BEFORE THE INDEPENDENT HEARINGS PANELS APPOINTED TO HEAR AND MAKE RECOMMENDATIONS ON SUBMISSIONS AND FURTHER SUBMISSIONS ON PROPOSED PLAN CHANGE 1 TO THE NATURAL RESOURCES PLAN FOR THE WELLINGTON REGION

UNDER	the Resource Management Act 1991 (the Act)
AND	
IN THE MATTER	of Hearing of Submissions and Further Submissions on Proposed Plan Change 1 to the Natural Resources Plan for the Wellington Region under Schedule 1 of the Act

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STATEMENT OF EVIDENCE OF JAMIE PETER PERYER FURSDON

ON BEHALF OF GREATER WELLINGTON REGIONAL COUNCIL

TECHNICAL (ENVIRONMENT RESTORATION) EVIDENCE

HEARING STREAM 3 – RURAL LAND USE

15 APRIL 2025

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INTRODUCTION

1 My full name is Jamie Peter Peryer Fursdon (preferred surname Peryer), I am a Senior Environment Restoration Advisor - Technical at Greater Wellington Regional Council (the Council).

2 I have read the submissions relevant to the Section 42A report on Rural Land Use.

3 I have prepared this statement of evidence on behalf of the Council in respect of technical matters arising from the submissions and further submissions Proposed Plan Change 1 to the Natural Resources Plan for the Wellington Region (**PC1**).

4 This statement of evidence relates to the matters in the Section 42A Report – Rural Land Use, specifically, to the sections in that Report on the Council's landowner support (non-regulatory) programmes, erosion management techniques, and Farm Environment Plans.

QUALIFICATIONS AND EXPERIENCE

5 I hold a Bachelor of Science in Environmental Science from the University of Waikato.

6 I am a Certified Nutrient Management Advisor with the Council and have completed Intermediate and Advanced Sustainable Nutrient Management courses with Massey University.

7 I have 12 years of experience in the environmental sector, 10 of which were spent working within regional councils. I specialise in advising primary industry businesses and peri-urban landowners on strategies to achieve better environmental outcomes. My areas of expertise include farm environment planning, good management practices, riparian management, biosecurity, forestry practices, emissions trading, and erosion control. I have also implemented various mitigations, such as fencing, afforestation (native and exotic), wetland restoration, and sediment catch structures. Through my work in Te Awarua-o-Porirua, Te Whanganui-a-Tara, and Kāpiti, I have engaged with over 120 rural landowners across various land uses and landscapes.

8 I participated in three of the four Whaitua processes (tasked with giving effect to the National Policy Statement for Freshwater 2020 (NPS-FM)) conducted by the Council: Te Awarua-o-Porirua, Te Whanganui-a-Tara, and Kāpiti. In this capacity, I provided technical expertise to the committees and advisors, primarily focusing on the practical implications and effectiveness of potential recommendations related to primary industry land use.

CODE OF CONDUCT

9 I have read the Code of Conduct for Expert Witnesses set out in the Environment Court's Practice Note 2023 (Part 9). I have complied with the Code of Conduct in preparing this evidence. My experience and qualifications are set out above. Except where I state I rely on the evidence of another person, I confirm that the issues addressed in this evidence are within my area of expertise, and I have not omitted to consider material facts known to me that might alter or detract from my expressed opinions.

SCOPE OF EVIDENCE

10 My evidence addresses:

10.1 The Council's Environment Restoration Programmes and the advisory and financial support offered to landowners.

10.2 The Council's Certified Farm Environment Plan (cFEP) programme and the capability for that programme to support PC1 implementation.

10.3 The purpose and utility of farm environment planning based on my own experience in working with landowners in the Wellington Region.

10.4 The available erosion management options for pastoral land use in Te Awarua-o-Porirua and Te Whanganui-a-Tara, along with their associated costs, benefits, and effectiveness.

BACKGROUND CONTEXT

11 Plan Change 1 rules WH.R27 & P.R26 require that properties with over 20ha in pastoral land use or over 5ha in horticultural land use develop a cFEP which must be independently certified. The requirements for this cFEP follow the existing rules in Schedule Z of the operative Natural Resources Plan (NRP) along with additional provisions outlined in Schedule 36 of PC1. Under Schedule Z, cFEPs must show that measures will minimize nitrogen, phosphorus, sediment, and *E. coli* loss through, as a minimum, good management practices and ensure the risk of loss to water does not exceed the average risk from the five years prior to 2 September 2020. In addition to this, Schedule 36 requires that cFEPs have more sediment specific risk assessment given the importance of sediment management in the PC1 Whaitua.

12 Many submissions stated that non-regulatory support services were vital to the successful implementation of regulatory approaches such as cFEPs. The Council's Environment Restoration programmes, along with other funding and advisory initiatives were highlighted as needing to be sufficient and aligned to enable landowners to meet regulations.

THE COUNCIL'S ENVIRONMENT RESTORATION PROGRAMME

The Environment Restoration Team

13 The Environment Restoration team sits in the Council's Ecosystems and Community business unit. It is tasked to support private landowners with the challenges of meeting our region's water quality and biodiversity maintenance and enhancement objectives alongside supporting mana whenua objectives. The team operates under two initiatives: the Key Native Ecosystem (KNE) programme and the incentives programmes. The KNE programme focuses on biodiversity (terrestrial and freshwater) improvements in high-value sites and given PC1 is mostly focused on water quality, I consider that the KNE programme is largely irrelevant to this evidence.

14 The Environment Restoration team consists of 21 Full-Time Equivalent (FTE) positions, including one FTE for the team leader, the remainder as Environment Restoration Advisors. Five Advisors are dedicated to the KNE programme and 15 to the incentives programmes. Of those 15 FTE, 1.5 FTE are currently allocated to each of Te Whanganui-a-Tara and Te Awarua-o-Porirua Whaitua.

The Council's incentives programmes

15 The Council's incentives programmes are designed to support private landowners to implement beneficial water quality or biodiversity actions, including actions identified through farm environment planning. These programmes consist of four strategic focus areas:

(a) Wellington Region Erosion Control Initiative (WRECI);

(b) Sustainable Land Use Fund (SLUF);

(c) Wetland Programme; and

(d) Riparian Programme.

16 These are described in Table 1 below.

Table 1: The Council's incentives programmes outline

Programme	Actions supported	Subsidy	Annual operational budget*	Funding Source
Wellington Region Erosion Control Initiative (WRECI)	Treatment of erosion prone land, where treatment includes stock exclusion fencing/land retirement, afforestation (native and exotic), poplar and willow pole planting	50% (30% for *Pinus radiata* afforestation)	$1.9M	33% funded by Ministry for Primary Industries**, remainder by rates and landowner contributions.
Sustainable Land Use Fund (SLUF)	Actions supporting catchment water quality or biodiversity outcomes including stock exclusion fencing, planting, water reticulation, effluent improvements, good management practices	50% (30% for reticulation, effluent and irrigation)	$2.2M	Funded by rates and landowner contributions.
Riparian Programme	Stock exclusion fencing and planting within riparian areas	50%	$363k	Funded by rates and landowner contributions.
Wetland Programme	Stock exclusion fencing, planting and weed control. Selective wetland creation/construction	50% for fencing 100% for pest plant control (3 years) 100% funding for plant supply (to a cap)	$527k	Funded by rates andin-kind contributions from landowners

**2025/2026 Financial year; budget excludes staff time costs and overheads.*

*** Ministry for Primary Industries (MPI) portion is funded via the Hill Country Erosion Fund (HCEF) until 2026/27 financial year. Application for future funding MPI from HCEF will be submitted in 2026. Rates funding is secured beyond 2026/27 to 2034, year 10 of the Council's long term plan.*

17 All four of the Council's incentive programmes are prioritised and delivered at a regional level, including Te Whanganui-a-Tara and Te Awarua-o-Porirua and three other Whaitua in the region. There are no specific funding allocations assigned to each individual Whaitua. The Riparian and SLUF programmes have designated priority Freshwater Management Units (FMUs) inline with the objectives of each programme. Projects within these FMUs are given priority for approval. For the SLUF programme, priority FMUs are determined by the two Whaitua Implementation Programmes (WIP), focusing on FMUs with water quality attributes in the D or E band for nitrogen, phosphorus, sediment, *E. coli*, or periphyton. The Riparian programme prioritises FMUs with D or E band ratings for *E. coli* or periphyton, or those with stock exclusion rules under the NRP. The WRECI and Wetland programmes operate across the region, supporting actions on erosion-prone land and wetlands respectively, and do not have priority catchments. These FMUs, relevant to the

PC1 area, are outlined in Table 2. Table 3 provides an indication of the extent of programme spend and outputs in the PC1 area.

Table 2 Priority FMUs for the Council's incentives programmes

	Priority FMUs			
	WRECI	**SLUF**	**Riparian**	**Wetland**
Te Whanganui-a-Tara	N/A	Te Awa Kairangi rural (Mangaroa and Pakuratahi), Wainuiomata rural, South-west coast rural (Mākara and Ohariu)	Te Awa Kairangi rural (Mangaroa and Pakuratahi), Wainuiomata rural, South-west coast rural (Mākara and Ohariu)	N/A
Te Awarua-o-Porirua	N/A	Pouewe, Takapu, Taupo, Te Rui o Porirua, Rangituhi	None - defer to SLUF	N/A

Table 3: The Council's incentives programmes summary for 2022-23 and 2023-24 financial years (combined) in Te Whanganui a Tara and Te Awarua-o-Porirua Whaitua.

		Environment Restoration programmes			
		WRECI	**SLUF**	**Riparian**	**Wetland**
Te Whanganui a Tara	**Programme spend**	$191k	$74k	$482k	$24k
	Programme outputs	187 ha afforestation and reversion	Riparian and afforestation projects	9 riparian sites 5,311m fencing 15,583 plants	5 wetlands supported
Te Awarua-o-Porirua	**Programme spend**	$322k	$162k	$76k	$23k
	Programme outputs	80 ha afforestation and reversion	Riparian, wetland, afforestation and reversion projects	2 riparian sites 450m fencing 3,300 plants	1 wetland supported

Wellington Region Erosion Control Initiative eligibility

18 Eligible land for WRECI must be Land Use Capability (LUC) 6e, 7e, or 8e (with some exceptions), which is generally assessed at farm-scale. Technology improvements to property-scale mapping of erosion prone land are continuously improving. LUC mapping is a long-standing method for identifying erosion prone land, although in the future LUC may

be supplemented or replaced by more effective methods of targeting erosion prone land treatment needs in Te Whanganui-a-Tara and Te Awarua-o-Porirua. For example, to better understand sediment sources, the Council commissioned sediment loss modelling for the Te Awarua-o-Porirua Whaitua. This modelling was intended to assist landowners in understanding sediment sources on their properties and eventually inform the Council's incentives programmes. This is the same modelling that PC1 uses to identify High and Highest Erosion Risk land as described in the statement of evidence of Mr Thomas Nation[1].

Role of Environment Restoration Advisors

19 Core work of Environment Restoration Advisors (ERA) involves relationship management with landowners leading to agreements between the Council and landowners to implement work that is targeted towards water quality or biodiversity benefits. The output metrics for these programmes is shown in Table 3. There is also a significant value-add in advisory services that are more difficult to measure.

20 ERAs use the Council's incentive programmes and water quality/biodiversity expertise to influence land use decision making and adaptations to farm systems that otherwise might not occur. ERAs are trained in Good Management Practices (GMPs) and will often advise landowners/farmers about GMP. This advisory role promotes the adoption of land use innovation and science, facilitating communication between farms about observed Good Management Practices (GMPs) and promoting the broader adoption of farm system improvements. ERAs also play an important role in communicating regulatory requirements to landowners/farmers and identifying pragmatic methods to ensure compliance.

Other funding

21 In 2022, Porirua City Council (PCC) secured significant funding from the Ministry for the Environment (MfE) to launch a $8.1M programme aimed at planting 600,000 native trees in riparian zones over five years[2]. Initially, the programme provided 100% funding for planting native seedlings within 3 metres of streams, with the Council supporting through

[1] *Nation, T. 2025. Statement of technical evidence HS3 – erosion risk mapping. Prepared for GWRC for PC1.*
[2] *https://www.jobsfornature.govt.nz/funded-projects/*

50% subsidies for fencing and planting beyond 3 metres. The MfE component of the funding is due to end in 2026.

22 In 2025, based on the sediment modelling undertaken by the Council[3], the PCC programme expanded to cover 100% funding for planting on erosion-prone land, as the modelling indicated it had the potential to be more impactful on reducing sediment than riparian sites[4]. This change aligned with the Council's WRECI programme, which continued to fund 50% of fencing for erosion-prone land.

23 The current available subsidy funding for revegetation in the Porirua catchment significantly reduces the cost barrier for landowners. Consequently, engagement has been high, both in project numbers and size. Notably, the recent change to make erosion-prone land eligible for 100% subsidies has resulted in a substantial increase in the area proposed for programme support.

24 Community groups offer another avenue for resourcing environmental initiatives. Several groups operate across Te Awarua-o-Porirua and Te Whanganui-a-Tara. For example, the Council has supported the Mākaracarpa's and the Pauatahanui Freshwater Catchment Community. Both groups, based in the rural Mākara/Ohariu and Pauatahanui catchments respectively, focus primarily on water quality.

Incentives programmes and Farm Environment Plans

25 I expect that, with certifiers and landowners informed of available incentives, the actions prescribed in farm environment plans (regardless of type of plan, as explained further) will be more likely to be implemented.

26 Retirement and afforestation of land are the most extensively supported activities by the Council incentive programmes in Te Whanganui-a-Tara and Te Awarua-o-Porirua. Alongside this, the Council's incentive programmes provide support for a broad range of other activities, offering flexibility to help landowners implement effective, customised actions.

FARM ENVIRONMENT PLANS

27 Farm Environment Plans are comprehensive documents designed to assist farmers and growers in identifying, managing, and mitigating the environmental impacts of farming on

[3] *Collaborations, 2023. Erosion Risk Mapping for Te-Awarua-o-Porirua and Te-Whanganui-a-Tara*
[4] *Peryer, J. 2024. Memo to Porirua City Council – Support for collaborative Porirua Harbour Programme*

freshwater ecosystems. Often mitigation of water quality risk is integrated with biodiversity benefits as well. The general farm environment planning process (the next section explains the requirements for different plan types) involves mapping the farm, assessing risks to water quality, and planning actions to address these risks through mitigation measures or improved management practices.

Farm Environment Plan types

28 There is currently one type of regulatory farm plan that applies in the Greater Wellington Region, cFEPs as required by the region's NRP.

29 Requirements for Freshwater Farm Plans (FWFPs) are set out under Part 9A of the Resource Management Act 1991 (RMA) and the Resource Management (Freshwater Farm Plans) Regulations 2023. These regulations currently do not apply to the Greater Wellington region. The government has paused the implementation of FWFPs while conducting a review.

30 Under the NRP, cFEPs are currently required for rural land uses in eight priority catchments within the region as outlined in Schedule Y. None of these catchments are in the PC1 area. Seven of these catchments are in the Wairarapa and one is in Kāpiti. These catchments were identified in Schedule Y as priority due to water quality issues related to excessive periphyton, or nitrogen.

Certified Farm Environment Plan requirements

31 The existing requirements for cFEPs are outlined in Schedule Z of the NRP. In summary these requirements are:

- Document key farm details and map characteristics, including riparian zones, wetlands, stock crossing points, critical source areas
- Farm system risk assessment that:
  - Is conducted by a Certified Farm Nutrient Adviser
  - Assesses the inherent and management risks associated with nitrogen, phosphorus, sediment, and *E. coli* loss
  - Considers specific risk factors covering nitrogen and phosphorus loss and nutrient transport risks
- An action plan that includes:
  - Description of good management practices (GMPs) and mitigation measures
  - Actions to minimise nutrient, sediment and *E.coli* loss

- Efforts to avoid increasing risks compared to the average levels from the five years before 2 September 2020
- Timeframe for implementation
- Methods for tracking progress (e.g., photos or spreadsheets)

Nitrogen assessment in Certified Farm Environment Plans

32 The cFEP process mandates a nitrogen risk assessment through Schedule Z of the NRP. While this does not require the use of a specific risk assessment tool, the requirement for a Certified Farm Nutrient Advisor to conduct the risk assessment covering both inherent risk and management risk ensures that cFEPs under the requirements of Schedule Z will adequately manage nitrogen risk. Where risks are identified, appropriate actions will be planned. This approach should be sufficient to maintain or reduce nitrogen levels from farms. Given that nitrogen is not generally a primary concern in the PC1 FMUs, in my opinion, this does not require a more detailed assessment than what is outlined in Schedule Z.

Current cFEP programme

33 As of 7 March 2025, 37 cFEPs out of an estimated 378 farms required to have a cFEP (Schedule Y catchments) have been prepared and submitted. This total number of farms required to have a cFEP is likely an overestimate, as explained later. Three additional catchments will require cFEPs by 30 June 2025, bringing the total number of farms requiring cFEPs to approximately 648. Based on these numbers, only around 7% of the cFEPs required have been submitted to the Council. In my opinion, several factors contribute to the low uptake:

33.1 The NRP and subsequent cFEP regulations were made operative in June 2023, and the first cFEPs were required by December 2023. This provided a very limited timeframe for the Council to prepare for the cFEP programme. Sufficient time is required to reallocate resources, engage with community, develop educational materials, create systems, and train and assess farm plan certifiers to certify the plans.

33.2 Although FWFP were initially signalled to be implemented in the region, their implementation was paused due to a change in government, which caused confusion among farmers, many of whom thought a farm plan was no longer required.

33.3 Industry involvement, which is crucial for supporting the development of farm plans, has been hindered by national uncertainty, with some reluctance to engage in regional farm planning initiatives, for fear of duplication.

I think it likely that uptake of cFEPs will increase as the Council's engagement programme continues and several more cFEP Certifiers are nearing full accreditation.

34 I understand the Council is actively using compliance and enforcement responses only in cases of observed land use practices that are causing significant environmental effects. In all other cases where landowner/farmers are not yet complying with cFEP requirements, the Council is supporting uptake and implementation with Environment Restoration advisory services. It is considered by the Council counterproductive to the necessary relationship management with landowner/farmers to potentially use enforcement tools on cFEPs in areas where they may be replaced by FWFP requirements in the near future.

35 The Council does not offer a cost subsidy for the completion of a cFEP nor does it charge for the assessment of cFEPs. The subsidies noted above are available, on a prioritised basis, to the completion of actions identified in cFEPs.

36 From my insights into the cFEP programme, the lowest cost for a landowner to produce a cFEP is when the landowner develops a satisfactory plan in accordance with Schedule Z requirements themselves and only needed a Farm Plan Certifier to certify the plan (approximately $1,000). The highest cost could be around $7,000-$10,000 for a complex farm system that has little to no previous farm environment planning (such as mapping) or risk identification and requires a consultant planner to produce the cFEP from scratch. I have observed that the typical cost for a certifier to write the entire plan in line with Schedule Z for most farm systems is in the range of $3,000 to $4,000.

Comparison of Certified Farm Environment Plans and Freshwater Farm Plans

37 Before the Government's pause on staged implementation of FWFPs, there was clarity on what they would require. The main differences between cFEPs and the proposed FWFPs were that FWFPs required (and cFEPs did not require):

37.1 A catchment context component - outlining the catchment context, challenges and values (CCCV) to inform the FWFP, and

37.2 An auditing component, which ensured actions were time-specific and completed.

In terms of content, cFEPs and FWFPs are largely similar in that they identify environmental risks and property-specific mitigation strategies, giving farmers the flexibility to choose the best solutions and actions for their farms.

38 The Council encourages farmers and certifiers to consider the catchment context for cFEPs. The Council is developing a Catchment Context Challenges and Values (CCCV) tool[5]. Originally the CCCV tool was a planning tool intended to support landowners and planners to meet the requirements of FWFPs but the inclusion of CCCV in cFEP planning is valuable for designing effective on-farm risk mitigation actions in a cFEP context.

39 Requirements for cFEPs were established prior to the finalisation of the FWFP requirements. Since both share similar criteria, there is no intention for landowners to require two separate plans when FWFPs are implemented. The Council is committed to supporting landowners to adapt a cFEP if it may need changes to meet the needs of future FWFPs.

40 Using Schedule Z for cFEPs in PC1 will ensure alignment regionally with the existing cFEP programme, providing consistency for certifiers, industry bodies, and staff.

41 Should the government opt for a lighter approach to FWFPs, the prescriptive nature of Schedule Z (and additionally Schedule 36) could mean cFEPs are more stringent than FWFPs. It is possible that a farm operator may require a cFEP when a FWFP is not required by national regulation.

Number of Certified Farm Environment Plans required under PC1

42 The PC1 provisions (both as notified and amended), require cFEPs for operations with 20 ha or more of pastoral or arable land use, or 5 ha or more of horticultural land use, which aligns with FWFP requirements prior to the pause and review. There are few horticultural properties in the PC1 area. A GIS analysis of the Agribase dataset identified 312 properties over 20 ha across both PC1 Whaitua. After refining the dataset to exclude forestry and other non-farming land uses, the number was reduced to 200, with 76 in Te Awarua-o-Porirua and 124 in Te Whanganui-a-Tara. Following a more detailed review and insights gained from the implementation of the cFEP programme in Schedule Y priority

[5] *CCCV Freshwater Management*

catchments, these initial estimates are likely an overestimate. Accurately calculating the number of required plans is challenging due to several factors, including:

42.1 Farms may consist of multiple titles, often under different ownership, which can appear as separate operations but are part of one farming operation.

42.2 Farming operations frequently lease blocks across multiple properties, with some submitted cFEP farms having up to six leased areas under a single operation.

42.3 Modelling the effective area at the Whaitua-scale is difficult, as properties may be 20ha or more but include less than 20ha of pastoral land use.

42.4 In Porirua, significant recent land use change has occurred, with several medium and large-sized rural properties being converted to housing. Additionally, a small number of properties have transitioned away from farming into to forestry or native retirement.

43 Taking these factors into account, the revised estimate for the required farm plans is 40 cFEPs for Te Awarua-o-Porirua and 90 cFEPs for Te Whanganui-a-Tara.

Considerations and proposed timeframes for PC1 Farm Environment Plans

44 In my opinion, the current dates set in the notified provisions for cFEPs to be implemented are no longer realistic and the dates should be extended. Insights gained from the current cFEP programme have shown that successful implementation of cFEPs requires:

44.1 Planning: The Council needs time to plan out the implementation of a cFEP work programme. This necessitates sufficient lead time before any deadlines to allocate or recruit resources. A significant amount of the Council resource is also needed to train certifiers and develop background information and support tools. A minimum lead time of 12 months from the regulations being made operative is recommended.

44.2 Engagement: With cFEP provisions, and the current confusion for landowners around FWFP requirements, landowners need time to understand what is being asked of them. This will require the Council to undertake engagement at a range of levels. Through the current cFEP programme, the Council has facilitated community workshops, industry engagement, and provided one-on-

one advice to farmers to effectively communicate cFEP requirements. Feedback from the current cFEP programme is that 9 months (as currently set for Schedule Y catchments) is sufficient time to engage and inform a community of their cFEP requirements.

44.3 Certifier capacity: Currently, there are 17 cFEP certifiers (2 fully accredited, 15 provisionally approved) providing services in the Wellington Region. Providing reasonable implementation timeframes will allow certifiers to build the necessary resources, as well as get an understanding of the additional requirements beyond Schedule Z.

45 Based on the considerations above, the proposed due dates for cFEPs have been extended from the notified provisions and outlined in Table 4.

46 Considerations for the order of cFEP due dates for each FMU are outlined below:

46.1 Community by community approach: There are three distinct rural communities in Te Whanganui-a-Tara and Te Awarua-o-Porirua. Adequate engagement would require working with each of these communities sequentially. The communities are: Mākara/Ohariu (South-west Coast rural streams), Hutt/Wainuiomata rural areas (Te Awa Kairangi rural streams and mainstems, Wainuiomata rural streams) and rural Porirua (all Te Awarua-o-Porirua FMU). Table 4 outlines the a sequence of cFEP due dates based on these separate communities.

46.2 Start with the FMUs with the biggest challenges first: Given the high suspended sediment reductions required, in my opinion, it is logical to prioritise the order of FMUs requiring cFEPs based on those requiring the greatest reductions first. Table 4 below accounts for this based on the revised suspended sediment load reduction to meet visual clarity targets presented in evidence by Mr James Blyth[6].

[6] *Blyth, J. 2025. Statement of technical evidence HS2 – suspended sediment load reductions required to achieve the visual clarity TASs. Prepared for Greater Wellington Regional Council for PC1*

Table 4: Proposed phase in of certified Farm Environment Plans:

Part FMU Te Whanganui-a-Tara	**Part FMU Te Awarua-o-Porirua**	**Proposed Due date**
South-west coast rural streams *Korokoro Stream*		30 Dec 2027
	Pouewe Taupō Takapū *Wai-O-Hata*	30 September 2028
Te Awa Kairangi rural streams and rural mainstems Wainuiomata rural streams *Parangārehu catchment streams* *Ōrongorongo, Te Awa Kairangi and Wainuiomata small forested and* *Te Awa Kairangi forested mainstems* *Te Awa Kairangi lower mainstem*		30 June 2029

NB Italicised FMUs are likely to have few or no properties requiring cFEPs.

47 I considered Freshwater Farm Plans but excluded from the cFEP due date considerations, as the Council has not yet received direction on the FWFP rollout post-review. If further guidance is provided on FWFPs, aligning the dates with those required for FWFPs should be considered at that point in time.

Importance of Farm Environment Plan certification

48 PC1 provisions (both as notified and amended) relating to cFEPs require that they are:

- Certified by a **Farm Environment Plan Certifier** and;
- Include a risk assessment conducted by a **Certified Nutrient Management Advisor**.

Farm Environment Plan Certifiers help farmers develop and certify their cFEP, while Certified Nutrient Management Advisors complete the required risk assessments.

49 The Council is responsible for accrediting individuals for these roles. To become accredited as either a Farm Environment Plan Certifier or a Certified Nutrient Management Advisor, candidates must have the relevant qualifications and experience and submit three completed cFEPs or farm-scale nutrient loss risk assessments for review by the Council.

Once accredited, additional cFEPs and risk assessments submitted to the Council are recorded against the farm or land parcels without needing further formal review.

50 The accreditation process was introduced following feedback from other regional councils. My understanding is that some regional Farm Environment Plan processes lacked accreditation for certifiers and subsequently they received plans of widely varying quality, with some requiring regulatory follow up.

51 The process of having accredited certifiers undertaking cFEP certification is important for the following reasons:

51.1 Ensures that certifiers are competent, with a thorough understanding of farm planning processes, nutrient and other contaminant risk assessments, the appropriate selection of actions (mitigations or management practices), and the regulatory requirements on farms.

51.2 The Council also provides certifiers with information on the catchment issues and objectives and highlights the opportunities available through incentive programmes and other initiatives.

52 Having competent cFEP certifiers ensures that plans are of an appropriate standard. Certifiers can help farmers understand their farm risks and ensure that actions outlined are both relevant and effective. Additionally, certifiers are familiar with specific catchments.

EROSION RISK TREATMENT PLANS

53 Schedule 36, Part E requires that cFEPs under PC1 have an Erosion Risk Treatment Plan (ERTP). An ERTP is expected to outline practical actions that effectively reduce erosion. While the notified provisions emphasised enforcing revegetation on all high erosion-risk land, in my opinion, this approach is likely to be impractical for many areas and could lead to unintended negative outcomes[7]. As this section highlights, I consider that effective sediment control can still be achieved through a range of actions, which the ERTP can specify.

[7] *Unintended negative outcomes include planting of species that won't survive (wasted investments) or the planting of inappropriate species or species detrimental to biodiversity or ecological outcomes.*

Effective Erosion Risk Treatment

54 Referencing work observed with active landowners in Te Awarua-o-Porirua and Te Whanganui-a-Tara, from my professional opinion, I consider that there are a range of feasible and effective actions that would be expected to be included in an ERTP. Strugnell farm, which undertook a voluntary Farm Environment Plan and sits in the "early adopters" category of farmers, has a number of actions that have been implemented. For reference, below is an outline of the action plan from Strugnell Farm Environment Plan.

Table 5: Strugnell voluntary Farm Environment Plan – implemented actions

Focus area	Mitigation or treatment	Sediment outcome
Grazing	Soil and fertiliser review – ensure soil health is optimal	Healthy soil = healthy sward of grass reduces surficial sediment runoff
	Managing pasture to not overgraze	Retaining grass cover after grazing limits surficial sediment runoff
Critical Source Areas	Fence off source areas – track water tables, exposed banks, wet areas	Stock are not able to pug these spaces and release sediment into water
	Plant a filter strip below high traffic area	Sediment generated is captured in filter strip
	Sensitive track construction and maintenance – regular cutoffs, cast soil stabilisation	Tracks built and maintained using good practices will generate less sediment
Soil conservation/erosion control	Retire steep faces from grazing – fencing	Stock removal from steep slopes removes tread/grazing damage and allows vegetation to regenerate, stabilising the land from gully, slide and slump erosion.
	Pole planting in gullies and along stream	Root systems from poles will hold banks together reducing the impact of streambank and gully erosion
	Retire remnant forest	Once stock are removed from the forest ground cover is able to regenerate reducing surficial erosion
	Retire and plant seepage wetlands	Removing stock from wetlands will reduce sediment generated by pugging and once reverted, seepage wetlands act as filters for sediment laden water

Focus area	Mitigation or treatment	Sediment outcome
Engineered controls	Debris trap/drop structure	A debris trap temporarily stops flood flows allowing sediment to settle out, and preventing stream bank scour
Other	Install new water tank fed by dam, more troughs in dry locations	Providing stock water reduces frequency of access to waterways, reducing pugging and sediment mobilisation.
	Dung beetles – release on farm	Dung beetles bury dung improving soil organic matter and reducing scour and erosion of soil

This suite of mitigations were specifically tailored to Strugnell farm and system. Further detail on the Strugnell Farm Environment Plan is expressed in the submission from Diane Strugnell[8]. Other farm operators may select other actions that better fit their farm systems and values. The value of farm environment planning is that farmers have flexibility to choose options that best suit their system.

55 There is a potential risk that ERTPs may focus on the most convenient actions and not create a suite of effective actions. In my opinion, this will be mitigated by the comprehensive risk assessment process required in Schedule 36 Part D, and the programme of mitigations in the ERTP needing to be planned against those risks. Changes to Schedule 36 proposed in Mr Gerard Willis's S42A report clarify that grazing management alone is inadequate, and additional measures are required to ensure cFEPs include clear actions. Furthermore, the accreditation of cFEP certifiers should ensure that the plans submitted contain effective action plans.

56 The effectiveness of mitigations within pastoral systems will vary depending on the type, extent, and current activity of erosion, as well as the scale and quality of the control

[8] *Strugnell, D. 2023 submission to Plan Change 1 https://www.gw.govt.nz/assets/Documents/2024/01/S005-Spoken-Submission-Diane-Strugnell.pdf*

measures. For example, a literature review by Manaaki Whenua[9,10] on the performance of erosion and sediment control (ESC) methods suggests the techniques applicable to PC1 generally perform as summarised in Table 6.

Table 6: The estimated effectiveness of erosion and sediment control for mitigations that could be applied to Te Whanganui a Tara and Te Awarua-o-Porirua as described in the Manaaki Whenua review

Erosion Type	Mitigation	Effectiveness
Surface Erosion	Wetlands	60–80%
	Sediment retention ponds	30-70%
	Grass buffer strips	40%
	Cover crops	40%
Landslides	Space-planted trees	70%
	Afforestation or reversion	90%
Gully Erosion	Space-planted trees	70%
	Afforestation or reversion	90%
	Debris dams	80%
Earthflows	Space-planted trees	70%
	Afforestation or reversion	90%
Bank Erosion	Riparian fencing and/or planting	50%

57 My understanding of the Manaaki Whenua paper as a practitioner who recommends erosion treatment as part of my day-to-day role is that it identified several factors influencing the performance of ESC methods, such as:

57.1 Land susceptibility;

57.2 Rainfall (e.g., Structural measures like detainment bunds can work well for sediment control, although their effectiveness may decrease during high flow events);

57.3 The scale of implementation; and

[9] *Phillips, C., Basher, L., & Spiekermann, R. 2020. Biophysical performance of erosion and sediment control techniques in New Zealand: a review. Contract Report: LC3761. Manaaki Whenua – Landcare Research.*

[10] *Drewry, D., Phillips, C., & Graham, S. Sediment reduction and mitigation principles – a review of New Zealand literature. Contract Report: LC4380. Manaaki Whenua – Landcare Research.*

57.4 Time until maturation (e.g., afforestation and pole planting can take years to become fully effective, while structural practices often provide immediate results).

58 I understand that Manaaki Whenua also considered management practices and considered that whilst not quantifiable, had a high impact on sediment loss. It was noted that practices which retained a persistent, complete pasture sward were highly effective at reducing sediment loss. This is achieved through grazing management (not over grazing areas) and maintaining soil fertility and ensuring pasture health.

Good Management Practices

59 Whilst specified mitigations are important to any ERTP and can be clearly defined and implemented, ERTPs will also include Good Management Practices (GMP) to address risks. In my opinion, from observing the implementation of GMPs, these can be effective in reducing sediment loss. The guide "Industry-agreed Good Management Practices relating to water quality" outlined potential GMPs that could be implemented across a range of land uses[11]. Selected GMPs that I considered to be relevant to PC1 are displayed in Table 6.

Table 6: Relevant Good Management Practices suitable to farm in Te Whanganui a Tara and Te Awarua-o-Porirua

Good Management Practices
Whole Farm
Identify the physical and biophysical characteristics of the farm system, assess the risk factors to water quality associated with the farm system, and manage appropriately
Maintain accurate and auditable records of annual farm inputs, outputs and management practices.
Cultivation and Soil Structure
Manage farming operations to minimise direct and indirect losses of sediment and nutrients to water, and maintain or enhance soil structure, where agronomically appropriate.
Ground cover
Manage periods of exposed soil between crops/pasture to reduce risk of erosion, overland flow and leaching.
Retire all Land Use Capability Class 8 and either retire, or actively manage, all Class 7e to ensure intensive soil conservation measures and practices are in place.

[11] *https://beeflambnz.com/knowledge-hub/PDF/industry-agreed-good-management-practices-relating-water-quality.pdf*

Sediment, phosphorus and faecal bacteria
Identify risk of overland flow of sediment and faecal bacteria on the property and implement measures to minimise transport of these to water bodies.
Locate and manage farm tracks, gateways, water troughs, self-feeding areas, stock camps, wallows and other sources of run-off to minimise risks to water quality.
To the extent that is compatible with land form, stock class and intensity, exclude stock from waterways.
Grazing
Manage grazing to minimise losses from critical source areas.

Cost effectiveness of actions

60 Cost effectiveness will also be a factor in mitigation or practice selection. Cost-effectiveness varies significantly both between the type of action and farm systems. Waikato Regional Council released Menus of Practices to improve water quality for dry stock farms[12]. This resource summarised the approximate costs and likely benefits of various actions that could be undertaken on drystock farms in the Waikato Region. A selection of the most relevant practices for the PC1 area, based on typical mitigations or practices that I have observed in the Greater Wellington region, along with a comparison of their costs and sediment reduction benefits as defined by the Waikato Menu of Practices is summarised in Table 7 below.

Table 7: Summary table of costs and sediment effectiveness for mitigations relevant to PC1

Management Area	Practice	Effectiveness (sediment)	Cost
Planting to reduce erosion	Space planting of trees on slopes	Moderate	Moderate
	Fence and plant unproductive steep slopes	Moderate-High	Moderate-High
Managing Critical Source Areas (Hotspots)	Direct stockyard runoff to paddocks and reduce runoff from tracks and yards	Moderate	Low
	Fence and plant wet areas	Moderate	Moderate
	Sediment traps (decanting dams, bunds)	Moderate	High
Riparian Management	Riparian planting	Moderate	High

[12] *https://www.farmmenus.org.nz/drystock-farms/*

Management Area	Practice	Effectiveness (sediment)	Cost
	Improve infrastructure to keep stock out of waterways	Moderate	Moderate-High
	Fence stock out of waterways	Low	Low-Moderate
Stock Management	Rotational grazing	Moderate	Low
	Match stock type/quantity to land use capability	High	Moderate
Cropping Management	Maintain buffer strips on sloping cropping paddocks	High	Low
	Reduce soil cultivation (strip tillage/direct drilling)	High	Low

61 The current establishment costs per ha for afforestation and pole planting, based on actual projects delivered by the Council in 2024 are summarised in Table 8 below.

Table 8: Summary table of costs to afforest and plant poles based on 2024 actual costs

Planting type	Cost/ha*	Notes
Afforestation - native	$11,000 - $19,000	Costs nearly double if requiring pest animal protection (sleeves)
Afforestation - exotic (Pines, Eucalyptus, etc)	$3,000 - $15,000	Varies depending on species, pines are cheapest
Poplar and willow poles	$2,500 - $10,000	Type of erosion determines stocking rate and cost

*establishment costs only and do not include ongoing maintenance, replacement, enhancement or fencing.

Poplar and willow pole feasibility

62 In my experience, when compared to other methods, Poplar and Willow pole planting is a cost-effective method for controlling erosion, particularly from slumping, slides, gullies, and streambank erosion. This technique is favoured because poles have fast growing extensive root systems and can be planted in areas still accessible to livestock. However, poles require sufficient soil moisture, wind shelter, and protection from salt spray. In Te Whanganui-a-Tara and Te Awarua-o-Porirua, pole planting has had mixed success. Poles planted in exposed areas or near the coast often struggle to survive. Recent survival audits undertaken by Greater Wellington reveal that much of the farmed land in both Whaitua is unsuitable for poles, with success limited to sheltered gully or valley floors. Despite earlier

PC1[13] and Whaitua[14] modelling suggesting pole planting as a solution for much of the landscape, from my observations in practice, it has proven to be a good tool only for confined parts of the landscape.

Challenges of establishing native vegetation

63 Based on my observations, native planting and reversion can be particularly challenging in certain areas within PC1, especially in high, exposed sites where climate conditions and poor soils hinder the establishment of native species. On these sites, seedling survival is often poor, and growth rates tend to be slow. Transitioning harvested *P. radiata* forests to native vegetation is typically more challenging and costly than establishing natives on farmed land. This appears to be due to two main factors: first, access difficulties caused by slash and forest residues make native planting more demanding; second, wilding pines present a significant obstacle to native reversion, as once established, they suppress the growth of native species, and controlling these wilding pines can be expensive. Successful native reversion, whether in pastoral or harvested forestry settings, is, based on my experience, generally only feasible when nearby native seed sources are available. In a few areas within PC1, including those with exotic forests, the absence of these nearby native seed sources limits the potential for successful native reversion.

CONCLUSION

64 The Council support programmes currently help farmers to implement environmental actions equivalent to those likely to be required in PC1 cFEPs. Alongside other initiatives, the Council programmes will support the implementation of the PC1 provisions as outlined in the Section 42A report, primarily through financial incentives for cFEP actions. However, the availability of this funding is limited, and is distributed across the region.

65 The Council, through development of the existing cFEP programme, has systems and processes in place to administer a cFEP programme in Te Whanganui-a-Tara and Te Awarua-o-Porirua. If implemented as outlined in this evidence, the Council will have sufficient time to allocate the necessary internal resources to effectively administer the cFEP programme.

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[13] *Collaborations, 2023. Erosion Risk Mapping for Te-Awarua-o-Porirua and Te-Whanganui-a-Tara*

[14] *Jacobs, (2019). Porirua Whaitua Collaborative Modelling Project Baseline Modelling Technical Report. Project IZ080700. Prepared for Greater Wellington Regional Council*

66 In my opinion, the provisions in Schedule 36, including the amendments outlined in the Section 42A report, will ensure that cFEPs incorporate a broad range of tailored, effective mitigations and GMPs for sediment control. These cFEPs will address erosion risk land, along with whole of farm actions providing a comprehensive approach to reducing sediment

DATE: 15 APRIL 2025

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[4] *Peryer, J. 2024. Memo to Porirua City Council – Support for collaborative Porirua Harbour Programme*

[5] *CCCV Freshwater Management*

[6] *Blyth, J. 2025. Statement of technical evidence HS2 – suspended sediment load reductions required to achieve the visual clarity TASs. Prepared for Greater Wellington Regional Council for PC1*

[7] *(Footnote)*

[8] *Strugnell, D. 2023 submission to Plan Change 1 https://www.gw.govt.nz/assets/Documents/2024/01/S005-Spoken-Submission-Diane-Strugnell.pdf*

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