

**BEFORE INDEPENDENT HEARING COMMISSIONERS
IN CHRISTCHURCH**

TE MAHERE Ā-ROHE I TŪTOHUA MŌ TE TĀONE O ŌTAUTAHI

UNDER the Resource Management Act 1991 (RMA)

AND

IN THE MATTER of the hearing of submissions on Plan Change 14
(Housing and Business Choice) to the Christchurch
District Plan

AND

IN THE MATTER of Canterbury Regional Council (submitter 689)

**WRITTEN RESPONSES TO HEARING PANEL QUESTIONS OF JESSICA
NEWLANDS ON BEHALF OF THE CANTERBURY REGIONAL COUNCIL**

STORMWATER (PORT HILLS)

23 April 2024

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Written responses to Hearing Panel questions in Minute 47

- 1 My name is Jessica Mary Newlands. I am a Resource Management Technical Lead at the Canterbury Regional Council (**Regional Council**) and have set out my qualifications and experience in my statement of evidence dated 20 September 2023.
- 2 I have prepared evidence on behalf of the Regional Council in relation to Plan Change 14 (**PC14**) to the Christchurch District Plan (**CDP**) dated 20 September 2024 and a summary of evidence dated 22 April 2024.
- 3 I have also engaged in expert witness conferencing and am a signatory to the Joint Statement of Infrastructure Experts dated 27 September 2023.
- 4 This statement sets out my written responses to the questions of the Hearing Panel set out in Appendix A of Minute 47 issued on 23 April 2024.

Question 1: What is the permitted activity level for earthworks on the Port Hills under the Regional Plan? (Paragraph 18 and others)

- 5 The Canterbury Land and Water Plan includes permitted activity rules for earthworks in erosion prone areas, in riparian areas, and over aquifers. The location of the earthworks on the Port Hills will determine which rules are applicable, and which volumes are permitted. Not all of the Port Hills is covered by the Canterbury Land and Water Plan High Soil Erosion Risk overlay. I have appended the relevant rules to this document, as well as a map showing the location of the High Soil Erosion Risk overlay (**Appendix A and B**).
- 6 These rules are also summarised in Appendix 4 to Ms Buddle's summary statement, and Appendix 2 of Ms Buddle's summary is a map showing the High Soil Erosion Risk overlay against the relevant residential zones and loess dominant soils.

Question 2: What geographic areas do the Stormwater Management Plans cover? (Paragraph 58)

- 7 The seven Stormwater Management Plans required by the Christchurch City Council's Comprehensive Stormwater Network Discharge Consent (**CSNDC**) are to cover the entire Christchurch District. The geographic areas that these are to cover individually are:

- Ōtākaro/ Avon River Area
- Puharakekenui/ Styx River Area
- Huritini / Halswell River Area
- Ōpāwaho/ Heathcote River Area
- Ihutai Estuary and Coastal Area
- Otukaikino/ Outer Area Christchurch
- Te Pātaka o Rakaihautu / Banks Peninsula Settlements

Appendix C includes a map showing these seven geographical areas (sourced from the Ihutai Estuary and Coastal Area Stormwater Management Plan). Appendix C also contains a map showing more specifically the Ōpāwaho/ Heathcote and Huritini / Halswell River Area (sourced from the Huritini / Halswell River Area Stormwater Management Plan).

Question 3: When were the Stormwater Management Plans lodged with Environment Canterbury? (Paragraph 58)

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Area	Date of lodgement
Otakaro/ Avon River Area	N/A
Puharakekenui/ Styx River Area	14 th December 2023
Huritini / Halswell River Area	13 th December 2021 then again 28 th February 2024
Ōpāwaho/ Heathcote River Area	13 th December 2021 then again 28 th February 2024
Ihutai Estuary and Coastal Area	21 st of December 2022
Otukaikino/ Outer Area Christchurch	29 th September 2023
Te Pataka o Rakaihautu / Banks Peninsula Settlements	N/A

Question 4: Can you give more detail on which aspects of the Stormwater Management Plans do not comply to enable them to be certified (Paragraph 58)

9 I will answer this question in relation to the Huritini / Halswell River Area and Ōpāwaho/ Heathcote River Area Stormwater Management Plans only. The Stormwater Management Plans were reviewed by Environment Canterbury staff experts in the fields of; engineering, compliance, groundwater, surface water and contaminated land. Two memorandums were prepared by these experts that outlined the reasons why certification could not be provided. These memorandums are 15 pages long each, so I will not replicate here all of the matters that were raised with the contents of the Stormwater Management Plans. In summary the Stormwater Management Plans did not meet the requirements of the CSDNC Conditions 6 and 8 and Schedule 2. Of note the Stormwater Management Plans:

- *Provided contaminant load reduction targets that were derived from C-CLM modelling done as part of the consent application. They did not provide a description of the process and considerations used in setting the contaminant load reduction target(s) and whether the targets were derived using the best practicable model or method and input data.*
- *Did not provide specific details on stormwater mitigation facilities and devices, or discussion as to whether the City Council were prioritising stormwater treatment in catchments: that discharge in proximity to areas of high ecological or cultural value, such as habitat for threatened species or Areas of Significant Natural Value under the Regional Coastal Environment Plan (Canterbury Regional Council, 2012); and areas with high contaminant loads.*
- *Did not provide details of monitoring that will be undertaken of any waterways and springs that could be affected by stormwater management changes anticipated within the life of the Stormwater Management Plan.*
- *Did not provide an assessment of the effectiveness of water quality or quantity mitigation methods established under previous by Stormwater Management Plans and identification of any changes in methods or designs resulting from the assessment.*

- *Halswell only - Did not set water level reduction or tolerances for increases for the critical 2% and 10% AEP events, and the identification of key monitoring locations were considered potentially problematic.*
- *Did not provide a summary of feedback received, nor respond to the Technical Peer Review Panel comments.*
- *Schedule 6 of the consent sets out minimum requirements to enable discharges under the CSNDC from greenfield developments and re-developments in areas not yet covered by Stormwater Management Plans. The Stormwater Management Plans replicated these minimum requirements and did not provide any commentary as to why these were considered suitable, and as to why more stringent requirements were not considered. These design standards should have been given catchment-specific consideration.*
- *Did not go into any detail on whether existing facilities are performing adequately, operation and maintenance requirements for existing facilities, what consideration is given to providing mitigation for existing developments and planning for new facilities.*
- *Halswell only – did not include a volume target. I note however that we expect the Stormwater Management Plan will be reviewed once the flood volume information has been received by the City Council, to detail the works required to mitigate the effects of stormwater discharges (specifically volume) if required.*
- *Various formatting, grammatical and reference errors required fixing.*

Question 5: What stage are the Stormwater Management Plans now at with respect to certification and what matters are still outstanding? Are these outstanding matters of ‘substance’ or technical/minor detail to be resolved? (Paragraph 58)

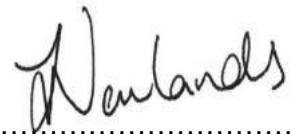
10 The Huritini / Halswell River Area and Ōpāwaho/ Heathcote River Area Stormwater Management Plans are still under review. I cannot confirm whether there are matters still outstanding. I can confirm that the revised Huritini / Halswell River Area Stormwater Management Plan does not include a volume target as I understand that the revised river and floodplain model is not yet available.

Question 6: What is the status of the Sediment Discharge Management Plan? (Paragraph 65)

11 The Sediment Discharge Management Plan was certified on the 14th of October 2022. The June 2022 revision is operative. This will need to be reviewed this year.

Question 7: Is there a map of the extended area to cover the Cashmere and Huntsbury areas of the Port Hills (Paragraph 97)

12 I'm not sure what this refers to. Ms Buddle may be better placed to answer this question.



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Jessica Newlands

23 April 2024

Appendix A – Permitted activity rules which may be applicable for earthworks on the Port Hills

- 5.168 The use of land for **earthworks** outside the bed of a river or lake or adjacent to a wetland boundary but within:
- (a) 10 m of the bed of a lake or river or a wetland boundary in Hill and High Country land or land shown as High Soil Erosion Risk on the Planning Maps; or
 - (b) 5 m of the bed of a lake or river or a wetland boundary in all other land not shown as High Soil Erosion Risk on the Planning Maps or defined as Hill and High Country; and any associated discharge of sediment or sediment-laden water in circumstances where sediment may enter surface water is a permitted activity, provided the following conditions are met:
1. Except in relation to recovery activities, or the establishment, maintenance or repair of network utilities and fencing, the extent of **earthworks** within the riparian margin:
 - (a) does not at any time exceed:
 - (i) an area of 500 m², or 10% of the area, whichever is the lesser; or
 - (ii) a volume of 10m³ on land shown as High Soil Erosion Risk on the Planning Maps; or
 - (b) is undertaken in accordance with a Farm Environment Plan that has been prepared in accordance with Schedule 7 Part A; or
 - (c) for plantation forestry activities is undertaken in accordance with the Environmental Code of Practice for Plantation Forestry (ECOP) 2007 and the NZ Forest Road Engineering Manual (2012); and

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2. Except in relation to recovery activities or the establishment, maintenance or repair of network utilities and fencing, the concentration of total suspended solids in the discharge does not exceed:
 - (a) 50g/m³ where the discharge is to any Spring-fed river, Banks Peninsula River, or to a lake, except when the background total suspended solids in the waterbody is greater than 50g/m³ in which case the Schedule 5 visual clarity standards shall apply; or
 - (b) 100g/m³ where the discharge is to any other river or to an artificial watercourse except when the background total suspended solids in the waterbody is greater than 100g/m³ in which case the Schedule 5 visual clarity standards shall apply; and
3. The activity does not occur adjacent to a salmon spawning area listed in Schedule 17, or in any inanga spawning habitat during the period of 1 January to 1 June inclusive, or in any Critical Habitat; and
4. Except in relation to recovery activities or the establishment, maintenance or repair of network utilities and fencing, any **earthworks** or cultivation is not within 5 m of any flood control structure without the prior written permission of the person or agency responsible for maintaining that flood control structure; and
5. From 5 September 2015, and in the riparian margins of Clarence, Waiau, Hurunui, Waimakariri, Rakaia, Rangitata, and Waitaki rivers, **earthworks** or cultivation do not result in a reduction in the area or diversity of existing riparian vegetation, unless the works have been authorised by a land use consent granted by the relevant territorial authority and conditions 1 to 4 above are met, or the activity is for the purpose of the installation, operation, maintenance, upgrade or repair of infrastructure.

- 5.169 Vegetation clearance and earthworks outside the bed of a river or lake or adjacent to a wetland boundary but within:
- (a) 10 m of the bed of a lake or river or a wetland boundary in Hill and High Country land and land shown as High Soil Erosion Risk on the Planning Maps; or
 - (b) 5 m of the bed of a lake or river or a wetland boundary in all other land not shown as High Soil Erosion Risk on the Planning Maps or defined as Hill and High Country;
- and any associated discharge of sediment or sediment-laden water in circumstances where sediment may enter surface water that does not comply with one or more of the conditions in Rules 5.167 or 5.168 is a restricted discretionary activity.

The exercise of discretion is restricted to the following matters:

1. For forest harvesting, the harvesting method, location of haulage and log handling areas, access tracks, and sediment control; and
2. The actual and potential adverse environmental effects on soil quality or slope stability; and
3. The actual and potential adverse environmental effects on the quality of water in rivers, lakes, or artificial watercourse, or wetlands; and
4. The actual and potential adverse environmental effects on areas of natural character, outstanding natural features or landscapes, areas of significant indigenous vegetation, indigenous biodiversity and significant habitats of indigenous fauna, mahinga kai areas or sites of importance to Tangata Whenua; and

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5. The actual and potential adverse environmental effects on the banks or bed of a waterbody or on its flood carrying capacity; and
6. The actual and potential adverse environmental effects on transport networks, neighbouring properties or structures.

Vegetation Clearance and Earthworks in Erosion-prone Areas

Note: Refer to the CRC's Erosion and Sediment Control Guidelines for additional guidance on undertaking vegetation clearance activities

- 5.170 Within the area shown as High Soil Erosion Risk on the Planning Maps and outside any riparian margin, the use of land (excluding any works for which a building consent has been obtained from the relevant local authority) for
- (a) Cultivation or spraying of slopes less than 25 degrees; or
 - (b) Cultivation or spraying on slopes greater than 25 degrees; provided that, the total area sprayed or cultivated is less than 200 m²; or
 - (c) Vegetation clearance of species (including by spraying) listed in the Biosecurity NZ Register of Unwanted Organisms or the Canterbury Regional Pest Management Plan; or
 - (d) Hand clearance and spot spraying of vegetation; or
 - (e) Silvicultural practices of release cutting, pruning or thinning to waste and harvesting in accordance with the Environmental Code of Practice for Plantation Forestry (ECOP) 2007; or
 - (f) Earthworks within a production forest undertaken in accordance with NZ Forest Road Engineering Manual (2012); or
 - (g) Maintenance of existing firebreaks, roads and tracks and, during a fire emergency, construction of new firebreaks and tracks; or
 - (ga) Construction of fences; or
 - (h) Construction of walking tracks no more than 1.5 m wide; or
 - (i) Maintenance of existing transport networks; or
 - (j) Earthworks and vegetation clearance associated with the establishment, repair or maintenance of pipelines, electricity lines, telecommunication lines and radio communication structures and fences; or
 - (k) Other earthworks where
 - (i) the volume is less than 10 m³ per site or per hectare (whichever is the greater); and
 - (ii) the maximum depth of cut or fill is 0.5 m;and any associated discharge of sediment or sediment-laden water in circumstances where sediment may enter surface water is a permitted activity, provided the following conditions are met:
1. Any cleared areas are stabilised and where it is not put to its final use shall be revegetated within 6 months from the date of the commencement of the vegetation clearance or earthworks; and
 2. Any cultivation is across the contour of the land; and
 3. When firebreaks, roads, or tracks are constructed or maintained the maximum depth of cut or fill is 0.5 m; and
 4. the concentration of total suspended solids in the discharge shall not exceed:

- a. 50 g/m³, where the discharge is to any Spring-fed river, Banks Peninsula river, or to a lake except when the background total suspended solids in the waterbody is greater than 50 g/m³ in which case the Schedule 5 visual clarity standards shall apply; or
- b. 100 g/m³ where the discharge is to any other river or to an artificial watercourse except when the background total suspended solids in the waterbody is greater than 100 g/m³ in which case the Schedule 5 visual clarity standards shall apply.

5.171 Within the area shown as High Soil Erosion Risk on the Planning Maps and outside any riparian margin, the use of land for vegetation clearance, cultivation and earthworks that does not comply with one or more of the conditions in Rule 5.170, or vegetation clearance, cultivation or earthwork activities not listed in Rule 5.170(a) to (k), and any associated discharge of sediment or sediment-laden water in circumstances where sediment may enter surface water is a restricted discretionary activity.

The exercise of discretion is restricted to the following matters:

1. The actual and potential adverse environmental effects on soil quality or slope stability; and
2. The actual and potential adverse environmental effects on the quality of water in rivers, lakes, artificial watercourses or wetlands; and
3. The actual and potential adverse environmental effects on areas of natural character, outstanding natural features or landscapes, areas of significant indigenous vegetation, indigenous biodiversity and significant habitats of indigenous fauna, mahinga kai areas or sites of importance to Tangata Whenua; and
4. The actual and potential adverse environmental effects on a wetland or the banks or bed of a waterbody or on its flood carrying capacity; and
5. The actual and potential adverse environmental effects on transport networks, neighbouring properties or structures; and
6. In addition, for forest harvesting, the harvesting method, location of haulage and log handling areas, access tracks, and sediment control.

Earthworks over Aquifers

Note: In addition to the provisions of this Plan and any relevant district plan, any activity which may modify, damage or destroy pre 1900 archaeological sites is subject to the archaeological authority process under the Heritage New Zealand Pouere Taonga Act 2014. An archaeological authority is required from Heritage New Zealand to modify, damage or destroy any archaeological site, whether recorded or not in the New Zealand Heritage List/Rārangi Kōrero website

5.175 The use of land to excavate material is a permitted activity, provided the following conditions are met:

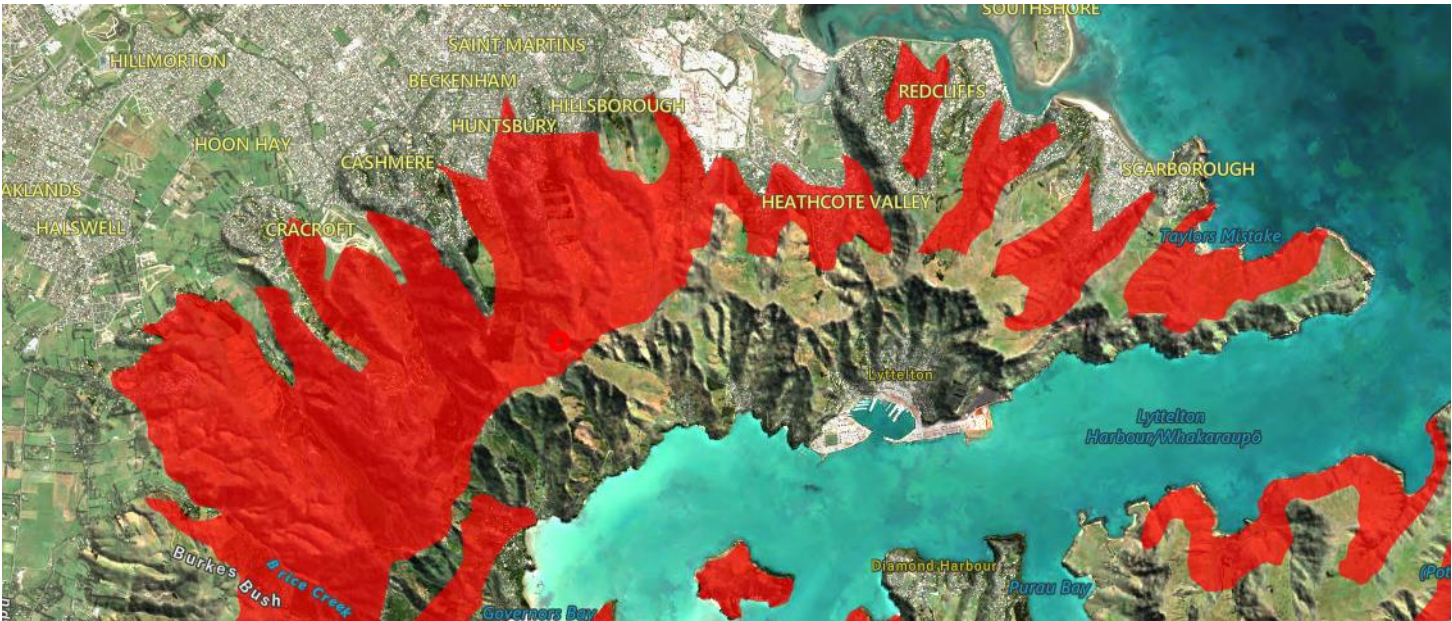
1. Over the Coastal Confined Gravel Aquifer System, as shown on the Planning Maps:
 - a. there is more than 1 m of undisturbed material between the deepest part of the excavation and Aquifer 1; and
 - b. if more than 100 m³ of material is excavated, the excavation does not occur within 50 m of any surface waterbody; or
2. Over an unconfined or semi-confined aquifer:
 - a. the volume of material excavated is less than 100 m³; or
 - b. the volume of material excavated is more than 100 m³ and:
 - (i) there is more than 1 m of undisturbed material between the deepest part of the excavation and the highest groundwater level; and
 - (ii) the excavation does not occur within 50 m of any surface waterbody.

5.176 The use of land to excavate material that does not comply with one or more of the conditions of Rule 5.175 is a restricted discretionary activity.

The exercise of discretion is restricted to the following matters:

1. The actual and potential adverse environmental effects on the quality of water in aquifers, rivers, lakes, wetlands; and
2. Any need for remediation or long-term treatment of the excavation; and
3. The protection of the confining layer and maintaining levels and groundwater pressures in any confined aquifer, including any alternative methods or locations for the excavation; and
4. The management of any exposed groundwater; and
5. Any adverse effects on Ngāi Tahu values or on sites of significance to Ngāi Tahu, including wāhi tapu and wāhi taonga.

Appendix B –High Soil Erosion Risk overlay CLWRP



Appendix C –Geographical areas of the Stormwater Management Plans

