

9 July 2018

Attention: Yvette Rodrigo
Canterbury Regional Council
200 Tuam Street
P O Box 345
Christchurch 8140

Dear Yvette

CRC160056 – CHRISTCHURCH CITY COUNCIL CSNDC AMENDMENT TO APPLICATION

This letter provides a commentary of the recent progress of the Comprehensive Stormwater Network Discharge Consent (CSNDC) application (CRC160056), and along with the attachments, constitutes an amendment to that application. Attached to this letter is a set of updated consent conditions and schedules, an updated Environmental Monitoring Programme (EMP), a Christchurch Contaminant Load Model (C-CLM) and an independent peer review of the C-CLM. To assist with clarity around the amendments made, references to the updated conditions are provided.

1. Background

Christchurch City Council (CCC) (the applicant) lodged the CSNDC application with Canterbury Regional Council (CRC) in June 2015.

Following the close of the submission period, CRC requested additional information from CCC during April 2016. Information required included details on matters such as:

- **The consent approach:** use of the SWIM group in conditions; the 35-year duration of consent that was applied for; and stakeholder engagement in the development of Stormwater Management Plans (SMPs);
- **The receiving environment objectives and targets:** further information regarding the water quality outcomes in Table 1a of the Canterbury Land and Water Plan (LWRP) and LWRP Policy 4.16;
- **Ngāi Tahu cultural values:** the status of Cultural Impact Assessments (CIA), and whether cultural health objectives and targets proposed were developed in agreement with rūnanga;
- **Surface water and groundwater:** questions raised around the proposed monitoring;
- **Flooding:** further details requested on flood modelling and reporting;
- **Responses to monitoring:** questions raised as to how the monitoring results would trigger further work to be undertaken by CCC as part of the consent conditions;
- **The relationship between the proposed conditions and Policy 4.16A** of the LWRP and its requirement that CRC will not issue any more discharge permits for stormwater into the CCC network after 1 January 2025.

The matters raised by CRC were responded to by the applicant; however, as a result of the issues arising from those questions and responses, the applicant then asked for the application to be placed

on hold to provide more time to investigate further possible amendments to the application. A key issue was the limited anticipated improvement to in-stream water quality and a lack of certainty or firm targets for stormwater discharge quality over time. Demonstrating improvement toward the in-stream water quality targets in the LWRP through stormwater discharge improvements alone is complicated by the multiple inputs of contaminants and the highly variable nature of the contaminant load over time.

2. Amendment to the CSNDC

The applicant, utilising engagement with some staff from the CRC, has been working through the following key issues:

- a. LWRP Policy 4.16A: CCC to have responsibility for all discharges from the CCC network after 1 January 2025;
- b. Flooding: whether flood effects and level of service from CCC on flooding was appropriately addressed in the proposed conditions;
- c. Mana whenua: whether more could be achieved to address concerns of papatipu rūnanga regarding cultural health targets for waterways;
- d. Groundwater: whether the diversion and discharge of stormwater would impact baseflow in streams and springs, as well as clarification around monitoring for drinking water supply wells;
- e. Collaborative approach to SMP drafting and review: CCC to provide information and obtain feedback from various parties, including papatipu rūnanga, during the drafting and review of SMPs.
- f. Duration of consent: whether a shorter duration than the 35 years applied for is appropriate.

In response, the following information and amendments have been incorporated into the approach to the consent, and within the updated consent conditions to address the concerns outlined above. An updated EMP has also been developed.

a. LWRP Policy 4.16A

The new proposed conditions include clauses whereby excluded stormwater discharges will be within the scope of the CSNDC once existing consents expire, or after 1 January 2025, whichever is the latest. Refer to Conditions 3 and 41.

b. Flooding

The new proposed conditions require the consent holder to mitigate the effects of the discharge of stormwater on water quantity as measured by the Receiving Environment Objectives and Attribute Target Levels within Schedule 7. Refer to Condition 22.

c. Mana whenua

The CCC and papatipu rūnanga have consulted. Progress has been made on the development of Cultural Impact Assessments, with only the Huritini/Halswell catchment CIA yet to be finalised. Further, the applicant and papatipu rūnanga have almost finalised an agreement regarding the proposed conditions and the submission by the Ngai Tahu parties. The applicant is hopeful of finalising that agreement shortly and has made changes to the proposed conditions, and proposed duration of consent, in anticipation of finalising that agreement. Refer to Conditions 15 and 56.

The proposed conditions require the involvement of papatipu rūnanga during annual planning of stormwater works, and the development of SMPs and the Implementation Plan. The proposed

conditions also require that the consent holder engage with papatipu rūnanga at concept design stage for the installation of stormwater treatment facilities and devices with regard to wāhi tapu and taonga, and that the consent holder provides Mahaanui Kurataiao Ltd with quarterly reports, and papatipu rūnanga with annual reports. The Mana Whenua Attribute Target Levels detailed in the proposed consent conditions require updating, and this is expected to be completed through meetings being scheduled with rūnanga representatives during July 2018.

Refer to Conditions 7, 12 and 15 and Schedules 4 and 5 in the attached proposed conditions.

d. Groundwater

An additional matter has been added to the proposed consent conditions so that SMPs are now required to consider if the diversion and discharge of stormwater would impact baseflow in streams and springs.

Conditions are also proposed that specifically require separation of CCC stormwater infiltration facilities from domestic drinking water supply wells.

Refer to Conditions 6(j) and 22 in the attached proposed conditions.

e. SMP requirements

An addition to SMP requirements has been added to the proposed conditions requiring feedback from rūnanga, the relevant Zone Committee(s) and Community Board(s). Refer to Condition 6(n).

f. Duration of consent

The applicant has amended the duration of resource consent required to 25 years, as part of the agreement being finalised with the Ngai Tahu submitters. Refer to Condition 56.

4. Progress on CSNDC Approach

Contaminant Load Model

The applicant has developed a contaminant load model for Christchurch (C-CLM) to model the extent to which the Council's stormwater treatment facilities reduce stormwater contaminants entering the receiving environment. The C-CLM takes account of stormwater discharge into waterways and into ground. A consent condition (Condition 16) is proposed that requires certain percentage reductions in stormwater contaminant loads (TSS, total copper and total zinc) to be achieved by CCC. The CCC will be in breach of the consent if the modelled reductions are not met.

Adaptive management

The conditions have been formulated with an adaptive management approach requiring ongoing reporting, and additional investigations where modelling or monitoring does not show the required or anticipated results. The SMPs are required to be reviewed every 10 years to assess whether changes will better achieve their purpose (refer to Condition 8). In addition, SMPs are to be updated for other purposes such as to respond to the results of modelling or monitoring, investigations undertaken, or to provide for the use of new technologies in stormwater management (refer to Conditions 9 and 10). Amendments to SMPs are to be certified by CRC (refer to Condition 11).

An Implementation Plan is to be prepared that gives effect to the SMPs (refer to Condition 12). The Implementation Plan is to be reviewed every three years with reference to the CCC Long Term Plan.

Any updates to the SMP or Implementation Plan are to be carried out through engagement with Papatipu Rūnanga (refer to Conditions 7 and 15).

The EMP is also subject to review and amendment for the purposes of better monitoring and to determine whether the receiving environment objectives and attribute target levels are being met (refer to Condition 42). Amendments to the EMP are to be certified by CRC (refer to Conditions 43 and 44).

Condition 16 sets specific percentage reductions required to be achieved for stormwater contaminants: total copper, total zinc, and TSS. The CCC would be in breach of the consent if the targets in Condition 16 are not met. However, the proposed consent conditions also require a process of investigation and reporting if the targets in Condition 16 are not met (refer to Condition 49). Similarly Condition 51 provides for investigations to be carried out if monitoring shows that specific attribute target levels are not being met. Any investigations under these conditions are required to be reported to CRC.

Other matters

The applicant considers that although the development and maintenance of stormwater treatment facilities represents a significant cost to the CCC, it achieves relatively modest stormwater contaminant reductions when compared to source control measures such as community education and behaviour change, and those that could be achieved by central government intervention such as prohibiting over time the use of copper brake pads. Therefore, in addition to the required stormwater contaminant reductions (as discussed above), the applicant is also proposing other 'non-infrastructural' measures to further demonstrate a commitment to improving the quality of stormwater discharge over time (LWRP Policy 4.16) (refer to Condition 38). Such measures include: trialling more targeted and selective street sweeping and sump cleaning; increased communication, education and awareness to encourage community actions to reduce stormwater contaminant discharges; and lodging a submission with central government seeking national measures and industry standards to reduce the discharge of contaminants including zinc and copper from metal roofs.

The applicant understands that establishment of a proven, cause-and-effect link between the stormwater contaminant load reduction and results in receiving urban waterways is an internationally unsolved issue. No technology or assessment tool is known to the applicant that can directly link an improvement in stormwater discharge contaminant quality to a river's water quality improvement. It is also this information gap that exacerbates the issue around providing with any certainty what water quality standards will be met in the receiving environment by 2025 (LWRP Policy 4.16) or any other specific date. To this end the applicant proposes to develop a stormwater quality investigation in the form of a funded research programme including the potential for in-stream modelling and this has been proposed within the conditions of the consent (refer to Conditions 35 – 37).

Schedule 1 (Sites Excluded from the CSNDC) is attached to the updated conditions and for completeness has now been populated with sites currently excluded from the South West and Pūharakekenui/Styx SMP areas.

5. Effects Assessment

Introduction

The assessment of effects contained within the CSNDC application discusses the potential effects of the activity and the scale and intensity of adverse effects including effects on: surface waterways; lakes; coastal and estuary environments; groundwater and springs (including drinking water supply wells); soil

quality; cultural values; flood risk; ecological; and amenity effects. It also considers positive effects, and effects during construction and after land development.

The effects assessment concludes that overall potential adverse effects on the receiving environment will be minor. This assessment takes account of the existing environment into which the stormwater will be discharged, along with the mitigation of effects through stormwater treatment facilities, best practice methods for flood risk, ongoing hydrometric monitoring and flood modelling, as well as the ongoing commitment to monitoring the receiving environment.

Amendment to the application

The amendment to the application represents an alteration to the way in which the activity will be managed to provide additional assurance and certainty around the applicant's demonstration of a commitment to progressively improve the quality of the stormwater discharge (LWRP Policy 4.16). The amendment also provides increased opportunity for the applicant to better mitigate effects through acting on the modelling and monitoring results. The activity of discharging stormwater from CCC's network, and the scale and intensity of that activity remains the same as that applied for.

Contaminant Load Model

As mentioned earlier, the Christchurch Contaminant Load Model (C-CLM) developed by the applicant for the purposes of this amended application models reductions in stormwater discharge contaminant load. The LWRP requires the quality of the stormwater discharge to improve over time, and the C-CLM (attached to the proposed consent conditions) has been developed as a tool to model the improvement. The C-CLM provides an estimation of the annual mass of stormwater contaminants (total copper, total zinc, and TSS) which:

- are entrained in stormwater as it passes over various surfaces such as undeveloped land, roofs, roads, hardstand areas etc. on its way to the receiving environment;
- are removed from stormwater as a result of treatment systems and devices, expressed as a percentage removal;
- enter the receiving environment.

The C-CLM provides increased certainty for determining the reduction of stormwater contaminants through proposed stormwater treatment facilities and devices. It also provides a means of evaluating the consent as to whether it is achieving the LWRP requirement to improve the quality of discharge.

The application also included commentary around non-infrastructural approaches to stormwater management. As detailed above the proposed conditions now provide specific timeframes within which non-infrastructural investigations and actions are to be carried out. This is an acknowledgement of the importance and impact of non-infrastructural methods in contributing to a reduction in stormwater contaminant load, such as if central government were to legislate against the use of copper brakes pads over time (refer to Condition 38).

6. Section 104D RMA

The application includes an assessment under section 104D of the Resource Management Act 1991 (RMA), required as the application is a non-complying activity under Rule 5.94 of the LWRP. Under section 104D of the RMA when considering the application, CRC, as the consent authority, may grant consent only if it is satisfied that either:

- The adverse effects of the activity on the environment will be minor, or
- The application is for an activity that will not be contrary to the objectives and policies of the relevant plan

The applicant considers that the adverse effects of the activity on the environment are minor, and therefore the first gateway test of section 104D is passed and CRC is able to consider the application on its merits.

For completeness, the CSNDC application and follow up responses to CRC requests for additional information conclude that the proposed activity is not contrary to the objectives and policies of the LWRP, including key policy 4.16. The amendment to the application includes the addition of the C-CLM which enables the reductions of contaminants in stormwater discharges to be modelled, and Condition 16 requires specific percentage reduction targets to be achieved by CCC. This provides additional certainty around the ability of the CCC to achieve improvements in stormwater discharge quality over time in accordance with Policy 4.16.

7. Conclusion

This explanation and the attached documentation form an amendment to the application, which includes amended proposed consent conditions and schedules which include the C-CLM report, and an updated EMP.

There is no amendment to the activity applied for (the discharge of stormwater from CCC's network), nor is there any increase in the effects of the proposed activity. The amendment to the CSNDC application provides increased certainty around the management of the consent to better ensure that CCC is achieving the overall goal of improving the quality of stormwater discharge over time and reflects the agreement that the CCC expects to shortly conclude with the Ngai Tahu parties.

The applicant trusts that this is sufficient for the processing of the CSNDC application to progress to a hearing. Please feel free to contact Graham Harrington to discuss further any aspect of the information provided.

Yours sincerely



David Adamson
General Manager City Services

Attachments:

- 1. Amended proposed consent conditions and schedules**
- 2. Updated Environmental Monitoring Programme**
- 3. Contaminant Load Model and Peer Review**