

**From:** [Kingsbury, Peter](#)  
**To:** [Mailroom Mailbox](#)  
**Subject:** PC4 pLWRP Further Submission  
**Date:** Tuesday, 17 November 2015 1:03:24 p.m.  
**Attachments:** [CCC further submission on ECan s LWRP PC4. Land and Water Regional Plan.DOCX](#)  
[Attachment 1 to Council s further submission on LWRP PC4.docx](#)

---

Hi

Please find attached the City Council's further submission on PC4 LWRP.

Please confirm receipt of this email.

Regards  
Peter Kingsbury

-----< HP Records Manager Record Information >-----

Record Number : 15/1390699  
Title : CCC further submission on ECan's LWRP PC4. Land and Water Regional Plan.

\*\*\*\*\*

This electronic email and any files transmitted with it are intended solely for the use of the individual or entity to whom they are addressed.

The views expressed in this message are those of the individual sender and may not necessarily reflect the views of the Christchurch City Council.

If you are not the correct recipient of this email please advise the sender and delete.

Christchurch City Council  
<http://www.ccc.govt.nz>

\*\*\*\*\*

## Christchurch City Council's further submission on Plan Change 4 to Environment Canterbury's Land and Water Regional Plan

17 November 2015

### Contact:

Peter Kingsbury

peter.kingsbury@ccc.govt.nz

027 599 4615

### General Notes:

The Christchurch City Council (the Council) submitted on Plan Change 4 LWRP Policy 4.86A and 4.86B. Although the submission discussed Schedule 17 of PC4 the focus of the submission was on LWRP Policy 4.86A and 4.86B and not Schedule 17 as indicated in Environment Canterbury's *Summary of Submissions*. The Council accepts that the submission point could also be listed under Schedule 17 if this is considered appropriate.

Plan provision	Point ID	Comment	Relief sought
2.9 Definitions, Translation and Abbreviations	PC4 LWRP-240	The Council supports the submission in so far as it highlights the issues in relation to habitat <u>suitable</u> for inanga spawning sites and <u>known</u> inanga spawning sites. In the Council's earlier submission to Variation 4, Policy 4.86A and 4.86B (see note in introduction with regard to this submission) the Council highlighted its concern with anomalies in	Support in part. Amend to re-define inanga spawning habitat through a broader scientific understanding and field observation, as discussed in the accompanying attachment (Attachment 1).

		Schedule 17. As further response to this concern an attachment (Attachment 1) related to this further submission highlights the potential issues with regard to Environment Canterbury's conclusions in regard to areas suitable for inanga habitat.	
Policy 4.13	PC4 LWRP-131	The Council supports submission PC4 LWRP-131 as it is consistent with the Council's submission that further degradation of waterway is not permitted under Policy 4.13.	Support. Amend as requested by Council in original submission PC4 LWRP-91, or similar.
Rule 5.163	PC4 LWRP- 536	<p>The Council supports the submission in part - that there be consistency in the rules relating to the spawning period.</p> <p>The Council is concerned that the restrictions under Condition 7 of this rule in regard to those areas identified as inanga spawning habitat will significantly restrict the Council's ability to meet its required levels of service in those areas. For example, the reach of the Avon River considered as a "potential" area for spawning is far and beyond where inanga spawning currently occurs, especially through the CBD. The restrictions proposed in those areas in combination with the actual spawning limitations will mean that Council will only have two months (November and December) at best in which maintenance of waterways can be undertaken.</p> <p>It is our opinion that the Council's maintenance activities can be managed to meet the desired outcome of protecting inanga spawning habitat without significantly compromising our ability to meet our level of service obligations under a permitted activity rule. In particular:</p>	<p>The Council seeks to have the inanga spawning sites included within Condition 7, but not inanga habitat.</p> <p>Amend to read:  <i>"Vegetation clearance does not occur in an inanga or salmon spawning site as listed in Schedule 17 during spawning times"</i>, or similar.</p>

		<ol style="list-style-type: none"> <li>1) Reducing the "potential" habitat areas to the areas that are included in Schedule 17 of the LWRP.</li> <li>2) Allowing maintenance of the river banks at known spawning sites from 1 June to 1 January with restrictions on, for example, the minimum grass length.</li> </ol>	
Rule 5.163	PC4 LWRP-642	<p>The Council supports the submission to delete mention of "inanga spawning habitat". The Council is concerned that the restrictions under Condition 7 of this rule in regard to those areas identified as inanga spawning habitat will significantly restrict the Council's ability to meet its required levels of service in those areas. For example, the reach of the Avon River considered as a "potential" area for spawning is far and beyond where inanga spawning currently occurs, especially through the CBD. The restrictions proposed in those areas in combination with the actual spawning limitations will mean that Council will only have two months (November/December) at best in which maintenance of waterways can be undertaken.</p> <p>It is our opinion that the Councils maintenance activities can be managed to meet the desired outcome of protecting inanga spawning habitat without significantly compromising our ability to meet our level of service obligations under a permitted activity rule. In particular:</p> <ol style="list-style-type: none"> <li>1) Reducing the "potential" habitat areas to the areas that are included in Schedule 17 of the LWRP.</li> </ol>	Support in part. The Council seeks to have the inanga spawning sites included within Condition 7, but not inanga habitat.

		2) Allowing maintenance of the banks at known spawning sites from 1 June to 1 January with restrictions on, for example, the minimum grass length.	
Planning Maps	PC4 LWRP - 602	The Council is concerned that the extent of the inanga habitat areas identified on the planning maps do not reflect the actual potential inanga habitat. Please see accompanying attachment (Attachment 1) to this further submission for further discussion.	Amend to re-define inanga spawning habitat through a broader scientific understanding and field observation, as discussed in the accompanying Council attachment (Attachment 1).

## **Attachment 1**

### **Accompanying Christchurch City Council further submissions with regard to inanga spawning sites and inanga habitat areas within Variation 4 LWRP**

#### **Known inanga spawning sites (LWRP Schedule 17)**

The Council supports the use of this schedule, and the associated rules and policies, to protect inanga spawning habitat. CCC sites have been compared to Schedule 17, to assess whether there are any anomalies between the two resources. There were a number identified, but these were largely small variations in the locations and therefore are unlikely to be of significant importance. Although it is noted that it would be easier for the community if the maps were directly comparable. This information can be provided on request.

We did, however, note the following important anomalies:

- Avon River, Avondale Road: the CCC site extends approximately 400 m further upstream to Alloway Street, based on Aquatic Ecology Limited 2004 data
- Heathcote River, 35 m downstream of Waltham Road bridge: this site is ~2.3 km upstream of the most upstream CCC site
- Wharf Road Stream: the CCC site is located further upstream, with the ECan site ~65 m downstream of the CCC downstream buffer
- Waikekewai Stream (2 sites): the CCC does not have these sites recorded
- Corsers Stream: this is a CCC site, but is not included in the LWRP schedule
- Styx River tributary: the ECan and CCC sites are on different waterways
- Avon River at Orrick Crescent: this is a CCC site, but does not appear to be in the LWRP schedule (the site does not appear to line up with any of the Avondale Road sites)
- Heathcote River at Aynsley Reserve/Hansen Park: this is a CCC site, but does not appear to be in the schedule (the site does not appear to line up with the Opawa Road sites)

We also note that our global consents restrict works in these areas only during the spawning season, but the plan change proposes that consent is required for works being undertaken at any time of year. This could result in future consents impinging significantly on Council works, which are already affected strongly by fish spawning restrictions. This proposed restriction would be appropriate if works were to potentially affect spawning, but some of these activities could be undertaken outside of the spawning season without affecting the viability of future spawning (e.g. instream works).

#### **Inanga spawning habitat (LWRP planning maps)**

On reviewing the LWRP planning maps, we note the following significant additional areas of the City waterways are included as spawning habitat, above that recorded as known spawning sites in Schedule 17 and/or in the CCC maps:

- Avon River (including Porritt Park loop): the ECan upstream limit is much further upstream (~6.2 km) and much further downstream (~4 km)
- Horseshoe Lake, No. 2 Drain, Old No. 2 Drain, Dudley Creek, Charlesworth Reserve, Linwood Canal, Ferrymead Park and associated waterways, Purau Bay, Lake Ellesmere and associated waterways (with the exception of Kaituna and Waikekewai Stream), Waimak/Ashley

(excluding parts of the Styx), Takiritawau and Duvauchelle Bay: the CCC does not have any of these waterways as sites

- Kate Sheppard Stream: the ECan site extends further upstream into Travis Wetland
- Heathcote River: the ECan site extends ~2.3 km further upstream and ~6 km downstream of CCC sites
- Opara Stream: this site extends approx. 2.8 km further downstream to the coast

The rationale behind the mapping of inanga spawning habitat (and therefore the anomalies above) is best summarised in an email sent to me by Dr Michael Greer, Ecologist at ECan, on 30<sup>th</sup> October 2015 (but is also detailed in the scientific<sup>1</sup> report and the s32<sup>2</sup> report in part):

*'The difference between the upstream extent of the known spawning sites listed in schedule 17 of variation 4 of the LWRP and the mapped area, described as inanga spawning habitat, is the result of the different techniques used to derive these components of the plan. The scheduled sites are confirmed sites where eggs have been found. While the mapped area was derived from the upstream extent of tidal inundation during spring tides (determined by LiDAR). This area is what we consider potential spawning habitat since if appropriate vegetation was present spawning could occur. There is the argument that inanga rely on certain salinity cues to spawn and that they will spawn at the tip of the saltwater wedge. This is true and there is a preference to spawn at the tip of the saltwater wedge. However inanga are plastic and can, and do spawn, away from the upstream margin of the saltwater wedge. It is unlikely that a catastrophic event decimating the vegetation at the tip of the saltwater wedge would preclude fish from seeking vegetation downstream. Although they would have to spawn higher up the banks. There is even an Avon example for this. The Canterbury earthquakes had the same effect as a 1m rise in sea level on water levels in the Avon. However, not all spawning has moved upstream with the saltwater wedge. Instead some spawning still takes place at old sites, but has moved higher up the bank. It seems that the only factor which truly limits spawning is the presence of appropriate veg that is wet on the spring tide and dry for the rest of the month. I think the distance between sites on the Avon support this. Therefore, by protecting the entire tidal zone, the availability of spawning habitat should increase, as viable spawning vegetation cannot be destroyed at key times of the year. It also provides resilience, ensuring that there is available habitat even if known sites are destroyed. In contrast a schedule of known does nothing to increase spawning habitat as it only maintains the status quo.'*

The Council generally supports these maps, and associated rules and policies, as they will protect spawning areas that may potentially occur currently and in the future with restoration, but have not yet been identified. However, the Council does have concerns with how the extent of this habitat has been determined and the associated planning limitations. In the s32 report (page 31), it is stated that 'this option is based on mapping potential inanga spawning areas which have been identified by a GIS based model that maps the areas within which inanga spawning is likely to occur based on estimates of saltwater intrusion'. We do not consider that the locations identified reflect *likely* spawning locations as described. We are not aware of spawning ever being recorded in the City Rivers at these substantial distances upstream or downstream of the tidal wedge, regardless of some surveys checking these areas (as confirmed by Mark Taylor, Aquatic Ecology Limited, who has been involved in surveys for many years). We consider focussing on the entire tidal inundation is not a

---

<sup>1</sup> Greer, M., Gray, D., Duff, K. & Sykes, J. (2015). Predicting inanga/whitebait spawning habitat in Canterbury. Report No. R15/100. Environment Canterbury, Christchurch.

<sup>2</sup> Environment Canterbury (2015). Section 32 evaluation report for Plan Change 4 (Omnibus) to the Canterbury Land and Water Regional Plan. Environment Canterbury, Christchurch. Accessed from: <http://files.ecan.govt.nz/public/lwrp/pc4/PC4-LWRP-S32A-Report.pdf>

sound scientific predictor of spawning locations, given their known preference to spawn around the tidal wedge. Unfortunately, we can see no scientific evidence or basis for using the proposed salinity model to determine potential spawning sites. We do not consider it is appropriate to have a rule for something that we consider may never happen, rather than something that ECan considers is likely to happen. The Avon River example in Dr Mike Greer's email, may instead indicate spawning philopatry, with inanga selecting past sites, regardless of salinity changes. In this case, these locations would be covered by Schedule 17. However, Mark Taylor has also confirmed that they have recorded only a small shift in the tidal wedge in this river, regardless of earthquake effects.

We do consider there is benefit in these maps, but that they should instead be based around potential movement of the tidal wedge and buffers around these areas. This mapping and schedule could be updated regularly as more information comes to hand. Or alternatively, the activity could still be permitted in these areas, if there is evidence that no inanga spawning is currently occurring (as determined by a suitably qualified ecologist), the exception to this being the removal of vegetation, which might facilitate spawning in the future. Either of these approaches would significantly reduce consenting requirements for many occasions where there are in fact no effects to mitigate. This will also reduce consenting resourcing with ECan, as the current mapping approach could increase consent numbers significantly. However, even with an assessment to determine whether the activity is permitted, it is noted that costs to the applicant would still be increased to mitigate effects that potentially are not present.

#### **Potential consequences of proposed changes**

We consider there may be the following consequences of the proposed inanga spawning sites and habitat, as well as potentially other unforeseen issues, to mitigate effects on spawning that may not be present:

- Under the review clause for our current consents, or for future consents, sites will be aligned with the additional (1) known inanga spawning sites (Schedule 17) and inanga spawning habitat (LWRP planning maps), and (2) works at known inanga spawning sites will be restricted at any time of year, instead of only during the spawning season. This may significantly impinge on current CCC waterway maintenance and restoration capabilities.
- Higher consenting requirements for the Council, the community and ECan, which will increase costs and timeframes, and therefore may inhibit positive enhancements being undertaken.

#### **Decisions requested**

- Amend Schedule 17 to ensure consistency between CCC and ECan observed sites of Inanga spawning within the Christchurch City's boundaries.
- Amend to re define inanga spawning habitat through a broader scientific understanding and field observation, as discussed in above.