in Appendix B unless we state otherwise.
- [17] PC6 Wairewa addresses the water issues with a raft of policies and rules by taking a four-pronged approach:
- (a) maintaining and improving the water quality and ecosystem health of the rivers;
 - (b) addressing low flow management in the rivers;
 - (c) reducing sediment and phosphorus input to the lake; and
 - (d) improving the water quality and ecosystem health within Te Roto o Wairewa.

Maintaining and improving the water quality and ecosystem health of the rivers

- [18] Provisions are proposed to maintain and improve the quality of water in the rivers and their tributaries. These include:
- (a) the setting of “outcomes” and “limits” that comply with the NPSFM National Objectives Framework (“**NOF**”) including the following attributes:
 - chlorophyll *a*;

- nitrate (toxicity);
 - ammonia (toxicity); and
 - *E.coli*;
- (b) the setting of other outcomes using attributes, not specifically required by the NPSFM, for rivers including:
- quantitative macroinvertebrate community index (“**QMCI**”);
 - dissolved oxygen;
 - temperature;
 - filamentous algae cover;
 - fine sediment cover;
 - cyanobacteria mat cover;
 - suitability for recreation grade; and
 - a narrative attribute for mahinga kai; and
- (c) policies and rules on stock exclusion from rivers in the Valley Floor Area in combination with bank stabilisation and sediment control measures.

Addressing the low flows in the rivers

[19] The Plan Change proposes to set environmental flow and allocation limits for the Ōkuti and Ōkana rivers. The proposed provisions are designed to avoid over-allocation and to protect the significant biodiversity values in the rivers during periods of low flow (summer months) without significantly impacting on abstraction.

Reducing sediment and phosphorus inputs to the lake

[20] Because of past deforestation, all soil material present in the catchment is prone to erosion and contributes to the suspended sediment loads in the river system. However, work by Landcare Research concluded that the undercutting and erosion of stream banks in the valley floor is the primary source of suspended sediments to the Lake under all flow regimes.⁵

⁵ Lynn, I.H. (2013) Sediment sources in the Wairewa Catchment. Technical report for Environment Canterbury, Report No. R13/103

- [21] Accordingly, the primary focus of PC6 Wairewa is reducing sediment and phosphorus losses from the flatter valley floor. The region-wide rules manage the discharge of nitrogen to water bodies and erosion in the steeper catchments.
- [22] The Plan Change defines a new area called the Valley Floor Area which is defined in the planning maps. The Valley Floor Area is an area of approximately 500ha below 20m elevation above mean sea level. There are 44 rural, lifestyle and commercial properties wholly or partly within the Valley Floor Area.
- [23] PC6 Wairewa proposes targeted policies and rules to reduce inputs of sediment, nutrients (primarily phosphorus) and microbial contaminants to rivers upstream of the Lake.
- [24] The most significant regulatory intervention is the proposed replacement of the region-wide stock exclusion rules in the Valley Floor Area. It is proposed that from January 2020 all stock is to be excluded from the bed (including the banks) of the Ōkana, Ōkuti and Takiritawai rivers, and their tributaries, and Te Roto o Wairewa. The use and disturbance by stock of the riparian margins is generally prohibited except for limited circumstances as provided in the permitted activity rules and a restricted discretionary rule. Riparian margin is defined in the LWRP as:
- (a) land within 10m of the bed of any lake, river or wetland boundary in hill and high country shown as High Soil Erosion Risk; and
 - (b) land within 5m of the bed of any lake, river or wetland boundary in all other land.
- [25] Provisions are proposed that encourage and support local-scale actions to reduce the amount of phosphorus-laden sediment entering the Lake, including:
- (a) works to reduce riverbank erosion in the Valley Floor Area provided it is carried out in accordance with an Erosion Plan submitted with an application for a resource consent;
 - (b) the need for a sediment retention basin and/or wetland at the head of the Lake to intercept phosphorus-rich sediment before it enters the Lake. A single rule is proposed for their construction, operation and maintenance; and
 - (c) promoting a reticulated wastewater system for Little River and promoting the sealing of septic tanks to avoid losses of untreated contaminants to groundwater and rivers.

Improving the water quality and ecosystem health within Te Roto o Wairewa

- [26] The most significant issue addressed by the Plan Change is the poor water quality and degraded ecosystem health of Te Roto o Wairewa.⁶ This impacts on cultural, recreational and amenity values associated with the Lake. The most visible evidence of poor quality, which we observed on our site visit, are cyanobacteria (blue-green algae) blooms that

⁶ s42A Report, at [2.4]

generally occur in the Lake each year. These blooms can produce toxins that can be harmful to humans and animals.

- [27] The primary cause of poor water quality and frequent algae blooms, as addressed in this proposed plan change, is the amount of phosphorus rich sediment entering the Lake from the catchment upstream⁷ in combination with the re-mobilisation of phosphorus bound to sediment already accumulated within the lake bed.
- [28] PC6 Wairewa addresses this significant issue by *inter alia*:
- (a) setting a phosphorus load target of no more than 2,600kg/year by 2030 as a first step towards improving the water quality of the Lake. This represents a 40% reduction from the current estimated load of 4400kg⁸ entering the Lake each year;
 - (b) setting limits or outcomes for the Lake (and similar limits for rivers) being total phosphorus, total nitrogen, chlorophyll-a, ammoniacal nitrogen and *E. Coli* that meet the national bottom lines for lake ecosystem health in the NPSFM 2014
 - (c) setting other numeric fresh water outcomes for the Lake (and similar limits for rivers), additional to those set by Appendix 2 in the NPSFM 2014, assessed by attributes including a trophic level index (TLI); dissolved oxygen; temperature; a lake submerged plant index (SPI), cyanobacteria; suitability for recreation grade (SFRG); and a narrative outcome for fresh water mahinga kai species;
 - (d) making provisions to support lake investigations into ways of reducing the impact of legacy phosphorus without requiring resource consent providing rule conditions to protect the environment and water users are complied with; and
 - (e) supporting the opening and closing of the Lake by bundling together associated activities into a single rule.
- [29] Control over when the Lake is artificially opened to the sea is important for maintaining flood control and land drainage functions in the Catchment. It is also necessary so fish and eels can pass between the rivers, lake and sea to complete their life cycles. Though the internal lake processes are complex, improving control over summer water levels and when the lake is opened or closed is beneficial for improving water quality, flushing sediment out to sea and re-establishing aquatic plants in the lake. Six resource consents for a lake opening regime were granted by commissioners on 22 March 2016.

⁷ s42A Report at [2.5]

⁸ Davie, T, (2015), Environment Canterbury memorandum 15 July 2015: Phosphorus loads to Lake Forsyth

Section 2 - The Legal and Statutory Context

Preliminary matter – Scope

- [30] A number of submissions sought amendments where the question of scope was an issue. The law on “scope” is now well settled.
- [31] Clause 6(1) of Schedule 1 to the Resource Management Act 1991 provides that once a proposed plan (including a change) is publicly notified under clause 5, a person described in sub-clauses (2) to (4) may make a submission “on it” to the relevant local authority.
- [32] An authoritative statement of the law on whether a submission is “on” a plan change is contained in the High Court decision of *Palmerston North City Council v Motor Machinists Limited*⁹. The Court explicitly endorsed the bi-partite approach in *Clearwater Resort Limited v Christchurch City Council*¹⁰ by which an analysis is required as to whether first, the submission addresses the change to the status quo advanced by the proposed plan change and, secondly, there is a real risk that persons potentially affected by the change proposed in the submission have been denied an effective opportunity to participate in the plan change process.
- [33] The Court in *Motor Machinists Limited* said that:¹¹

The first limb of the **Clearwater** test requires that the submission address the alteration to the status quo entailed in the proposed plan change. The submission must reasonably be said to fall within the ambit of that plan change. One way of analysing that is to ask whether the submission raises matters that should have been addressed in the s32 evaluation and report. If so, the submission is likely to fall within the ambit of the plan change. Another is to ask whether the management regime in a district plan for a particular resource is altered by the plan change. If it is not, then a submission seeking a new management regime for that resource is unlikely to be “on” the plan change, unless the change is merely incidental or consequential.

And¹²

The second limb of the **Clearwater** test asks whether there is a real risk that persons directly or potentially directly affected by the additional changes proposed in the submission have been denied an effective opportunity to respond to those additional changes in the plan change process.

- [34] The Court then went on to say that a precautionary approach is required to receiving submissions proposing more than incidental or consequential further changes to a notified proposed plan change. The Court further said that the approach taken by the Environment Court in *Naturally Best New Zealand Limited v Queenstown-Lakes District Council*¹³ of endorsing “fair and reasonable extensions” is not correct. Where a submission

⁹ [2013] NZHC 1290

¹⁰ HC Christchurch AP34/02, 14 March 2013

¹¹ at [91] (d)

¹² at [91] (e)

¹³ EnvC C049/04

does not meet each limb of the *Clearwater* test, the submitter has other options; to submit an application for a resource consent, to seek a further public plan change, or to seek a private plan change.

[35] We propose to apply the *Clearwater* test as explained by the Court in *Motor Machinists* when considering the question of scope. We summarise our duties in relation to scope as:

- (a) to determine whether each submission is a valid submission and is “on” Plan Change 6, applying the tests in *Motor Machinists Limited*, being whether:
 - the submission reasonably falls within the ambit of the plan change by addressing a change to the pre-existing status quo advanced by proposed Plan Change 6; and
 - (i) there is a real risk that by making changes sought in the submission, other persons directly or potentially directly affected by the additional changes proposed in the submission have been denied an effective opportunity to respond to those additional changes in the Plan Change process; and
- (b) by asking ourselves:
 - (i) has a submitter raised a relevant “resource management issue” in its submission? This may be in a specific or general way;
 - (ii) is the change contemplated by the submitter reasonably within the general scope of: an original submission; or Plan Change 6 as notified; or somewhere in between; and
 - (iii) was the summary of the decisions sought fair and accurate and not misleading?

The Resource Management Act (1991)

[36] The starting point for setting the statutory context is the Resource Management Act 1991 (the **RMA** or **the Act**). The Act is the statutory basis upon which all functionaries, including regional councils, exercise their functions, powers and duties under the Act.

Part 2

[37] **Part 2** is a framework against which all the functions, powers, and duties under the RMA are to be exercised for the purposes of giving effect to the RMA. Section 5 has been described as the lodestar of the RMA.¹⁴ It guides decision-making under the RMA towards the overarching purpose of sustainable management and directs decision-makers to manage resources so that the reasonably foreseeable needs of future generations can be met and the life-supporting capacity of the ecosystem protected.

[38] **Section 5** sets out the Act’s overall objective. Its purpose is identified in s5(1) as “to promote the sustainable management of natural and physical resources”. In doing this, sustainable management is to be given the meaning stated in s5(2):

¹⁴ Lee v Auckland City Council [1995] NZRMA 241 (PT) at [248]

In this Act, sustainable management means managing the use, development, and protection of natural and physical resources in a way, or at a rate, which enables people and communities to provide for their social, economic, and cultural wellbeing and for their health and safety while –

- (a) sustaining the potential of natural and physical resources (excluding minerals) to meet the reasonably foreseeable needs of future generations; and
- (b) safeguarding the life-supporting capacity of air, water, soil, and ecosystems; and
- (c) avoiding, remedying, or mitigating any adverse effects of activities on the environment.

[39] Section 5 contemplates environmental preservation and protection as an element of sustainable management of natural and physical resources;¹⁵ and protecting the environment from adverse effects of use and development is an aspect (though not the only aspect) of sustainable management.¹⁶

[40] Although s5 is not itself an operative provision,¹⁷ where applicable the other sections of Part 2 (ss6, 7 and 8) are operative, albeit at the level of general principles, directing those administering the RMA, and elaborating¹⁸ on how s5 is to be applied in the circumstances described in them.

[41] **Section 6** of the RMA identifies matters of national importance, and directs all persons exercising functions and powers under the Act to recognise and provide for them. Of them, those relevant to PC6 Wairewa include:

- The preservation of the natural character of the coastal environment (including the coastal marine area), wetlands, lakes and rivers and their margins, and the protection of them from inappropriate use and development.¹⁹
- The protection of areas of indigenous vegetation and significant habitats of indigenous fauna.²⁰
- The maintenance and enhancement of public access to and along lakes and rivers.²¹
- The relationship of Māori and their culture and traditions with their ancestral lands, water, sites, waahi tapu, and other tāonga.²²
- The protection of protected customary rights.²³

¹⁵ Environmental Defence Society v New Zealand King Salmon Limited & Ors [2014] NZCSC 38 at [146]

¹⁶ Environmental Defence Society v New Zealand King Salmon cited above, at [148]

¹⁷ Environmental Defence Society v New Zealand King Salmon, cited above, at [151]

¹⁸ Environmental Defence Society v New Zealand King Salmon, cited above, at [25] and [149]

¹⁹ s6(a) RMA

²⁰ s6(c) RMA

²¹ s6(d) RMA

²² s6(e) RMA

²³ s6(g) RMA

[42] The word “inappropriate” in s6(a) should be interpreted “*against the backdrop of what is sought to be protected or preserved*”.²⁴ The application of these matters, which are described as having national significance, is to serve the Act’s purpose of promoting sustainable management. They are not to be achieved at all costs. Protection is not an absolute concept, and a reasonable, rather than strict, assessment is called for.²⁵

[43] **Section 7** directs that, in achieving the purpose of the Act, all persons exercising functions and powers under it are to have particular regard to some 11 listed matters, nine of which are relevant to PC6 Wairewa. They are:

- (a) kaitiakitanga;
- (aa) the ethic of stewardship;
- (b) the efficient use and development of natural and physical resources;
- ...
- (c) the maintenance and enhancement of amenity values;
- (d) intrinsic values of ecosystems;
- ...
- (f) maintenance and enhancement of the quality of the environment;
- (g) any finite characteristics of natural and physical resources;
- (h) the protection of the habitat of trout and salmon;
- (i) the effects of climate change;
- ...

[44] **Section 8**, the final section of Part 2 of the Act, directs persons exercising functions and powers under it to take into account the principles of the Treaty of Waitangi (te Tiriti o Waitangi). We understand this direction does not extend to principles that are not consistent with the scheme of the RMA, nor does it provide for allocating resources to Māori.²⁶ It does not impose a duty on functionaries to take into account past wrongs, or to be open to ways to restore imbalance.²⁷

[45] Although Part 2 states the purpose of the Act and the principles in elaboration of the purpose, where specific, unqualified prescriptions of a superior instrument by which Part 2 is given effect apply, a decision-maker is not free to “*refer back*” to Part 2.²⁸ To do so would diminish such a prescription. However, the Supreme Court direction is qualified by two constraints:

- the lawfulness and meaning of the prescription must not be in dispute; and
- the prescription must “*cover the field*”.

²⁴ Environmental Defence Society v New Zealand King Salmon, cited above, at [105]

²⁵ Environmental Defence Society v Maungani County Council [1089] 3 NZLR 257 (CA) 260

²⁶ Minhinnick v Minister of Corrections NZEnvC A043/2004

²⁷ Waikanae Christian Camp v Kapiti Coast District Council (HC Wellington 27/10/2004 McKenziej)

²⁸ Environmental Defence Society Inc v King Salmon, cited above, at [80] and [88]

Restrictions on land and water – Section 9, 13, 14 and 15

- [46] **Section 9(2)** of the RMA provides that no person may use land in a manner that contravenes a regional rule unless the use is expressly allowed by a resource consent.
- [47] **Section 13(1)** of the RMA restricts activities in the bed of any lake or river unless expressly allowed by a regional rule or a resource consent.
- [48] **Section 14** of the RMA regulates taking, using, damming, or diverting water unless expressly allowed by a national environmental standard, a regional rule or a resource consent; or the water is required to be taken for an individual's reasonable domestic needs or the reasonable needs of an individual's animals for drinking water and the taking does not, or is not likely to, have an adverse effect on the environment; or the water is required to be taken for fire-fighting²⁹.
- [49] **Section 15** of the RMA provides that no person may discharge any contaminant or water into water; or contaminant onto or into land in circumstances which may result in that contaminant entering water.

Functions of regional councils – Section 30

- [50] **Section 30** of the RMA lists the functions of regional councils for the purpose of giving effect to the Act in their regions. The following of those functions are relevant to PC6 Wairewa:
- The establishment, implementation, and review of policies and methods to achieve integrated management of the natural and physical resources of the region;³⁰
 - The preparation of policies in relation to the actual or potential effect of the use, development, or protection of land which is of regional significance;³¹
 - Control of the use of land for the purpose of soil conservation; maintenance and enhancement of the quality of water and water bodies; maintenance of the quantity of water and water bodies; maintenance and enhancement of ecosystems in water bodies;³²
 - In respect of any coastal marine area in the region, the control (in conjunction with the Minister of Conservation), of the taking, use, damming, and diversion of water;³³

²⁹ s14(2) and (3) RMA

³⁰ s30(1)(a) RMA

³¹ s30(1)(b) RMA

³² s30(1)(c) RMA

³³ s130(d)(iii) RMA

- The control of the taking, use, damming and diversion of water, and the control of the quantity, level and flow of water in any water body, including;
 - (i) the setting of any maximum or minimum levels or flows of water;
 - (ii) the control of the range, or rate of change, of levels or flows of water;³⁴
- The control of discharges of contaminants into or onto land, air, or water and discharges of water into water;³⁵
- The establishment of rules in a regional plan to allocate the taking or use of water (other than open coastal water);³⁶
- The establishment, implementation, and review of policies and methods for maintaining indigenous biological diversity.³⁷

[51] Section 30(4) contains directions about allocation of natural resources in regional plans under s30(1)(fa) or (fb). The directions:

- restrict allocating amounts of resources that have already been allocated (s30(4)(a) and (b));
- allow the allocation of a resource in anticipation of expiry of existing consents (s30(4)(c) and (d));
- authorise allocating a resource among competing types of activities (s30(4)(e)); and
- allow allocation of water if the allocation does not affect activities authorised by s14(3)(b) to (e).

Contents of regional plans – Sections 63, 66, 67 and 68

[52] **Section 63** of the RMA states that the purpose of a regional plan “is to assist a regional council to carry out any of its functions in order to achieve the purpose of this Act.”

[53] **Section 65** authorises a regional council to prepare a regional plan for any function specified in s31(c), (ca), (e), (f), (fa), (fb), (g) or (ga),³⁸ and directs that a plan is to be prepared in accordance with Schedule 1.³⁹

[54] **Section 66** stipulates:

³⁴ s130(e)(i) and (ii) RMA

³⁵ s130(1)(f) RMA

³⁶ s130(fa)(i) RMA

³⁷ s130(1)(ga) RMA

³⁸ s65(1)

³⁹ s65(3)

- that a regional council is to prepare a regional plan **in accordance** with its functions under s30, the provisions of Part 2, its duty under s32, and any regulations;⁴⁰
- that when preparing a regional plan, the regional council is **to have regard to** any proposed regional policy statement for the region and management plans and strategies prepared under other Acts to the extent to which their content has a bearing on resource management issues of the region;⁴¹
- that when preparing a regional plan a regional council is **to take into account** any relevant planning document recognised by an iwi authority, if lodged with the council, to the extent that its content has a bearing on resource management issues of the region.⁴²

[55] **Section 67** of the RMA stipulates that:

- a regional plan is to state the objectives for the region; the policies **to implement** the objectives; and the rules (if any) **to implement** the policies;⁴³
- a regional plan is **to give effect to** any national policy statement, and any regional policy statement;⁴⁴
- a regional plan is **not to be inconsistent with** a water conservation order, or any other regional plan for the region;⁴⁵
- if a council allocates the taking and use of water under s30(1)(fa)(i) the regional plan is to record how it has done so.⁴⁶

[56] **Section 68** of the RMA:

- empowers a regional council to make rules in a regional plan for carrying out certain functions and **for achieving the objectives and policies** of the plan;
- prescribes that in making a rule, a regional council is **to have regard to** the actual or potential effect (particularly any adverse effect) on the environment of activities; and,

⁴⁰ s66(1)

⁴¹ s66(2)(c)(i)

⁴² s66(2A)(a)

⁴³ s 67(1)

⁴⁴ s 67(3)

⁴⁵ s 67(4)

⁴⁶ s 67(5)

- relevantly contains specific prescriptions for rules relating to levels or flows or rates of use of water, including the ability for the plan to require consequential reviews of consents.⁴⁷

[57] We keep all of these duties in mind in addressing submissions on PC6 Wairewa if and as they apply to the subject matter of the submissions and evidence.

Section 32 requirements and other statutory reports

[58] **Section 32** of the RMA prescribes requirements for preparing and publishing evaluation reports. An evaluation report is to examine whether the provisions of PC6 Wairewa are the **most appropriate way** to achieve the relevant objectives of the LWRP by:

- identifying other reasonably practicable options for doing so;
- assessing the efficiency and effectiveness of the provisions in doing so; and
- summarising the reasons for deciding on the provisions.⁴⁸

[59] The report is to contain a level of detail that corresponds to the scale and significance of the environmental, economic, social and cultural effects anticipated from implementation of the proposal.⁴⁹

[60] In assessing the efficiency and effectiveness of provisions, the assessment has to identify and assess the anticipated benefits and costs of the environmental, economic, social and cultural effects, including opportunities for economic growth and employment anticipated to be provided or reduced. The assessment has also, if practicable, to quantify the benefits and costs; and if there is uncertain or insufficient information about the subject matter of the provisions, has to assess the risk of acting or not acting.⁵⁰

[61] **By s32AA**, a further evaluation is required for any changes proposed since the original evaluation report was completed. That further evaluation does not need to be published as a separate report if it is referred to in the decision-making record in sufficient detail to demonstrate that it was undertaken in compliance with that section.⁵¹

Evaluation and reports requested by statute and provided by Council

[62] Pursuant to its obligation under s66(1)(e) of the RMA and clause 5(1)(a) of Schedule 1, The Council prepared an evaluation report for the proposed Plan Change entitled “**Section 32 Report – Plan Change 6 to the partly-operative Canterbury Land and Water**

⁴⁷ s 68(7)

⁴⁸ s32(1)(b) RMA

⁴⁹ s32(1)(c) RMA

⁵⁰ s32(2)(a) RMA

⁵¹ s32AA(1)(d)(ii) RMA

Regional Plan: 24 September 2015” and an **“Addendum to the Section 32A report; 29 April 2016”**. This report and addendum was made available for public inspection as is required by s32(5). The Council prepared a further report entitled **“Addendum to the Section 32A Report (under section 32AA) dated 29 April 2016.”**

[63] Some submitters have, through their submissions or evidence, commented on the Council’s “s32 assessment”. We also received:

- (a) a **“Joint Statement of expert planning witnesses: 8 April 2016”** in response to Directions in Minute 3; and
- (b) a document from Council officers entitled **“Response to questions of hearing commissioners in Minute 3”**.

[64] **Pursuant to s42A** of the RMA a report dated 12 February 2016 was prepared for the purpose of assisting us in our deliberations, and a revised marked-up version of the proposed plan change dated 1 March 2016. As a consequence of discussion at the hearing, an addendum to the s42A Report was provided to us dated 29 April 2016. Three erratum reports were also provided: for the s42A Report, the s42A Reply Report and the s32AA Report.

[65] During the course of the hearing we directed clarification of and caucusing on certain matters. We have considered responses to those questions and directions in our evaluation.

[66] We have considered all of the statutory reports to the extent we are required to do so by the statutory directions.

Other Acts

[67] There are other Acts that apply either directly or indirectly to the Council’s decision on PC6 Wairewa and deciding submissions on it.

Te Rūnanga o Ngāi Tahu Act 1996 and Ngāi Tahu Claims Settlement Act 1998

[68] The Te Rūnanga o Ngāi Tahu Act 1996 recognises Ngāi Tahu Whanui as tāngata whenua for Canterbury. This is relevant when applying ss6(e), 7(a) and 8 of the RMA, and in giving effect to relevant sections of the RPS.

[69] The Lake’s Statutory Acknowledgement is set out in the Ngāi Tahu Claims Settlement Act 1998, under which part of the Lake shore at the head of the Lake, was returned to Te Rūnanga o Ngāi Tahu.

Fisheries (South-East Area Amateur Fishing) Regulations 1986

[70] These regulations confirmed that the tuna (eel) fishery at Te Roto o Wairewa is for Ngāi Tahu only.

Fisheries (South Island Customary Fishing) Regulations 1999

[71] Two mātaimai were gazetted under these regulations in 2010.

Environment Canterbury (Temporary Commissioners and Improved Water Management) Act 2010

[72] This Act empowers Environment Canterbury, among other matters, to address issues relevant to the efficient, effective, and sustainable management of fresh water in Canterbury. Of particular relevance to PC6 Wairewa is s63 which directs that, in considering any proposed plan, the Council is to have particular regard to the vision and principles of the Canterbury Water Management Strategy (**CWMS**), as set out in Part 1 of Schedule 1 to the 2010 Act, in addition to the matters relevant under the RMA to its decisions made under clause 10(1) of Schedule 1 to the RMA.

[73] The text of the CWMS vision and principles reproduced in Part 1 of Schedule 1 to the 2010 Act includes a statement of the vision, and also states fundamental principles, including primary principles and supporting principles.

National Policy Statements and Canterbury Regional Policy Statement

[74] In considering the submissions on PC6 Wairewa, and the recommendations that we make on them, we apply the statutory requirements that PC6 Wairewa is **to give effect to** national and regional policy statements.⁵² The words “to give effect to” are strong directives, creating a firm obligation,⁵³ and require positive implementation.

The New Zealand Coastal Policy Statement 2010 (NZCPS)

[75] Objective 1 of the NZCPS deals with matters relating to both the coastal marine area and also the coastal environment. Parts of the Wairewa Catchment are within the coastal environment.

[76] Relevantly:

- (a) Objective 3, Policy 2 seeks to ensure that Ngāi Tahu and Rūnanga are involved in issues of concern to them; and
- (b) Objective 6 recognises that protection of coastal values does not preclude use and development in appropriate places and within appropriate limits.

National Policy Statement on Freshwater Management 2014 (NPSFM)

[77] The National Policy Statement on Freshwater Management 2014 is about recognising the national significance of fresh water for all New Zealanders and Te Mana o te Wai (the mana

⁵² s67(3) RMA

⁵³ *Environmental Defence Society v NZ King Salmon*, cited above [77]

of the water). It sets out objectives and policies that direct local government to manage water in an integrated and sustainable way, while providing for economic growth within set water quantity and quality limits.

[78] The main focus of the NPSFM is:

- setting freshwater objectives (goals that describe the desired state of fresh water now or in the future);
- setting limits (the maximum amount of the resource available for use); and
- implementing methods to achieve the freshwater objectives and limits.

[79] The policy statement is divided into eight parts. We summarise those parts as follows:

[80] **Part A** and **Part B** give direction on what must be provided for, or addressed in a regional plan in terms of managing water quality and quantity. Part A is about water quality and Part B is about water quantity. Central to these sections are requirements for:

- maintaining or improving overall water quality across a region;
- safeguarding the life-supporting capacity of fresh water, and the health of people and communities;
- the efficient use and allocation of water;
- protecting the significant values of wetlands and outstanding freshwater bodies; and
- setting freshwater objectives, limits and methods.

[81] **Part C** gives direction to regional councils about managing fresh water in an integrated way. Councils must manage the relationship between land use and development, and fresh water. Councils must also manage the effects of land use and development, including cumulative effects, on fresh water and coastal water.

[82] **Part CA** provides the process for setting freshwater objectives. This section has two appendices, which provide lists of national values (Appendix 1) and attributes (Appendix 2) that regional councils must use to set freshwater objectives.

[83] **Part CB** provides direction on how to monitor progress towards, and achievement of, freshwater objectives.

[84] **Part CC** gives direction to regional councils about the requirement to account for fresh water takes and discharges. This means that when it comes to setting freshwater objectives and limits, councils and the community know what water is being taken and what contaminants are being put into fresh water bodies.

- [85] **Part D** provides direction on involving iwi and hapū in reflecting tāngata whenua values and interests in water management.
- [86] **Part E** provides information on the timeframe for implementing the NPSFM.
- [87] The NPSFM was gazetted on 4 July 2014 and came into force on 1 August 2014. From 1 August 2014 the NPSFM 2011 was revoked.
- [88] The ZIP and ZIP Addendum (which was published in September 2014) were developed when the NPSFM 2011 applied. These documents form the basis for the proposed Plan Change. While the objectives of the NPSFM 2014 remain largely the same as the objectives in the NPSFM 2011, the process that regional councils must use to set freshwater objectives (ie the intended environmental outcomes) is different.
- [89] In particular, Policy CA2 requires the council to consider all national values for water and identify the values for each freshwater management unit (ie water body) which includes two compulsory values and may include any other national value or values that the regional council considers appropriate.
- [90] The process under Policy CA2 also requires the council to assign attribute states for the compulsory values and also for the other values identified by the regional council for the particular fresh water management unit (some attribute states are specified in an appendix to the NPSFM 2014, and if an attribute state is not given the council is required to set an attribute state that the regional council considers appropriate).
- [91] In formulating freshwater objectives (ie the outcomes for a water body) which are required to be set under Policies A1 and B1, the regional council is required to set the freshwater objectives in numeric terms by reference to the specified numeric attribute state contained in the appendix of the NPSFM 2014 (if there is a numeric attribute state).

Canterbury Regional Policy Statement 2013

- [92] The Canterbury Regional Policy Statement 2013 (the RPS) contains four objectives which specifically relate to the management of fresh water:
- (a) to ensure freshwater resources are managed to enable people and communities to provide for their economic and social wellbeing, for in-stream recreational and amenity values, and any economic and social activities associated with those values, provided the life supporting capacity/mauri is safe-guarded, natural character values are preserved, and any actual or reasonably foreseeable requirements for community and stock water supplies and customary uses are provided for – Objective 7.2.1;
 - (b) requiring that further abstraction of water in the region occurs in parallel with improvements to the efficiency with which water is allocated for abstraction, the way it is abstracted and conveyed, and its application or use – Objective 7.2.2;

- (c) requiring the overall quality of fresh water in the region is maintained or improved and the environmental attributes of ecosystems are safeguarded – Objective 7.2.3; and
- (d) ensuring fresh water is managed in an integrated way within and across catchments and between agencies and people with interests in water management in the community – Objective 7.2.4.

[93] The objectives are implemented through 13 policies in the Regional Policy Statement, which address:

- (a) natural character values (Policy 7.3.1 and 7.3.2), and environmental protection, restoration and enhancement programmes (Policy 7.3.3);
- (b) managing effects on water quality and quantity (Policies 7.3.4 – 7.3.7);
- (c) efficient allocation and use of fresh water (Policy 7.3.8);
- (d) integrated solutions for water management, and storage and harvest of fresh water, and existing activities (Policies 7.3.9 – 7.3.11);
- (e) precautionary approach where information is uncertain (Policy 7.3.12); and
- (f) stewardship and kaitiakitanga (Policy 7.3.13).

Other regional plans

[94] In considering the submissions on PC6 Wairewa, and the recommendations we make on them, we apply the statutory requirement that PC6 Wairewa must **not be inconsistent with** any other regional plan for the region.⁵⁴

The Canterbury Natural Resource Regional Plan (“NRRP”)

[95] Prior to the development of the LWRP, the NRRP was the primary regional plan for regulating the management of natural resources in Canterbury. Chapters 4, 7 and 8, relating to water quantity and quality, beds of lakes and rivers, wetlands and soil conservation were revoked when the LWRP was made operative.

[96] While the NRRP was relevant at the time of the development and drafting of the proposed plan change, and accordingly it had to be consistent with the NRRP, its relevance for the purposes of this report has been overtaken by the LWRP being made operative.

[97] The LWRP aims to provide the framework to facilitate the delivery of the community’s aspirations for water management in Canterbury as set out in the Canterbury Water Management Strategy.

⁵⁴ s67(4)

Iwi Management Plans

- [98] In determining our recommendations we apply the statutory requirement that we are required to **take into account** any relevant planning document recognised by an iwi authority, if lodged with the Council.
- [99] Those Iwi Management Plans relevant to the Wairewa catchment that have been lodged with the Council are:
- (a) Te Rūnanga o Ngāi Tahu – Freshwater Policy (1999);
 - (b) Te Whakatau Kaupapa – Resource Management Strategy for Canterbury (1992); and
 - (c) Mahaanui Iwi Management Plan (2013).
- [100] The Ngāi Tahu Freshwater Policy includes:
- (a) a catchment-based and holistic “mountain to sea” approach to resource management – s4.1.2;
 - (b) identification of priority areas including the restoration, maintenance and protection of the mauri of freshwater resources – Objective 6.2;
 - (c) maintaining vital, healthy mahinga kai populations – Objective 6.3.
- [101] Te Whakatau Kaupapa, the resource management strategy for Canterbury, was first published by Ngāi Tahu in November 1990. General policies within the strategy relating to water include:
- (a) the encouragement of more efficient use of water – Policy 7; and
 - (b) the maintenance of existing wetlands – Policy 10.
- [102] The Mahaanui Iwi Management Plan, was prepared by the six Papatipu Runanga of the takiwā that extends from the Hurunui River in the north, to the Hakatere/Ashburton River in the south, inland to Ka Tiritiri o Te Moana (the Southern Alps), and including Te Pataka o Rakaihautu (Banks Peninsula), and the coast. The plan notes that Te Roto o Wairewa is one of only two customary lakes in New Zealand which means that only persons belonging to the Ngāi Tahu iwi can take tuna (eels) from the lake.
- [103] The Mahaanui Iwi Management Plan also contains freshwater policies and policies specifically relating to Te Roto o Wairewa, which cover a variety of matters including:
- (a) cultural health of the lake;
 - (b) Lake level management;

- (c) cultural health of waterways;
- (d) Māori reserve land;
- (e) subdivision and development;
- (f) restoring important places;
- (g) wāhi tapu and wāhi taonga; and
- (h) climate change.

Canterbury Water Management Strategy

- [104] We have already mentioned the direction in s63 of the ECan Act that **particular regard is to be given** to the vision and principles of the Canterbury Water Management Strategy (CWMS) set out in Part 1 of Schedule 1 to that Act.
- [105] The preparation of the CWMS was supervised by a multi-stakeholder steering group under the overall leadership of the Canterbury Mayoral Forum. It followed recognition that a shift was needed from effects-based management of individual consents to integrated management based on water management zones and management of cumulative effects of both water abstraction and land use intensification.
- [106] The vision of the CWMS is:
- To gain the greatest cultural, economic, environmental, recreational and social benefits from our water resources within a sustainable framework both now and for future generations.
- [107] The primary principles include sustainable management, a regional approach, and kaitiakitanga. The first is stated to require the water is managed in accordance with sustainability principles and to be consistent with the RMA and the Local Government Act.
- [108] The second primary principle provides that the planning of natural water use is to be guided by first and second order priority considerations. Those in the first order are the environment, customary use, community supplies, and stock water. Those in the second order are irrigation, renewable electricity generation, recreation, tourism, and amenity.
- [109] The third primary principle provides for kaitiakitanga, which is explained as follows:
- The exercise of kaitiakitanga by Ngāi Tahu applies to all water and lakes, rivers, hāpua, water ways and wetlands, and shall be carried out in accordance with tikanga Māori.
- [110] The supporting principles include natural character, indigenous biodiversity, access, quality of drinking water, recreational and amenity opportunities, and community and commercial use.

[111] In order to give effect to the vision and principles of the CWMS, collaborative zone committees were set up to facilitate community engagement and (by consensus where possible) to identify community-informed outcomes. This Plan Change originated from a recommendation from the Banks Peninsula Zone Water Management Committee.

[112] The Regional Policy Statement recognises the importance of the zone committee process in Policies 7.3.9 and 7.3.13 which state:

“Policy 7.3.9 – Integrated solutions to fresh water management

To require integrated solutions to the management of fresh water by developing and implementing comprehensive management plans which address the policies of this Statement including addressing all the relevant matters set out in Appendix 2.

Policy 7.3.13 – Resolution of freshwater management issues

To encourage the involvement of people and communities in the management of fresh water, including:

- (1) community stewardship of water resources and programmes to address fresh water issues at a local catchment level;
- (2) Ngāi Tahu, as tāngata whenua, exercising kaitiakitanga in accordance with tikanga Māori; and
- (3) providing opportunities for consent holders to take greater stewardship of fresh water resources, within consent conditions.”

[113] Given the close relationship between the CWMS, the zone committee processes and the Zone Implementation Programme, we agree that weight ought to be given to them in the context of our recommendation on PC6 Wairewa. In so doing, we are mindful of the submissions and evidence we received as to the different submitters’ involvement in the process.

The Canterbury Land and Water Regional Plan

[114] First, the plan change has its genesis in Policy 4.9 of the LWRP, which requires reviews of sub-region sections to:

- (a) be in accordance with Appendix 2 of the RPS 2013; and
- (b) identify and provide for the social, economic, cultural and environmental values of each catchment; and
- (c) have particular regard to collaboratively developed local water quality and quantity outcomes and methods, and timeframes to achieve them, including through setting limits and targets; and
- (d) establish methods and a timeframe to phase out any over-allocation where over-allocation of water for abstraction from surface water catchments or groundwater zones or nutrient discharges has been determined; and

- (e) not make any changes to the objectives or policies 4.1-4.9 of this plan, but may provide for policies, outcomes and limits that are specific to the catchments in the sub-region.
- [115] Policy 4.11 further requires any review to acknowledge the pivotal role of good management practices in the sustainable management of the region's water bodies.
- [116] Second, as the proposed plan change relates to the policies and rules in s15 of LWRP, it is to the objectives of that Plan that we should first turn. When those objectives were promulgated the various statutory instruments, extant at that time, had to be considered in accordance with the level of consideration laid down by statute.
- [117] All of the parties to Plan Change 6 appeared to accept that the objectives of the LWRP reflect the relevant principles of the RMA and the then extant statutory instruments to the degree that they apply.
- [118] As we have said, a regional plan must state:⁵⁵
- (a) the objectives for the region;
 - (b) the policies to implement the objectives; and
 - (c) the rules to implement the policies.
- [119] There is, therefore, a hierarchy within a regional plan with objectives at the top, followed by policies, and then rules.
- [120] This hierarchy is reflected in the s32 Evaluation Report which must examine:
- (a) the extent to which the objectives are the most appropriate way to achieve the purposes of the Act; and
 - (b) whether the provisions proposed are the most appropriate way to achieve the objectives.
- [121] A regional council may make rules for the purpose of achieving the objectives and policies of the plan.⁵⁶
- [122] Thus the policies must be consistent with the objectives; and the rules must be consistent with the objectives and policies.
- [123] The objectives in the LWRP identify the resource management outcomes or goals for land and water resources in the Canterbury region, to achieve the purpose of the RMA. The objectives form a comprehensive suite of outcomes to be attained and implemented by the policies, rules and other methods.

⁵⁵ s67(1) of the RMA

⁵⁶ s68(1) of the RMA

[124] Section 3 of the LWRP states that the objectives of the plan “*must be read in their entirety and considered together. In any particular case some objectives may be more relevant than others, but in general no single objective has more importance than the others;*”.

[125] Because the objectives of the plan “*must be read in their entirety*” we set them out in full as follows:

- 3.1 Land and water are managed as integrated natural resources to recognise and enable Ngai Tahu culture, traditions, customary uses and relationships with land and water.
- 3.2 Water management applies the ethic of ki uta kai tai – from the mountains to the sea – and land and water are managed as integrated natural resources recognising the connectivity between surface water and groundwater, and between fresh water, land and the coast.
- 3.3 Nationally and regionally significant infrastructure is enabled, and is resilient and positively contributes to economic, cultural and social wellbeing through its efficient and effective operation, ongoing maintenance, repair, development and upgrading.
- 3.4 A regional network of water storage and distribution facilities provides for sustainable, efficient and multiple use of water.
- 3.5 Land uses continue to develop and change in response to socio-economic and community demand.
- 3.6 Water is recognised as essential to all life and is respected for its intrinsic values.
- 3.7 Fresh water is managed prudently as a shared resource with many in-stream and out-of-stream values.
- 3.8 The quality and quantity of water and fresh water bodies, and their catchments is managed to safeguard the life-supporting capacity of ecosystems and ecosystem processes, including ensuring sufficient flow and quality of water to support the habitat and feeding, breeding, migratory and other behavioural requirements of indigenous species, nesting birds and, where appropriate, trout and salmon.
- 3.8A High quality fresh water is available to meet actual and reasonably foreseeable needs for community drinking water supplies.
- 3.9 Abstracted water is shown to be necessary and reasonable for its intended use and any water that is abstracted is used efficiently.
- 3.10 Water is available for sustainable abstractional use to support social and economic activities, and social and economic benefits are maximised by the efficient storage, distribution and use of the water made available within the allocation limits of management regimes which are set in the plan.
- 3.11 Water is recognised as an enabler of the economic and social wellbeing of the region.
- 3.12 When setting and managing within limits, regard is had to community outcomes for water quality and quantity.
- 3.13 Groundwater resources remain a sustainable source of high quality water, which is available for abstraction while supporting base flows or levels in surface water bodies, springs and wetlands and avoiding salt-water intrusion.

- 3.14 High naturalness waterbodies and hāpua and their margins are maintained in a healthy state or are improved where degraded⁵⁷.
- 3.15 Those parts of lakes and rivers that are valued by the community for recreation are sustainable for contact recreation.
- 3.16 Fresh water bodies and their catchments are maintained in a healthy state, including through hydrological and geomorphic processes such as flushing and opening hāpua and river mouths, flushing algal and weed growth, and transported sediment.
- 3.17 The significant indigenous biodiversity values of rivers, wetlands and hāpua are protected.
- 3.18 Wetlands that contribute to cultural and community values, biodiversity, water quality, mahinga kai, water cleansing and flood mitigation are maintained.
- 3.19 Natural character values of fresh water bodies, including braided rivers and their margins, wetlands, hāpua and coastal lagoons, are protected.
- 3.20 Gravel in river beds is extracted to maintain floodway capacity and to provide resources for building and construction and maintenance, while maintaining the natural character of braided rivers and not adversely affecting water quality, ecosystems or their habitats, access to or the quality of mahinga kai or causing or exacerbating erosion.
- 3.21 The diversion of water, erection, placement or failure structures, the removal of gravel or other alteration of the bed of a lake or river, or the removal of vegetation or natural defences against water does not exacerbate the risk of flooding or erosion of land or damage to structures.
- 3.22 The effectiveness of both man-made natural hazard protection infrastructure, and wetlands and hāpua as natural water retention areas, is maintained to reduce the risk of and effects from natural hazards, including those arising from seismic activity and climate change.
- 3.23 Soils are healthy and productive, and human-induced erosion and contamination are minimised.
- 3.24 All activities operate at good environmental practice or better to optimise efficient resource use and protect the region's fresh water resources from quality and quantity degradation.

Application of legal context

[126] We have set out the most relevant of the statutory precepts which make up the somewhat complex legal context and which sets out our statutory duties as they should be applied to our consideration of PC6 Wairewa and the amendments sought in the submissions.

[127] While our duties at first appear multifarious and compound, we can in this exercise simplify them considerably. This is because the objectives of the LWRP have subsumed the principles set out in the RMA and the relevant statutory instruments extant at the time the Plan was promulgated.

[128] We thus propose to assess the policies, rules and provisions that are proposed to be changed against the Plan's objectives, and in the case of rules and other provisions the effects on the environment. As for the statutory instruments that have come into force since the Plan

⁵⁷ Objective 3.14 as amended by the decisions on Plan Change 4 to the Canterbury Land and Water Regional Plan

was made operative, we will refer to them when we consider it appropriate to do so. That is, where there are provisions that have not been reflected in the objectives of the LWRP.

[129] We thus summarise our duties as:

- (a) to remind ourselves of the direction in s63(1) of the RMA that the purpose of regional plans is to assist a regional council to carry out any of its functions in order to achieve the purpose of the Act;
- (b) from the submissions identify an amendment sought;
- (c) determine whether the amendment is within scope;
- (d) identify amendments that are alternative options to a particular provision and discard those that are impracticable;
- (e) to remind ourselves that there is no presumption as to which alternative should be accepted;
- (f) for each reasonably practicable alternative option, which proposes a change of policy, assess the extent to which adopting that option or not would:
 - (i) be the most appropriate way to achieve the objectives by assessing the efficiency and effectiveness of the policy against the objectives; and
 - (ii) consider, where appropriate, the relevant statutory instruments promulgated in accordance with the statutory directions under the RMA;
- (g) if a requested amendment is to a rule, have regard to whether the rule, as it would be amended, would:
 - (i) be the most appropriate way to achieve the objectives and policies of the LWRP; and
 - (ii) have any actual or potential effect on the environment, including in particular, any adverse effect (as directed by s68(3));
- (h) if we determine that the wording of a provision should be substantially different to that recommended by the Council Officers we must:
 - (i) undertake a section 32AA analysis; and
 - (ii) either publish that analysis or set it out in our recommendation.

Section 3 - The physical context - the existing environment

The Wairewa Catchment

- [130] Te Roto o Wairewa is a shallow coastal lake on the southern side of Banks Peninsula.
- [131] The two primary surface water inputs are the hill-fed Ōkuti and Ōkana Rivers which flow into the Lake via the Takiritawai River. Their catchments experienced large-scale land use change in the nineteenth century due to deforestation.
- [132] The geology of the Wairewa Catchment is characterised by the steep hill slopes of the dissected Akaroa Volcano. The middle and lower slopes of the catchment are mantled in loess derived from greywacke source-rocks, reworked loess and mixed volcanic-loess colluvium. Limited valley-fill deposits occupy the narrow valley floor floodplains and marginal foot slope fans.
- [133] All soils present in the catchment are prone to erosion and contribute to both the bed loads and suspended sediment loads of the drainage system. The primary sources of sediment to the Lake are identified as:
- (a) stream bank erosion of valley fill deposits and channel bed load remobilisation;
 - (b) on-slope erosion processes and slope wash from loess, reworked loess and mixed volcanic-loess colluvium where they are directly connected to the drainage system; and
 - (c) shallow landslides and collapsed tunnel gullies adjacent to the south-eastern shoreline discharging erosion debris directly into the lake.
- [134] Lake cores indicate that from the 1860s after significant deforestation and conversion to pasture there was a four-fold increase in the sedimentation rate in Te Roto o Wairewa.
- [135] Rainfall in the Wairewa Catchment is higher than on the Canterbury Plains and increases with altitude. NZ Meteorological Service recorded mean annual rainfalls of 1097 mm at Puaha and 1219 mm at a site at 61 m elevation in the Ōkuti Valley, compared with only 689 mm at Lincoln. During the summer months, evapotranspiration can be higher than rainfall, and occasional droughts occur.⁵⁸
- [136] The Wairewa Catchment is prone to flooding. The steep, short creeks and streams, and current soil and vegetation cover have limited capacity to hold and slowly release water from intense rainfall events. Flooding has been common in the Ōkana and Ōkuti valleys since the catchment was first occupied.⁵⁹

⁵⁸ Whitehead, J. (2013).

⁵⁹ Wairewa ZIP Addendum (2014)

Cultural environment

- [137] Te Roto o Wairewa is one of the lakes referred to in the tradition of ‘Ngā Puna Wai Karikari o Rakaihautu’ which tells how the principal lakes of Te Wai Pounamu were dug by the rangatira (chief) Rakaihautu.⁶⁰ It was once an abundant source of mahinga kai and was particularly famous for its tuna (eels), which provided sustenance for mana whenua.
- [138] Wairewa Rūnanga is the administrative and legal body of Kāti Irakehu and Kāti Makō, which are the Kāi Tahu hapū (sub-tribes) that have manawhenua (tribal authority) over Wairewa and its surrounding takiwā.
- [139] The outstanding cultural significance of Te Roto o Wairewa is recognised in its Statutory Acknowledgement status in the Ngāi Tahu Claims Settlement Act 1998. Under the Ngāi Tahu Claims Settlement Act 1998, ownership of part of the lake shore at the head of Te Roto o Wairewa was returned to Te Rūnanga o Ngāi Tahu.
- [140] Te Roto o Wairewa is one of only two customary lakes in New Zealand, where harvest of eels is for customary use only, the other being Lake Horowhenua in the North Island.⁶¹ Two mātaimai are gazetted, the first being the Te Kaio Mātaimai from Te Kaio to Birdlings Flat, and the second being the Wairewa Mātaimai, which includes Te Roto o Wairewa and the Tākiritāwai River.⁶² The Mātaimai provide formal processes for Wairewa Runanga to manage customary food gathering areas and resources. The tuna/eel fishery at Te Roto o Wairewa is managed for Ngāi Tahu customary harvesting only.
- [141] Mahinga kai is a central element to Wairewa mana whenua identity and cultural well-being. The deterioration of the Lake has threatened the cultural practice of harvesting tuna with the tuna population within the lake considered to be in critical decline (Cranwell, 2011).⁶³ The harvest season of tuna in the lake was halted by the serious cyanobacteria blooms that occurred in the lake in 2016.
- [142] To address this decline, the Wairewa Rūnanga began investigating means to improve the water quality of the lake and subsequently restore mahinga kai opportunities. In particular, research has been undertaken by the Rūnanga in respect of alternative methods to manage lake opening and closing.

Area covered by PC6 Wairewa

- [143] PC6 Wairewa applies to the Wairewa Catchment shown below. This catchment is situated on Banks Peninsula between Christchurch and Akaroa. It covers the land from the mean high water springs at Birdlings Flat to the south, Mount Fitzgerald and Mount Sinclair to

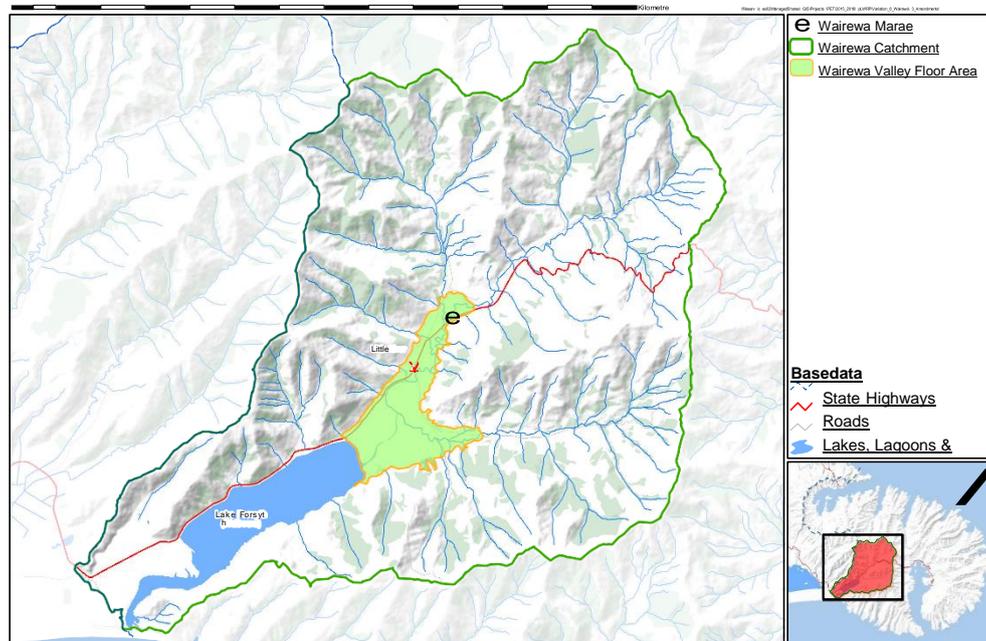
⁶⁰ Schedule 71 Statutory acknowledgement for Wairewa (Lake Forsyth) NTCSA 1998, I. Cranwell evidence 4 March 2016

⁶¹ Lake Forsyth Lands Vesting Act 1896, Fisheries (South-east Area Amateur Fishing) Regulations 1986

⁶² Customary Fishing Regulations (Kaimoana Customary Fishing Regulations 1998); Fisheries (Declaration of Wairewa/Lake Forsyth Mataitai Reserve and Appointment of Tangata Tiaki/Kaitiaki) Notice 2010 (made pursuant to Regulations 20, 21 and 22 of the Fisheries (South Island Customary Fishing) Regulations 1999).

⁶³ Cited in s32 Report - Plan Change 6 to the Partly Operative Canterbury Land and Water Regional Plan

the north, High Bare Peak to the west and Saddle Hill/Wainui Pass to the east. The main water resources in the catchment include Lake Forsyth/Te Roto o Wairewa and the waterways that flow into the Lake, such as the Ōkana, Ōkuti and Takiritawai Rivers. The Catchment includes the townships of Little River, Birdlings Flat and Cooptown. The area covered by PC6 Wairewa comprises approximately 109 km² (10,900 ha) of which Te Roto o Wairewa comprises 5.6 km² (560 ha).



Te Roto o Wairewa

- [144] Te Roto o Wairewa is a small, shallow ICOLL⁶⁴ that is fed by the Ōkana and Ōkuti Rivers. The Ōkana and Ōkuti Rivers join as the Takiritawai River before flowing into the head of Te Roto o Wairewa. The lake also receives lesser inflows from smaller creeks which flow directly into the lake, as well as an unknown but likely minor component contributed directly from groundwater.
- [145] Te Roto o Wairewa/Lake Forsyth is a relatively new lake. Prior to European settlement the lake was a tidal inlet, and in prehistory has alternated between freshwater, brackish and a full seawater inlet.⁶⁵ The lake is separated from the sea by the eastern end of an active barrier-beach complex known as Kaitorete Spit. This barrier has evolved over 8000 years as an accumulation of material which has been transported north along the coast of the Canterbury Bight.⁶⁶
- [146] The timing of the transition of the lake from marine estuary to closed-in lake is uncertain but appears to have begun at least 450 years ago.⁶⁷ A lake outlet still existed in the 19th

⁶⁴ Intermittently closed and open lake or lagoon

⁶⁵ Schallenberg & Schallenberg 2013

⁶⁶ Schallenberg & Schallenberg 2013

⁶⁷ Schallenberg & Schallenberg 2013

century and whalers, canoes and coastal traders accessed the lake from the ocean implying that the lake was open at least periodically.⁶⁸

- [147] Currently the Lake is intermittently brackish with a wide salinity range.⁶⁹ The average depth of Te Roto o Wairewa varies between one and two metres depending on the lake level, with a maximum depth near the outlet of four metres. The Lake has a volume ranging between 5 to 10 million cubic metres and a mean turnover time of 29 to 58 days, assuming a mean inflow of 2 cubic metres per second.⁷⁰
- [148] Te Roto o Wairewa/Lake Forsyth is a nationally significant wetland habitat for waterfowl, a variety of salt and freshwater marsh plants and invertebrate species.⁷¹ The lake and tributaries provide habitats for a variety of fish species including tuna (eels), inanga (whitebait), kanakana (lamprey), pātiki (flounder), banded kokopu, and common and upland bullies. The Ōkuti River is a known spawning site for the threatened kanakana/NZ Lamprey (*Geotria australis*). Apart from the upland bully all these species require access to the sea to complete their lifecycle. Perch and brown trout can also be found in Te Roto o Wairewa/Lake Forsyth and its tributaries.

Artificial lake opening

- [149] Artificial opening of the lake to the sea first occurred in 1866 to avoid flooding and improve drainage⁷².
- [150] In January 2008, Wairewa Rūnanga obtained consents to construct, operate and maintain a canal and groyne at the eastern, seaward end of Te Roto o Wairewa/Lake Forsyth. The consents were part of a feasibility trial to establish whether a permanent or semi-permanent mouth for the lake was a viable solution to restore and enhance the quality of the lake. The canal begins on the bed of the lake, traverses the beach and then crosses legal and unformed road into the Coastal Marine Area (CMA).
- [151] The canal opening provides for a more controlled opening, compared to the previous method of a mid-beach opening. The canal is a permanent feature with a gravel bund at the seaward end forming a barrier to the sea. This provides for a faster and more controlled opening, and crucially the ability to close the canal when sufficient water has drained from the lake. During winter 2010, the first year the canal was in service, the lake was opened seven times for a total period of approximately 42 days from June until mid-October, or for just over 30% of this period.
- [152] The lake openings are most frequently undertaken during the winter months (May – August) as the primary purpose is to prevent flooding, although there are still some October openings. The period of May - August is outside the main period for both glass eel

⁶⁸ Schallenberg & Schallenberg 2013

⁶⁹ Main et al. 2003

⁷⁰ Waters, 2014

⁷¹ Hughey, K. (2014).

⁷² Jacobson, 1940, cited in s32 Report

migration and spring whitebait migrations which occur in spring. When opened the Lake generally only stays open for a short period of time (2-10 days). Over the period since the canal was built, surf-driven gravel deposition at the mouth of the canal appears to be reducing and the canal is currently remaining open for longer periods. In winter 2013, the canal was opened in early June and remained open until the end of July.

- [153] Wairewa Rūnanga and Christchurch City Council have recently been granted resource consents to construct, operate and maintain the canal and groyne on a more permanent basis,⁷³ to improve the lake's water quality and cultural fishery as well as minimising land inundation and drainage problems that arise when water levels in the lake are high.
- [154] A permanent opening during migration periods would give fish the best opportunity to enter and leave the lake. But even at present, the narrow and highly permeable canal beach berm which builds up between openings is likely to have significantly extended the period when elvers may get into the lake. Eel fishermen have reported seeing elvers entering the lake by worming through outflows between the gravels.⁷⁴ The lake openings appear to have improved the water quality of the lake as measured by trends in the Trophic Level Index (TLI). A longer-term dataset is required before this can be confirmed as a permanent trend. The flowering of macrophytes (aquatic plants) in the spring of 2013, has also been attributed to the possible improvements in the lake health due to the artificial lake opening regime.⁷⁵
- [155] Control over when the lake is artificially opened to the sea is important for maintaining flood control and land drainage functions in the catchment. It is also necessary so fish and eels can pass between the rivers, lake and sea to complete their life-cycles. Though the internal lake processes are complex, improving control over summer water levels and when the lake is opened or closed is beneficial for improving water quality, flushing sediment out to sea and re-establishing aquatic plants in the lake.

River water quantity and quality

- [156] The summary of Te Roto o Wairewa/Lake Forsyth above identified that the Ōkana and Ōkūti Rivers which join to form the Takiritawai River are the primary conduits for surface water entering the Lake. As we saw during our field visit, the Ōkana and Ōkūti Rivers drain an extensively modified agricultural catchment. Riparian vegetation in the valley floor reaches of these rivers is pasture with only scattered introduced trees such as willows. There is limited shading over the rivers and bank slumping is evident, with erosion occurring during flood events. Water quality is characterised by increasing soluble phosphorus (described above), ammonia-N and *E. coli*.

⁷³ Decision date: 22nd March 2016

⁷⁴ B. Ruru pers comm. Cited in s32 Report

⁷⁵ s32 Report

- [157] Despite these stream conditions, the s32 Evaluation Report notes that, based on a report by Dr Duncan Gray⁷⁶, fish and invertebrate communities are relatively healthy and typical of Banks Peninsula streams. However Dr Gray states that reducing inputs of nutrients, sediment and faecal matter, along with riparian shading, would enhance fish habitat and reduce growth of aquatic weeds and algae. Having seen the degraded state of these river channels, and the lake downstream, we agree. The s42A Report⁷⁷ identifies significant biodiversity values of the rivers as including native fish species such as lamprey (kanakana) and inanga (whitebait), and also mentions eel (tuna), banded kōkopu and upland bullies.
- [158] Ecosystem and aquatic health of the streams is affected not just by catchment land use but by their flow regime. About 75% of the lake inflow comes from the Ōkana River and the remainder from the Ōkuti. The plan change seeks to manage low flows during summer, which are affected by water takes in the catchment.
- [159] Consented water takes comprise two surface water takes – including the Christchurch City Council (CCC) permit for the Little River and Cooptown water supply from Police Creek serving 74 residential and 23 commercial properties – plus 3 active groundwater consents of a total of five. Permitted water takes for household and stock water uses were estimated in a 2013 report by Whitehead at just under 5 l/sec ± 35%. These takes compare with estimated 7-day mean annual low flows of 108 l/sec for the Ōkana River at State Highway 75 and 66 l/sec for the Ōkuti River at Kinloch Bridge⁷⁸. Restrictions on water taken during low flows would apply to the consented water takes, as discussed below in our evaluation.

Water quality of lake

- [160] From 1860 onwards the Wairewa Catchment has been dramatically modified by major deforestation that has caused erosion and the subsequent sedimentation rates in Te Roto o Wairewa/Lake Forsyth have increased substantially.⁷⁹ Total nitrogen, total phosphorus and chlorophyll *a* within Te Roto o Wairewa/Lake Forsyth typically exceed the water quality limits for coastal lakes set in the Land and Water Regional Plan (LWRP) and the bottom-line numeric attributes set for the ecosystem health of lakes in the NPSFM 2014.
- [161] Nutrient levels are variable and often very high. Lake-core samples indicate that sediment deposition in the lake increased from approximately 1.0 mm/year, peaking at 3.7 mm and stabilising at 3.0mm/year as a result of deforestation of the catchment.
- [162] The lake also has a wide temperature range and varying pH levels between 6.5 and 9.9, with earlier research reporting a similar range of 6.2 to 10.2.⁸⁰ The high variability is unusual compared to other freshwater lakes in the Canterbury region and may be influenced by varying salinity and the occurrence of the algal blooms.

⁷⁶ Stream ecology in tributaries of Wairewa/Lake Forsyth, 5 September 2013

⁷⁷ s42A Report at [2.22]

⁷⁸ s32 Report Table 2

⁷⁹ Schallenberg & Schallenberg 2013

⁸⁰ Schallenberg & Schallenberg 2013

- [163] Trophic Level Index (TLI) is a measure for the nutrient and productivity (trophic) status of lakes.⁸¹ As TLI increases above 4 it indicates increasingly poor water quality, higher nutrients and algal production. Te Roto o Wairewa/Lake Forsyth has a highly fluctuating annual TLI, varying between 4 and >7 (eutrophic to hypertrophic).⁸²
- [164] When the Lake is in a hypertrophic state (saturated with phosphorus and nitrogen) it appears to trigger blooms of potentially toxic cyanobacteria, which can become a serious health issue for users of the Lake. The blue-green cyanobacteria blooms produce toxins which are harmful to humans and animals, having an adverse effect on the human nervous system and causing skin irritation on contact.
- [165] This significantly impacts cultural, recreational and amenity values associated with the Lake. After prolific blooms the decomposition of the algae can remove oxygen from the water and result in fish kills. *Nodularia spumigena* has been confirmed as the main toxic species present during the blooms. This species grows well in brackish water and calm conditions and is typically present in the Lake between December and April, often peaking in concentration during February. A bloom was visible during our site visit to the catchment on 20 April 2016. Other species of phytoplankton are dominant in the Lake for the remainder of the year.
- [166] Several factors may predispose the Lake to cyanobacterial proliferations, including warm summer temperatures, brackish conditions, a plentiful dissolved phosphorus supply, and internal or external mechanisms of nutrient supply which support large blooms. The levels of phosphorus in the Lake are viewed as the main concern in terms of promoting cyanobacterial blooms because their growth is limited by the availability of this nutrient.

Sources of phosphorus

- [167] High phosphorus levels in Te Roto o Wairewa/Lake Forsyth are primarily due to the presence of high levels of phosphorus in the surrounding volcanic soils, with phosphorus that is bound to sediment entering waterways.⁸³ Other sources of phosphorus can be fertiliser and effluent, but these are considered to be less significant contributors in this catchment.
- [168] There are parts of the catchment that are particularly susceptible to erosion and thereby contributing sources of phosphorus to the lake. These are:
- (a) the banks of the Ōkana, Ōkuti and Tākiritawai Rivers (the reaches between the Lake and approximately the Church Road bridge, and Usshers Road bridges respectively – referred to in PC6 Wairewa, along with part of Te Roto o Wairewa/Lake Forsyth, as the ‘Valley Floor Area’);

⁸¹ The TLI runs from <1 (almost pure water) to > 7 (highly nutrient enriched)

⁸² The s32 Report; note in the same document monthly TLI fluctuations have been reported to peak over TLI of 9 to drop to 5 or 6 and at times as low as 4.

⁸³ Lynn, 2005

- (b) hillside erosion areas that are directly connected to a waterway (which may be ephemeral); and
- (c) tunnel gullies adjacent to the south-eastern lake shoreline which can discharge erosion debris directly to the lake.

[169] Land disturbance near waterways can cause phosphorus to enter waterways bound to soil, which is then transported down the waterways into the Lake. Land activities that can disturb soil and/or create pathways for runoff to enter water include stock disturbing riparian margins and river banks and entering waterways, building and maintaining tracks/roads, cultivation, storm rainfalls on steep unforested land and drain clearance. A lack of riparian vegetation along the stream banks contributes to the loss of phosphorus-rich sediment.

[170] Lynn (2014) considered the stream banks in the Valley Floor Area to be the largest contributor of phosphorus in the Lake. Waters (2014) estimated the amount of phosphorus entering Te Roto o Wairewa/Lake Forsyth as 11,300 kg per annum. However this has since been reviewed by Dr Davie, who concluded that the phosphorus loads have been over estimated, and the current annual load of phosphorus entering the lake is actually closer to 4,400 kg per year.⁸⁴

[171] The water quality and ecosystem health of Te Roto o Wairewa/Lake Forsyth is poor and even if the volume of phosphorus-rich sediment entering the lake each year is reduced, the amount of existing phosphorus accumulated on the lake bed requires reduction if the health of the lake is to be improved.

Current land use

[172] Overall, the majority of the Catchment is in tussock grassland (56%), pasture (39%) or lake (5%). The dominant land use within the Catchment is sheep and beef farming, which represents approximately 76% of land use within the catchment. Mixed sheep and beef farming is the most dominant (49%) followed by beef cattle farming (19%) and sheep farming (9%).⁸⁵ There is currently no dairy farming within the Catchment and it is considered unlikely that dairy farming will become a significant land use within the Catchment due primarily to the steepness of the terrain.⁸⁶ Apart from farming, the Catchment contains areas of commercial forestry (8%), native bush (5%) and lifestyle blocks (4%). In recent times, some farmland has been subdivided into lifestyle blocks, which is likely to continue and may increase demand for domestic and drinking water, as well as changing expectations of river and lake water quality.

[173] Within the Catchment the majority of streams are unfenced.⁸⁷ The Lane (2005) report, cited in the s32 Evaluation Report, estimated that 77% of the Ōkana and Ōkuti Rivers were

⁸⁴ Davie (2015)

⁸⁵ s32 Report

⁸⁶ s32 Report

⁸⁷ Lynn 2013

unfenced (approximately 35km), although this does not account for fencing that may have occurred in more recent times.⁸⁸ However, lack of fencing highlights the increased stream sediment and nutrient loadings likely to be attributable to stock access, as well as the absence of any attenuation of inputs from overland flow through an appropriate riparian buffer. Fortunately, stocking rates in the upper catchment are relatively low, as is the use of artificial fertiliser.

Social environment

- [174] The community of the Wairewa Catchment includes one main township (Little River) with two smaller villages (Birdlings Flat and Cooptown). From Little River the nearest large settlements are the township of Akaroa (approximately 28km to the east), and the city of Christchurch (approximately 52km to the north).⁸⁹
- [175] CCC supplies approximately 74 residential and 23 commercial properties in the Little River and Cooptown communities with reticulated water sourced from Police Creek, a spring-fed tributary of the Ōkana River. Little River, Cooptown and Birdlings Flat are not reticulated for wastewater. Concerns identified by the CCC include risks related to a high water table and water quality problems due to the close proximity of Te Roto o Wairewa/Lake Forsyth. The current system of privately owned and serviced septic tanks has been identified as a source of phosphorus loss to water that requires management. CCC has programmed construction of a reticulated wastewater system in its long-term plan. This would service the settlements of Little River and Cooptown and the Western Valley area.
- [176] Recreational values associated with the Wairewa Catchment, in particular the freshwater bodies include: sightseeing, picnicking, fishing, kayaking, cycling, tramping, bird watching, mountain biking, swimming, water skiing, power boating, waterfowl hunting and rural walks. The highly significant tuna/eel fishery values have been mentioned earlier. The frequency of lake toxicity warnings (particularly blooms of blue-green algae) and the health and safety risks associated with contacting the Lake have attracted much media attention which will have had a negative impact on public perceptions with respect to the suitability of the water for recreational activities.

⁸⁸ Mr Power in his oral submission with Federated Farmers (20 April 2016) suggested some significant fencing may have occurred since then.

⁸⁹ Taylor Baines & Associates, 2013

Section 4 - Evaluation of PC6 - responding to the issues

- [177] It is against the physical and legal context as set out in this report so far that we evaluate the recommended provisions of PC6 Wairewa as set out in Appendix B. We must also assess those provisions against the submissions, the evidence, the representations and the reports that we have received.
- [178] The proposed plan change contained a package of provisions to address the main water issues in the Wairewa Catchment. The most significant issue is the poor water quality and degraded ecosystem health of Te Roto o Wairewa/Lake Forsyth which impacts on the cultural, recreation and amenity values associated with the Lake.
- [179] The PC6 Wairewa rules primarily focus on reducing sediment and phosphorus losses in the flatter valley floor, while region-wide rules under the LWRP manage erosion in the steeper parts of the catchment.
- [180] As we have said, the proposed provisions as set out in Appendix B were arrived at after an extensive collaborative process which culminated in only one outstanding issue at the completion of the hearing.
- [181] This has made our task more straightforward in that there were few contentious issues to determine. Rather, our task is to determine whether the agreed provisions meet the statutory directions contained in the RMA.
- [182] It is important for us to remember that this package must be considered as an integrated and holistic package. However, for the purpose of evaluating the provisions it is practicable to consider them grouped under the following topics:
- (a) Section 10 – Banks Peninsula (Introduction)
 - (b) Policies underlying the rule framework
 - (c) Recognition of cultural significance;
 - (d) Maintaining and improving the water quality and ecosystem health of the rivers;
 - (e) Addressing low flows in the rivers;
 - (f) Reducing sediment and phosphorus inputs into the lake;
 - (g) Improving water quality and ecosystem health within Te Roto o Wairewa; and
 - (h) Miscellaneous.
- [183] We acknowledge that many of the provisions of the above topics overlap in that they can be a tool for implementing the desired outcomes across more than one topic.

[184] In this section when we refer to a plan provision, it is the provision as set out in Appendix B, unless otherwise stated.

Section 10 – Banks Peninsula (Introduction)

[185] The introductory section of PC6 Wairewa headed ‘Section 10 – Banks Peninsula’ received a number of submissions seeking amendments to ensure the introductory section aligned with the ZIP Addendum and accurately presaged the proposed policies and rules.

[186] The Council officers in their s42A report addressed the concerns of submitters and suggested a number of amendments to meet them. No party took issue with the amendments proposed by the Council at the end of the hearing. We accordingly recommend, subject to some minor amendments made by us, for consistency and clarity; the Council’s proposed amendments, as set out in Appendix B, for the reasons set out in the Reports.

[187] One amendment that we have made requires some explanation. This relates to the matter of the TLI trophic state. The ZIP Addendum recommended an outcome of TLI 4 for the trophic state of the Lake. The notified plan change set an outcome of TLI 6 which was inconsistent with the underlying attribute states (targets) set out in the LWRP and the National Objective Framework bottom lines which meant that the outcome should be TLI 5. This was pointed out to us by Dr Davie (Council scientist) at the hearing and in response to commissioners questions issued prior to the hearing. At the hearing we discussed this matter with Mrs. Richardson and Mr. Lowndes from the Banks Peninsula Zone Committee and they pointed out that the Zone Committee’s long term (20 years) aspiration is for a TLI of 4. Accordingly we considered it important to ensure that the ZIP Addendum aspiration was appropriately reflected in the plan change. Hence, the addition of the words “aspiring to a TLI trophic state of 4 in the long term (20 years)” in the introduction.

Policies underlying the rule framework

[188] PC6 Wairewa as notified introduced four new policies and a further policy was recommended for inclusion following the receipt of submissions.

Policies 10.4.1 and 10.4.2

[189] Policy 10.4.1 is a broad policy that identifies the key methods or actions that will be necessary to enhance the cultural values held by Ngāi Tahu and the ecological health and water quality in the catchment. The actions include:

- (a) excluding stock from surface waterbodies in the Valley Floor Area from 1 January 2020;
- (b) encouraging bank stabilisation activities;
- (c) planting riparian margins with native species where this is compatible with stabilising river banks;

- (d) providing for a wetland and/or sediment basin upstream of the Lake to remove phosphorus and sediment;
- (e) minimising phosphorus in community wastewater treatment system discharges; and
- (f) preventing inundation of septic tanks from floodwaters in flood-prone areas.

[190] Policy 10.4.2 concerns improving water quality of the Lake by achieving the targets in Table 10(e) and Table 10(f) by 2030.

[191] Policy 10.4.1 received six submissions. Three submissions oppose Policy 10.4.1 and three support it in part. Sixteen further submissions were received. Policy 10.4.2 received two submissions, one in support. In the other, Ngāi Tahu requested the replacement of Policy 10.4.1 and Policy 10.4.2 with a single policy as discussed below.

[192] The Director-General of Conservation requested that Policy 10.4.1 clause (c) be amended to encourage "...the planting of appropriate native species in riparian margins..." as species need to be appropriate for the situation. This amendment would signal that species should be suitable for the location and the situation; for example, not incompatible with flood management objectives.

[193] Ngāi Tahu sought the deletion of Policy 10.4.1 and Policy 10.4.2 and requested replacing these policies with a new policy that linked the water quality outcomes set in Policy 10.4.2 with the actions required to achieve them set out in Policy 10.4.1. This would read:

Improve water quality in Te Roto o Wairewa/Lake Forsyth to achieve the targets set out in Table 10(e) and 20(f) by 2030 by:

- (a) Reducing the risk of bank erosion or collapse and associated loss or discharge of sediment into water;
- (b) avoiding the direct discharge of animal or human effluent into water;
- (c) encouraging the planting of indigenous vegetation species in riparian margins where this activity does not adversely affect bank stabilization works;
- (d) encouraging people to minimize their wastewater discharges and the phosphorus content in their wastewater;
- (e) managing on-site effluent treatment and disposal systems in areas prone to inundation; and
- (f) maintaining current low levels of nitrogen concentrations in freshwater.

[194] There was disagreement on the utility of linking the two policies in the one statement. Mr Picken (author of the s42A Report) was of the view that the two policies needed to remain separate; with Policy 10.4.1, focusing on actions to enhance the multiple values in the catchment, with the clauses linked to the rules; and with Policy 10.4.2, providing a clear statement that water quality in the Lake needs to be improved to meet the targets in Tables 10(e) and 10(f). Mr Picken was of the opinion that combining the two policies would dilute their significance. We agree and adopt his reasoning in the s42A Report.

[195] Ngāi Tahu suggested amendments to Policy 10.4.1(f) by replacing the term 'septic tank' with 'on-site wastewater treatment system'; and inserting a new sub-clause (g) requiring the maintenance of low levels of nitrogen and ammonia concentrations in rivers to meet the

limits in Table 10(d). These amendments were agreed to by the Council officers in the s42A Report and for the reasons given therein we concur, except that we have substituted the word “nitrate-nitrogen” for the word “nitrogen”, to accurately represent the contaminants as set out in Table 10(d).

[196] Some other minor amendments requested by Fish and Game and the Director-General of Conservation were agreed to at caucusing and we adopt and recommend them.

Policy 10.4.3

[197] Policy 10.4.3 seeks to improve and maintain the flood carrying capacity of the Ōkana, Ōkuti and Takiritawai rivers.

[198] There were six submissions received on this policy, with one seeking its retention and five seeking amendments.

[199] With the exception of the Ngāi Tahu submission, the amendments sought were based on the premise that stock and bank erosion were not the main causes of reduced flood carrying capacity. We are satisfied on the evidence that bank erosion and collapse are a contributing factor to flooding by reducing channel capacity and that stock is a contributing factor to the breakdown of stream banks, and accordingly the amendments sought based on this premise are not recommended.

[200] The Ngāi Tahu submission suggested the policy be re-worded to focus on the effects as there may be other activities that are reducing the flood carrying capacity of the waterways, and they accordingly sought the following words:

“... and avoid activities in the beds or margins of these rivers or their tributaries which may significantly reduce their flood carrying capacity.”

to replace:

“by excluding stock from the beds and riparian margins of those rivers, and by enabling bank stabilisation works, so that induced bank erosion and collapse is avoided.”

[201] This amendment also addresses the submission of the Little River Wairewa Flooding Committee.

[202] The officers, in their s42A Report, agreed to the amendment sought by Ngāi Tahu and for the reasons set out in that Report, we agree.

Policy 10.4.4

[203] Policy 10.4.4 requires recognition of the cultural values of Ngāi Tahu, and enhancement of the ecological health of Te Roto o Wairewa/Lake Forsyth, whilst maintaining flood control and land drainage functions, by three means, including allowing investigations of legacy

phosphorus issues in the Lake, and providing for the artificial opening and closing of the Lake.

[204] Policy 10.4.4 as notified received four submissions. Fish and Game requested that Policy 10.4.4 be retained. Little River Wairewa Flooding Committee supported policies related to achieving flood management outcomes.

[205] The Department of Conservation requested the following note be inserted with Policy 10.4.4:

“Note: DOC manages the bed of Lake Forsyth/Te Roto o Wairewa under the Conservation Act (1987) and activities in the bed will require authorisation under that Act.”

[206] At the hearing it was agreed that it would be most appropriate to insert this note in the plan before Rule 10.5.6.

[207] Ngāi Tahu considered that while the policy recognised the cultural significance of the Lake it did not provide for those values. At the hearing it was agreed to add the words: “and provide for” after “recognise”, and add the words “and customary uses of” before “Te Roto o Wairewa”. We agree that this wording addresses the Ngāi Tahu concerns and recommend accordingly.

Recognition of cultural significance

New Policy 10.4.4A

[208] A new policy to recognise the cultural significance of the Lake to Ngāi Tahu was requested, which we discuss below. The suggested wording was:

Cultural significance of Te Roto o Wairewa/Lake Forsyth

Recognise the cultural significance of Te Roto o Wairewa/Lake Forsyth to Ngāi Tahu and its status as a customary lake and area of statutory acknowledgement under the Ngāi Tahu Claims Settlement Act 1998; and promote the restoration of the lake and margins for customary uses.

[209] Policy 10.4.4A was agreed to between Ngāi Tahu and the Council as a result of caucusing during the hearing as Ngāi Tahu was concerned that the proposed plan change as notified did not adequately reflect the cultural significance of the Lake. This reflects the wording of the proposed introduction to section 10 which emphasises the outstanding cultural significance of Te Roto o Wairewa/Lake Forsyth.

[210] To reflect the importance of the cultural significance of the Lake, we recommend amendments to other provisions. Importantly, it was agreed as between Ngāi Tahu and the Council that when naming the Lake, the Māori name should precede the English name so that it reads Te Roto o Wairewa/Lake Forsyth throughout the Plan.

Maintaining and improving water quality and ecosystem health of rivers

Introduction

- [211] The description of the physical context concerning the poor water quality and ecosystem health of Te Roto o Wairewa/Lake Forsyth pointed particularly to sediment and phosphorus inflows and stored contaminants being the culprits. However, the water quality and ecosystem health of the rivers themselves are also an important factor that is addressed by the recommended provisions.
- [212] While the river water quality in the Wairewa Catchment is generally good, with the nitrogen and ammonia concentrations in the Ōkuti and Ōkana rivers within the NOF band A (the most protective in the NPSFM), further improvement by reducing inputs of sediment, phosphorus and microbiological contaminants would both protect the rivers and contribute to improvement over time in the lake downstream.

Issue - maintain and improve water quality

- [213] Key actions to maintain and improve river water quality⁹⁰ are:
- (a) reliance on LWRP provisions for “red” Nutrient Allocation Zones for requiring Farm Environment Plans and limiting any increases in nitrogen leaching from below the root zone to groundwater and rivers;
 - (b) a suite of freshwater outcomes, limits and targets for the Catchment’s rivers (outcomes and targets to be met by 2030) including (among others) indicators for ecological health, human health for recreation and mahinga kai;
 - (c) excluding all stock from rivers in the Valley Floor Area from 1 January 2020; and
 - (d) assisting and encouraging landowners within the Valley Floor Area to implement practical measures to reduce stream bank erosion.
- [214] These actions reflect the relevant Zone Committee priority outcomes, which are (**our emphases**)⁹¹:

Kaitiakitanga

All streams, freshwater wetlands, Te Roto o Wairewa, salt marsh/estuaries, springs and harbours in the Banks Peninsula Zone **have Kaitiakitanga as an overarching value and reflect Ki Uta Ki Tai, Mauri, Mahinga Kai to tangata whenua, Wahi Tapu and Wahi Taonga.**

Water Quality

People in the Banks Peninsula Zone have access to safe drinking water, as defined by the New Zealand Drinking Water Standards (NZDWS). **Water quality in Banks Peninsula waterways is regularly monitored. Policies and rules are developed to maintain water quality and improve it where appropriate.**

⁹⁰ s32 Report at [5,4], p25

⁹¹ Banks Peninsula Zone Implementation Programme at p13, 15, 19, 20

Erosion and Sediment Control

Sediment discharge into waterways is minimised. Sediment build-up in the harbours is managed sustainably to prevent damage to Mahinga Kai and Kai Moana from erosion and sedimentation.

Te Roto o Wairewa

All streams that flow into Te Roto O Wairewa are flourishing ecosystems reflecting Mauri, Kaitiakitangi and Mahinga Kai values.

[215] More specifically, the ZIP Addendum⁹² makes these further relevant catchment recommendations, to be implemented by 2020:

5.2 Environment Plans – Sediment and Phosphorus

Land managers with erosion and storm water hot spots and, land with waterway boundaries and/or with waterways running through properties be encouraged to prepare environment plans to focus attention on the reduction and management of:

- Sediment (and phosphorus) entering waterways
- Stream bank collapse
- Storm water from properties and roading infrastructure
- Stock exclusion and access across waterways
- Debris and willows impeding water flowing in waterways.

Environment plans are written to foster good management and may include but not be limited to:

- Identification of high risk sites where sediment is likely to be discharged
- Actions to reduce sediment discharges (e.g. sediment traps, planting, diverting water away from erosion prone areas)
- Regular clearance of drains and small waterways
- Stock exclusion
- Stock crossings (i.e. culverts and bridges) and drinking bays
- Fencing and planting of waterways where it will not impede drainage.

5.6 Exclude all stock from waterways

The pLWRP excludes all stock from waterways in the lower catchment of both the Ōkana and Ōkuti Rivers by 2020 and that landowners be supported with education, advice and funding.

5.10 Dissolved Nitrogen in Waterways

The pLWRP sets a dissolved nitrogen limit of a five year average of 0.2mgN/L.

5.11 Monitor and adapt – Periphyton Growth

Environment Canterbury continues to monitor the streams in the Wairewa catchment for periphyton growth to determine whether further action is needed.

Relevant provisions in plan change in response

[216] In PC6 Wairewa, freshwater “outcomes” for the rivers of the Wairewa Catchment arising from these recommendations are proposed to be actioned through the inclusion of Table 10(a) which operates in conjunction with a similar table of outcomes for the Lake, Table 10(b) discussed below.

⁹² Wairewa ZIP Addendum (November 2014) at pp21, 24, 26, 27, 36

- [217] Water quality “limits” are similarly proposed for rivers of the Wairewa Catchment in Table 10(d) with similar “limits and targets” for the Lake in Table 10(e).
- [218] Attributes in Tables 10(a) and (d) comply with the NPSFM National Objectives Framework (NOF). Attributes required for rivers by the NPSFM are Chlorophyll *a* and *E.coli* which are in Table 10(a) outcomes, and Nitrate and Ammonia in Table 10(d) limits. Other non-mandatory attributes are included in both tables.
- [219] In response to questions at the hearing, we note that the nitrate-nitrogen limit in Table 10(d) is set at a higher level (lower concentration) than required for protection of aquatic organisms against nitrate toxicity. The annual median limit of 0.2 mg/L is to prevent excessive periphyton growth and to limit the rivers’ nitrogen contributions to the Lake⁹³ while allowing for small scale development, such as pasture improvement. Limits for ammoniacal nitrogen are set at the Attribute State A boundary. Both rivers currently meet these limits.
- [220] The s42A Report⁹⁴ states that PC6 Wairewa rules on stock exclusion from rivers in the Valley Floor Area, in combination with bank stabilisation and sediment control measures, are expected to lead to improvements in river water quality. Numeric outcomes for the rivers include an *E.coli* count that equates to a low risk of infection for people undertaking primary contact recreation activities involving full immersion.

Discussion

- [221] Table 10(a) describes the freshwater outcomes to be achieved in the Wairewa Catchment rivers by 2030.
- [222] Of the three submissions on Table 10(a), only the submission from the Director-General of Conservation sought any change. The submitter sought the inclusion of the following additional Ecological Health Indicator: *Threatened and at risk species and their breeding sites are protected from activities adverse to them.*
- [223] The s42A Report noted that there are a number of at risk fish and bird species within the catchment, but recommended no change to Table 10(a) because ‘*the proposed amendment is imprecise and it is unclear what species, parameters and activities would require monitoring and by whom.*’ In the absence of any elaboration on this point by the submitter at the hearing, for the reasons given, we have accepted the s42A Report recommendation not to include this change.
- [224] Table 10(d) prescribes water quality limits for the rivers in the Wairewa Catchment.
- [225] The Director-General of Conservation, Fish & Game and Ngāi Tahu all sought retention of Table 10(d) as notified. Two minor amendments were recommended to us to update the map reference to the "Topo 50" format to be consistent with other map references in

⁹³ As noted in the introductory text to the Plan Change.

⁹⁴ s42A Report at [2], p2-2

the LWRP, and to correct a spelling and transposition error in the description of the measurement locations for each river.

Finding

- [226] Tables 10(a) and 10(d) should be amended as set out in Appendix B for the reasons given in the section 42A Reply Report dated 22 April 2016.

Addressing low flow in rivers

Issue

- [227] As stated earlier, low flows in the small streams and rivers in the Wairewa Catchment can put stream ecology under stress, particularly affecting habitat of native fish such as kanakana and inanga.

Relevant plan change provisions in response

- [228] PC6 Wairewa proposes environmental flow and allocation limits for the Ōkuti, Ōkana and Takiritawai rivers and tributaries. These are intended to avoid over-allocation and are designed to protect the significant biodiversity values in the rivers during periods of summer low flow. The s42A Report states that these limits will not significantly impact on abstractors, although our evaluation below contests this. The proposed limits are based on technical standards in the draft 2008 National Environmental Standard (NES) on Ecological Flows and Water Levels⁹⁵.
- [229] These low flow limits are intended to operate in tandem with the proposed stock exclusion rules and non-regulatory measures such as riparian planting, to deliver the relevant Zone Committee priority outcomes, which are **(our emphases)**⁹⁶:

Kaitiakitanga

All streams, freshwater wetlands, Te Roto o Wairewa, salt marsh/estuaries, springs and harbours in the Banks Peninsula Zone **have Kaitiakitanga as an overarching value and reflect Ki Uta Ki Tai, Mauri, Mahinga Kai to tangata whenua, Wahi Tapu and Wahi Taonga.**

Water Quantity

There is **enough water available in the Banks Peninsula Zone to meet the needs of daily living, stock water, and fire fighting storage as a priority**, and allow allocation for other uses where these priority needs are already being met. **Allocation of water required to meet these needs is subject to flow and allocation limits** so that the unique values of the Banks Peninsula streams are protected.

Te Roto o Wairewa

All streams that flow into Te Roto o Wairewa are flourishing ecosystems reflecting Mauri, Kaitiakitangi and Mahinga Kai values.

⁹⁵ We note that the NES has not yet been made operative

⁹⁶ Banks Peninsula Zone Implementation Programme at p13, 16, 20

Climate Change

Climate Change effects are taken into account in all infrastructure upgrades and planning on Banks Peninsula. As the climate changes there is adequate water available and flooding is minimised.

[230] More specifically, the ZIP Addendum⁹⁷ makes these further relevant recommendations:

5.4 Flow Allocation

The pLWRP treats the Ōkana and Ōkuti catchment as two separate catchments when approaching water allocation.

5.5 Minimum Flows and Lake Levels

The pLWRP adopt a flow allocation for the Ōkana and Ōkuti with a minimum flow of 90% MALF7 and a total allocated volume of 30% MALF⁹⁸.

[231] PC6 Wairewa proposes to implement the minimum flows and allocation limits via Rules 5.123 – 5.125 of the LWRP and new Table 10(c)⁹⁹:

Discussion

[232] Table 10(c) sets out minimum flows (when abstraction must cease), flow rates at which abstractions must reduce, and allocation limits for the main rivers in the catchment, the Ōkana, Ōkuti and Takiritawai rivers.

[233] The corrections recommended in Appendix B to Table 10(c) are minor editorial corrections with no effect on implementation.

[234] The limits set in Table 10(c) are those recommended by Drs Davie and Gray¹⁰⁰ and adopted by the Zone Committee in ZIP Addendum recommendations 5.4 and 5.5 described above. They put forward two options, one using the LWRP default provisions (minimum flow of 50% MALF7 and allocation limit 20% of MALF7) and the recommended option using the NES draft standard (90% and 30% respectively).

[235] The proposed option has the benefit of a higher allocation limit, meaning that further surface water would be available for allocation from the Ōkana and Ōkuti. The benefit of the proposed minimum flows is slightly higher stream flows for the stream ecology during summer dry periods. However, the minimum flows proposed are considerably higher under the NES option than the LWRP option, meaning that the reliability of supply¹⁰¹ for any abstractors will be low during summer low flows, compared to the current reliability.

⁹⁷ Wairewa ZIP Addendum (November 2014) at p23, 36

⁹⁸ MALF signifies mean annual low flow calculated from mean daily flows, and MALF7 signifies the same but calculated from mean weekly flows. The NES upon which this recommendation is based uses only MALF7. The commentary for this recommendation also uses MALF7 so we have assumed the recommendation contains a typo and both the 90% and 30% apply to MALF7 (use of MALF would produce a slightly lower allocation limit).

⁹⁹ Final Officer s42A version dated 22 April 2016

¹⁰⁰ Memo to N Regnault from T Davie & D Gray Options for flow allocation in Wairewa catchment dated 7 February 2014

¹⁰¹ Reliability meaning the periods when the allocated rate of water take is actually allowed to be taken under Table 10(c) minimum flow restrictions

- [236] For example, in the Ōkuti, on average, current abstractors would be unable to take water for 3 days per year whereas under proposed Table 10(c) this would rise to 20 days per year, and with 25% and 50% restrictions on water take for much longer than that. For the Ōkana the respective figures are 0 days and 33 days per year with water takes shut off. Dr Davie's analysis¹⁰² shows that in the last 25 years there would have been 6 summers when the shut off period exceeded 70 days in the Ōkana catchment. Effectively anyone taking water in either catchment will need water storage through summer with this level of reliability.
- [237] The effect on current abstractions is actually quite muted. It was pointed out to us that the CCC consent to take water from Police Creek for the Little River community supply is not subject to minimum flow restrictions under Policy 4.49 of the LWRP. Therefore, the effect of Table 10(c) limits on current consents – once a review of conditions is done – affects only one consent for landscaping purposes in the Ōkuti (CRC970388), and an inactive but hydraulically connected groundwater consent downstream of Police Creek (CRC071841).
- [238] In our view, choosing a minimum flow between the two options considered (70% of MALF7) in combination with the LWRP allocation limit of 20% of MALF7 would strike a better balance between ecological protection and reliability. We note that the s42A report at para 10.30 states that the minimum flows correspond to 70% of MALF7 whereas the figures in Table 10(c) are those for 90% of MALF7. However, we are constrained by the lack of submissions on the proposed limits.
- [239] No submissions sought amendments to the allocation limits in Table 10(c). Fish and Game and the Director-General of Conservation both sought that minimum flows and restriction flows are rounded up to the nearest five or ten round number. The reasons given were that this is within the margin of error of measurement, it is precautionary, and it will have little effect on reliability for abstractors.
- [240] Fish and Game and the Director-General of Conservation have also sought that a new rule be included in the Plan Change for Table 10(c):
- By section 68(7) of the RMA, Table 10(c) shall affect the exercise of any existing resource consent to which this rule applies from the expiry of 7 years after the day on which this plan change becomes operative.*
- [241] The reason given was that using section 68(7) to introduce this rule provides ample lead-in time for consent holders to adjust to the new regime.
- [242] We consider that as a matter of principle, when minimum flows and allocation limits are set, they should be applied within a reasonable time to existing consents, not just to new consents. The Council officers did not support the requested new rule because they consider such a review is at the discretion of the Council, and that the Council would be unlikely to implement a review prior to its expiry (which is in 2032). We find their conclusion surprising given the long duration of this consent.

¹⁰² Council memo *ibid*, Table 4. Note we are uncertain whether this analysis is for current consents or for the situation where the allocation limit is fully allocated. In any case the effects on reliability are substantial.

[243] Unfortunately no evidence was specifically presented on the matter by any party. However, we note that one of the conditions of the primary resource consent (CRC970388, expiring 28 May 2032) that would be affected by this change states;

The Canterbury Regional Council may annually, on the last working day of May, serve notice of its intention to review the conditions of this consent for the purposes of:

(a) ...

(b) *Complying with the requirements of a relevant rule in an operative Regional Plan.*

[244] As the Council already has the power to review the consent in any event, we consider that nothing would be gained by inserting the s68(7) rule as requested. We consider the outcomes of the Plan would be best served by all consent holders being subject to the restrictions set out in Table 10(c). This would not occur in the absence of a review.

Findings

[245] In the absence of submissions seeking any changes to the limits in Table 10(c), we recommend the limits in Table 10(c) as notified, including the editorial changes recommended in the s42A Reply Report dated 22 April 2016.

[246] We do not consider rounding to be a valid reason for amending the minimum flows and restrictions in Table 10(c).

[247] We also recommend that the s68(7) rule proposed by Fish and Game and the Director-General of Conservation is not included in the plan as the Council already has the power to review the consent.

Reducing sediment and phosphorus input to the lake

Issue

[248] Sedimentation, particularly within the Ōkana, Ōkuti and Takiritawai rivers, is largely due to stream bank erosion which could be improved by stabilising the banks via improved land practices (i.e. stock not accessing waterways and establishment of appropriate riparian buffer zones with planting).

[249] A lesser contributor of phosphorus loss within the catchment is septic tank systems located in the Valley Floor Area which are not appropriately sealed.

Relevant plan change provisions in response

[250] PC6 Wairewa establishes a Valley Floor Area where rules to manage water quality apply. The Valley Floor Area is the main source of sediment and nutrients entering the lake and where improving land management practices is likely to provide the greatest gains for achieving the freshwater outcomes.

[251] Works to reduce river bank erosion in the Valley Floor Area require a resource consent but the Plan Change supports and encourages such work, provided it is carried out in accordance with a Valley Floor Area River Bank Erosion Plan.

[252] The key targets and actions proposed to reduce the sediment and phosphorus input into Te Roto o Wairewa/Lake Forsyth include:

- (a) introducing ecological, cultural and recreational freshwater outcomes and water quality limits for the Wairewa Catchment (discussed above);
- (b) reliance on LWRP region-wide provisions for controlling the effects of vegetation clearance and earthworks in High Soil Erosion Risk Areas (defined in LWRP)¹⁰³, which currently make up a large part of the catchment; and
- (c) addressing catchment sources of sediment and phosphorus by:
 - (i) excluding stock from all rivers in the Valley Floor Area from January 2020 to reduce stream bank erosion and keep faecal material out, thus reducing the loss of phosphorus-rich sediment to rivers and the Lake;
 - (ii) encouraging other stream bank protection actions to reduce erosion of riverbanks in the Valley Floor Area and the subsequent loss of phosphorus-rich sediment to waterways;
 - (iii) facilitating the construction and maintenance of a sediment basin and/or wetland at the head of Te Roto o Wairewa/Lake Forsyth to intercept sediment (and phosphorus) before it enters the Lake; and
 - (iv) promoting a reticulated wastewater system for Little River that includes phosphorus removal, and promoting the sealing of septic tanks to prevent floodwater inundation.

[253] The relevant proposed rules in the notified version of PC6 Wairewa are:

- (a) bank stabilisation Rules 10.5.2 and 10.5.3;
- (b) stock exclusion Rule 10.5.5;
- (c) Rule 10.5.6 which enables the construction of a sediment basin and/or wetland;
- (d) Schedule 24c which sets out the content and requirements of a “Valley Floor Area River Bank Erosion Plan” referred to in Rule 10.5.2.; and
- (e) the Planning Map which defines the Valley Floor Area.

¹⁰³ Proposed Plan Change 5 to the LWRP proposes provisions relating to a new High Runoff Risk Phosphorus Zone to be identified in the planning maps

[254] The above rules work in conjunction with the region wide rules in Section 5 of the LWRP. In particular we note the region-wide stock exclusion rules (Rules 5.68 – 5.71) which apply outside of the Valley Floor Area; and the on-site wastewater rules (Rules 5.7 – 5.9) which apply throughout the Wairewa Catchment.

Addressing catchment sources

[255] Targeted policies and rules to reduce inputs of sediment, nutrients (P primarily) and microbial contaminants to rivers upstream of Te Roto o Wairewa/Lake Forsyth is a significant aspect of PC6 Wairewa and has attracted the most submissions.

[256] Section 10.11 in Plan Change 6 amends Planning Maps B-067 and B-077 by adding a layer called the "Wairewa Valley Floor Area". The Valley Floor Area is generally at or below 20 m elevation above mean sea level. This is equivalent to the area referred to by Lynn (2013) as being particularly susceptible to erosion and thereby contributing sources of phosphorus to the Lake: the reaches between the Lake and approximately the Church Road Bridge and Usshers Road Bridge.

[257] Section 10.11 and Planning Maps B-067 and B-077 received two submissions seeking that the amendments are retained. There were no submissions in opposition.

[258] We queried during the hearing the overlap between the Valley Floor Area as defined in the proposed PC6 Wairewa Planning Map and the High Runoff Risk Phosphorus Zone proposed in Plan Change 5 to the LWRP. This overlap means that within a small area, two sets of rules would apply to activities within that area. A map¹⁰⁴ overlaying the two zones was provided to us in the s42A Reply Report. A comparison of that map with the map of the Valley Floor properties¹⁰⁵, shows that the overlap affects four properties greater than 10 hectares in area. There are no submissions seeking amendment to these provisions and accordingly we can make no recommendation for change.

[259] The relevance of PC4 (Omnibus) was also discussed, at the hearing and caucusing, in relation to management of inundation of wastewater treatment plants in the Wairewa Catchment and implementation of Policy 10.4.4(f). Ngāi Tahu sought the insertion of a catchment specific rule in PC6 Wairewa in respect of the issues of managing existing and modified or new on-site waste water treatment systems.

[260] In the s42A Report, the Council officer recommended that the Ngāi Tahu request for a new rule not be included on the basis that the region-wide rules are sufficient for managing the risk of inundation of on-site wastewater treatment systems and that there is sufficient information available for Council staff to identify flood prone areas. For the reasons set out in that Report, we agree.

¹⁰⁴ s42A Reply Report Appendix C

¹⁰⁵ s42A Reply Report Appendix B

Enabling works to stabilise river banks

Rule 10.5.1

- [261] Rule 10.5.1, as notified, provided that any activity classified as a permitted activity by a rule in Section 5 of the LWRP is a permitted activity in the Valley Floor Area.
- [262] Federated Farmers and Ngāi Tahu, in their submissions, both indicated that this rule is confusing. After caucusing the joint witnesses agreed to delete Rule 10.5.1 and add the following advisory note instead:¹⁰⁶

Note: Despite Rules 10.5.2 and 10.5.3, any activity classified as a permitted activity by a Rule in Section 5 of this plan is permitted in the Valley Floor Area unless it is being carried out for the primary purpose of reducing bank erosion and collapse, in which case Rules 10.5.2 and 10.5.3 apply.

Rule 10.5.2

- [263] The notified PC6 Wairewa Rule 10.5.2 bundled together the range of activities likely to be associated with bank stabilisation works that may otherwise require several resource consents under different rules in Section 5 of the LWRP. The conditions and matters for discretion aim to ensure erosion control works are undertaken appropriately and are consistent with a River Bank Erosion Plan that has considered possible environmental and other effects.
- [264] The Director-General of Conservation requested that Rule 10.5.2 matter of discretion 3 be amended to be consistent with clause (a) in the Rule, and that matter of discretion 4 be amended so the location and timing of the activity could be managed to avoid fish spawning sites particularly during the spawning season. Fish and Game sought a similar amendment to Rule 10.5.2 matter of discretion 4 to specifically include trout spawning habitat.
- [265] The s42A Report author agreed with the Director-General of Conservation's submission to amend matter of discretion 3 to allow consideration of the plant species to be planted or removed as it may for example, be a protected species or performing a useful flood control function.¹⁰⁷
- [266] The Director-General of Conservation and Fish and Game requested amendments to matter of discretion 4 to allow consideration of fish spawning habitat in general (rather than specifically inanga) and the timing of the activity. However we note that PC4 (Omnibus) as notified proposed a definition of "inanga spawning habitat" and therefore retention of that phrase here is desirable. The s42A Report author agreed with the Director-General of Conservation's request. We consider that specific reference to species may inadvertently exclude consideration of unlisted species, and therefore we recommend adding the words "*the spawning habitat of other fish*" after "*inanga spawning habitat*" in Rules 10.5.2 and 10.5.5A.

¹⁰⁶ Final Officer s42A version dated 22 April 2016

¹⁰⁷ s42A Report

[267] Accordingly, in the interests of consistency we consider it appropriate for matter of discretion 4 to state:

“4 Effects on water quality, sources of human or animal drinking-water, aquatic ecosystems, inanga spawning habitat, the spawning habitat of other fish, and the timing of the activity”

[268] For clarity we consider that the above matter of discretion 4 should be replicated in matter of discretion 3 in 10.5.5A.

[269] Federated Farmers opposed Rule 10.5.2 (and Schedule 24c), as in its view, providing an assessment of the effects covered in the matters of discretion would place an "intolerable burden" on landowners in putting together applications for resource consent. Rule 10.5.2 does not compel landowners to carry out bank stabilisation works.

[270] The rule bundles together a range of activities for bank stabilisation works that may require resource consent into one rule and is intended to simplify the consent application process. The rule does not impose additional requirements that must be met for anyone to carry out other activities, such as the use of land for a farming activity. We heard that the purpose of the rule was to enable a group of landowners along a river to work together on bank stabilisation works while ensuring that the potential adverse effects of the works are minimised. We envision that the CRC would need to facilitate this work.

[271] Federated Farmers also sought clarification as to whether fencing would require resource consent under this rule. We were advised that fencing is, if conditions are met, a permitted activity under Rules 5.167, 5.168 and 5.170 of the LWRP.

[272] Ngāi Tahu requested Rules 10.5.2 and 10.5.3 be deleted and replaced because they are unclear. The section 42A Report recommended amending the text to state “*for the purpose of reducing bank erosion and collapse*”.

Finding

[273] After caucusing the expert planning witnesses agreed to the wording of Rules 10.5.2 and 10.5.3 as set out in the s42A Report, on the basis of the agreement to replace Rule 10.5.1 with the advisory note (mentioned above). We recommend those amendments for the reasons set out in the s42A Report, with the exception of specific reference to inanga and other fish.

Rule 10.5.3

[274] Activities to reduce bank erosion that are not undertaken in accordance with a Valley Floor Area River Bank Erosion Plan prepared in accordance with Schedule 24c do not comply with Rule 10.5.2, and become non-complying under the proposed Rule 10.5.3. The non-complying activity status provides for exceptional circumstances where erosion works are not carried out under a Valley Floor Area River Bank Erosion Plan, and would ensure that works are carried out appropriately and that environmental effects such as flooding, and impacts on other water users are addressed.

[275] Rule 10.5.3 received five submissions. No further submissions were received. The Director-General of Conservation and Fish and Game request the rule is retained. Federated Farmers opposes the rule and Ngāi Tahu requests it is deleted. The submissions on Rule 10.5.3 generally followed the positions on Rule 10.5.2 and we recommend the wording of Rule 10.5.2 as set out in Appendix B.

Schedule 24c

[276] Compliance with Schedule 24c is the only condition of Rule 10.5.2, and it sets out what must be in a Valley Floor Area River Bank Erosion Plan.

[277] Schedule 24c received four submissions and fifteen further submissions.

[278] The Director-General of Conservation supports the Schedule but again sought that the spawning sites of other fish are managed sustainably and protected from adverse effects. For the reasons given in paragraph [266] above the same wording should be used in clause 5(a) of Schedule 24c.

[279] Federated Farmers also opposed the Schedule, as in its view, the requirements of Clauses 5(a) to (h) would be onerous on small landowners. These sentiments are similar to those expressed for Rule 10.5.2. As discussed above, Rule 10.5.2 and its condition of Schedule 24c does not compel landowners to carry out stabilisation works.

Prohibiting stock from river bed and riparian margins

[280] The main purpose for the stock exclusion provisions within PC6 Wairewa is to avoid stock exacerbating natural stream bank erosion, which contributes to poor water quality in the Lake, and avoid damaging riparian vegetation planted to stabilise river banks. These provisions link with the recommendations within the ZIP Addendum¹⁰⁸:

The pLWRP excludes all stock from waterways in the lower catchment of both the Ōkana and Ōkuti Rivers by 2020 and that landowners be supported with education, advice and funding.

[281] There were a number of issues raised in response to the stock exclusion provisions. The main concerns within the submissions and evidence included:

- (a) the definition of stock (including sheep);
- (b) the feasibility of fencing all stock out of all waterways;
- (c) the consequences for weed control from prohibiting sheep grazing in riparian margins;
- (d) the clarity of Rules 10.5.4 and 10.5.5; and

¹⁰⁸ Wairewa ZIP Addendum (2014), recommendation 5.6, pg 24

- (e) the fact that some farmers have already established fencing, but that fencing may not comply with the riparian margin LWRP definition (i.e. less than 5 m or 10 m from the bed of the lake or river).

[282] As stock exclusion, and in particular the prohibited activity status of proposed Rule 10.5.5, was the main issue raised by submitters in evidence and at the hearing we requested that the submitters who had requested to be heard at the hearing caucus this issue. This occurred on the afternoon of 20 April 2016, and resulted in a Joint Statement of Canterbury Regional Council, Ngāi Tahu, Wairewa Rūnanga, North Canterbury Fish and Game and Federated Farmers, which was presented to us on 22 April 2016.

[283] This joint statement proposed replacement Rules 10.5.5, 10.5.5A, 10.5.5B and 10.5.5C to address the main concerns of the submitters. The default position remains that all stock continues to be excluded from the bed, banks and riparian margins of rivers and the Lake in the Valley Floor Area from 1 January 2020.

[284] However, Rule 10.5.5A provides a consent pathway for sheep to use and disturb the riparian margin as a restricted discretionary activity with appropriate matters of discretion specified. Although resource consent is required and the rule is limited to sheep only, it provides some flexibility for farmers who may wish to graze stock in the riparian margin to control weeds, while still enabling potential effects, including on stability of river banks (amongst other things) due to stocking rates and duration and timing of grazing, to be addressed at the time of the consent application.

[285] The matters for discretion also allow an applicant to support their application by outlining the benefits of any proposed bank stabilisation and erosion protection works to provide further benefits. This then helps provide some incentive to conduct or initiate wider bank stabilisation controls.

[286] The proposed additional Rules 10.5.5B and 10.5.5C allow stock to be within the riparian margin as defined in the LWRP definitions (i.e. less than 5 m or 10 m from the bed of the lake or river) for landowners who have already established fencing prior to 20 April 2016.

[287] Rule 10.5.5B allows all stock to use and disturb the riparian margin as a permitted activity, where:

- (a) prior to 20 April 2016, a permanent barrier, including fencing, has been established no closer than 2 metres from the bed;
- (b) that barrier (or fence) is maintained so stock (apart from sheep) cannot pass through it; and
- (c) the use and disturbance of the riparian margin is on the landward side of that barrier.

[288] Rule 10.5.5C allows land owners to graze sheep along river banks as a permitted activity, provided that:

- (a) prior to 20 April 2016, permanent post and wire fencing has been established; and
- (b) that fence is maintained; and
- (c) there is no evident damage, by sheep, to riparian planting and the riparian margin on the river side of the fence.

[289] In the Reply Report¹⁰⁹ a further amendment to the drafting of the rules, to provide clarification, was suggested by adding the phrase “within the riparian margin” to Rules 10.5.5B and 10.5.5C. The author of the s42A Report also recommended the reference to the rivers and lake is included in 10.5.5A.

[290] There was some discussion at the hearing on the need to define ‘stock’. The protocol of the LWRP is to use the Oxford English Dictionary definition where no definition is provided for within the Plan. Also the proposed amendments of the stock exclusion rules now make it unnecessary to provide a further definition.

Finding

[291] For the reasons given in the Council officer’s reports, and as further explained and elaborated on by us above, we recommend Rules 10.5.2 to 10.5.5C and Schedule 24c as set out in Appendix B.

Intercepting contaminants upstream of lake

[292] Proposed PC6 Wairewa includes provisions to facilitate the construction and maintenance of a sediment basin and/or a wetland at the head of Te Roto o Wairewa/Lake Forsyth to intercept sediment (and phosphorus) before it enters the Lake.

[293] The relevant provisions include Policy 10.4.1 (which has been discussed previously) and Rule 10.5.6 which is specific to the Valley Floor Area and allows the disturbance of the bed and riparian margins of a river and lake to construct, maintain, and use a sediment basin and/or wetland (to intercept sediment and phosphorus before it enters Te Roto o Wairewa/Lake Forsyth) as a discretionary activity.

[294] Rule 10.5.6 received four submissions. The Director-General of Conservation and Fish and Game sought the rule to be retained.

[295] M and M Herlihy and K Stanbury opposed the rule and sought confirmation whether obtaining small quantities of stock water from the river would remain a permitted activity.

[296] Proposed Rule 10.5.6 is specific to the disturbance of the bed and riparian margins of a river and lake to construct, maintain, and use a sediment basin and/or wetland within the Valley Floor Area and would not affect the region-wide permitted activity rule status of stock water, unless it was particularly specified.

¹⁰⁹ Officers’ Reply Report 22 April 2016

Finding

[297] We recommend Rule 10.5.6 be retained as notified, subject to the minor edit included in Appendix B.

Improving water quality and ecosystem health within Te Roto o Wairewa

Issue

[298] As stated previously, Te Roto o Wairewa/Lake Forsyth is highly eutrophic, in poor ecosystem health and regularly experiences toxic algae blooms that are harmful to humans and animals and can result in fish kills. Consequently the Lake's cultural health is severely degraded and access for uses such as mahinga kai, recreational or amenity values is compromised.

[299] To significantly improve the health of the Lake requires not only a significant reduction in the volume of phosphorus-rich sediment entering the lake each year, but also a reduction in the amount of phosphorus which has previously accumulated on the bed of the lake. Key actions to address the legacy phosphorus issue include:

- (a) the lake opening and closing regime being used to improve water quality;
- (b) initiating investigations to determine appropriate techniques to remove or neutralise existing phosphorus in the lake bed to improve water quality, ecological health and mahinga kai, and to inform future lake restoration activities to re-establish or enhance aquatic plants.

Relevant plan change provisions in response

[300] PC6 proposes to address this significant issue, in part by:

- (a) establishing limits, and also outcomes and targets to be achieved by 2030, for lake water quality for Te Roto o Wairewa/Lake Forsyth; and
- (b) managing Phosphorus within Te Roto o Wairewa/Lake Forsyth, by:
 - (i) supporting lake investigations into ways of reducing the impact of legacy phosphorus without requiring resource consent - provided rule conditions to protect the environment and water users are complied with; and
 - (ii) supporting the opening and closing of the lake by “bundling” together activities associated with lake opening into a single rule.

Setting outcomes, limits and targets for lake water quality

[301] The lake water quality outcomes, limits and targets are intended to reflect the relevant Zone Committee priority outcomes, which are (**our emphases**)¹¹⁰:

¹¹⁰ Banks Peninsula Zone Implementation Programme 2012 at p13, 15, 20

Kaitiakitanga

All streams, freshwater wetlands, **Te Roto o Wairewa**, salt marsh/estuaries, springs and harbours in the Banks Peninsula Zone **have Kaitiakitanga as an overarching value and reflect Ki Uta Ki Tai, Mauri, Mahinga Kai to tangata whenua, Wahi Tapu and Wahi Taonga.**

Water Quality

People in the Banks Peninsula Zone have access to safe drinking water, as defined by the New Zealand Drinking Water Standards (NZDWS). Water quality in Banks Peninsula waterways is regularly monitored. **Policies and rules are developed to maintain water quality and improve it where appropriate.**

Te Roto o Wairewa

Te Roto O Wairewa is a nationally and regionally significant 'Flagship Project' showcasing **outstanding environmental restoration. The lake has a Trophic level Index (TLI) of 4 within 20 years and can support Mahinga Kai and contact recreation within 15 years.**¹¹¹

- [302] The ZIP Addendum¹¹² makes an equivalent statement relevant to the setting of outcomes, limits and targets for Te Roto o Wairewa water quality:

Desired outcomes: The Lake

Te Roto o Wairewa is a nationally significant project showcasing outstanding environmental restoration. Annual Average TLI = 4 within 20 years.

No more than 30% of water quality samples in a year have chlorophyll a levels above 20µg/l. Chlorophyll a level should not exceed 50 µg/l. The lake supports mahinga kai and contact recreation all year round within 15 years.

Recommendations: 5.3 Inputs of Phosphorus and Lake Assimilation

A target of 1700 kg phosphorus per annum enters the lake within 20 years (2035). Reduce the discharge of phosphorus-rich sediment into the lake by approximately 85% over 20 years (2035).¹¹³

- [303] Tables 10(b), 10(e) and 10(f)¹¹⁴ set the lake water quality outcomes, limits and targets, and the Total Phosphorus Load target, respectively. The realisation of these will rely not only on the rules in section 10.5, but also the implementation of the region-wide objectives, policies and rules in sections 3, 4 and 5 of the LWRP respectively.

Discussion

- [304] Tables 10(b), 10(e) and 10(f) use the terms 'Freshwater outcomes', 'limits' and 'targets'. In the NPS 2014 'limits' and 'targets' are defined:

- (a) **Limit** is the maximum amount of resource use available, which allows a freshwater objective to be met;

¹¹¹ We note that the proposed provisions PC6 Wairewa propose a TLI of 5, rather than 4. This has been noted as an aspirational goal in the introduction to Section 10 of the Plan, the wording of which was added following discussion with Council officers, Mrs. Richardson and Mr. Lowndes at the hearing.

¹¹² Wairewa ZIP Addendum (November 2014) at p13 and 22

¹¹³ We note that this target has been based the estimates of the current annual load of phosphorus to the lake by Waters 2014 and not the revised calculations by Dr Davie stated in the s32 Report and given in further detail by Dr Davie at the hearing.

¹¹⁴ Final Officer s42A version dated 22 April 2016

- (b) **Target** is a limit which must be met at a defined time in the future; and
- (c) **Freshwater objective** describes an intended environmental outcome in a freshwater management unit, and is what we understand is intended by the term ‘Freshwater outcomes’.

Table 10(b)

- [305] Table 10(b) sets freshwater outcomes for Roto o Wairewa/ Lake Forsyth.
- [306] Freshwater outcomes in Table 10(b) have a mixture of attributes, for some unspecified, and others specified in Appendix 2 of the NPSFM 2014.
- [307] In Table 10(b), as notified, TLI is being used as the ‘Eutrophication’ attribute. It is suggested that this text is amended to reflect that the attribute describes the ‘trophic’ state outcome, rather than describing the outcome of ‘Eutrophication’.
- [308] Although the NPSFM 2014 does not refer to TLI directly, it does provide attribute states and national bottom lines for its components (i.e. total nitrogen, total phosphorus and chlorophyll *a*). These attribute levels together form the basis of a revised TLI outcome of 5. PC6 Wairewa, as notified, incorrectly included a TLI outcome of 6 which was inconsistent with the underlying attribute states (targets). This was pointed out to us by Dr Davie at the hearing in response to our questions. Dr Davie commented that applying the limits of TN, TP, and Chl *a* in Table 10(b) into a TLI calculator gives a TLI close to 5. He opined the TLI outcome could and should be 5. We accept this opinion.
- [309] We note that the TLI freshwater outcome in Table 10(b) is set at 5, rather than the ZIP addendum recommendation of 4. We discussed this with Mrs. Richardson and Mr. Lowndes at the hearing and they confirmed the Zone Committee’s long term aspiration for a TLI of 4 but accepted that a TLI of 5 is more appropriate as an outcome to be achieved by 2030.
- [310] A number of corrections to Tables 10(b), 10(e) and 10(f) were suggested by the author of the s42A Report as minor editorial corrections with no effect on implementation, with the exception of the addition of the visual attribute: Macrophytes.
- [311] Table 10(b) received three submissions in support. The Director-General of Conservation supported the Table but sought two additional attributes:
 - Ecological Health Attribute: Threatened and at risk species and their breeding sites are protected from activities adverse to them; and
 - Visual Quality Attribute: Increase in native macrophyte beds to 20% cover and associated clearer water quality in the lake margins than mid-lake.
- [312] The suggested additional Ecological Health attributes were not supported for inclusion by the Council officers because the attribute lacked specificity around the parameters required

to be monitored (species and activities) and by whom.¹¹⁵ We agree that the attribute lacks sufficient specificity and is a matter that may be evaluated in a resource consent process where appropriate.

[313] We note that the Director-General of Conservation was not present to make any representations on the macrophyte visual attribute at the hearing, however the Council officers accepted the need for such an attribute. Without any evidence or representations to justify a 20% cover, as opposed to any other percentage cover, we consider it inappropriate to state that a numerical quantum with outcomes should be reached by 2030. However, we accept that an attribute recognising an increasing trend in the spatial extent of native macrophyte beds should be included in Table 10(b).

[314] While no one raised the issue of scope, we turned our minds to this issue as we are bound to do. The Director-General of Conservation submission sought a new attribute to be included in Table 10(b). It is our view that the submission was on the Plan Change to the extent that it addressed Table 10(b). However it sought the addition of a new attribute and the question then arises as to whether it is likely that a person has been disadvantaged. The attribute sought is an environmental outcome and the indicators in Table 10(b) do not affect an individual in that they are not a pre-requisite for any activity. Accordingly we do not consider any person to be unjustly affected.

Table 10(e)

[315] Table 10(e), sets water quality limits, and targets to be achieved by 2030 for Te Roto o Wairewa/ Lake Forsyth.

[316] Table 10(e) received three submissions, all of which were in support. Minor amendments were recommended to us to update the map reference to the "Topo 50" format to be consistent with other map references in the LWRP, and to clarify the specific monitoring site. We agree with these recommendations.

Table 10(f)

[317] Table 10(f) contains the annual phosphorus load target for Te Roto o Wairewa/Lake Forsyth of 2,600 kg/year. This represent around a 40% reduction on the estimate of the current annual load of 4,400 kg/year, as calculated by Dr Davie.¹¹⁶ Dr Davie's load estimate is significantly less than that of an earlier estimate by Waters (2014) of 11,300 kg/year.¹¹⁷ At the hearing we asked whether the methodology used to determine the load target could be referenced in a footnote to clarify the calculation that formed the basis of the figure in the Plan Change. The Officers' Reply Report (22 April 2016) stated that the footnote could be referenced, but should not be because the Council does not reference methods in the

¹¹⁵ s42A Report 10.20 & 10.12 & 10.13

¹¹⁶ Davie (2015). Environment Canterbury Memorandum: Phosphorus Loads to Lake Forsyth.

¹¹⁷ Waters (2014) Phosphorus Loading to Lake Forsyth/Te Roto o Wairewa: Preliminary Results for a Lake Phosphorus Budget.

Plan, nor would it affect how the Council subsequently applies the load, therefore it was considered unnecessary. We disagree because the Plan contains other similar referencing (e.g. Table 10(b)) and for monitoring and compliance reasons the methodology used is important.

Findings

[318] In relation to Table 10(b) we find:

- (a) that the suggested additional Ecological Health attribute relating to threatened species should not be included in the Plan Change because the attribute lacks specificity; and
- (b) that an additional native macrophyte visual quality attribute sought by the Director-General of Conservation be included as recommended by the Council officers for the reasons set out in the s42A Report.

[319] In relation to Table 10(e) we find that the minor amendments recommended by the Council officers be made in the interests of clarity and consistency.

[320] In relation to Table 10(f) we find that Dr Davie's methodology is appropriate and we recommend this methodology be referenced in the Plan as a footnote to the Table to clarify its source.

Support of lake investigations into ways of reducing the impact of legacy phosphorus

[321] As previously stated, the improvement of the water quality and health of the Lake is in part dependant on the reduction of the quantity of existing phosphorus accumulated on the lake bed. Key actions proposed to address this issue (as stated in the Section 32 Report) are:

- (a) an artificial lake opening and closing regime that improves water quality by better controlling summer lake levels and marine ingress which can influence nutrient concentrations; and
- (b) enabling investigations into methods to remove or neutralise existing phosphorus in the bed of the Lake to improve water quality, ecological health and mahinga kai, and to inform future lake restoration activities to re-establish or enhance aquatic plants.

[322] PC6 Wairewa provides for the opening and closing of the Lake by bundling together activities associated with lake opening into a single rule. Enabling legacy phosphorus investigations is to be implemented by the proposed Rules 10.5.7 and 10.5.8.¹¹⁸

[323] Rule 10.5.7 classifies the disturbance of the bed of Te Roto o Wairewa/Lake Forsyth as a permitted activity (subject to conditions) for the purpose of investigating legacy phosphorus. Investigations that do not comply with the conditions of permitted activity Rule 10.5.7 require resource consent under Rule 10.5.8.

¹¹⁸ Final Officer s42A version dated 22 April 2016

[324] The only issue in contention was raised by Ngāi Tahu, who sought that permission of the Wairewa Rūnanga be a pre-requisite for classification as a permitted activity. In the alternative, the submitter sought restricted discretionary status.

[325] We consider these suggestions should not be recommended because:

- (a) it is unlawful for the Council to reserve to itself or any other party discretion to decide if an activity is permitted or not; and
- (b) reclassifying the activity status would be contrary to the intent of enabling and encouraging such investigations to occur.

[326] Through the submissions and evidence from Ngāi Tahu and the Joint Statement of Expert Planning Witnesses 18 April 2016, it was made clear to us that when, where and how these investigations are carried out could affect customary uses and values associated with the Lake. In recognition of the importance to Wairewa Rūnanga and to protect Ngāi Tahu values from potential harm from lake bed investigations, it was agreed and we recommend that the following note be added.

Note: It is expected that any person carrying out an activity in accordance with Rule 10.5.7 would consult with Wairewa Rūnanga before undertaking investigations.¹¹⁹

Finding

[327] For the reasons set out above, in relation to Rules 10.5.7, 10.5.8 and 10.5.9 no amendments are recommended except for the inclusion of the note concerning consultation with Wairewa Rūnanga.

Miscellaneous and Consequential Amendments

Issue

[328] Federated Farmers submission¹²⁰ on the Freshwater Outcomes section of the Plan Change (10.6) sought clarification for readers that freshwater outcomes in the Banks Peninsula sub-region, other than in the Wairewa Catchment, are covered by objectives and policies found elsewhere in the LWRP, not in PC6 Wairewa.

Discussion

[329] S42A recommendation R10.6 recommended alternative wording to address the submission, which we support.

¹¹⁹ Addendum to the s42A Reply Report – 29 April 2016

¹²⁰ Federated Farmers PC6 LWRP-35

Finding

[330] Amend 10.6: Fresh Water Outcomes as follows:

10.6: Fresh Water Outcomes

The following tables set out the freshwater outcomes to be achieved in the Wairewa Catchment by 2030. The freshwater outcomes for other areas in the Banks Peninsula Sub-region are set out in the Objectives in Section 3, and in Policies 4.1, 4.2, 4.3 and 4.4 in Section 4 of this Plan.

Section 5 - Overall evaluation

- [331] This report and recommendation discusses and evaluates the provisions contained in PC6 Wairewa to the LWRP. The Plan Change proposes amendments to Section 10 (Banks Peninsula sub-Region); Section 16 (Schedules) and the Planning Maps of the LWRP specifically for the catchment of Te Roto o Wairewa/Lake Forsyth. This report is to be read in conjunction with the provisions contained in Appendix B and the List of Supporting Documents outlined in Appendix C.
- [332] PC6 Wairewa is the culmination of an extensive collaboration process ushered in by the Canterbury Water Management Strategy. This collaboration process continued through the hearing resulting in the parties reaching agreement on all issues bar one at the completion of the hearing.
- [333] PC6 Wairewa contains regulatory provisions that reflect the recommendations made by the Banks Peninsula Zone Committee in its ZIP Addendum. The ZIP Addendum was developed through a collaboration approach taken under the CWMS involving the community including Ngāi Tahu.
- [334] The Zone Committee completed its Zone Implementation Programme for Banks Peninsula in 2013, and its ZIP Addendum for the Wairewa Catchment in November 2014.
- [335] Te Roto o Wairewa/Lake Forsyth is a tribal tāonga. It was once an abundant source of mahinga kai and famous for its tuna (eels), which provided sustenance for mana whenua, Kai Irakehu and Kati Mako. The outstanding cultural significance of Te Roto o Wairewa/Lake Forsyth is recognised by:
- (a) its statutory acknowledgement status in the Ngāi Tahu Claims Settlement Act 1998, under which ownership of part of the lake shore at the head of the lake was returned to Te Runanga o Ngāi Tahu;
 - (b) it being one of only two customary lakes in New Zealand;
 - (c) the Fisheries (South-east Area Amateur Fishing) Regulations 1986 confirming that the tuna fishery at Te Roto o Wairewa is for Ngāi Tahu only; and
 - (d) the gazetting of two Mataitai in December 2010 under the Fisheries (South Island Customary Fisheries) Regulations 1986.
- [336] Te Roto o Wairewa/Lake Forsyth has degraded over the last 160 years. The catchment has been modified by major deforestation that has caused erosion and the subsequent loss of sediment into waterways and accumulation on the lake bed. Due to the sediment being naturally high in phosphorus the Lake has become, at times, highly eutrophic and, as noted earlier in this report, experiences regular summer blooms of the toxic cyanobacteria.
- [337] As described earlier in this report, the poor water quality and ecosystem health of the Lake is in large measure due to the accelerated inflow of phosphorus-rich sediment from

upstream waterways as a result of sedimentation. Sedimentation, particularly within the Ōkana, Ōkuti and Takiritawai rivers is largely due to stream bank erosion which could be improved by stabilising banks and improving land practices.

[338] The key targets and actions reflected in the proposed provisions of PC6 Wairewa to improve the water quality and ecological cultural health of the Lake include measures to address:

- (a) the water quality and ecosystem health of rivers in the Wairewa Catchment;
- (b) the low flow issues within the Ōkana, Ōkuti and Takiritawai rivers;
- (c) the phosphorus load entering the Lake, which is reducing the water quality of the lake; and
- (d) the accumulated phosphorus within the bed of the lake, which is reducing the ecosystem health and water quality of the Lake.

[339] PC6 Wairewa contains a solutions package that comprises actions that sit both inside and outside the regulatory framework. The regulatory aspects (either contained in PC6 or via region-wide provisions in the LWRP) include:

- (a) catchment load targets for phosphorus and freshwater outcomes and limits for Te Roto o Wairewa/Lake Forsyth and rivers within the catchment;
- (b) exclusion of all stock from surface water bodies in the Valley Floor Area;
- (c) provisions that support actions to reduce bank erosion, provided they comply with the requirements of a Valley Floor Area River Bank Erosion Plan;
- (d) provisions that provide for a sediment retention basin and/or wetland at the head of the Lake;
- (e) provisions that support lake restoration activities that re-establish or enhance aquatic plants, enhance water quality, ecosystem health and mahinga kai, or remove phosphorus from lake bed sediments, including associated in-lake field investigations;
- (f) provisions that support a lake opening regime that improve water quality, address cultural values held by Ngai Tahu and fulfil a land drainage function; and
- (g) minimum flows and allocation limits for the Ōkana, Ōkuti and Takiritawai rivers and their tributaries to protect the ecosystem health of these waterways during low flows;
- (h) higher standards for the treatment of wastewater to reduce phosphorus in the discharge; and

- (i) existing LWRP region-wide provisions governing (among other activities) nutrient management, fertiliser use, stock exclusion, wastewater treatment, vegetation clearance and earthworks in erosion-prone areas and riparian areas.

[340] Complementary to the regulatory provisions are the non-regulatory aspects encouraged by the solutions package. These non-regulatory aspects include:

- (a) education on bank stabilising techniques on the valley floor;
- (b) encouraging the construction and maintenance of a sediment retention basin and/or wetland at the head of the lake; and
- (c) a lake opening regime that improves lake water quality.

[341] The regulatory and non-regulatory aspects are envisioned to work together as a package to achieve the outcomes and limits set in the Tables. For Te Roto o Wairewa/Lake Forsyth this includes the programme is designed to improve the water quality within the Lake and Catchment such that it will achieve the national bottom lines.

[342] We have considered, to the degree directed by statute, the matters set out in:

- (a) the RMA 1991;
- (b) the relevant National Policy Statements; and
- (c) the relevant statutory instruments.

[343] As we have said in the main body of this report, the matters set out in the relevant statutory directions are subsumed in the Objectives of the LWRP. No party to the Plan Change challenged that the Objectives of the LWRP reflect the relevant principles of the RMA and the then extant statutory instruments.

[344] The Objectives of the LWRP identify the resource management outcomes or goals for land and water resources in the Canterbury Region, to achieve the purpose of the RMA. The Objectives form a comprehensive suite of outcomes to be attained and implemented.

[345] Further, clear directions are set out in Policy 4.9 that require certain matters to be considered upon review of the sub-region sections. We have referred to these matters in the main body of the report.

[346] We are satisfied, that the proposed provisions of PC6 Wairewa are the most appropriate way to achieve the Objectives of the LWRP, and that the process and outcomes are consistent with the directions contained in Policy 4.9. No party claimed otherwise.

[347] Since the Objectives of the LWRP became operative, two important National Policy Statements have been promulgated:

- (a) the NZCPS 2010; and
- (b) the NPSFM 2014.

[348] The NZCPS is of peripheral but important application where the Lake meets the sea. Relevantly the proposed provisions relating to Tangata Whenua and the provisions relating to the improvement of the flow of the Lake to the sea are in accordance with Objectives 3 and 6 respectively of the NZCPS.

[349] The NPSFM is of particular importance to this Plan Change. We agree with the Council officers and their s32 Report, and s42A Report, that the content of PC6 gives effect to the objectives and policies in the NPSFM, and that PC6 complies with the steps set out in Policies CA1 and CA4 of the National Objectives Framework.¹²¹

[350] In particular:

- (a) the Wairewa Catchment, including all water bodies within the catchment, has been identified as a single freshwater management unit;
- (b) the values for the water bodies in the Catchment have been identified, including through discussions with the community led by the Banks Peninsula Zone Committee to develop the ZIP Addendum. Of particular note are the significant mahinga kai values associated with Te Roto o Wairewa/Lake Forsyth;
- (c) PC6 includes freshwater objectives (called “Freshwater Outcomes” in the LWRP) and water quality limits for rivers and the lake that include all of the attributes in Appendix 2 to the NPSFM 2014;
- (d) other objectives and limits are also included that are relevant to managing the values present in the rivers and lake in the Wairewa Catchment;
- (e) the “states” for all attributes in Appendix 2 are above the specified national bottom lines, and give effect to Objective A2, which (in summary) is that overall water quality is maintained or improved;
- (f) targets have been set that, by 2030, will phase out over-allocation; and
- (g) environmental flow and allocation regimes have been set for rivers in the Catchment.

[351] We have had particular regard to the vision and principles of the CWMS set out in Part 1 of Schedule 1 to the Environment Canterbury (Temporary Commissioners and Water Management) Act 2016.

¹²¹ s32 Report at [89]

Section 6 - Conclusion and recommendation

[352] We have considered and evaluated the provisions of PC6 Wairewa; the submissions lodged on it; the further submissions lodged on it; the reports of the Council officers; and the evidence and representations made and given at our public hearing or lodged with the hearing manager.

[353] Our reasons for our findings are set out in the main body of this report.

[354] We accordingly recommend the provisions of PC6 Wairewa to the Canterbury Land and Water Regional Plan as set out in Appendix B to this report.

DATED 4 August 2016



Gordon Whiting, Hearing Commissioner (Chairman)



Andrew Fenemor, Hearing Commissioner



Dr Jane Kitson, Hearing Commissioner

Appendices

Appendix A – Schedule of Recommended Decisions

Appendix A to this recommendation is separately bound.

Appendix B – Proposed Plan Change 6 – Inclusive of Recommended Amendments

Appendix B to this recommendation is separately bound.

Appendix C – Reference Material

Appended to this document.

Appendix C

Reference Material

- 1 New Zealand Coastal Policy Statement 2010. New Zealand Government.
- 2 Canterbury Coastal Environment Regional Plan, 2005.
- 3 Canterbury Regional Policy Statement 2013, Environment Canterbury
- 4 Canterbury Water Management Strategy, Environment Canterbury (2009)
- 5 Canterbury Land and Water Regional Plan, September 2015
- 6 Banks Peninsula Zone Implementation Programme, March 2013
- 7 Wairewa Zone Implementation Programme Addendum, November 2014
- 8 Proposed Plan Change 4 to the Canterbury Land and Water Regional Plan - Report and Recommendations of the Hearing Commissioners Adopted by Council as its Decision, 21 July 2016
- 9 Te Rūnanga o Ngāi Tahu Freshwater Policy (1999)
- 10 Mahaanui Iwi Management Plan 2013
- 11 National Policy Statement for Freshwater Management 2010, New Zealand Government
- 12 National Policy Statement for Freshwater Management 2014, New Zealand Government
- 13 Section 32 Report – Plan Change 6 to the Partly Operative Canterbury Land and Water Regional Plan. 24 September 2015.
Note: 29 technical reports, technical memos and other references are listed in Section 13 of the Section 32 report on pp82-83. These are also duplicated on the Environment Canterbury website at:
http://ecan.govt.nz/OUR-RESPONSIBILITIES/REGIONAL-PLANS/LWRP/PC6/Pages/supporting_documents.aspx
- 14 Plan Change 6 to the Canterbury Land and Water Regional Plan. Addendum to the Section 32A Report – 29 April 2016
- 15 Plan Change 6 (Lake Forsyth/Wairewa) to the Canterbury Land and Water Regional Plan. Section 42A Report (Alastair Picken, Philip Maw, Tim Davie, Lesley Woudberg, Paul Hulse), 12 February 2016. Environment Canterbury Report Number R16/2. ISBN 978-0-947507-24-4 (Hardcopy), ISBN 978-0-947507-25-1 (Web), ISBN 978-0-947507-26-8 (CD).
- 16 Section 42A Report Errata – Plan Change 6 (Lake Forsyth/Wairewa) to the Canterbury Land and Water Regional Plan. 1 March 2016.
- 17 Joint Statement of Expert Planning Witnesses, dated 18 April 2016. [In response to Minute 3 and Tabled at the Hearing 19 April 2016]
- 18 Plan Change 6 to the Canterbury Land and Water Regional Plan. Responses to Questions of Hearing Commissioners in Minute 3 (Philip Maw, Alastair Picken, Dr Tim Davie). Tabled at Hearing Tuesday 19 April 2016.
- 19 Joint Statement of Federated Farmers (Combined Canterbury Provinces), North Canterbury Fish and Game Council, Te Rūnanga o Ngāi Tahu, Wairewa Rūnanga, and Canterbury Regional Council, dated 20 April 2016.
- 20 Plan Change 6 to the Canterbury Land & Water Regional Plan. Officers' Reply For Council Reply Hearing (Alastair Picken, Philip Maw, Tim Davie). 22 April 2016.
- 21 Proposed Plan Change 6 to the Canterbury Land and Water Regional Plan – Section 10 Banks Peninsula. Version Showing Final Officer s42A Report Recommendations as red “Tracked Changes”. 22 April 2016.
- 22 Plan Change 6 to the Canterbury Land and Water Regional Plan. Addendum to the Section 42A Reply Report – 29 April 2016.