

**IN THE MATTER OF** the Resource Management Act  
1991

**AND**

**IN THE MATTER OF** Applications for resource  
consent by the Central Plains  
Water Trust and a notice of  
requirement for the designation  
of land by Central Plains Water  
Limited associated with the  
construction and operation of  
the Central Plains Water  
Scheme

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**SUMMARY OF SUPPLEMENTARY SUBMISSIONS ON BEHALF OF  
THE DIRECTOR-GENERAL OF CONSERVATION**

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Dated: 25 August 2008

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Director-General of Conservation  
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## SUMMARY OF SUPPLEMENTARY SUBMISSIONS ON BEHALF OF THE DIRECTOR-GENERAL OF CONSERVATION (THE DEPARTMENT)

### 1. INTRODUCTION

1.1 In the Commissioners Minute (No 4) (The Minute) the Commissioners provided the Applicant (CPW) with the option of providing further information in respect to a number of matters including (para 13) "*Canterbury Mudfish and other Section 6 matters*".

1.2 In particular the Commissioners were seeking:

- CPW's "...proposals to address the requirement to protect significant habitats of indigenous fauna and in particular Canterbury Mudfish, and threatened bird species".
- "Proposals for enforceable and certain consent conditions dealing with ..." the issue of protection.
- "A clear statement as to the objectives of the management plan".
- "Submissions as to the interpretation and application of Section 6(c)..." in particular the meaning of protection in this context – the protection of the significant habitats which will be affected by the proposal or protection of the overall habitat of the relevant species?
- "Does mitigation or offset achieve protection, where existing significant habitats will be destroyed or significantly reduced in size and /or quality? If so does the offset need to provide an equivalent quantity and quality of habitat?"
- "How will protection of the new or enhanced habitat be achieved via consent conditions or otherwise?"
- "The Applicants position in respect of Section 6(c) and whether it is satisfied that protection will be achieved by the conditions of the proposed designation or other means.

- Dr Allibone’s expert opinion as to whether what is proposed will ensure that the significance of the habitat of the Canterbury mudfish within the valley will be ‘protected’/ kept safe from harm.
  - In particular is he satisfied that a viable, high quality (significant) population of Canterbury mudfish would endure in the long term in the valley and/or in the location of other significant habitats? Will such population be at the same or similar quality and quantity as present? Will overall native fishing biodiversity values be maintained within the valley and/or within the Ecological District and Region?
- 1.3 Other questions were asked in respect of the proposed CPW take regime in regard to potential effects on (interalia) “*instream value*” (para 15).
- 1.4 In response CPW filed supplementary evidence (SE) from Dr Richard Allibone presenting additional information (SE para 2) regarding:
- The goals for Canterbury Mudfish protection and mitigation
  - Significant mudfish habitat in the Waianiwaniwa Valley
  - The proposed mitigation for the mudfish habitat lost in the Waianiwaniwa Valley
  - Protection of mudfish in other parts of the CPW command area
  - Mitigation for effects on Canterbury mudfish.
- 1.5 CPW also filed revised conditions relating to the mudfish in the evidence of Mr Tipler (SE Appendix C – Revision A). In addition evidence was filed in respect of an amended CPW take regime.
- 1.6 Finally CPW presented legal submissions in respect of Section 6(c) and whether protection of the mudfish would be achieved by the conditions.
- 1.7 The Minute (para 9) allowed for a response to the additional evidence and legal submission from other relevant witnesses and counsel. Accordingly the Department is presenting supplementary evidence from Associate Professor Angus McIntosh on the revised Canterbury mudfish mitigation plan. I will also be presenting additional legal submissions in respect of Section 6(c), revised conditions of consent and comments in respect to the effects of the amended CPW take regime on instream bird values.

## 2. SECTION 6(c)

- 2.1 My submission of 20 May 2008 (DOC Submission) addressed Section 6(c) in paras 18.5 – 9 and I will not repeat those points nor will I repeat the points re mitigation/environmental compensation/biodiversity offsets in paras 15.1 – 8. Rather this submission will focus on the issues raised by the CPW supplementary evidence and submission and, in particular whether the proposal to translocate Canterbury mudfish into the proposed artificial waterways recognises and provides for the ‘protection of significant habitat as required by Section 6(c).
- 2.2 The requirement under Section 6(c) is to recognise and provide for the protection of significant habitat of indigenous fauna. There seems to no dispute that the current habitat at the Waianiwaniwa Valley is significant as far as the mudfish are concerned (McIntosh EIC para 6.1, Allibone SE para 5). Although not pristine (and in places degraded) it has managed to sustain what is “...very likely the largest and most significant population of Canterbury mudfish in existence.” ( McIntosh EIC para 2.3). It “...is the most significant habitat remaining because of the abundance of fish, the size of the fish and spatial extent of the population by comparison to other known populations.” (McIntosh EIC para 2.16).
- 2.3 Dr Allibone (SE para 6) argues that without the mudfish the existing stream habitat is not significant. Further that the proposed new artificial “...waterways will provide habitat of at least equal quality to that present in the valley ..” with some additional benefits in respect to riparian management and water quality/quantity (SE para 35). On that basis the CPW legal submissions argue that the revised CPW mudfish proposal recognises the protection of significant habitat and provides for it (Legal Submissions on section 6(c) paras 9-10).
- 2.4 In my submission the distinction made between the habitat and the population is a curious one. Clearly the two are linked because the habitat supports the indigenous fauna. As a significant population of mudfish are present, the habitat is significant. It is an interesting proposition to argue that, by removing the fish from the habitat and placing them somewhere else, and then destroying the original habitat, section 6(c) is met. Such an approach fails to acknowledge that the proposal will impact on current significant habitat of indigenous fauna or

will result in adverse effects on both the habitat and the fauna. It also fails to acknowledge that section 6(c) refers to significant habitat.

- 2.5 'Habitat' is defined as the "*natural home of plant or animal*" (Concise Oxford) or "*Ecology – the natural conditions and environment in which an animal lives e.g. forest, desert or wetlands*" (Encarta Dictionary). In this case the Waianiwaniwa Valley provides the "*largest known contiguous Canterbury mudfish habitat*" (McIntosh EIC para 2.12) of at least 23 kilometres. To replicate that natural habitat would require a low gradient connected stream network of at least 23 kilometres (McIntosh EIC para 4.2). The natural stream network includes wetlands and oxbows as well as the stream channel. The natural habitat is not just a simple stream channel but a stream and wetland complex with low gradient and deep pools. Further in Associate Professor McIntosh's EIC (paras 2.3 – 16) he discusses aspects of the habitat which contribute to the population's characteristics. These include the "*high quality mudfish habitat*" (para 2.8) found in wetland remnants, and the interconnected natural stream/wetland complex. "*This rare combination of conditions makes the Waianiwaniwa River valley a unique ecosystem and creates an important 'whole catchment' refuge containing the most significant remaining population of Canterbury mudfish in existence.*" (para 2.15).
- 2.6 The new CPW mitigation proposal is to replace the current natural stream habitat with 3 artificial waterways above and on either side of the reservoir totalling some 20 kilometres. These channels will not have the same low gradient and wetlands, or meanders of the natural valley habitat. They are 3 distinct and isolated channels as opposed to an interlinked natural stream network. Further the original habitat is destroyed before the success of the translocation can be assessed. (Dr Allibone believes it will take at least 10 years for the mudfish population to develop a large size range (SE para 36)). As Associate Professor McIntosh concludes it will not provide similar natural habitat as the existing one. The proposed additional benefits of better water quality, water flow and predator control are of marginal benefit. They are not sufficient to justify loss of the natural stream habitat.
- 2.7 Therefore in my submission the proposal to exchange an existing significant mudfish natural stream habitat for an artificial waterway into which mudfish may or may not be successfully relocated does not meet the requirements of Section 6(c) to recognise and provide for the protection of that habitat.

2.8 CPW supplementary submissions refer to Royal Forest and Bird Protection Society of NZ Inc v Buller District Council and Anor HC CHCH CIV-2005-485-001240 21 December 2005 Panckhurst J. as authority that relocation of a species and predator control can meet the requirements of Section 6(c). The issue on appeal in the High Court in respect of the indigenous fauna was the standard of proof in assessing the mitigation plan for Kiwi and snails and whether the mitigation proposals were “off-site proposals” more correctly to be considered as compensation rather than mitigation and hence beyond the scope of section 5(2)(c).

2.9 The ‘snails’ litigation in the Environment Court and High Court established that in that case a mitigation plan which included measures to relocate fauna from one area to another could be acceptable. However I don’t think the ‘snails’ case is authority that the CPW mitigation plan would similarly be acceptable. In my submission there are a number of crucial differences between the two proposals:

- The ‘snails’ case was in the context of a proposal to mine 10% of the snail’s remaining habitat and translocate 10% of the remaining population (at para 65). The kiwi habitat was also significantly larger than the area of the mine site (para 62). The whole population was not at risk.  
*“[74] I am unpersuaded that the Court erred in its analysis of the mitigation plans in this instance. While the values at stake were of national importance, the Court made factual findings that about 10 kiwi and up to 200 snails (10% of the population) were at risk from the mining activity. Without in any way diminishing the value at stake, it was not, therefore, a situation where entire populations were at risk from the proposed activity”.*
- The snail and kiwi translocations would be accompanied by predator control programmes over an extensive area of habitat beyond the mine site. The successful implementation of those programmes would lead to the long term enhancement of species numbers (para 86).
- Further the snail translocation is not permanent as the life of the mine was to be limited to 10 years. Once mining is complete the site is to be revegetated and the snails translocated back to the rehabilitated mine area.

- While the success of the translocation is uncertain the remaining habitat and populations will benefit from the predator controls.

*"[81] The impact of the mining proposal was succinctly summarised in these terms:*

*[160] We recognise that the proposal will potentially remove the whole or part of the habitat of ten great spotted kiwi and will remove completely the habitat of around 10% of the population of Powelliphanta "patrickensis". There is no certainty that populations of either of these species will be restored to the area of the mine site. Nevertheless we consider that the proposed predator-proof areas will improve the quality of the habitat that remains; thus the proposal is not inconsistent with policies to protect the significant habitats of indigenous fauna".*

- The coal resource was of national, regional and district importance (para 84).

*"[84] At the forefront of his submission on this aspect Mr Christiansen referred to an inquiry made by the Court of counsel and to their response as recorded in the decision:*

*[61] The parties accepted that the fact that there were section 6 matters was not determinative of the application. In respect of matters under section 6(a), 6(c) and 6(e), there was no disagreement that these matters of national, regional and local importance were directly relevant to the application before the Court. Further, there was no argument that the landscape and features, if not outstanding under section 6(b), had very high value. Nor was there any dispute that the coal resource had national, regional and district importance....."*

2.10 The CPW reservoir will inundate virtually the whole of the Wainiwaniwa Stream mudfish habitat in perpetuity. It is of a completely different scale in respect to the impact on the Wainiwaniwa mudfish. The differences between the effects of the 2 proposals on the significant habitats involved (i.e. 10% of the snail habitat against most of the mudfish habitat) mean the findings of the Environment Court in respect to Section 6(c) in respect of the West Coast mine can not be applied to the CPW proposal.

2.11 In my submission to argue it is acceptable to destroy almost all of the Canterbury mudfish habitat in the Wainiwaniwa Valley on the basis that an attempt is made to translocate and establish a population in artificial waterways is unacceptable. Furthermore does not constitute "*protection of significant habitat*".

- 2.12 The success of the proposed replacement habitat will not be known for at least a decade after the loss of the natural habitat. The loss of significant natural habitat is permanent while the success of the artificial habitat is unknown and untried.
- 2.13 If the proposal does not protect the mudfish habitat will the mitigation plan mitigate/compensate for the loss? The tests for mitigation/compensation were outlined in my previous submission at para 15.4. is it of comparative value and will it be effective?
- 2.14 Based on Associate Professor McIntosh's assessment the answer must be that the artificial habitat will not be of equivalent value and that there is no assurance the mudfish can be successfully translocated or develop into a significant population.
- 2.15 I acknowledge that section 6(c) does not provide a veto and the impact on the mudfish habitat becomes a matter to be weighed in the overall judgement. However, the protection of the largest and most significant Canterbury mudfish habitat and population is a matter of national significance (Allibone SE para 5) and thus should be afforded significant weight.

### **3. OTHER MATTERS**

- 3.1 Legal Protection: There is no proposal to provide any protection for the remaining mudfish habitat within the Waianiwaniwa downstream of the reservoir. If it involves 3<sup>rd</sup> party land it would need to be negotiated with the landowners.
- 3.2 Consent conditions/Management Plan:
- CRC 061939 condition 2 in relation to the Mudfish Protection Management Plan has been amended (Tipler S E Appendix C – Revision A) but only to explicitly provide for the 20km of new habitat above the reservoir water level. There are still no quantitative criteria that could be measured. Nor is there any requirement that the artificial mudfish habitat be assessed as significant before the existing habitat is destroyed. There is no change to the conditions relating to promotion of legal protection of mudfish habitat 2(h) which only requires "promotion of legal protection" or to 2(k) "Provision of

*opportunities to under take revegetation*". These provisions are therefore no more enforceable than they were previously

- A new condition 3 has been added which requires the construction of new habitat within the valley and protection of mudfish habitat within the Hororata River catchment prior to filling the reservoir.
- The General Conditions for the Farm Management Plans 11(e) and (f) have not changed and still only require survey of potential mudfish site and exclusion from any actual sites of cattle, deer or pigs or provision of alternative habitat and translocation. The draft conditions of consent therefore appear to be no more certain or enforceable than they were before.

#### **4. EFFECT OF MODIFIED CPW FLOW ON INSTREAM VALUES**

##### **4.1 Birds**

CPW's supplementary evidence in respect of the modified flow proposal concentrates on the effects on recreational values, e.g. jet boating, kayakers, anglers. This is perhaps not surprising given the specific reference to these values by the Minute. However as the Minute noted (para 15) there are other instream values that have to be taken into account in assessing the modified CPW proposal. The evidence does not appear to have addressed the effects of the modified proposal on instream values, i.e. birds and in particular the impact of mammalian predation.

- 4.2 John Hayes is giving supplementary evidence for Fish and Game in respect to an unmodified 80 cumec minimum flow on B permits in respect of salmon angling, fish and aquatic invertebrate habitat in the Waimakariri River. Professor Ken Hughey gave evidence about the potential effects of the original CPW flow proposal in respect of birds. His evidence concentrated in particular (but not exclusively) on the effect of mammalian predation and its relationship with island nesting and river flows. He was therefore asked to consider Tipler's revised flow proposal and John Hayes evidence. He advised that he agreed with Hayes that the minima of 80 and 100 cumecs respectively provide more feeding and food producing habitat than either the initial CPW proposal or likely Tipler's revision.

4.3 However Professor Hughey was unable to comment on the effect of Tipler's revised flow without further data analysis comparable with the evidence he presented data analysis that is directly comparable to that presented in his evidence in respect of mammalian predation.

## 5. CONCLUSIONS

- The revised Canterbury mudfish mitigation plan does not provide for the protection of the significant mudfish habitat in the Waianiwaniwa valley.
- There is no certainty that it will be possible to construct suitable artificial habitat and successfully translocate mudfish into it. Let alone recreate the existing populations characteristics.
- Unlike the 'snails case' there will be not be the remaining habitat to support an enhanced population in the event that the translocation fails.
- The benefits for the mudfish do not outweigh the loss of their natural habitat or the risks of translocation.
- The revised mudfish proposal would not constitute sustainable management.
- There is no evidence of the effects of the revised CPW take on mammalian predation of birds.

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Dated: 25 August 2008



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22 August 2008

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**Attention:** Jen Miller

Dear Jen

You asked me to consider the supplementary evidence of Mr Cliff Tipler and to evaluate it in the context of how it might relate to the habitat needs of birdlife on the Waimakariri River – you also asked me to consider 80 and 100 cumec 'B' Block minimum flows at the Old State Highway bridge in the same contexts.

In carrying out this brief evaluation I have taken account of my principal evidence and that of John Hayes from Cawthron Institute as well as his draft supplementary evidence. I have also liaised with Richard de Joux over flow regime interpretation matters.

In terms of IFIM-habitat modelling of foods and feeding habitat of riverbed nesting birds I concur with the views of John Hayes, i.e., 80 and 100 cumec 'B' Block minima are superior to the CPW application and to the revised Tipler figures.

In my principal evidence I paid special attention to the relative security of nest sites from primarily mammalian predators and to that end developed a relationship between islands of >2ha and river flows (see Paragraph 2.110, Figure 7, and Figures 9a and 9b). In that evidence I suggested an unmodified flow of at least 60 cumecs was needed – Figures 9a and 9b are attached to this letter with a dashed line added to highlight how minimum river flows under various scenarios vary around this point.

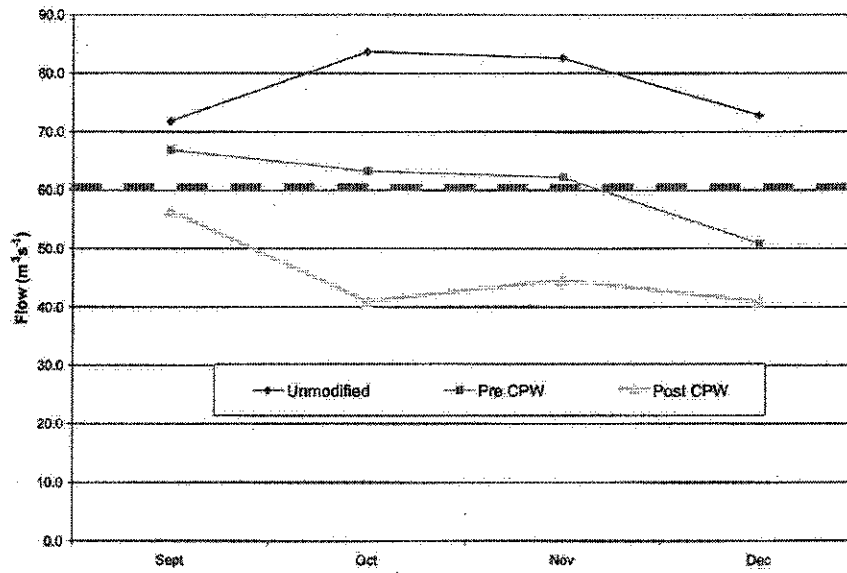
I have spoken to Richard de Joux about the Tipler flow recommendations. We are both of the view that significantly more data analysis would be required to allow a proper evaluation of the revised flows against my recommended birdlife requirements – this analysis has not been provided by the applicant and nor is it otherwise available to me.

Having drawn the above conclusion there are nevertheless some points worthy of making. There is no doubt that both 80 and 100 cumec 'B' Block flow minimums would provide greater levels of island nesting security than would the initial CPW flow proposals. It is not possible to determine what affect the revised Tipler suggestions would have without substantial further data analysis.

Yours sincerely

Dr Ken Hughey  
(Professor of Environmental Management)

Figure 9a. Waimakariri monthly minimum flows – 1971.



The dashed red line is the critical threshold for island nesting security

Figure 9b. Waimakariri monthly minimum flows – 1991.

