

**BEFORE THE FRESHWATER HEARING PANEL**

**UNDER** the Resource Management Act 1991  
**IN THE MATTER** of the Proposed Otago Regional Policy Statement 2021

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**STATEMENT OF EVIDENCE OF MARIA BARTLETT  
ON BEHALF OF WAIHŌPAI RŪNAKA, ŌRAKA-APARIMA RŪNAKA AND TE  
RŪNAKA O AWARUA**

**28 June 2023**

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## INTRODUCTION

1. My name is Maria Bartlett.
2. I have over twenty years' experience in resource management strategy, policy and planning. I spent much of the first decade of my career in processing resource consents for Canterbury Regional Council and over a decade now within the Kāi Tahu tribal structure. Over the years I have been focussed on freshwater management, petroleum and minerals, the Exclusive Economic Zone, climate change and local government relationships with iwi and hapū. Whilst working for Kāi Tahu I have been involved in resource consent processes; regional plan development and plan changes; regional policy statements; Environment Court mediations and hearings; Board of Inquiry processes; resource management and local government reform; as well as producing the tribal climate change strategy<sup>1</sup>; and the first Mana Whakahono ā Rohe agreement<sup>2</sup>.
3. I am a certified RMA commissioner. Within the last two years I have sat on panels for West Coast Regional Council and the Environmental Protection Authority. I have been appointed to the panel for the proposed Te Tai o Poutini Plan.
4. I am currently employed by Te Ao Mārama Incorporated as Kaitohutohu Matua (principal advisor) where I have been since 2019. Te Ao Mārama is the regional environmental entity that represents Waihōpai Rūnaka, Ōraka-Aparima Rūnaka and Te Rūnaka o Awarua in resource management matters.
5. I contributed to development of the proposed Otago Regional Policy Statement (pORPS) through group topic sessions, direct engagement with Otago Regional Council (ORC) and co-drafting.
6. Although this is a Council hearing, I confirm that I have read the Code of Conduct for Expert Witnesses contained in the Environment Court Practice Note 2023 and have complied with it in preparing this evidence. I confirm that the issues addressed in this evidence are within my area of expertise and I have not omitted material facts known to me that might alter or detract from my evidence.

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<sup>1</sup> Te Tāhū o Te Whāriki – Anchoring the Foundation. He Rautaki Mō te Huringa o te Ahurangi Climate Change Strategy - [Ngāi-Tahu-Climate-Change-Strategy.jpg \(600x450\) \(Ngāitahu.iwi.nz\)](#)

<sup>2</sup> [Mana Whakahono a Rohe Arrangement WebInteractive.pdf \(wrc.govt.nz\)](#)

7. My evidence primarily addresses the submissions of Waihōpai Rūnaka, Ōraka-Aparima Rūnaka and Te Rūnaka o Awarua, made on their behalf by Te Ao Mārama. I use the collective term Ngāi Tahu ki Murihiku in reference to these Papatipu Rūnanga.
8. The key documents I have referred to in drafting this brief of evidence are:
  - (a) Resource Management Act 1991 (RMA) and relevant instruments of national direction;
  - (b) Te Rūnanga o Ngāi Tahu Act 1996 (TRONT Act) and Ngāi Tahu Claims Settlement Act 1998 (NTCSA);
  - (c) Te Tangi a Tauira, the Cry of the People, Ngāi Tahu ki Murihiku Natural Resource and Environmental Management Plan 2008 (Te Tangi a Tauira);
  - (d) Cultural and planning evidence prepared for Kāi Tahu ki Otago, and cultural evidence of Evelyn Cook;
  - (e) pORPS and Section 32 evaluation;
  - (f) Section 42A report on the Freshwater Planning Instrument (FPI); and
  - (g) Submissions and further submissions.
9. References in my evidence to the pORPS are to the Section 42A (FPI) version.
10. My further recommended amendments to the Section 42A version are shown in blue, with underline for additions and strikethrough for deletions.

## **SCOPE OF EVIDENCE**

11. As part of the overall Kāi Tahu suite of evidence, my evidence is to be read in conjunction with the planning evidence of Sandra McIntyre. I generally agree with the evidence of Ms McIntyre unless otherwise stated.
12. My evidence covers:
  - (a) The partnership approach to pORPS development;
  - (b) Mana whenua rights, interests and values;
  - (c) Ki uta ki tai;

- (d) Te Mana o te Wai;
- (e) Freshwater Visions;
- (f) Over-allocation;
- (g) Wastewater and stormwater; and
- (h) Other matters related to Ngāi Tahu ki Murihiku submission points.

## **NGĀI TAHU KI MURIHIKU**

### **Partnership**

13. Ngāi Tahu ki Murihiku are in general support of the FPI components of the pORPS<sup>3</sup>, aspects of which were co-developed between ORC, Kāi Tahu ki Otago and Ngāi Tahu ki Murihiku, through the work of Aukaha and Te Ao Mārama<sup>4</sup>, as acknowledged by Ms Boyd in the s42a report<sup>5</sup> and also outlined in the evidence of Ms McIntyre.
14. This partnership approach has been important in developing the expression of Te Mana o te Wai, the freshwater visions and provisions in the Land and Freshwater (LF) chapter that are subject to this hearing. The constructive working relationship between ORC and Kāi Tahu has allowed for mana whenua to inform the FPI drafting with mātauraka, in accordance with the National Policy Statement for Freshwater Management 2020 (NPSFM). In particular, clause 3.4(1)(a) regarding the local approach to giving effect to Te Mana o Te Wai and clause 3.4(1)(b) regarding the making of regional policy statements. Investment by Ngāi Tahu ki Murihiku in this process is also an expression of the principles of mana whakahaere, kaitiakitanga and manaakitanga, working alongside the governance responsibility of ORC, as described in clause 1.3(4) of the NPSFM.
15. While the Ngāi Tahu ki Murihiku submission does not request any specific amendments associated with point FPI042.014, it is requested that the intent of co-developed text and provisions is preserved. I discuss this in relation to particular provisions where relevant.

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<sup>3</sup> FPI042.145

<sup>4</sup> FPI042.014

<sup>5</sup> Section 42A, para 343, including reference to s32 sections 2.1 and 2.5.2.

## Ngāi Tahu ki Murihiku rights, interests and values

16. The summary of decisions requested acknowledges the general submission point of Kāi Tahu ki Otago, FPI030.052, that references progress made towards recognition and provision for mana whenua rights, interests and values in the pORPS. The reasons for the Ngāi Tahu ki Murihiku submission also speak to the need for the long term approach to resource management in Otago to be based on recognition and provision for the rights, interests and values of mana whenua, and includes reference to the impact of degradation of taonga on mana whenua rights, interests and values. The evidence of Evelyn Cook describes aspects of the impact of degradation of waterbodies<sup>6</sup>, which adds to the whakaaro of Edward Ellison<sup>7</sup>, Brendan Flack<sup>8</sup> and Justin Tipa<sup>9</sup>.
17. These overarching matters are reflected in the non-FPI section of the pORPS on key issues identified by Kāi Tahu<sup>10</sup>. A range of Kāi Tahu rights are referenced in the pORPS, including customary rights to resources, and the link between rakatirataka and kaitiakitaka in exercising rights and responsibilities<sup>11</sup>.
18. Within the FPI, there is a reference in RMIA-WAI-I3 to Kāi Tahu fishing rights that were explicitly protected by the Treaty of Waitangi. Significantly, LF-WAI-O1, the Te Mana o te Wai objective in clause (5) makes direct connection between Kāi Tahu exercise of rakatirataka, manaakitaka and kaitiakitaka and the protection and restoration of the mauri of Otago's waterbodies, which is an articulation of the combination of rights and responsibilities described in the Mana Whenua (MW) chapter of the pORPS<sup>12</sup>. All other references to rakatirataka and kaitiakitaka in the LF chapter are in the non-FPI parts of the pORPS, as a consequence of ORC's interpretation of the High Court decision on what 'relates to freshwater quality or quantity'<sup>13</sup>. As was discussed during the non-FPI hearings, this interpretation is not supported by Kāi Tahu, but in the interests of progressing much needed freshwater management changes in Otago, Ngāi Tahu ki Murihiku and Kāi Tahu ki Otago have chosen to work constructively with the split

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<sup>6</sup> For example, see paragraphs 21 to 24.

<sup>7</sup> For example, EiC of Edward Ellison, paras 16, 48, 61-66

<sup>8</sup> For example, EiC of Brendan Flack, Impacts of land use on freshwater and the coastal environment

<sup>9</sup> For example, EiC of Justin Tipa, paras 9, 14, 23

<sup>10</sup> Partnership, Te Tiriti o Waitangi and Kāi Tahu, p12.

<sup>11</sup> For instance, in relation to the definition of Māori land; Relationship of Kāi Tahu with their rohe, p59; Kāi Tahu values, p63; kaitiakitaka, p64; Coastal environment (taku tai moana me te wai māori), p67; Ngāi Tahu Claims Settlement Act 1998, p68; nohoaka and customary fisheries, p70; RMIA-MKB-I2, p117; LF-WAI-E1, p168; EIT-INF-P13, p221.

<sup>12</sup> See the Environmental management perspectives and values of Kāi Tahu, particularly p64.

<sup>13</sup> Section 42A, paras 16-17.

elements of the pORPS to support decision-making that achieves a well-integrated whole.

19. By including the entirety of LF-WAI-O1 in the FPI, ORC has provided an important means for decision-makers to connect decision-making across the two parts of the instrument, ensuring that recognition of, and provision for, the rights, interests and values of mana whenua remains central to freshwater management in the region. After all, degradation of water quality and water quantity has been consistently signalled by Kāi Tahu as impacting on a range of mana whenua rights, interests and values, including through Te Kēreme, the Ngāi Tahu claim, which has already been recognised by the Waitangi Tribunal<sup>14</sup> and the Crown through the Ngāi Tahu Settlement process<sup>15</sup>. LF-WAI-O1 is a critical provision of the pORPS in this respect, especially when read in conjunction with provisions in the MW<sup>16</sup> and Integrated Management (IM)<sup>17</sup> chapters.

### **Ki uta ki tai**

20. Ki uta ki tai is a concept fundamental to the Ngāi Tahu ki Murihiku approach to resource management<sup>18</sup>, and to the management of freshwater<sup>19</sup>. The reasons for the Ngāi Tahu ki Murihiku submission include wanting to see improved recognition of the connection between the health and well-being of waterbodies, the management of lands and waters, and the health and well-being of the coastal environment. Ki uta ki tai appears in a number of provisions in the non-FPI<sup>20</sup>, and is described in the Foreword or mihi of the pORPS as a central tenet of the instrument<sup>21</sup>, as well as being described as a Kāi Tahu environmental management perspective<sup>22</sup>. Lack of integrated water management is highlighted as an issue of significance to Kāi Tahu<sup>23</sup>. Ngāi Tahu ki Murihiku provided advice during the development of the pORPS that included a

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<sup>14</sup> For example, see the Ngāi Tahu Report 1991 section on the Impact of settlement, p157-159 - [The Ngai Tahu Report 1991 \(justice.govt.nz\)](https://www.justice.govt.nz/maori/tauhira/1991/)

<sup>15</sup> See the Crown apology in s6 of the NTCSA, particularly clause 7 regarding rangatiratanga; as well as the Mahinga Kai provisions (Part 11 and Part 12) and the Schedules that include joint management plans, Statutory Acknowledgement Areas, Tōpuni, Nohoanga, Taonga species and Customary fisheries - [Ngāi Tahu Claims Settlement Act 1998 No 97 \(as at 01 July 2022\), Public Act Contents – New Zealand Legislation](https://www.legislation.govt.nz/act/public/1998/007/1.1.101/)

<sup>16</sup> See MW-O1, MW-P1, MW-P2 and MW-P3

<sup>17</sup> See IM-O1, IM-P1 and IM-P3

<sup>18</sup> Te Tangi a Taurira, Section 1.2, p24 - [Te Tangi a Taurira – The Cry of the People \(es.govt.nz\)](https://www.es.govt.nz/te-tangi-a-taurira/)

<sup>19</sup> See Ngāi Tahu ki Murihiku Freshwater Objectives (2020), section 2.6.1, p12, [Ngāi Tahu ki Murihiku Freshwater Objectives \(February 2020\).pdf \(datacomsphere.com.au\)](https://datacomsphere.com.au/naai-tahu-ki-murihiku-freshwater-objectives-february-2020.pdf), and Draft Murihiku Southland Freshwater Objectives (2020), Section 4.2, p20, [Draft Murihiku Southland freshwater objectives \(June 2020\).pdf \(datacomsphere.com.au\)](https://datacomsphere.com.au/draft-murihiku-southland-freshwater-objectives-june-2020.pdf); reports informing changes to the Southland Water and Land Plan

<sup>20</sup> IM-O2, IM-M1, CE-P1A, LF-WAI-P3, ECO-P8 and ECO-P10

<sup>21</sup> Foreword or mihi, p4

<sup>22</sup> Specifically a philosophy of holistic resource management, p63 and p64

<sup>23</sup> RMIA-WAI-I5

positive assessment of the draft instrument in relation to establishing a ki uta ki tai framework, within which the lens of Te Mana o te Wai is applied, consistent with Ngāi Tahu ki Murihiku understanding<sup>24</sup>.

21. *Figure 1* below<sup>25</sup>, which was prepared during the development of changes to the Southland Water and Land Plan provides a useful illustration of the relationship of the concept of ki uta ki tai and Te Mana o te Wai, which has been informed by mātauraka:

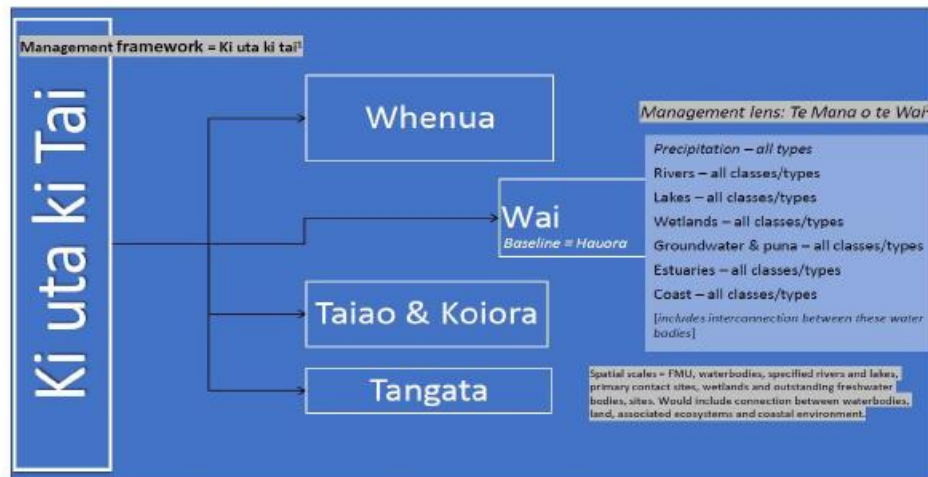


Figure 1: Ki uta ki tai framework, *Draft Murihiku Southland Freshwater Objectives (2020)*, p 21

22. Within the FPI, the Section 42A author has accepted the Ngāi Tahu ki Murihiku submission point FPI042.008 that amended clause (4) of LF-WAI-O1 to incorporate reference to the connectedness of water, land and coastal waters. This provides an important link to LF-WAI-P3, which is in the non-FPI section of the instrument, as well as to the added provision CE-P1A. Ki uta ki tai is also a significant reference within LF-VM-O2(1)(a), ensuring Mata-au is treated as a single connected system.
23. Ki uta ki tai is inferred in the new region-wide vision LF-FW-O1A, clause (2), which appears to mimic clause (4) of LF-WAI-O1. The exception is that groundwater is explicitly mentioned in LF-FW-O1A(2) and the objective is linked directly to timeframes and spatially to FMUs and rohe. In LF-WAI-O1(4) the focus is on land and water management that recognises and reflects that the connectedness of fresh water, land and coastal water supports and perpetuates life. In LF-FW-O1A(2) the focus is on recognising this connectedness within specified timeframes for each FMU and rohe.

<sup>24</sup> Appendix 8 of the Section 32 report, p18

<sup>25</sup> An enlarged version of Figure 1 is included in Appendix 2 to my evidence

The introduction of reference to groundwater in LF-FW-O1A(2) highlights one type of freshwater, which is in some ways helpful, but in the absence of reference to other types of freshwater it misses an opportunity to ensure certain interconnected waterbody types are not overlooked. The following sentence is a helpful summary of interconnectedness that ensures waterbodies such as springs, which are important wai taonga, and ephemeral streams that contribute to the system<sup>26</sup>, are not forgotten by the management regime:

*“Thinking specifically about waters, ki uta ki tai is also about the interactions between waters and waterbody types, including rains, lakes, groundwater, springs, rivers and streams, including ephemeral streams, wetlands, estuaries and the coastal environment.”<sup>27</sup>*

24. In order to address the reasons for the Ngāi Tahu ki Murihiku submission<sup>28</sup>, including the reasons given for submission point FPI042.145, I recommend amendment to LF-FW-O1A(2), as follows:

“ ...

(2) the interconnection of land, freshwater (including springs, groundwater, ephemeral waterbodies, wetlands, rivers and streams, and lakes) and coastal water is recognised, ...”

### **Te Mana o te Wai**

25. Ngāi Tahu ki Murihiku have been working with the concept of Te Mana o te Wai over the last decade through the proposed Southland Water and Land Plan (pSWLP) process<sup>29</sup>, beginning in 2014 when the concept was first introduced into the NPSFM. A body of work has developed in the Southland region, informed by mātauraka, that is now supported through the inclusion of the hierarchy of obligations in the NPSFM 2020,

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<sup>26</sup> Ngāi Tahu ki Murihiku Freshwater Objectives (2020), Section 2.6.1, para 39 and Section 4.2, para 82

<sup>27</sup> This is a modification of reference in the Draft Murihiku Southland Freshwater Objectives (2020), Section 4.2, p21 to include ephemeral streams

<sup>28</sup> Paragraphs 12 and 14 of Attachment One of submission on the FPI parts of the pORPS

<sup>29</sup> The proposed Southland Water and Land Plan recognises the national significance of Te Mana o te Wai (p8-9), upholds Te Mana o te Wai (Interpretation Statement, p26) and includes policy on implementing Te Mana o te Wai (Policy 44) - [2021\\_03\\_26 - Water and Land Plan - Part A - Appeals Version \(26 March 2021\).pdf \(es.govt.nz\)](#)



prioritising first the health and well-being of waterbodies and freshwater ecosystems<sup>30</sup>. This includes evidence from Ngāi Tahu ki Murihiku to the Environment Court regarding key concepts, including ki uta ki tai, mauri, Te Mana o te Wai, kaitiakitanga and mahinga kai.

26. The expression of Te Mana o te Wai captured in LW-WAI-O1 of the FPI builds on this body of work and reflects the combined understanding of Kāi Tahu ki Otago and Ngāi Tahu ki Murihiku, working with ORC, as well as what has come through community consultation and submissions. Advice from Ngāi Tahu ki Murihiku on the draft pORPS identified that LF-WAI-O1 has the effect of acting as a korowai over the waterbodies of Otago, providing an overarching principle of protection, which is supported<sup>31</sup>.
27. Aside from the changes to clause (4) discussed in the Ki Uta Ki Tai section above, Kāi Tahu ki Otago requested an amendment that has been included as clause (4)<sup>32</sup>, which reflects one of the six principles of Te Mana o te Wai<sup>33</sup>. This, and the amendment to clause (2) are not problematic. However, the introduction of clause 4(A) requires consideration in terms of whether it is an accurate reflection of mātauraka and the NPSFM concept of Te Mana o te Wai. Clause 4(A) has taken two of the sentences from the NPSFM and put them together in a way that differs from Ngāi Tahu ki Murihiku interpretation (see *Figure 2* below).
28. The NPSFM 2020 reads:

*“Te Mana o te Wai is a concept that refers to the fundamental importance of water and recognises that protecting the health of freshwater protects the health and well-being of the wider environment. It protects the mauri of the wai.”*
29. My understanding is that Ngāi Tahu ki Murihiku would infer “Te Mana o te Wai” where the second sentence says “It”. In other words, Te Mana o te Wai protects the mauri of the wai, including through recognition of mana. Work done through the Southland pSWLP process, informed by mātauraka, has addressed this, including diagrammatically, as shown in *Figure 2*<sup>34</sup> below:

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<sup>30</sup> Clause 1.3(5) of the NPSFM

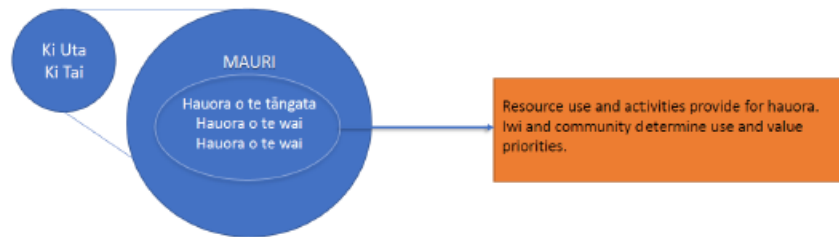
<sup>31</sup> Appendix 8 of the Section 32 report, p18

<sup>32</sup> FPI030.015

<sup>33</sup> NPSFM, Clause 1.3(4)(e) and (f)

<sup>34</sup> An enlarged version of Figure 2 is included in Appendix 3 to my evidence

**Figure 3: Relationship between Ki Uta Ki Tai, the mauri of water and the provision of hauora**



*Figure 2: Mauri and hauora, from Draft Murihiku Southland Freshwater Objectives (2020), p 23<sup>35</sup>*

30. Mauri incorporates both physical and spiritual elements<sup>36</sup>. Te Tangi a Tauira shares the knowledge of Ngāi Tahu ki Murihiku that mauri is a gift inherent in the natural environment, one that needs to be preserved<sup>37</sup>. There are a number of ways we can measure the health and well-being of waterbodies and freshwater ecosystems, consistent with understanding how well we are providing for te hauora o te wai, te taiao and te tangata<sup>38</sup>, including through the use of Ngāi Tahu Indicators of Health<sup>39</sup>. The evidence of Evelyn Cook describes some of these indicators through her own experience and in her own words<sup>40</sup>. When these indicators are improved, particularly where waterbodies have been degraded, the mauri of waterbodies is protected and restored. As *Figure 2* shows, when mauri is intact or at its fullest, te hauora o te wai, te taiao and te tangata are provided for, but it also shows that there is more to mauri than just the sum of these parts<sup>41</sup>.
31. In light of this, the relationship between the chapeau of LF-WAI-O1 and clause 4(A) needs to be considered, as well as the relationship of the two halves of the clause. Through the chapeau of the objective the mauri of Otago’s water bodies is to be protected, and their health and well-being is to be protected, and restored where it is degraded. The “it” in the chapeau is not clear as to whether it is referencing mauri, or health and well-being, but may be interpreted as both, which could potentially be improved by just using the phrase “[where degraded](#)”. Then there is an introduced repetition in clause 4(A) that connects protection to management of land and water.

<sup>35</sup> Note that there is a typographical error in the ellipse that lists the three hauora references, one of which should read “Hauora o te taiao”

<sup>36</sup> EIC of Evelyn Cook, paras 6 - 10

<sup>37</sup> Te Tangi a Tauira, p26-27

<sup>38</sup> Draft Murihiku Southland Freshwater Objectives (2020), Appendix 1

<sup>39</sup> Ngāi Tahu ki Murihiku Freshwater Objectives (2020), Section 3.1, p20

<sup>40</sup> EIC of Evelyn Cook, paras 8, 10, 21, 22

<sup>41</sup> See EIC of Edward Ellison, para 17

This is both confusing and contains redundant elements. The “and” used before reference to management of land and water in the chapeau indicates that in addition to protecting and restoring mauri and the health and well-being of waterbodies, management of land and water needs to recognise and reflect a number of things. If the main point of introducing clause 4(A) is to introduce the understanding that protecting the health and well-being of water protects the wider environment, then this is a genuine additional meaning that brings in an element of the fundamental concept of Te Mana o te Wai that is not otherwise mentioned. In that case, reference to the mauri of water needs to be left off the end of this introduced clause. I consider this to be consistent with the proper application of MW-P3.<sup>42</sup>

32. I note as well that the chapeau references “water bodies”, whilst clause 4(A) references “water”. In that respect a different nuance is introduced to protection in clause 4(A). Evelyn Cook addresses the relevance of this change in focus for mana whenua in the final sentence of her evidence-in-chief for the FPI hearing. The change in nuance is not critical, however, as through the combination of the chapeau and clause 4(A) both waterbodies and water are to be protected. My recommendation is to amend LF-WAI-O1 as follows:

“ ...

(4A) protecting the health and well-being of water protects the wider environment and the mauri of water, ...”

33. This recommendation also relates to the Section 42A amendments to LF-WAI-P1(1) that reference the contribution that prioritising the health and well-being of water bodies and freshwater ecosystems makes to the health and well-being of the environment. The evidence of Evelyn Cook references these kind of interrelationships<sup>43</sup>. LF-WAI-P1 as amended appears to appropriately reflect both Ngāi Tahu ki Murihiku mātauraka and the NPSFM 2020.
34. Unfortunately, proposed Section 42A amendments to LF-WAI-AER2 replicate the errors described in amendments to LF-WAI-O1(4A) and ignore the first part of the chapeau to LF-WAI-O1 which is core to this objective, incorporating both protection and restoration. Ngāi Tahu ki Murihiku sought emphasis on protection and restoration

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<sup>42</sup> Amended by Ngāi Tahu ki Murihiku submission point 00223.030 in the non-FPI hearing (although the s42a FPI provisions version of the pORPS records the point as 00223.029).

<sup>43</sup> EIC of Evelyn Cook, paras 11, 23, 24

where degraded in LF-WAI-AER2, as well as recognition that this is a benefit to everyone (not just to Kāi Tahu), with reference to “kā takata katoa”. This principle of restoring what has been degraded is the outcome that Ngāi Tahu ki Murihiku are seeking<sup>44</sup>, in recognition of how much has been lost and how out of balance the natural environment has become as a consequence<sup>45</sup>. This is an aspect of the intent of the co-drafted objective LF-WAI-O1 that submission point FPI042.014 seeks to preserve.

35. I note that “degraded” is defined in the pORPS and NPSFM, as it relates to the limit setting process and national bottom lines, so in terms of what restoration means in the pORPS, once limits are set in the Otago Land and Water Regional Plan (LWRP) then the expectations for restoration of particular waterbodies and waterbody attributes will also be set. It is also possible to describe the combination of attributes that, when supported to improve, provide for hauora, the health and well-being of waterbodies, as has been described in the Southland process<sup>46</sup>. These matters will be addressed through the LWRP process. While I can understand the intent of the Ngāi Tahu ki Murihiku submission in referencing the benefit to people, at this point the more important aspect to emphasise is the inclusion of the concept of restoration in the anticipated environmental outcome.
36. I recognise that the s42a recommendations have introduced freshwater ecosystems to LF-WAI-AER2, which is consistent with the concept of Te Mana o te Wai in the NPSFM, so I support this addition as necessary to give effect to the NPSFM and to reflect LF-WAI-P1, which has been supported in the Ngāi Tahu ki Murihiku submission<sup>47</sup>.
37. As a consequence, I recommend the following wording for LF-WAI-AER2 is amended to reflect the chapeau of LF-WAI-O1, the overarching Te Mana o te Wai objective:

“The mauri of Otago’s waterbodies, and the health and well-being of waterbodies and freshwater ecosystems protects the wider environment and the mauri of water is protected, and restored where degraded.”

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<sup>44</sup> Ngāi Tahu ki Murihiku Freshwater Objectives, Paetae Tuarua and Paetae Tuatoru, p34

<sup>45</sup> Refer to the EiC of Evelyn Cook, paras 15, 22-23

<sup>46</sup> Draft Murihiku Southland Freshwater Objectives (2020)

<sup>47</sup> [FPI042.145](#)

## Visions

38. The introduction of a region-wide objective is supported. Although it is described as an objective rather than a vision, it absorbs elements of the visions as notified and may be thought of as an overarching freshwater vision that then links to the more specific freshwater visions for FMU and rohe, and their timeframes. In my opinion, this resolves the challenge of inconsistency in expression between different FMUs and rohe, which addresses the submissions points of Ngāi Tahu ki Murihiku on this matter, FPI042.010 and FPI042.011. One area where the link between the objective and the visions could be made clearer is by ensuring there are clear links between the FMU vision and the overarching objective, to ensure those overarching matters are not ignored when a plan reader looks to a particular FMU vision. I would support a consequential amendment to the relevant FMU visions in LF-VM-O2 to O6 as follows:

“...in the [name] FMU, and in addition to the matters in LF-FW-O1A”:

39. I support the joining together of the provisions in the visions section (LF-VM) with the fresh water section (LF-FW), which is helpful on matters such as wastewater discharges for instance, connecting the region-wide objective or overarching vision to phase out direct discharges within specified timeframes<sup>48</sup> to the associated policy<sup>49</sup>.
40. Appendix 7 of the Section 32 report contains freshwater visions feedback from Ngāi Tahu ki Murihiku<sup>50</sup> provided to the council during preparation of the pORPS, which is shown in **Appendix 1** of my evidence for ease of reference. Issues of variability of expression between FMUs and rohe is evident in this feedback, as a consequence of approaching the task separately for Mata-au as a whole and its constituent rohe, and the Catlins. The advantage of an overarching region-wide objective or vision is that it clarifies what is common to all FMUs and rohe and what is genuinely different.
41. LF-FW-O1A(2) is discussed in the earlier Ki uta ki tai section of my evidence. With regards to LF-FW-O1A(1), the presence of indigenous vegetation in association with waterbodies is a Ngāi Tahu Indicator of Health, which also relates to the availability of cultural materials<sup>51</sup>. This is illustrated in the evidence of Evelyn Cook<sup>52</sup>. While it is possible to read LF-FW-O1A(1) in conjunction with LF-WAI-P2, IM-P3, IM-P6, MW-P2,

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<sup>48</sup> LF-FW-O1A(8)

<sup>49</sup> LF-FW-P16

<sup>50</sup> Section 32, Appendix 7, p9

<sup>51</sup> Included within He Puna Whakaata o Mātauranga, the Murihiku Cultural Water Classification System

<sup>52</sup> For example, EiC of Evelyn Cook, paras 21 and 23,

MW-P3, MW-M1 and MW-M2 to determine what constitutes “healthy”, utilising mātauraka, there would also be benefit in providing a definite link to indigenous vegetation in association with natural character in LF-FW-O1A(4).

42. As drafted LF-FW-O1A(4) has an important form and function focus, but is missing other dimensions of natural character that would be relevant to the outcome expressed in LF-FW-O1A(1), including the presence of indigenous vegetation. The relative dominance of indigenous flora and fauna is a feature of the description of natural form and character in Appendix 1B of the NPSFM<sup>53</sup>. Various aspects of the NPSFM description of natural form and character were referenced in the freshwater visions feedback of Ngāi Tahu ki Murihiku<sup>54</sup>.
43. The region-wide objective or overarching vision would better give effect to the NPSFM if the multiple characteristics of natural form and character were acknowledged, which include biological, visual and physical characteristics in the NPSFM. This would also better reflect mātauraka. Having also considered the evidence of Ms McIntyre on this matter, particularly as it relates to groundwater, flows and levels,<sup>55</sup> and feedback provided by Ngāi Tahu ki Murihiku on references in freshwater visions to hydrology, I recommend amendment to LF-FW-O1A(4) to achieve this, as follows:

“ ...

(4) the natural form and character, ~~including form and function~~, including flows and levels of water bodies (including aquifers) reflects their natural characteristics and natural behaviours to the greatest extent practicable, ...”

44. LW-FW-O1A(3) speaks to the aspiration expressed in the freshwater visions feedback of Ngāi Tahu ki Murihiku for the Roxburgh rohe, which sought a means to be established within a decade that would protect diadromous species, like tuna (eels)<sup>56</sup>, from the terminal impacts of hydroelectricity infrastructure<sup>57</sup>. Instead, when read in conjunction with LF-VM-O2, the ease of migration of indigenous species is to be achieved by 2045 in this rohe, which corresponds with Ngāi Tahu ki Murihiku

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<sup>53</sup> Appendix 1B – Other values that must be considered, Natural form and character, clause (f)

<sup>54</sup> For example, references in the Mata-au freshwater vision to natural form and function, indigenous flora and fauna and culturally significant species

<sup>55</sup> EiC of Sandra McIntyre, Region-wide freshwater objective section and Appendix 1 to her evidence

<sup>56</sup> As referenced in the EiC of Evelyn Cook, paras 15 and 26

<sup>57</sup> Refer also to the EiC of Evelyn Cook, para 16

understanding of “within a generation”<sup>58</sup>. I support this clause as achieving the intent of the Ngāi Tahu ki Murihiku submission<sup>59</sup>.

45. LW-FW-O1A(5) appropriately expresses support for the relationship of Kāi Tahu with wāhi tūpuna, including Mata-au and Catlins waterbodies, which is highlighted in the evidence of Evelyn Cook not just in terms of use, but in terms of association and identity<sup>60</sup>.
46. LW-FW-O1A(6) makes an important connection between the health of water and the health of people, which accords with mātauraka and the often quoted whakataukī that is referenced in the evidence of Evelyn Cook on the non-FPI parts of the pORPS<sup>61</sup>. He Puna Whakaata o Mātauraka, the Murihiku Cultural Water Classification System, references a similar whakataukī that captures this connection: “Homai tō waiora ki au, kia tū pakari (give me the health giving water, that I may stand tall, strong and healthy)”<sup>62</sup>.
47. LF-FW-O1A(7) speaks to climate change resilience, which is a matter highlighted in Ngāi Tahu ki Murihiku submission<sup>63</sup> as well as in the freshwater visions feedback of Ngāi Tahu ki Murihiku for Mata-au, and supported by IM-O4.
48. LF-WAI-O1A(8) provides the strong direction that Ngāi Tahu ki Murihiku sought in their submission regarding the phasing out of direct discharges of wastewater to water bodies<sup>64</sup>, which was included in the freshwater visions feedback of Ngāi Tahu ki Murihiku for Mata-au and Catlins.
49. In terms of changes to LF-VM-O2, the vision for Mata-au, and what remains after the creation of and reliance on LF-WAI-O1A to act as an overarching vision for FMU and rohe, the vision for Upper Lakes reflects the freshwater visions feedback of Ngāi Tahu ki Murihiku regarding protection of the purity of these waters, although changes were signalled as needing to occur within fifteen years, which is closer to 2040 than 2030. There may be challenges to resolve around achieving the region-wide objective by

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<sup>58</sup> Te Tangi a Taurira, p139

<sup>59</sup> FPI042.145

<sup>60</sup> EiC of Evelyn Cook, paras 7-12

<sup>61</sup> EiC of Evelyn Cook on the non-FPI parts of the pORPS, paras 17 and 18

<sup>62</sup> Applying He Puna Whakaata o Mātauranga, Policy Brief, September 2019

<sup>63</sup> FPI submission, Attachment One, paragraph 21

<sup>64</sup> FPI042.011

2030,<sup>65</sup> so more time may be helpful, but I do not see scope in Ngāi Tahu ki Murihiku submission to consider amendment of the timeframe.

50. I note that there are some elements of the notified version of LF-VM-O2 that are now lacking, and which are important to Ngāi Tahu ki Murihiku. Specifically, in the Dunstan and Roxburgh rohe<sup>66</sup> the reference to sustainable abstraction occurring from main stems or groundwater in preference to tributaries was a co-drafted element of the visions, relevant to Ngāi Tahu ki Murihiku submission point FPI042.014.
51. The freshwater visions feedback of Ngāi Tahu ki Murihiku for the Dunstan and Roxburgh rohe specifically referenced the need to make infrastructure changes that increasingly utilise main stem waters as a preference to smaller tributary waterbodies, which is linked in that feedback to climate change resilience. The evidence of Evelyn Cook references the value of smaller tributary waterbodies and reducing abstractive pressure<sup>67</sup>. Ngāi Tahu ki Murihiku has supported transition from reliance on small tributary waterbodies that were the subject of deemed permits to groundwater sourced closer to the Mata-au main stem<sup>68</sup> and repeatedly challenged applicants seeking to take all or the majority of water from small tributary waterbodies<sup>69</sup>.
52. The co-drafted element that has been discarded is crucial to changes that Ngāi Tahu ki Murihiku have said are necessary to protect the mauri of small tributary waterbodies that have historically faced significant abstraction pressure in Mata-au, and to ensure that the Otago region is resilient to the impacts of climate change, including reduced flows in these smaller tributaries<sup>70</sup>. While the extreme risks signalled regarding increased temperatures, changes in rainfall, snow and ice may not manifest until 2040, investment over the life of the pORPS will be necessary to reduce vulnerability to both waterbodies and businesses reliant on water. There is a relationship here to the application of new environmental flows and levels for waterbodies through the regional

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<sup>65</sup> See for instance the 29 June 2023 ORC Environmental Science and Policy Committee Agenda, Item 7.1, Item 7.4, Item 7.6, Item 7.7 - [environmental-science-and-policy-agenda-2023-06-29-1.pdf \(orc.govt.nz\)](#)

<sup>66</sup> In addition, the freshwater visions feedback provided by Ngāi Tahu ki Murihiku highlighted the priority of actively managing species interactions in the Dunstan, Roxburgh and Lower Clutha rohe, which is relevant to the new method ECO-M8A. I note that this method does not appear in the s42a version of the pORPS for the FPI process, although I understood it to be supported by ORC at the close of the non-FPI hearing.

<sup>67</sup> EIC of Evelyn Cook, paras 9, 24-26

<sup>68</sup> For example, Swann Road Irrigation Limited

<sup>69</sup> For example, applications to replace deemed permits with resource consents to take water from Amisfield Burn, Breakneck Creek, Park Burn, Long Gully and Omeo Creek, as described in my evidence on Plan Change 7, Table 1 - [Nga-Runanga-EiC-M-Bartlett-Rights-and-interests-Amended-tracked-17-Feb-2021.PDF \(environmentcourt.govt.nz\)](#)

<sup>70</sup> See Otago Climate Change Risk Assessment, Table 5-1, p38, N2 and N5



plan process, which is also likely to impact on what is available for abstraction from these small tributary waterbodies once their health and well-being is prioritised in ways that have not previously occurred. On that basis I support the recommendation of Ms McIntyre at her paragraph 61(a)(ii), which would resolve this matter for Ngāi Tahu ki Murihiku in relation to the Dunstan and Roxburgh rohe. In the event that her recommendation to apply this approach to the entirety of Mata-au is not accepted, then I recommend the following amendments to the Section Section 42A version of LF-VM-O2:

“ ...

(7A) in the Dunstan and Roxburgh rohe, abstraction occurs from main stems or groundwater in preference to tributaries,

(7AB) in the Lower Clutha rohe ...”

53. With regards to the Lower Clutha rohe, the provision that is retained in this part of the Mata-au vision does not appear to be specific to this rohe. It largely reflects LF-FW-O1A(4) so adds very little over and above what is already provided for. In contrast, what was LF-VM-O2(7)(c)(iii) in the notified version does target known issues in the Lower Clutha regarding water quality. The freshwater visions feedback provided by Ngāi Tahu ki Murihiku referenced restoration of water quality and increasing access to waters of a drinkable standard. It would make more sense to delete what was LF-VM-O2(7)(c)(i) and retain what was LF-VM-O2(7)(c)(iii), with an amendment to reflect LF-WAI-P1, linking to the health needs of people rather than human contact which is a phrase not otherwise referenced in the pORPS.<sup>71</sup> I recommend the following amendments to the Section 42A version of LF-VM-O2:

“ ...

(7B) in the Lower Clutha rohe, ~~opportunities to restore the natural form and function of water bodies are promoted wherever possible,~~ land management practices reduce discharges of nutrients and other contaminants to waterbodies so that they are safe for the health needs of people, and ...”

54. With regards to the vision for the Catlins FMU, LF-VM-O6, retention of what was clause (4) is supported, which will appear to apply where there is already a high degree of

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<sup>71</sup> Refer to general submission point FPI042.145 that supports LF-WAI-P1

naturalness, similar to the description in the evidence of Evelyn Cook<sup>72</sup>. Not all of the Catlins FMU is in this state,<sup>73</sup> and for those areas that are not, the 2030 timeframe may not be achievable in relation to aspects of the new region-wide objective LF-FW-O1A. The freshwater visions feedback of Ngāi Tahu ki Murihiku sought to achieve the Catlins vision within a generation, which would lend towards extending the timeframe towards more like 2040 than 2030. Similar to the situation with the Upper Lakes rohe, I do not see scope in Ngāi Tahu ki Murihiku submission to consider amendment of the timeframe.

### **Over-allocation**

55. Reasons for the Ngāi Tahu ki Murihiku submission include concerns about existing over-allocation in relation to both water quantity and water quality<sup>74</sup>. The evidence of Evelyn Cook refers to phasing out abstraction that takes all of the water or targets headwaters in ways that affect the remainder of the waterbody<sup>75</sup>, which is an expression of how Ngāi Tahu ki Murihiku understand over-allocation with respect to affected waterbodies, rather than with reference to limits set in planning instruments.
56. The Section 42A report responds to the submission point of Ngāi Tahu ki Murihiku regarding the need to clarify the meaning of “over-allocation” as it relates to the definition of “degraded” when a limit has not been set, FPI042.140<sup>76</sup>. The definition of “degraded (in relation to fresh water)” is not part of the FPI, while the definition of “over-allocation” is part of this hearing, which is a highly problematic situation in terms of cohesive decision-making. In essence, Ms Boyd concludes that the new LWRP is due to be notified in the middle of next year so the issue is only potentially relevant for a short time. I largely agree as limits will need to be set in the LWRP that give effect to LF-WAI-O1, the region-wide objective LW-FW-O1A and freshwater visions for FMU and rohe. Limits set in this way should address the concerns of mana whenua, including those expressed by Evelyn Cook.

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<sup>72</sup> EiC of Evelyn Cook, para 8

<sup>73</sup> See for instance the 29 June 2023 ORC Environmental Science and Policy Committee Agenda, Item 7.1, Item 7.2, Item 7.4, Item 7.7 - [environmental-science-and-policy-agenda-2023-06-29-1.pdf \(orc.govt.nz\)](#)

<sup>74</sup> FPI submission, Attachment One, para 19

<sup>75</sup> EiC of Evelyn Cook, para 26

<sup>76</sup> S42a report, para 418

## Wastewater and stormwater

57. Ngāi Tahu ki Murihiku are seeking to ensure a progressive phasing out of direct discharges of wastewater and stormwater to rivers through targeted planning and implementation, including working with local authorities and businesses undertaking commercial activities<sup>77</sup>. This implements Te Tangi a Taurira policy<sup>78</sup>, supporting cultural associations and uses by avoiding culturally offensive discharges and the impacts of contamination on cultural practices. Te Ao Mārama has been working with Manaaki Whenua and the Cawthron Institute to understand the presence and impacts of emerging contaminants<sup>79</sup>, which can reach waterways via wastewater and stormwater pathways and which may not be addressed by standard treatment practices. My understanding is that the knowledge from this research has reinforced existing mātauraka, as contained in Te Tangi a Taurira, namely that direct discharges to waterbodies should be avoided. Refer also to the evidence of Evelyn Cook<sup>80</sup>.
58. The Ngāi Tahu ki Murihiku submission references desire for cessation of direct discharges of wastewater, in relation to LF-VM-O6<sup>81</sup> and LF-FW-AER9<sup>82</sup>. The freshwater visions feedback of Ngāi Tahu ki Murihiku contained references to phasing out direct discharges of both wastewater and stormwater within the Upper Lakes, Dunstan, Roxburgh and Lower Clutha rohe, and the Catlins FMU. The new region-wide objective LW-FW-O1A refers to phasing out direct discharges of wastewater but not stormwater. The Ngāi Tahu ki Murihiku submission references an anticipated environmental result that direct discharges of stormwater to water bodies are reduced across the region and the quality of stormwater discharges from existing urban areas is improved, in relation to LF-FW-AER10<sup>83</sup>. Te Tangi a Taurira policy and the draft freshwater visions provided by Ngāi Tahu ki Murihiku to the ORC during development of the pORPS took a stronger position than the stance in the Ngāi Tahu ki Murihiku submission. The submission demonstrates an emphasis over the life of the pORPS on phasing out wastewater discharges as a higher priority goal for Ngāi Tahu ki Murihiku.

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<sup>77</sup> For example, see Ngāi Tahu ki Murihiku Freshwater Objectives (2020), p57 and 63

<sup>78</sup> Te Tangi a Taurira, kaupapa 3.5.13.5, p159, which states: “Avoid the use of water as a receiving environment for the direct, or point source, discharge of contaminants. Generally, all discharge must first be to land.”

<sup>79</sup> See the New Zealand Strategy for Emerging Contaminants - [Patua te taniwha kei tamariki tonu Assail the leviathan whilst it is young \(landcareresearch.co.nz\)](https://www.landcareresearch.co.nz/patua-te-taniwha-kei-tamariki-tonu-assail-the-leviathan-while-it-is-young)

<sup>80</sup> EIC of Evelyn Cook, paras 29 - 30

<sup>81</sup> FPI042.011

<sup>82</sup> FPI042.012

<sup>83</sup> FPI042.013

59. The Section 42A report agrees that the pORPS should emphasise phasing out wastewater discharges, in connection with the specified timeframes for FMUs and rohe visions as referenced in the new region-wide objective LW-FW-O1A, but not the changes requested that would require direct discharges of stormwater to be reduced. The submission points of Kāi Tahu ki Otago have improved LF-FW-P15 and LF-FW-P16 and these changes have been supported by Ngāi Tahu ki Murihiku. I do not recommend any additional changes to the LF-FW provisions in relation to these matters and refer to the evidence of Ms McIntyre in that regard, with the exception that LF-FW-AER9 and LF-FW-AER10<sup>84</sup> need to reflect the amendments made that address Kāi Tahu ki Otago and Ngāi Tahu ki Murihiku evidence and submissions.

### **Dams and weirs**

60. In my opinion, the matter of dams and weirs discussed in the non-FPI hearing remains outstanding in relation to the FPI.<sup>85</sup> LF-VM-E2 could usefully draw a link between achieving the region-wide objective or overarching vision and the visions specific to Mata-au and constituent rohe, and the presence of dams and weirs that will impact on implementation of the objective and visions. I do not accept the position of the Section 42A author that it is not apparent where to reference dams within the wording of the explanation.

### **Additional matter**

61. I note that SRMR-I6, which is part of the FPI instrument, replicates an error that Ngāi Tahu ki Murihiku and Kāi Tahu ki Otago identified in RMIA-WAI-I3<sup>86</sup> and which has been corrected. Mātauraka needs to be consistently applied through the pORPS<sup>87</sup>. I recommend that the final sentence of SRMR-I6 be amended to reflect the changes to RMIA-WAI-I3, as follows:

“... it culminates in a ~~loss of rakatirataka~~ and diminishing of mana.”

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<sup>84</sup> FPI042.012 and FPI042.013

<sup>85</sup> FPI042.002

<sup>86</sup> FPI042.006 and FPI030.014

<sup>87</sup> With reference to MW-P2, MW-P3, MW-M2 and IM-P3

## Appendix 1: Freshwater visions feedback from Ngāi Tahu ki Murihiku

### Draft Freshwater Visions

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#### Mata-au FMU

##### Mata-au catchment as a whole.

*The mauri of the Mata-au/Clutha River, its health and well-being as a whole, ki uta ki tai, will be restored through a Treaty partnership approach to governing and managing lands and waters in the catchment, utilising mātauranga, upholding Kāi Tahu values, valuing natural form and function, prioritising water for waterbodies, supporting all the qualities of waterbodies that provide for aquatic life and culturally safe and healthy human interactions, increasing areas and populations of indigenous flora and fauna to improve access to healthy and abundant mahika kai and to create biodiversity corridors, mindful of impacts on coastal waters, and providing for a range of Kāi Tahu associations and uses within the catchment, as well as high quality drinking water supplies, hydroelectricity generation, climate resilient economic activities, and valued social and recreational activities of communities, supported by collaborative actions.*

##### Upper Lakes rohe

*The high quality waters of the lakes and their tributaries are protected recognising the significance of the purity of these waters to Kāi Tahu, and restored within a generation wherever human activities have impacted their mauri, including phasing out all direct discharges of wastewater and stormwater to water within fifteen years, alongside cloaking their connected lands with endemic species, supporting cultural associations and uses, and enabling full enjoyment of them by mana whenua, local communities and manuhiri in a manner that ensures the same qualities of these waters are available to successive generations.*

##### Dunstan rohe

*Impact on the well-being of Kāi Tahu from loss of access to lands, waters and mahika kai over a century ago and as a result of hydroelectricity infrastructure is recognised by prioritising within a generation, and with five yearly milestones, restoration of flows in waterbodies impacted by abstraction, including streams, aquifers, springs and wetlands; as well as restoration of habitat for indigenous species, enabling restocking of species and supporting improvement in the abundance and health of aquatic species and terrestrial species on connected lands, actively managing species interactions to support indigenous populations vulnerable to predation; and increasingly utilising main stem waters as a preference to smaller tributary waterbodies through infrastructure improvements that support climate resilient economic activities and intergenerational well-being for communities, including Kāi Tahu; whilst phasing out direct discharges of wastewater and stormwater.*

##### Roxburgh rohe

*Within ten years indigenous aquatic species are protected from mortal impacts of hydroelectricity infrastructure with safe fish passage provided for diadromous species, enabling populations of these species to access the full range of their habitats within the Mata-au catchment system, while tributary waterbodies are restored within a generation, with five yearly milestones, to support their natural form, function and hydrology, and improve habitat for indigenous species, actively managing species interactions to support indigenous populations vulnerable to predation, and increasingly utilising main stem waters as a preference to smaller tributary waterbodies through infrastructure improvements that support climate resilient economic activities and intergenerational well-being for communities, including Kāi Tahu, whilst phasing out direct discharges of wastewater and stormwater.*

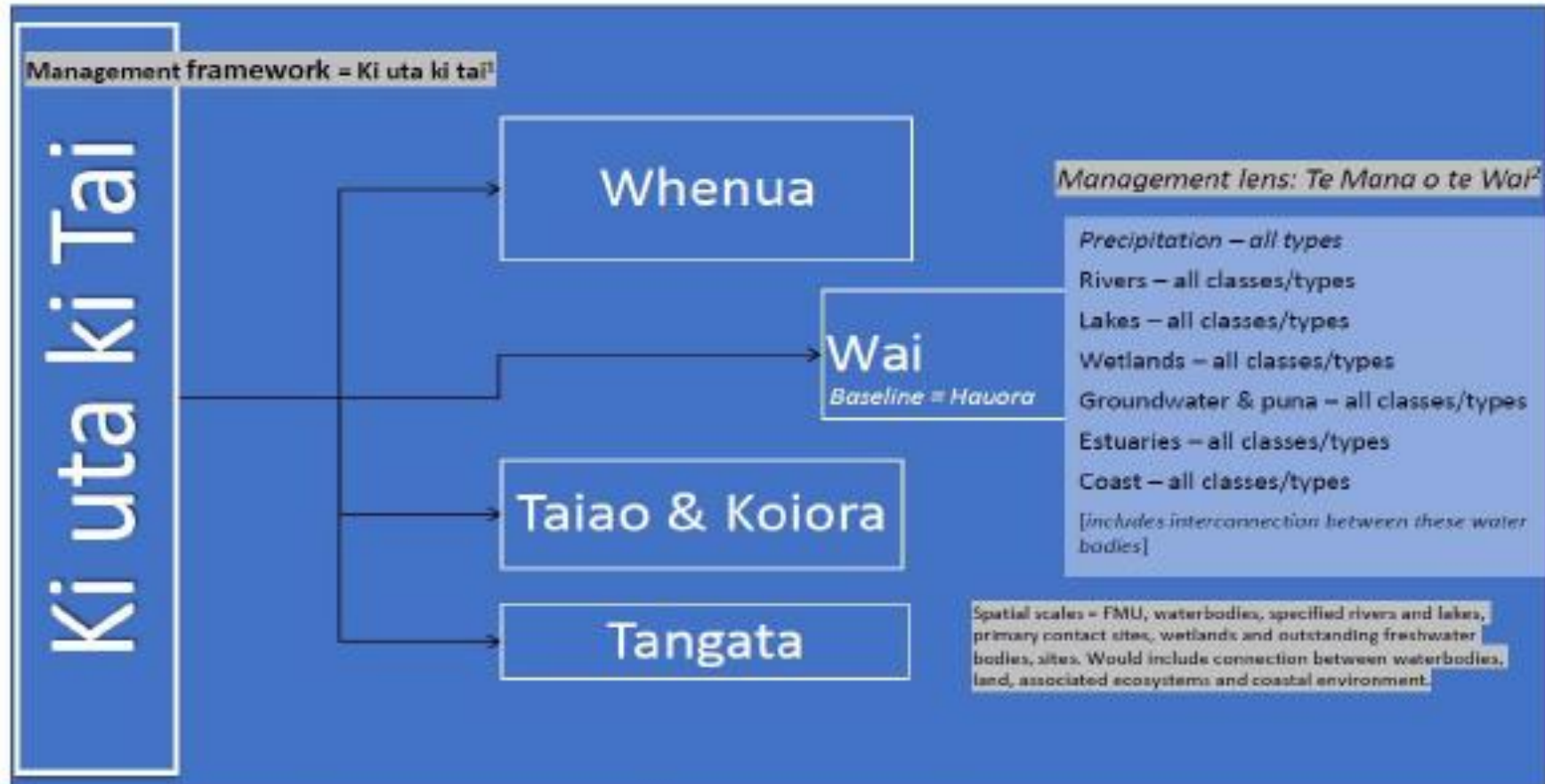
### Lower Clutha rohe

*Within a generation, with five yearly milestones, remnant wetlands, areas of endemic indigenous vegetation and riparian margins are connected as biodiversity corridors that run through the rohe providing for protection and recovery of indigenous populations from the coastal margins to the headwaters of Mata-au tributaries, prioritising riparian management that stabilises banks and provides for the habitat needs of indigenous species and actively managing species interactions to support indigenous populations vulnerable to predation, whilst the quality of water and the bed of waterbodies are progressively restored where they have been adversely impacted by human activities, as is their natural hydrological function, increasing access to waters of a drinkable standard and incorporating the phasing out of direct discharges of wastewater and stormwater within fifteen years.*

### Catlins FMU

*Within a Treaty partnership approach to governing and managing lands and waters, ki uta ki tai, priority will be given to restoration of indigenous biodiversity, taoka and mahika kai species, instream, on connected lands and in coastal environments in order to provide for an uninterrupted biodiversity network within a generation, free of barriers to fish passage, with endemic indigenous vegetation present on all banks and riparian margins, protecting waterbodies from sedimentation risks associated with bank instability and adjacent land use activities, ensuring waterbodies are free from invasive and pest species, with natural form and function characteristics and fresh water quality of a drinkable standard, including as a result of phasing out direct discharges of wastewater and stormwater, supporting economic activity that is based on and nurtures a high quality natural environment.*

Appendix 2: Ki uta ki Tai diagram



1. Ki uta ki tai is more than a spatial scale – it is the management framework for how everything interacts. Concerns each of the parts and sum of the parts. One part can affect the whole.  
 2. In pSWLP – from NPS2014 and 'O Te Wai' in Te Tangi a Tauira 2008.

Appendix 3: Diagrammatic representation of relationship between mauri and hauora

