

BEFORE THE CANTERBURY REGIONAL COUNCIL

UNDER THE

Resource Management Act 1991

AND

IN THE MATTER

of application CRC190445 by the Christchurch City Council for a comprehensive resource consent to discharge stormwater from within the Christchurch City area and banks Peninsula settlements on or into land, into water and into coastal environments

EVIDENCE SUMMARY

JANE SUSAN WEST FOR CHRISTCHURCH CITY COUNCIL

7 November 2018

TABLED AT HEARING

Application: *CRC 190445*

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Date: *7 November 2018*

CHRISTCHURCH CITY COUNCIL
PO BOX 73015
Christchurch 8154
Solicitor Acting: Brent Pizzey
Tel 64-3-9415550
Brent.Pizzey@ccc.govt.nz

INTRODUCTION

1. My name is Jane Susan West. I here summarise key points of my evidence, highlighting areas of agreement and disagreement between my opinion and that expressed by or on behalf of submitters and in the s42A report.

OVERVIEW

2. Christchurch City Council (**Council**) has applied for resource consent to discharge stormwater from its network (which is defined in the proposed consent conditions), to land and water (including coastal water) in Christchurch City, and within the settlement areas within Te Pātaka o Pākaihautū/Banks Peninsula. The resource consent is to provide for the discharge of stormwater from the Council's network under one comprehensive resource consent, and to replace the existing global and catchment resource consents held by Council ('global' consents CRC000315, CRC090292, CRC120223 South West Christchurch, and CRC131249 Pūharakekenui/Styx).
3. Resource consent is required under Rule 5.94 of the Land and Water Regional Plan (**LWRP**) as a non-complying activity, under Rule 6.2 of the Waimakariri River Regional Plan (**WRRP**) as a non-complying activity, under Rule 7.2 of the Canterbury Regional Coastal Environment Plan (**RCEP**) as a non-complying activity, and under Rule 10.34 of the RCEP as a discretionary activity. Overall, resource consent is required for a non-complying activity.
4. I consider that the Application and the proposed consent conditions demonstrate the commitment of Council to progressively improve the quality of stormwater discharge over time as required by key LWRP Policy 4.16. This is achieved through a package of management measures including:
 - a. modelling the load of key stormwater contaminants and their reduction through stormwater treatment facilities (the **C-CLM**), including a requirement to achieve percentage reductions over the term of the consent (Condition 16);

- b. flood modelling used for development of stormwater infrastructure, flood risk assessment and to demonstrate achievement of target water levels (Schedule 7) in Christchurch waterways;
 - c. monitoring the receiving environment and the requirement to achieve receiving environment objectives and attribute target levels through reference to Schedules 3 to 7 of the proposed consent conditions and the Environmental Monitoring Programme (**EMP**);
 - d. The ongoing development and review of Stormwater Management Plans (**SMPs**) including engagement with key stakeholders;
 - e. The development of the Implementation Plan that is reviewed every three years with reference to Council's Long Term Plan (**LTP**);
 - f. The adaptive management of the consent through proposed consent conditions requiring responses to modelling and monitoring results, along with the review and update of **SMPs**, the Implementation Plan, and the **EMP** to respond to modelling and monitoring results, or other information such as changes in technology.
5. The **SMPs** are a key element for managing the discharge of stormwater from a reticulated network, as required by Policy 4.16 and Rule 5.93 of the **LWRP**. The proposed conditions require Council to investigate methods to provide an understanding of causes and effects between contaminant load reduction, and environmental outcomes, and also commits Council to actions around advocacy and the development of programmes for better stormwater contaminant 'source control'.
6. In my opinion this approach, along with the proposed duration of consent, provides for appropriate management of the comprehensive stormwater discharge consent and provides consistency and certainty for the community in the way that Council will manage stormwater discharged from its network. It will also simplify the administration of stormwater discharges for Council and Canterbury Regional Council (**Environment Canterbury**) with one set of consent conditions under which to operate.
7. Based on all the evidence, and in the context of the existing environment, I consider that the adverse effects of the proposed stormwater discharge will be minor.

8. The integrated management of stormwater in Christchurch, in accordance with SMPs developed and reviewed under the proposed consent conditions is, in my view, consistent with the LWRP, the RCEP, the WRRP, the Canterbury Regional Policy Statement (**RPS**) and the National Policy Statement for Freshwater Management (**NPSFM**). The objectives and policies in these statutory documents generally aim to maintain or improve water quality over time. The adaptive package of modelling, monitoring, and reporting, and the receiving environment objectives and attribute target levels to be achieved through the consent conditions have been proposed to achieve this. It is my opinion that the proposed activity promotes sustainable management and is consistent with the relevant provisions of the Resource Management Act 1991 (**the Act**).

CORRECTIONS FROM EVIDENCE IN CHIEF

9. Having re-read my evidence in chief (**EIC**) I now consider that in light of the submitter's evidence and Council's rebuttal evidence I need to provide more clarity around my EIC statements at paragraphs 60 and 61. This is with regard to the risk matrix to be developed under proposed consent Condition 3 and the reference to a risk matrix proposed to be added within the Sediment Discharge Management Plan (**SDMP**) now proposed under Condition 40 with regard to Erosion and Sediment Control.
10. The latest version of the working draft of proposed consent conditions has been tabled by Mr Pizzey. This includes proposed Condition 3(c) that requires Council to develop a transition plan for the excluded sites to be managed by Council under this consent post-2025 in accordance with Policy 4.16A of the LWRP. The required transition plan includes the development of a risk matrix to determine if a site is considered 'high risk'.
11. As discussed in my rebuttal evidence (paragraph 47) an additional condition was also proposed under the heading 'Erosion Sediment and Control' (Condition 40) referring to a risk matrix being developed for the management of construction phase stormwater discharges and this is where a TSS limit would be determined on a site-specific basis. The conditions now proposed at Condition 40 are for a SDMP to be developed by Council, for certification by Environment Canterbury. The new proposed conditions set out the purpose of the SDMP (to manage

discharges of stormwater from development sites) that includes a fine sediment and TSS Attribute Target Level for waterways and coastal areas within Schedules 4 and 5 to be met. In order to achieve the purpose of the SDMP it will include a risk matrix to determine TSS limits, and a description of the process for how TSS limits will be included in authorisations issued by Council to discharge into the Council network.

12. I also discuss this matter at paragraph 307 of my EIC, and I now propose the following changes to that paragraph to provide more clarity (deletions shown ~~strikethrough~~, and additions shown as **bold and underlined**):

~~The adoption of a TSS limit and the approach to managing stormwater discharges post-2025 in accordance with Policy 4.16A of the LWRP has been discussed in the evidence of Mr Tipper and Mr Norton. Mr Norton now and this is to be included within the~~ **proposes a SDMP to be developed which will include the development of a** risk matrix proposed in **(Condition 40) 3**. ~~Mr Norton also proposed a new proposed condition (under Condition 41) with regard to construction phase discharges referencing the risk matrix in proposed Condition 3 to determine a TSS level for ESG required for a site.~~

13. At paragraph 63 of my EIC, the last sentence reads: "*Mr Callander has discussed the matter with regard to the effects on groundwater quality.*" The word *quality* should be replaced by the word *quantity*.
14. At paragraph 64 of my EIC, the first sentence refers to a Memorandum of *Agreement*. This should refer to a Memorandum of *Understanding*.
15. At paragraph 229 of my EIC there is a reference to proposed Condition 41. This should instead reference proposed Condition 3.
16. At paragraph 261 of my EIC there is a reference in brackets to Condition 3. This should instead reference Condition 40. The final sentence of paragraph 261 should therefore read (deletions shown ~~strikethrough~~, and additions shown as **bold and underlined**):

Amendments to the proposed conditions (**Condition 3 40**) are proposed to ensure an ongoing robust process is in place to minimise the potential for adverse effects from sediment discharges both pre and post-2025.

RESOURCE MANAGEMENT ACT

Part 2, Section 104 and 104D

17. Mr Reuther and I agree that the Application achieves the purpose of the Act (section 5), recognises and provides for matters of national importance (section 6), has had particular regard to the relevant other matters (section 7), and takes into account the principles of the Treaty of Waitangi (section 8). We also agree on the matters to be considered under Section 104.
18. In relation to Section 104D in my opinion the activity passes both gateways and therefore there is no barrier to granting the discharge permit being sought by Council.
19. Based on the evidence provided by expert witnesses I have concluded that the adverse effects on the environment will be minor. I note that the section 42A Officer's Report (**Officer's Report**) [paragraph 981] considers that there is potential for more than minor effects on freshwater and coastal water quality. I will return to this under my heading 'Remaining Areas of Disagreement – Environment Canterbury'.
20. Mr Reuther and I agree that the Application is not contrary to the objectives and policies of the relevant plans (in this case LWRP, WRRP and RCEP).

Section 123 – Consent Duration

21. This Application is for a consent duration of 25 years, which has been agreed through negotiation between Council and Papatipu Rūnanga (originally, a duration of 35 years was applied for). The nature of the discharge is for existing and future stormwater from the Council network. The Application, and actions to be undertaken by Council through operation of the consent, seeks to improve the quality of stormwater discharged over time, which is to be measured through

modelling of contaminant loads, and continued monitoring of the receiving environment.

22. This Application is for operation of a long-term functioning stormwater system providing treatment of stormwater and flood mitigation for large parts of the city, maintained by Council. Mr Reuther [paragraph 606 of the Officer's Report] and I agree that this existing infrastructure has contributed significantly to general social and economic wellbeing. Given that the discharge of stormwater from the Council network already exists there are no immediate reasonable alternatives than the current regime of discharge to land and to water via treatment systems.
23. The proposed consent conditions require reductions in the stormwater contaminant load, for which Council will need to invest in additional stormwater treatment facilities and devices, including retrofitting in existing areas of development. The EIC of Mr Harrington explains that a short-term duration has the potential to create uncertainty within Council and undermine the case for securing resources to implement retrofit projects, which are a key initiative to reduce contaminants entering waterways. In addition to the operational measures, the proposed consent conditions also require Council to invest in non-infrastructure measures such as source control advocacy, community education and awareness, and funding of further research and investigation.
24. Council as applicant, as well as representing Christchurch ratepayers and the wider community, requires the certainty afforded with a longer duration so that sustainable management can be achieved through long term planning. The value of the investment in the resource consent process and in the implementation of stormwater facilities and devices has been discussed in the EIC of Mr Adamson, Mr Norton and Mr Harris. The proposed conditions also require advocacy, and research and investigation, with additional associated costs.
25. The costs of re-consenting the same activity in five to 10 years would, in my opinion, be significant, and I understand this to be part of the reason that Council decided on a comprehensive consent for all of Christchurch, rather than continuing with consenting stormwater discharges on a catchment by catchment basis. It is proposed for Papatipu Rūnanga and other key stakeholders to be involved in the development and review of SMPs, and for the responses to modelling and

monitoring to be reported on an annual basis so that constant review and improvements can be made over the duration of the consent. I consider that this adaptive management approach with review conditions is more appropriate and responsive to any changes through the proposed analysis and reporting of modelling and monitoring results than a short duration consent.

26. In my opinion the conditions provide certainty as to the management of stormwater discharge and the commitment of Council to improve the quality of stormwater discharges over time. Any re-evaluation of the consent is, in my view, best completed through review conditions as provided for by section 128 of the RMA (and proposed in the consent conditions).

REMAINING AREAS OF DISAGREEMENT – ENVIRONMENT CANTERBURY

Overview

27. For the most part I consider that agreement has been reached between Council and Environment Canterbury staff. The remaining areas of disagreement between the experts have been discussed by Council witnesses.
28. I note that the updated proposed conditions include additional changes to Conditions 2, 3 and 41, which are intended to provide for the ability of Council to continue to exclude some high-risk sites. The changes are also intended to provide greater certainty for industry around how that would occur, either through the provisions in the transition plan for sites that are currently excluded, or through the industrial site audit process.
29. In terms of disagreement between the planning officer, Mr Reuther, and myself, this is restricted to two distinct areas. One is regarding a conclusion on cultural effects, and the other is regarding the potential adverse effects on freshwater and coastal water quality.

Cultural Effects

30. The Officer's Report [paragraph 579] confirms receipt of the agreement reached between Ngā Rūnanga and Council, and that this includes agreement around

funding for the appointment of water quality and mahinga kai specialists which will develop the mana whenua values to be added to Schedules 4 and 5 of the proposed conditions, and the EMP. Mr Reuther [paragraph 590 of the Officer's Report] points out that Cultural Impact Assessments (CIAs) have not been completed for all catchments. Mr Reuther acknowledges that Ngā Rūnanga did not submit on the Application (CRC190445). He also acknowledges that the proposed consent conditions include the requirement to continually engage and collaborate with Papatipu Rūnanga. Mr Reuther is unable to conclude what the effects on cultural values will be [paragraph 589 of the Officer's Report].

31. CIAs have been completed for each of the four SMPs that are complete (Ōtākaro/Avon, Pūharakekenui/Styx, Huritini/Halswell and Ōpāwaho/Heathcote catchments). Given the conditions of consent that have been proposed, the agreements reached between Council and Ngā Rūnanga, and the requirement to continue to complete CIAs as part of the development of SMPs, I consider that cultural values have been adequately considered through this Application, and the process represents successful collaboration between the parties to find appropriate solutions.

Water Quality

32. Dr Margetts [paragraph 12 of her evidence summary] has set out her recommended changes to the proposed consent conditions and the EMP as a result of the caucusing undertaken with Environment Canterbury experts, Ms Stevenson and Dr Bolton-Ritchie. She has responded to the one matter where agreement has not been reached (coastal wet weather monitoring) between her and Dr Bolton-Ritchie.
33. The Officer's Report [paragraph 981] considers that there is potential for more than minor effects on freshwater and coastal water quality. I consider that the evidence of Dr Margetts (in her EIC, rebuttal and evidence summary) has addressed the matters of concern raised throughout the Officer's Report and based on that evidence I consider that the potential adverse effects are minor.
34. Discussions between Mr Callander and the Environment Canterbury expert, Mr Etheridge has resulted in a number of agreed changes to the proposed conditions

of consent which have now been resolved through updated proposed conditions of consent tabled by Mr Pizzey.

Water Quantity and Flood Modelling

35. Mr Harrington [slide 23 of his evidence summary] considers the remaining area of disagreement between him and Environment Canterbury expert Mr Law on the matter of flood modelling. Mr Harrington has described the additional flood modelling points now agreed, and that these are to be required through information within SMPs under proposed Condition 6(q).

SMP Reviews

36. Mr Adamson has discussed his preference for a condition requiring peer review of SMPs, rather than the use of a technical advisory panel as suggested in the Officer's Report. This matter has been discussed with Environment Canterbury staff and I understand that the peer review condition proposed is acceptable (shown within proposed Condition 7).

Christchurch Contaminant Load Model

37. There has been recent caucusing between the Council and Environment Canterbury experts and a joint statement has been tabled. At the time of writing, discussions are still taking place around the detail within the joint statement, and I am yet to form an opinion as to the potential for additional conditions, or changes to conditions that might be appropriate.

TSS Limits

38. There has been useful debate both within Council, and between Council and Environment Canterbury staff regarding the need for, and appropriate format within which to impose TSS limits for the discharge of stormwater from development sites (construction phase stormwater).
39. This matter has been addressed in the EIC, and evidence summary of Mr Tipper and Mr Norton. Both agree that Council should retain the ability to impose a TSS limit on the authorisation issued by Council under this consent. I support the

proposal discussed by Mr Norton to include new conditions under proposed Condition 40 that require a SDMP to be developed for the purposes of meeting the fine sediment and TSS attribute target level for waterway and coastal areas within Schedules 4 and 5 of the proposed conditions. The SDMP is required to include a risk matrix for determining TSS limits on a site-specific basis.

REMAINING AREAS OF DISAGREEMENT – SUBMITTER'S EVIDENCE

40. The key area of disagreement on planning matters within the evidence of submitters is around the detail of proposed consent conditions. Some amendments to conditions have been recommended throughout the rebuttal evidence and these are set out in the updated proposed conditions tabled by Mr Pizzey.
41. Mr Harrington has discussed his difference of opinion with Mr Potts, the expert providing evidence on behalf of the Rodrigues', in his rebuttal evidence and evidence summary. In his evidence summary Mr Harrington has discussed the specific issues experienced by residents within the Styx River catchment and within the Brooklands area. He sets out the remaining points of difference between his opinion, and that of Mr Potts on behalf of the Rodrigues' [slide 21 – 22 of his evidence summary].
42. Questions have been raised by commissioners regarding flood modelling. Mr Harrington is able to provide additional commentary around this matter at this point if acceptable to the panel.
43. Mr Van Nieuwkerk [paragraph 23-25 of his evidence summary] addresses the concerns raised by Mr Cameron in evidence for NZ Steel regarding the C-CLM, particularly sources of zinc and the management of zinc load to urban waterways. Mr Van Nieuwkerk considers that the C-CLM is fit for purpose in assessing the contaminant contribution of urban function (such as buildings and roads) rather than other sources of zinc load into waterways. Mr Kennedy [paragraph 5 – 6 of his evidence summary] also addresses NZ Steel's evidence regarding the effectiveness of the C-CLM to manage predicted ecological stress in waterways.

44. Mr Tipper [paragraph 7 – 9 of his evidence summary] has addressed the matters raised in evidence by Mr Sunich and Mr Laurenson for the Oil Companies regarding TSS limits, and discusses his (and Mr Norton's) concern around setting a single limit that applies to all sites.

PROPOSED CONSENT CONDITIONS

45. One of the approaches to measuring stormwater contaminant reduction proposed in this Application is the use of the C-CLM to model the load of key stormwater contaminants, and the removal of those contaminants through treatment systems. Details of stormwater treatment systems and source control measures will be included within SMPs, and through the Implementation Plan that is required to be reviewed every three years with reference to Council's LTP under Condition 12. Council will be required to investigate and remediate where necessary if the required stormwater contaminant load reduction targets within Table 2 of proposed Condition 16 are not met (Condition 49).
46. In terms of the management of water quantity as a result of stormwater, Council maintains hydrological information systems in order to plan and manage stormwater flows and flooding. Flood models are used to correctly size the stormwater treatment and detention facilities associated with new urban development and redevelopments feeding into the Council's stormwater network. Proposed consent conditions require water quantity attribute target levels (Schedule 7) to be met for each catchment.
47. Ongoing assessment of the city's stormwater discharges on surface water, groundwater and coastal water throughout the term of consent will be provided for through the EMP, which is based on monitoring that has been undertaken by Council for decades and which includes monitoring of a range of attributes including those attribute target levels in Schedules 4 to 6 of the proposed consent conditions. The proposed consent conditions require the extent of the mitigation of effects to be measured against the receiving environment objectives and attribute target level monitoring results. Council will be required to investigate and remediate where necessary if the attribute target levels are not achieved (Conditions 20, 21 and 51).

48. The proposed conditions also require Council to carry out stormwater quality investigations (Condition 37) to further enhance the current understanding of causes and effects between contaminant load reduction, and environmental outcomes.
49. The updated version of the proposed consent conditions table has been tabled by Mr Pizzey and this includes the latest recommendations from Council experts resulting from discussions with Environment Canterbury staff and through consideration of the matters raised in submitter's evidence.

JANE SUSAN WEST

7 November 2018

