

**BEFORE THE CANTERBURY REGIONAL COUNCIL  
HEARING COMMISSIONERS**

**IN THE MATTER** of the Environment Canterbury (Transitional  
Governance Arrangements) Act 2016

**AND**

**IN THE MATTER** of submissions on Proposed Plan Change 7  
to the Land and Water Regional Plan and  
Proposed Plan Change 2 to the Waimakariri  
River Regional Plan

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**SUMMARY OF EVIDENCE OF DR BELINDA ISOBEL MARGETTS  
FOR CHRISTCHURCH CITY COUNCIL**

**10 November 2020**

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## INTRODUCTION

1. My name is Belinda Isobel Margetts. 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 officer's report.

## OVERVIEW

2. There were a number of issues raised in the Council's submission that relate to general waterway health and effects on aquatic biota where relief was sought by Council. These are outlined in Appendix A of my Evidence in Chief (**EIC**). I have recommended no further relief for each of these items as I am satisfied that they have been adequately addressed in the S42A report. The exception to this is the definition for Indigenous Freshwater Species Habitat, which I discuss below in paragraph 4.

## CORRECTIONS

3. As outlined in my rebuttal evidence, I would like to amend paragraph 14 of my EIC. This is to reflect the subsequent changes in the nitrate national bottom line due to the National Policy Statement for Freshwater Management 2020 (**NPS-FM**). This change is:

~~"I recommend that to achieve the nitrate-nitrogen limits within waterways, a median nitrate nitrogen target for the Christchurch groundwater system of 3.8 mg/L is specifically included within PC7. In addition, the reductions in Table 8-9 should ensure that the nitrate-nitrogen limits within waterways will be met.~~ **the PC7 limits and targets that relate to groundwater that feeds waterways should ensure that the NPS-FM 2020 bottom line nitrate target for rivers (2.4 mg/L) is met. This is on the proviso that where nitrate levels in rivers are below this bottom line, levels shall not deteriorate below 2018 levels (i.e. in line with Footnote 2 of Schedule 8 of the Canterbury Land and Water Regional Plan)**".

## **KEY POINTS OF DISAGREEMENT**

4. I consider that the definition of Indigenous Freshwater Species Habitat definition does not go far enough to protect species and should be amended to include:
  - 4.1. not just threatened fish species, but At-Risk: Declining species;
  - 4.2. all known locations of these species, not just their critical habitat (e.g. not only spawning sites for lamprey); and
  - 4.3. the most recent information on fish species presence, of which the Christchurch City Council can provide additional records for.

## **PROPOSED CHANGES TO LWRP**

5. Provided there is scope to do so, the changes to Indigenous Freshwater Species Habitat definition as detailed above in paragraph 4.
6. The proposed limits in Schedule 8 for 'spring-fed – plains' and 'spring-fed – plains – urban' waterways should be updated to reflect the new nitrate national bottom line in the NPS-FM. These values are 2.4 mg/L for the annual median and 3.5 mg/L for the annual 95<sup>th</sup> percentile.
7. To achieve the nitrate-nitrogen limits within waterways, the PC7 limits and targets that relate to groundwater that feeds waterways should ensure that the NPS-FM 2020 bottom line nitrate target for rivers (2.4 mg/L) is met. This is on the proviso that where nitrate levels in rivers are below this bottom line, levels shall not deteriorate below 2018 levels (i.e. in line with Footnote 2 of Schedule 8 of the Canterbury Land and Water Regional Plan).
8. A qualitative standard is included in PC7 to prevent adverse effects on stygofauna due to nitrate contamination of groundwater. For example, "nitrate levels in groundwater should not interfere with the life-sustaining quality of the aquifer" or "nitrate levels in groundwater shall not cause adverse effects on groundwater stygofauna and microbes".

Dated at Christchurch this 11<sup>th</sup> day of November 2020

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Belinda Isobel Margetts