

**BEFORE THE HEARINGS PANEL
FOR THE PROPOSED TIMARU DISTRICT PLAN**

UNDER the Resource Management Act 1991 (RMA)

AND

IN THE MATTER of the Proposed Timaru District Plan

AND

IN THE MATTER of Hearing Stream F, including Natural Hazards

**STATEMENT OF EVIDENCE OF JOLENE MARGARET IRVINE ON BEHALF
OF THE CANTERBURY REGIONAL COUNCIL**

Hearing Stream F, including Natural Hazards

Hearing date: 29 April – 2 May 2025

INTRODUCTION

1. My full name is Jolene Margaret Irvine. I am employed by the Canterbury Regional Council (Regional Council) in the role of Team Leader – Rivers Planning.
2. I hold the following qualifications:
 - a. Master of Science with Distinction in Zoology from University of Otago;
 - b. Post Graduate Diploma in Science with Distinction in Environmental Science from Canterbury University; and
 - c. Bachelor of Science in Zoology (major) and Ecology (minor) from University of Otago.
3. I have been employed by the Regional Council for over 16 years. I have been providing resource management advice for the Rivers team for 12 years, and prior to that, I was a Consents Planner.
4. My current role and relevant experience includes:
 - a. Providing plan interpretation and consenting advice to the Rivers Section, which delivers the Regional Council's flood, erosion and drainage responsibilities and river enhancement works.
 - b. Team leader of the Regional Gravel Officer, lead author for the revised Canterbury Regional River Gravel Management Strategy (draft is out for engagement at time of writing) and decision maker on Regional Council Gravel Authorisations.
 - c. Advising on parts of the Regional Council's submission on the proposed Timaru District Plan (**pTDP**) as related to the delivery of the Regional Council's flood, erosion and drainage responsibilities.
5. I have prepared this planning evidence on behalf of the Regional Council.

CODE OF CONDUCT

6. While this is a council level hearing, I can confirm that I have read and am familiar with the Code of Conduct for Expert Witnesses contained in the Environment Court Practice Note 2023. I have complied with the Code of Conduct in preparing this evidence and I agree to comply with it while giving any oral evidence during this hearing. Except where I state that I am relying on the evidence of another person, my evidence is within my area of expertise. I have not omitted to consider material facts known to me that might alter or detract from the opinions that I express.
7. Although I am employed by the Regional Council, I am conscious that in giving evidence in an expert capacity that my overriding duty is to the Hearing Panel.

SCOPE OF EVIDENCE

8. I have been asked to provide evidence in support of the Regional Council's submission as it relates to the potential limitations the **pTDP** places on the Regional Council's ability to deliver flood, erosion and drainage protection to the Timaru community.
9. In preparing my evidence I have reviewed the following documents:
 - a. the notified and relevant provisions of the definition of Natural Hazard Mitigation Works (**NHMW**) and Flood Protection Works (**FPW**) and Natural Hazards (**NH**), Coastal Environment (**CE**), Earthworks (**EW**), Drinking Water Protection (**DWP**), Ecosystems and Biodiversity (**ECO**), Natural Character (**NATC**) and Natural Features and Landscapes (**NATC**), and Sites and Areas of Significance to Māori (**SASM**) chapters of the pTDP;
 - b. the relevant paragraphs of the Section 42A (**s42A**) reports prepared by Mr Willis and Ms Wilcox; and
 - c. the Canterbury Regional Code of Practice for Defences Against Water and Drainage Schemes (**COP**).

SUMMARY STATEMENT

- 10 My evidence details the flood and erosion protection schemes within Timaru District, the reason for undertaking these protection works, work types and the established environmental planning processes undertaken by the Regional Council.
11. On review of the s42A reports and recommendations, I consider further amendments are required to Rule NH-R3, CE-R9, CE-R14 and DWP-R3 to give effect to the Regional Council's submission.
12. Those amendments primarily focus on enabling the Regional Council to deliver flood and erosion protection to the Timaru District, including where that relates to gravel management within rivers.

REGIONAL COUNCIL RESPONSIBILITIES IN PROVIDING FLOOD AND EROSION PROTECTION AND DRAINAGE

13. The Regional Council is responsible for keeping communities safe from floods, primarily through the Soil Conservation and Rivers Control Act 1941 (**SCRCA**) and Resource Management Act 1991 (**RMA**). The function of Catchment Boards (now regional councils) in providing flood and erosion protection and drainage is outlined in the SCRCA¹ and Land Drainage Act 1908 (**LDA**)².
14. These responsibilities are delivered through public commitments made under the Local Government Act 2002 (**LGA**) via the Long-Term Plan³, and subsequent Annual Plans, which connect to the Infrastructure Strategy⁴. This is where the funding and objectives for various river and drainage schemes are set.
15. There are nine (9) established River and Drainage Rating Districts/Schemes (**schemes**) that are entirely, or partly within the Timaru District:
 - a. Rangitata River Rating District;

¹ Refer to s126 and s133 of SCRCA 1941.

² Refer to s17 and s25 of LDA 1908.

³ As required under section 93 LHA 2002.

⁴ As required under section 101B LGA 2002.

- b. Orari-Waihi-Temuka Rivers Rating District;
 - c. Taitarakihi Creek (managed by the Regional Council, on behalf of Timaru District Council (**TDC**));
 - d. Seadown Drainage District;
 - e. Seadown Road Drain;
 - f. Saltwater Creek (managed by the Regional Council, on behalf of TDC);
 - g. Washdyke Creek; and
 - h. Lower Pareora River Control Scheme.
16. A summary of those schemes, as recorded in the Regional Council Asset Management Plans is included in **Attachment 1**, and describes the objectives, work types, asset values, annual maintenance budget and the value of the infrastructure, land and other assets on the floodplains that benefit from protections delivered through each scheme. The spatial extent of those schemes is shown on the map in **Attachment 2**.
17. There is considerable on-going expenditure for the operation and maintenance of these established schemes and significant benefits to people's safety, and the district's social, cultural and economic prosperity. Work delivered within these schemes is primarily funded through targeted rates raised by the Regional Council from landowners adjacent to the schemes who benefit most from the protection work.
18. Flood and erosion protection may also occur outside of the existing schemes, typically in response to natural hazard events, community needs or additional funding opportunities. The Climate Resilience Projects, recently funded by central government, and the 2021 flood recovery program exemplify how the Regional Council has up-scaled works programs to deliver integrated flood and river resilience along with river enhancement projects. These projects delivered additional improvements within and outside of established rating districts. Within the Timaru district the two key projects were the Rangitata 2019 flood protection project for flood recovery project (immediate 'make it safe', works to reinstate flood protection to pre-2019 floods) and flood and

erosion protection enhancement; and a regionwide berm transition project to improve flood resilience in river berms through plantings, weed control, and increasing native biodiversity. Canterbury wide, this project created and improved areas of native (924ha) and exotic (240ha) plants (251,538 plants total), and controlled weeds over 1,290ha.

19. An example of out-of-scheme flood and erosion protection work is a joint project between TDC and the Regional Council to protect the eroding edge of the Peel Forest Landfill. Erosion had exposed some landfill material along Rangitata River's edge, and without immediate action, the site was vulnerable to further erosion and waste discharge. The Regional Council managed the river works component, creating a large gravel bund moving flows away from, and protecting the erosion bay, and improved the future strength of that bund by incorporating willow plantings.
20. The Regional Council continues to shift towards a more integrated approach to river enhancement works addressing flood, erosion and drainage management, biodiversity, biosecurity, cultural and other community and recreation enhancement. These programs are designed to provide many community benefits alongside the Regional Councils core functions of minimising and preventing flood hazards. These flood, erosion and drainage protection schemes also support the natural character and biodiversity through weed management, providing access to rivers and protecting further encroachment from surrounding landowners into the riverbeds.
21. In undertaking the above powers/functions the Regional Council must still be compliant with the RMA, including any consenting requirements created through Regional and District Plans.

TYPES OF REGIONAL COUNCIL RIVER AND DRAIN MANAGEMENT MAINTENANCE WORKS

22. The physical environments where the Regional Council delivers its flood, erosion and drainage responsibilities include drains and small watercourses, single channel and braided rivers, the vegetated berms/margins of braided rivers and in the coastal marine area (**CMA**). These areas straddle both Regional and District Plan jurisdictions.

23. The type of maintenance works may include (among others):
- a. Earthworks: lateral erosion control, channel realignment, placing rock, removing flood debris, stopbank and groyne maintenance, track maintenance, drain maintenance including bank re-battering for erosion management, silt removal and drain clearing.
 - b. Vegetation clearance: agrichemical spraying, mechanical clearance from river fairways and small watercourses, weed cutting, hand clearance, mowing.
 - c. Flood and erosion protection plantings: pole planting and layering, anchored tree protection, vegetative enhancement planting (both exotic and natives). The vegetated area along the river berms can take on additional flood waters, slowing its energy, redirecting back towards the river and reducing erosion to stopbanks, land and other assets. The condition of the berm can be as important as the condition of the stopbank for it to perform as expected.
24. River, catchment and drainage schemes are reliant on all work types playing an integrated and complementary role in protecting communities (i.e., the schemes are only as strong as their weakest point). To provide an example, I have included **Figure 1** and related **Table 1** which show aerial photographs from January 2021 and April 2024⁵, before and after a significant flood event in 2021. Six areas are identified, with a discussion on the changes, or not, to vegetation between those two dates. On the southern bank (true right) is a stopbank (yellow line) and flood protection vegetation is riverside of that (peach line), as described and protected under the Canterbury Regional Flood Protection and Drainage Bylaw.
25. The purpose of this example is to illustrate how flood and erosion protection works are not restricted to within existing footprints of past works, but to the footprint of the full scheme area allowing for both proactive and reactive work throughout the scheme area to deliver

⁵ Imagery sourced from ECanMaps, owners Regional Council and Toitū Te Whenua Land Information New Zealand.

scheme objectives (and not just to maintaining singular historic assets or structures).

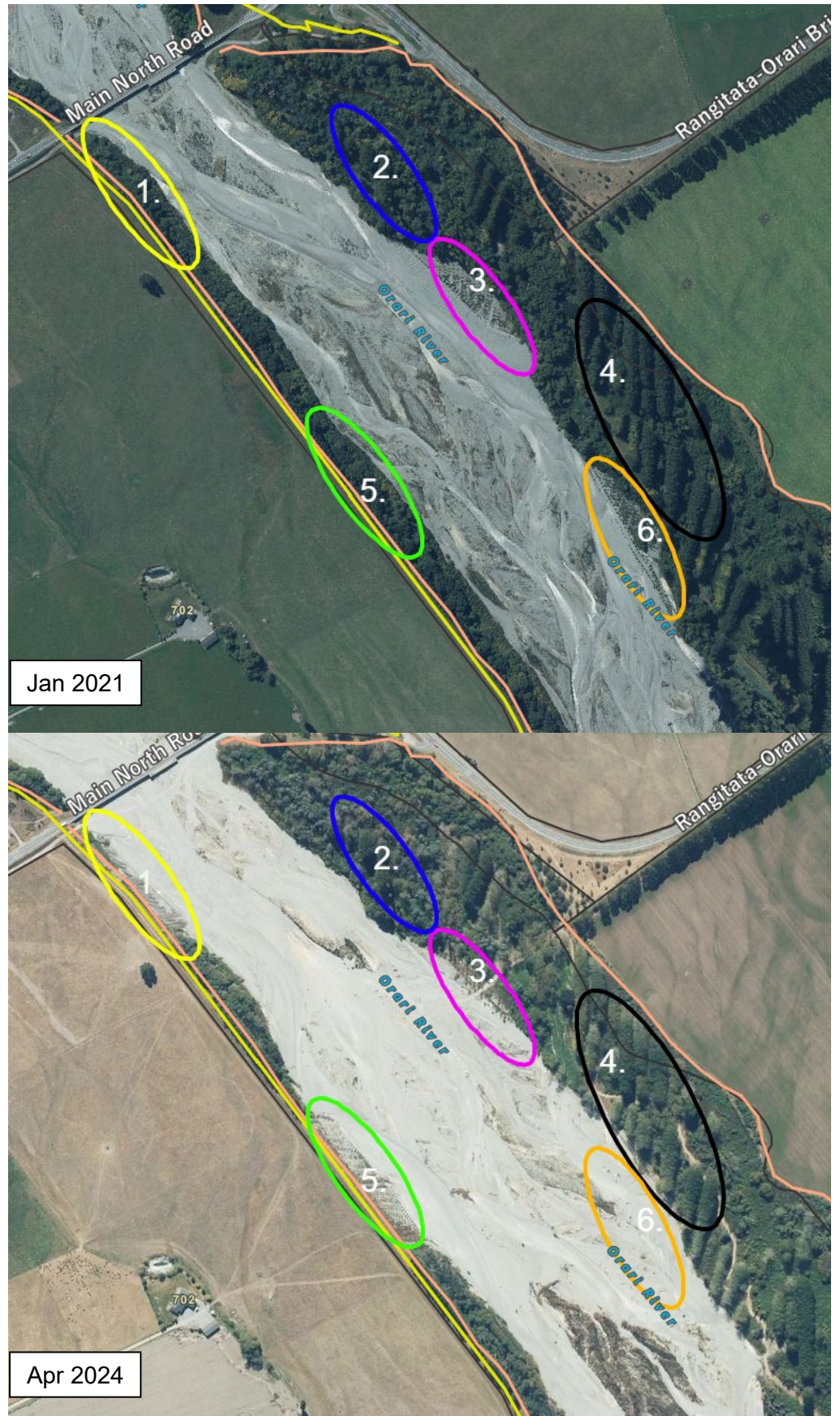


Figure 1: Two aerial photographs, top Jan 2021, bottom Apr 2024, showing various stages and types of flood and erosion protection vegetation on the Ōrari River.

Area	January 2021 image	April 2024 image
1	Historic willow and polar provide narrow buffer protecting stopbank.	Existing tree edge eroded during 2021 flood with erosion and continued loss of trees recorded in 2022. Flood and erosion protection vegetation re-established (trenched) in 2022 to protect stopbank.
2	Historic or wild grown exotic trees, heavily infested with weeds. These trees still play an important role in flood and erosion protection.	Unchanged, continued weed management occurs.
3	Recently (~2020) planting willow poles, established to protect the erosion bay forming.	Half of area lost during floods, no new planting established since.
4	Older version of willows planted ~2000 in windrows creating erosion and flood protection to the stopbank.	Unchanged
5	Historic willow and polar provide narrow buffer protecting stopbank.	Trees and stopbank lost during 2021 flood. Stopbank rebuilt in same location, anchored tree protection established in front of stopbank for erosion and flood protection.
6	Recently (~2020) planted willow poles, established to protect the erosion bay forming.	Eroded and lost during 2021 floods, and not replaced.

Table 1: Discussion on the flood and erosion protection works in six discrete areas between January 2021 and April 2024.

REGIONAL COUNCIL'S JOB SET-UP AND ENVIRONMENTAL CONTROLS

26. The Regional Council has existing controls in place to ensure potential environmental risks are avoided or mitigated and is committed to continual improvement. Works are planned and completed in accordance with the Canterbury Regional Code of Practice for Defences Against Water and Drainage Schemes⁶ (**COP**). This COP is linked to a Permitted Activity rule within the Canterbury Regional Land and Water Regional Plan (LWRP) to enable the Regional Council's flood and erosion protection work.

⁶ <https://www.ecan.govt.nz/your-region/your-environment/river-and-drain-management/defences-against-water-code-of-practice/>

27. The COP addresses the broad range of potential effects that need to be considered when planning river works and is further supported by a 'Rivers Section Environmental Guide', which further describes specific environmental risks and the required operational practices. Prior to works occurring, Job Sheets are created for work delivered internally. Statement of Works are created when contractors are engaged that follow the requirements and direction of the COP and 'River Section Environmental Guide' and record sensitive sites, on-the-ground methodology to manage risks, and notification and engagement requirements (amongst other matters, such as health and safety).
28. As committed through the COP, the Regional Council prepares and engages on Annual Works Plans. These Plans discuss an overview of planned work, identification of sensitivities and appropriate mitigation to demonstrate conformance with the COP. Annual Works (overview) and Monthly works plans⁷ (more detailed) are shared with Papatipu Rūnanga, the DOC, and Fish and Game with any feedback welcomed.

ASSESSMENT OF PTDP ON THE REGIONAL COUNCIL'S DELIVERY OF FLOOD AND EROSION PROTECTION WORKS

29. My evidence will focus on the following requests within the Regional Council's submission as they relate to the Regional Councils flood and erosion protection and drainage works and includes:
 - a. NHMW definition and NH objectives and policies (submitter # 183.14A, 183.31, 183.32, 183.36);
 - b. NHMW - NH Rules (submission #183.5, 183.38, 183.40, 183.41, 183.48, 183.49, including connections to submissions #183.77, 183.76 (ECO), 183.65 (SASM), 183.85, 183.86 (NATC) and 183.90, 183.91 (NFL));
 - c. NHMW - CE Rules (submission #183.128, 183.130);

⁷ <https://www.ecan.govt.nz/your-region/your-environment/river-and-drain-management/current-works/>

- d. NHMW - EW Chapter (submission #183.134, 183.136); and
- e. Quarrying/Mining – CE and DWP Rule (submission #183.131, 183.142).

NHMW definition and NH objectives and policies

30. The proposed Objectives, Policies and Rules within the NH chapter refer to 'Natural Hazard Mitigation Works' (**NHMW**). The s42A report recommends these changes to the definition of NHMW:

Amend the definition of natural hazard mitigation works as follows:

Natural Hazard Mitigation Works means: structures and associated engineering works to prevent or control the impacts of natural hazards and includes both soft engineering natural hazard mitigation works²⁷² and hard engineering natural hazard mitigation works, retaining walls, stop banks and flood protection works.²⁷³ Retaining walls not required for a hazard mitigation purpose are excluded from this definition. Raised building floor levels and raised land which are required to be raised to meet the requirements of a flood assessment certificate are excluded from this definition.²⁷⁴

31. In my opinion, this is consistent with the Regional Council's submission⁸ and the definition is broad enough to capture the range of work types that may be undertaken to deliver the flood and erosion protection functions of the Regional Council. The recommended changes to the definition from the s42A report is to also include the sub-definition of Flood Protection Works (**FPW**).

FLOOD PROTECTION WORKS means works, structures and plantings for the protection of property and people from floods and includes:

- a. areas of vegetation maintained or planted in beds and margins of rivers,
- b. the clearance of vegetation and debris from river fairways,
- c. works to prevent or minimise river bed or bank erosion,
- d. the construction, use, maintenance and removal of defences against water, and
- e. any access tracks required to undertake these works and activities.

32. I note that the recommended definition does not refer to, or reflect, the integration of many work types throughout rating districts/schemes (ki uta ki tai). While this could be included in the NHMW, or Flood Protection Works definitions, I have recommended wording to incorporate that aspect within the conditions of Rule NH-R3 (below), which is consistent with submission #183.5 (more below).
33. I have reviewed the s42A reports recommended changes to NH-O3, NH-P3, NH-P9 (renumbered to NH-P8 in the s42A report) and consider them appropriate to support the delivery of the flood, erosion and drainage works undertaken by the Regional Council⁹.

⁸ 183.14A.

⁹ 183.31, 183.32 and 183.36.

NHMW - NH Rules

34. In my opinion, the most effective way to deliver the CRC request to enable the Regional Council ability to maintain community flood, erosion and drainage protection works is to enable these works through an unambiguous, single-stop rule framework. This request was captured in the Regional Council's submission requesting an overarching Permitted Activity rule within the Natural Hazards chapter, that when met, overrides any other consenting requirement that may be triggered in other sections of the plan¹⁰.
35. The recommendation in the s42A report largely follows this structure, and is consistent with one option suggested in the Regional Council's submission¹¹. In the introduction to the Rules of NH, the s42A report recommends an additional note *"For the purposes of NH-R3 Natural hazard mitigation works, the rules in the ECO, NATC, NFL and SASM chapters do not apply."*
36. I support the addition of this note, as it provides for a streamlined rule assessment framework. It is noted that CE has not been included in this exception, as requested in the Regional Council's submission¹² (discussed further under paragraph 47 and 48).
37. I have also reviewed the s42A recommended changes to Rule NH-R1, and agree those changes improve clarity that the rule does not apply to NHMW, and as such, does not capture the Regional Council's flood and erosion protection works¹³.
38. Rule NH-R3 provides for a permitted activity pathway for NHMW, and subsequently Restricted Discretionary and Discretionary activity status where the conditions of the rule are not met. The Regional Council submission sought to amend NH-R3, and/or NHMW definition to improve clarity that the overarching permitted activity rule provides for all earthworks and vegetation clearance associated with existing public flood and erosion protection works, as described at the

¹⁰ 183.5, 183.65, 183.76, 183.77, 183.85, 183.86, 183.90 and 183.91.

¹¹ 183.40.

¹² 183.5.

¹³ 183.38 and 183.40.

'scheme' level; and to have a permitted activity pathway available to all for small scale NHMW¹⁴.

39. The s42A report recommended additions to Rule NH-R3's title, which in my view are consistent with the Regional Council's submission¹⁵.
40. In my view, the conditions of Rule NH-R3 are ambiguous when applying them to the flood and erosion protection works undertaken by the Regional Council (discussed below). Secondary to that, the recommended drafting in the s42A report would require anyone other than the Crown, Regional Council or TDC to obtain a resource consent for any NHMW, regardless of the scale.
41. The ambiguity relates to river protection schemes being delivered at a catchment or river scale (ki uta ki tai) and not just to historic work sites or structures. River and catchment schemes are reliant on all work types playing an integrated and complementary role in the success of a scheme (i.e. the schemes are only as strong as their weakest point). This concept was illustrated under paragraph 23 and 24 where the need for maintenance, enhancement, and replacement of flood and erosion protection vegetation, anchored tree protection, and a stopbank were shown in response to the dynamic erosion patterns of a river. The limitations in PER-1 and PER 2 (as notified, they are PER-2 and PER-3 following the recommendations of the s42A report) may be interpreted as distance to, and footprints of, historic work sites or identified assets (e.g. Stopbanks), as opposed to any work type captured in the NHMW definition within the full footprint of the established river schemes.
42. I recommend redrafting the PER 1 and PER 2, and deleting of others, so that PER 1 applies to maintenance work undertaken by the Councils within established scheme areas and that PER 2 allows for maintenance by others, effectively reaffirming their existing use rights within those limitations. My recommended amendments are shown in red text, the black markups are those presented in the s42A report:

¹⁴ 183.5 and 183.41.

¹⁵ 183.40.

NH-R3 Natural hazard mitigation works - maintenance, replacement and upgrading including associated earthworks and incidental vegetation removal Note: This rule does not apply to natural hazard mitigation works only involving the planting of vegetation		
Flood Assessment Area Overlay High Hazard Area Overlay	<p>Activity status: Permitted</p> <p>Where: <u>PER-1</u> The activity is limited to maintenance, replacement or upgrading of existing natural hazard mitigation works <u>within existing river control schemes and undertaken by or on behalf of the Crown, Canterbury Regional Council or the Council, and OR</u></p> <p><u>PER-4 2</u> <u>The activity is limited to maintenance, replacement or upgrading of existing</u> natural hazard mitigation work that:</p> <p>(a) Is within 25m of the <u>existing</u> alignment or location vertically and horizontally <u>of existing</u> natural hazard mitigation works; and</p> <p><u>PER-2 3</u> (b) <u>Does not increase the</u> footprint of <u>the existing</u> natural hazard mitigation works <u>is not increased</u> by more than 25%</p> <p><u>PER-3 4</u> <u>The activity is undertaken by or on behalf of the Crown, Canterbury Regional Council or the Council; and</u></p> <p><u>PER-4</u> If the site is subject to flooding in a 0.5% AEP rainfall event, NH-S2 is complied with. 53</p>	<p>Activity status where compliance not achieved with PER-1, PER-1 or PER-2 or PER-3 or PER-4: Restricted Discretionary</p> <p>Matters of discretion are restricted to:</p> <ol style="list-style-type: none"> 1. the likely effectiveness of the natural hazard mitigation works and the need for them; and 2. the extent of any adverse social, cultural and environmental effects, including <u>from indigenous vegetation clearance, vegetation planting, and earthworks on any sensitive environments, including significant natural areas, natural character areas, riparian margins, sites and areas of significance to Māori and within any ONF or ONL overlay</u>; and 3. any potential adverse effects of from diverting or blocking overland flow path(s), including upstream and downstream flood risks; and 4. any increased flood risk for people, property, <u>infrastructure</u> or public spaces; and 5. the extent to which alternative locations and options for the natural hazard mitigation works have been considered and the merits of those; and 6. any positive effects of the proposal on the community. <p>Activity status where compliance not achieved with PER-4 PER-1: Restricted Discretionary</p> <p><u>Where</u> <u>RDIS-1</u> <u>Any new natural hazard mitigation works:</u></p>

		<p>a. are undertaken by or on behalf of the Crown, Regional Council, or the Council; or</p> <p>b. are undertaken by or on behalf of the Port of Timaru and are located within 310m of PREC7;</p> <p><u>Matters of discretion are restricted to:</u></p> <p>1. those matters set out for non-compliance with PER 2, PER 3 or PER 4.</p> <p><u>Activity status where compliance not achieved with RDIS-1: Discretionary</u></p> <p><u>Matters of discretion are restricted to:</u></p> <p>1. the relevant matters of discretion of any infringed standard.</p>
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43. The Regional Council's submission point 183.41 requested a new rule setting a permitted activity threshold for new, small scale NHMW. The s42A report does not support this request as it was not accompanied with drafted text. A solution to this request would be to amend PER-1 in my drafting above to:

PER-1

~~The activity is limited to maintenance, replacement or upgrading of existing natural hazard mitigation works is within existing river control schemes and undertaken by or on behalf of the Crown, Canterbury Regional Council or the Council, and OR~~

44. This update would allow the Crown, Regional Council and TDC to undertake any NHMW as a permitted activity throughout the district, relying on those agencies environmental planning, and social licence, to manage environmental effects. It is common for community groups and individuals to seek advice and operational delivery from the Regional Council for flood and erosion protection outside of the established rating schemes. The Regional Council has some funding outside of established schemes that enables supporting community groups through cost sharing of works, or supporting others through providing advice and delivering the work in a 'user-pays' agreement. At the Regional Council, flood and erosion protection and drainage works, whether within established river control schemes or not, are

managed through the same COP processes, with reporting, engagement and environmental risks managed in the same way. This is a simple adjustment that would partly give effect to submission #183.41, although may be seen as out of scope of the submission made.

45. Without the PER-1 text recommended under paragraph 42, the hearing commissioners should be aware that Rule NH-R3 would always require resource consent for any flood and erosion protection works outside of established river schemes, no matter their scale. This may prevent the Regional Council from being able to act quickly on funding opportunities, or to respond to changing damage and needs outside of established schemes. At the least it may increase the costs and delays in delivering any required 'new' protections in the district (consenting costs may exceed the physical costs of the works). My preference is to also enable those works through a permitted activity pathway which I consider as being consistent with NH-O2 and NH-P9 (1) (P8 in s42A report) and would be achieved through my recommended drafting under paragraph 42.
46. The s42A report accepted our submission and consolidated Rule NH R9 into Rule NH R3 and subsequently deleted Rule NH R9¹⁶. I agree that this an appropriate framework.
47. If the above recommendation is not favoured by the Hearing Commissioners, then I maintain that the rule or definition needs to be abundantly clear that those setbacks and footprint apply to the full footprint of schemes. Alternative examples to consider:
 - a. The proposed Waimakariri District Plan approach where the scheme scale of works is reflected in the (recommended) definition of 'community scale natural hazards mitigation works';
 - b. The partially operative Selwyn District Plan where '*flood or erosion protection works or drainage works administered by a Regional Council or Territorial Authority*' is used within the NH Rules, with no definitions required. An alternative rule would

¹⁶ #183.40, 183.48 and 183.49

then be required for the NHMW that is not flood, erosion and drainage work undertaken by the Regional Council.

NHMF - CE Rules

48. The Regional Council submission requested that the CE rules did not apply to NHMF captured by NH-R3¹⁷. The s42A report recommends such an exclusion for all requested chapters except CE (see paragraph 34 of this evidence). I assume the s42A reporting officer excluded CE from that list due to the different overlays where the rules in NH and CE apply, with 'Coastal Environment Area Overlay' and 'Sea Water Inundation Overlay' being matters that sit within the CE chapter. Coastal Environment Area Overlay and Sea Water Inundation Overlay appear to be almost entirely within the Flood Assessment Overlay (exceptions being some coastal areas south of Timaru). These Coastal layers may extend ~3km up rivers and overlap where the Regional Council delivers flood and erosion protection and drainage works.
49. If CE-R9 is still considered necessary, consistent with my request for NH-R3, I recommended amendments to CE-R9 as shown in red text (the black markups are those presented in the s42A report). The commissioners may also want to consider my recommended amendments to PER-1 drafted under paragraph 42.

CE-R9 Natural hazard mitigation works, including <u>associated earthworks and incidental vegetation removal</u> <i>This rule does not apply to natural hazard mitigation works only involving the planting of vegetation</i>		
1 Coastal Environment Area Overlay Sea Water Inundation Overlay	Activity status: Permitted Where: <u>PER-1</u> The <u>activity is limited to maintenance, replacement, or upgrading of existing natural hazard mitigation works are for the operation, maintenance, replacement or upgrading of these works; and within existing river control</u>	Activity status where compliance not achieved with PER-1 Restricted Discretionary Where RDIS-1 <u>Any new natural hazard mitigation works:</u> <ol style="list-style-type: none"> <u>Are undertaken by or on behalf of the Crown, Regional Council, or the Council; or</u> <u>Are undertaken by or on behalf of the Port of</u>

¹⁷ 183.128

	<p><u>schemes and undertaken by or on behalf of the Crown, Canterbury Regional Council or the Council, and OR</u></p> <p>PER-4 2</p> <p>The <u>activity is limited to maintenance, replacement or upgrading of existing</u> natural hazard mitigation works is occurs <u>that:</u></p> <p>(a) <u>Is</u> within 25m of the existing alignment or location vertically and horizontally <u>of existing natural hazard mitigation works;</u> and</p> <p>PER-2 3</p> <p>(b) <u>Does not increase</u> the footprint of the existing natural hazard mitigation works is not increased by more than 25%</p> <p>PER-3 4</p> <p>The activity is undertaken by or on behalf of the Crown, Canterbury Regional Council or the Council; and</p>	<p><u>Timaru and are located within 310m of PREC7.</u></p> <p>Matters of discretion are restricted to:</p> <ol style="list-style-type: none"> 1. the likely effectiveness of the natural hazard mitigation works and the need for them; and 2. the extent of any adverse social, cultural and environmental effects, including <u>from indigenous vegetation clearance, vegetation planting, and earthworks on any sensitive environments, including significant natural areas, natural character areas, riparian margins, sites and areas of significance to Māori and within any ONF or ONL overlay;</u> and 3. any potential adverse effects of <u>from</u> diverting or blocking overland flow path(s), including upstream and downstream flood risks; and 4. any increased flood risk for people, property, or public spaces; and 5. the extent to which alternative locations and options for the natural hazard mitigation works have been considered and the merits of those; and 6. any positive effects of the proposal on the community. 7. <u>the extent to which the works will result in adverse cumulative effects;</u> and 8. <u>the extent to which the works will transfer natural hazard risk to other sites and the implications of this;</u> and 9. <u>the extent of any positive benefits that will result from the proposal;</u> and 10. <u>the extent to which the works have a functional need or operational need for its location and</u> 11. <u>for the NHC Overlay, any adverse impacts on the identified matters contained in CE-P4, CE-P5, CE-P6, CE-P7,</u>
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		<p><u>CE-P8, CE-P9, CE-P10 and CE-P11.</u></p> <p>Activity status where compliance not achieved with <u>PER-2, PER-3 or PER-4:</u> Restricted Discretionary</p> <p><u>Matters of discretion are restricted to:</u></p> <p><u>Those matters set out for PER-1.</u></p> <p>Activity status where compliance not achieved with <u>RDIS-1: Discretionary</u></p> <p><u>Matters of discretion are restricted to:</u></p> <p><u>1. the relevant matters of discretion of any infringed standard.</u></p>
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50. The s42A report accepted our submission and incorporated Rule CE-R12 into Rule CE-R9 and subsequently deleted Rule NH-R12. I agree that this an appropriate framework.

NHMW - EW Chapter

51. I agree with the s42A reporting officer (Ms Wilcox) that the Regional Council's submission¹⁸ on EW-P1 and EW-R1¹⁹ has been addressed by changes to the NHMW definition.

Quarrying/Mining – CE and DWP Rule

52. The Regional Council's submission sought an advisory note to the effect that work within the bed of lakes and rivers is within the jurisdiction of the Regional Council for Rules DWP-R3²⁰ and CE-R14²¹. The s42A report accepted this submission in part, recommending the addition of an advisory note, but the recommended advisory note is effectively stating the opposite of the Regional Council's request (that both pTDP, and any Regional Plan rules apply within the beds of lakes and rivers).

¹⁸ 183.134.

¹⁹ 183.136.

²⁰ 183.142.

²¹ 183.131.

53. There are Drinking Water Protection zones and CMA mapped on the pTDP that overlap riverbeds where the Regional Council actively manage gravel extraction, and these additional restrictions within the pTDP may impact the Regional Council's ability to deliver the flood and erosion protection.
54. In my opinion, having rules within both Regional and District Council Plans that manage gravel extraction from riverbeds, including riverbeds within the defined coastal marine area, is unnecessary duplication, and just because a District Council can have such a rule, I do not think they should.
55. The disturbance of riverbeds for gravel extraction is managed through Regional Plans. The Regional Council has dedicated staff monitoring and advising on gravel levels within riverbeds and provides advice on all river-based gravel extraction in the Timaru District (there may be occasions where applicants obtain independent advice, but since the South Canterbury Gravel Agreement was formed in 2007, the Regional Council has agreed on the gravel being available, before any permission is issued). Gravel that is considered available for extraction, subject to other criteria also being considered is identified by:
 - a. the volume known to have accumulated since a particular date (i.e., when a flood protection scheme was established);
 - b. the volume above targeted bed levels identified through flood modelling results and repeated bed level surveys; or
 - c. localised deposits identified as causing a flood or erosion risk by site visits.
56. Gravel that is considered available, is likely to be reducing the flood carrying capacity of the river and until it is removed, may be causing a flood or erosion risk to the community. Managing gravel in this way, is an important component in delivering the Regional Council's flood and erosion protection responsibilities.
57. The Regional Council issues permissions to extract river-based gravel through two processes: Resource Consents (s13 RMA) and Gravel Authorisations. Gravel Authorisations enable others to extract gravel as a permitted activity (subject to certain conditions) if that

extraction is consistent with the Canterbury Regional River Gravel Management Strategy. This mixed-permission approach was created ~10 years ago to encourage and enable extraction from locations where it is needed for flood and erosion protection. In the past year, there have been 13 Resource Consents, and 23 Gravel Authorisations issued for gravel extraction between the Rangitata and Waitaki Rivers (inclusive).

58. Environmental audits are undertaken for all gravel extraction above the nominal permitted activity volumes within the Regional Plan(s) (5-20 cubic metres). These audits will consider the impacts on drinking water protection zones and the CMA. The Canterbury Regional Land and Regional Plan has policies protecting sources of drinking water and the Canterbury Regional Coastal Environmental Plan requires resource consent for the *'removal of sand, rocks, shingle, shell, or other natural material from an active beach system in volumes greater than 5 cubic metres by any person within any 12 month period'* (rule 9.2, Restricted discretionary activity) from within Hazard Zone 1 and 2 of the CMA (additional rules apply to the foreshore and seabed). If considered necessary, conditions can be placed on both Resource Consents and Gravel Authorisations to avoid, mitigate or remedy the risk to drinking water sources and the CMA.
59. It is also worth noting Gravel Authorisations can only authorise extraction from the dry gravel islands (and not in flowing water). In my experience, all Resource Consents for gravel extraction within Timaru District also only authorise extraction from dry gravel islands.
60. To quote the draft revised Gravel Management Strategy, there should be *"a streamlined and consistent approach to planning and permission requirements between regional and district councils. This includes a preference for the Canterbury Regional River Gravel Code of Practice to address concerns of both the regional and district councils and for the regional council to manage all permissions required for gravel extraction (ie. district plans do not require additional consents where permission for the activity is held from the regional council)."* The draft Strategy is currently out for public engagement, and subject to change prior to adoption.

61. To remove duplication between Councils, I recommend this advice note is included in both Rule CE-R14 and DWP-R3 (rule titles below). I have marked up the recommended advice note in the s42A report for DWP-R14 (my mark up in red):

CE-R14 Quarrying/Mining / Quarrying Activity (excluding for natural hazard mitigation works, or reclamation within or adjacent the Port Zone)

[...]

Note: this rule does not apply to works in the coastal marine area or beds of lakes and rivers, as these are also managed within the jurisdiction of the Canterbury Regional Plans, which Council and may require resource consent from that Council.

and

DWP-R3 Mining or quarrying, including prospecting and exploration

[...]

Note: this rule does not apply to works in the beds of lakes and rivers, as these are also managed within the jurisdiction of the Canterbury Regional Plans, which Council and may require resource consent from that Council.



Jolene Irvine
09 April 2025

Attachment 1: Summary of River and Drainage Rating Districts within the Timaru District.

Scheme	Scheme objectives	Works type	Asset value	Annual maintenance budget	Value protected
Rangitata River Rating	A comprehensive scheme to maintain the Rangitata River system to minimise erosion and flooding on the south side of the river, and to prevent flood flows entering the South Branch at flows less than 1500 cumecs.	Stopbanks (3.63 km), erosion control works, impermeable groynes (1), tree planting (34.3km), lateral rock work (4100 tonne).	\$7.97M (May 2020)	\$363,000 5 yr average 2015-2020	\$336M (July 2018)
Orari – Waihi – Temuka Rivers Rating District	A comprehensive scheme to provide a flood channel, stabilised with poplar and willow planting, capable of carrying 1200, 150, and 700 cumecs respectively.	Stopbanks (127.9km), erosion control works, tree planting (155.6km), lateral rock work (6180 tonne), drains and grassed waterways (40.6km), maintenance of small watercourses and drains, culverts and floodgates (33), tracks, channel clearing (vegetation and gravel).	\$59.9M (May 2020)	\$810,000	\$3.252B (Sep 2020)
Taitarakihi Creek	To protect land/housing adjacent to Taitarakihi Creek from flooding.	Stopbanks (1.4km), open drain / small watercourse.		\$3,800	
Seadown Drainage District	To maintain the drainage system to provide for efficient and economic drainage of the Seadown Drainage District, to prevent sea water flooding of the low lying coastal belt, to maintain cross section shape and grade of the drains and minimise the impact of coastal erosion on the efficient operation of the existing drainage system.	Drains and small water course (34.7km), culverts (7), stopbanks (8.8km).	\$4.424M (May 2020)	\$47,600	Area = 1470ha
Seadown Road Drain	To provide effective drainage to the area immediately downstream of the Railway between Seadown Road and the No.1 Seadown drain.	Drains and small water course maintenance (1.3km)	\$36,000	\$400	
Opihi Catchment Control Scheme	To maintain the Opihi Catchment Control Scheme to minimise flooding, erosion and degradation/aggradation in the lower river. To provide stablised banks, minimise loss of land to erosion and to capacity for flood flows (listed for various rivers/reaches).	Stopbanks (71.6km), erosion control works, tree planting (274.7km), lateral rock work (8200 tonne), drains and grassed waterways (13.8km), culverts and floodgates (12), channel clearing (vegetation and gravel) and upper catchment works.	\$66M (May 2020)	\$835,000 5 yr average 2015-2020	\$2.704B (Sep 2020)
Washdyke Creek	To provide a 200 cumec standard of flood protection to the Washdyke Industrial area between Racecourse Creek and the Washdyke / Papaka confluence and a 280 cumec standard between Papaka Stream and the Railway.	Stopbanks (4.6km), floodwall (1), culvert outlet.	\$0.83M	\$5,900	\$153.5M May 2021
Saltwater Creek	To reduce the flooding to the Redruth area.	Drop structure, culverts (2) and stopbanks (3.4km).	\$0.48M (May 2020)	\$5,900	
Lower Pareora River Control Scheme	To maintain the Lower Pareora River Control Scheme to minimise erosion, flooding and aggradation. To contain a flood flow of 500 cumecs downstream of the Pareora Huts.	Stopbanks (27.83km), erosion control works, tree planting (31.5km), Rock (1500 tonne), drains and grassed waterways (6.7km), channel clearing (vegetation and gravel).	\$9.0M	\$123,000	\$236M (Sep 2020)

Attachment 2: Details of the nine (9) River and Drainage Rating District/Schemes within the Timaru District.

