

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

**AND**

**IN THE MATTER** of an application pursuant to Section 201 for  
a Water Conservation Order on the Hurunui  
River.

**STATEMENT OF SUPPLEMENTARY EVIDENCE BRIAN JOHN ROSS  
ON BEHALF OF  
NORTH CANTERBURY FISH AND GAME COUNCIL  
Dated 20 April 2009**

**INTRODUCTION**

1. I prepared a first statement of evidence dated 6 March 2009, in respect of Fish and Game's application for a Water Conservation Order on the Hurunui. I confirm the detail of my experience and qualifications set out therein.
2. I have been asked to provide supplementary evidence to the hearing panel in relation to the evidence given previously by Malcolm Bell.
3. I have been asked to specifically comment on his evidence contained in paragraph 5.2, sub paragraphs a – e; paragraph 5.3; and also to provide an opinion, based on my experience, as to the Hurunui River being representative of the way the rivers listed in Mr. Bell's evidence used to be, and how it compares to other rivers in our region that have an uninterrupted flow from their source to the sea.
4. Also in this statement of evidence I set out my comments in rebuttal in respect of the evidence of Richard Allibone, for Amuri Irrigation Company Ltd.

## **COMMENT ON THE RIVERS MENTIONED**

### **Background Information**

5. In his evidence Mr. Bell discusses the past and present condition of the Hororata and Hawkins Rivers (in 5.2 a and 5.2 b) and mentions the Selwyn River (in 5.3). For the purposes of providing the hearing panel with clarification, I would like to point out that these three rivers are, or to be more precise used to be, inescapably linked, particularly for their value as significant Brown trout fisheries.
6. The Selwyn River is the main tributary of Lake Ellesmere, and the Hororata and Hawkins Rivers are the main tributaries of the Selwyn River. Brown trout from Lake Ellesmere used to run up the Selwyn River in huge numbers, to spawn in it and the two tributary rivers, thus maintaining them as important and viable Brown trout fisheries.
7. Needless to say, anglers took advantage of these fish, either in the lake itself, or in the rivers, when the fishing season allowed. It is not that surprising, given the sheer numbers of well conditioned Brown trout available to anglers, that the Selwyn River attained an international reputation in the early days of Canterbury angling.
8. Combined with the Selwyn River flow becoming less and less permanent from below Coalgate downstream to below SH 1, and the resulting interruption to the huge spawning run of Brown trout from Lake Ellesmere, trout numbers have declined significantly.
9. This decline has been taking place for many years in the Selwyn River, as Brown trout numbers here declined from an estimated spawning run of 65,367 trout in 1949 (12,105 actually trapped and tagged), to 3000 trapped in 1977, to 562 in 1987, to 87 spawning fish in 2004, and finally the 2007 trap caught 265 Brown trout. This trap had to be constructed downstream of Coes Ford, as the river did not have enough water flow upstream, where previous fish traps were located. (Information from Acclimatisation Society / Fish & Game trapping records)

## The Hororata and Hawkins Rivers

10. When I began working for the North Canterbury Acclimatisation Society in 1978, both the Hororata and Hawkins Rivers were two very healthy self sustaining Brown trout fisheries of regional significance. Indeed, many anglers rated them even higher than that, not only for the quality and quantity of the trout present, but also because of their relatively unmodified rural locations and their relative closeness to urban centres particularly Christchurch.
11. These fisheries were viable in spite of the fact that both of the rivers were not always continuously connected to the Selwyn River particularly during the summer months and their lower reaches used to dry in an upstream direction most years. This meant that staff had to undertake fish salvage operations, most years, more regularly for the Hororata River than the Hawkins River. At the Hororata River these salvage operations were mostly undertaken at night time when the water would recede most, only to start flowing back downstream in the early hours of the morning. If the trout were not removed in these areas, they would be discovered dead there next morning in pools that had re-filled with water. I am not a hydrologist, so cannot explain how this happened, but you had to see it to believe this phenomenon. Salvaged trout were generally moved to permanent water upstream. This situation was already taking place in 1978 and continued through to when fish salvage effectively ceased ten to twelve years later.
12. Over time, periods of disconnection to the Selwyn River and continued drying of the rivers have increased. This coincides with increased water abstraction for farming and in the case of the Hawkins River, the wetland drainage near its headwaters in the mid 70's was having an effect. Periods of natural drought have also contributed to this increase in dewatering of the Hororata, Hawkins and Selwyn Rivers. The only time these rivers meet nowadays, is at flood events, and even then the Selwyn River does not flow every year to enter Lake Ellesmere.
13. Water quality has also declined because of continual low flows. As a recent example, ECAN erected signs at the Selwyn River at Whitecliffs this summer, advising of the presence of the toxic algae phormidium, and for the public and animals to avoid contact with the water, and including - no fishing!

14. It is my opinion that both the Hororata and Hawkins Rivers of today bear hardly any resemblance to the clean flowing rivers they once were, nor to the significant Brown trout fisheries they contained. I would concur with Mr. Bell's evidence that you would no longer recommend these two rivers as angling destinations.

### **The Waipara River**

15. My experience with the Waipara River is nowhere near as extensive as with the three rivers already covered, however I have been involved in fish rescue operations there because of the river drying up, particularly in it's mid to lower reaches in the early 1980's. I believe it is this continual interruption of the river flow to the sea, and the sea run trout that used to run upstream to spawn that has lead to a depletion of the trout stocks.
16. Speaking to anglers who used to regularly fish the Waipara River, particularly that part which flows through a long and winding gorge in its upstream reach, confirm to me my belief that Brown trout numbers have severely declined. Fish & Game have in recent years received submissions from concerned anglers seeking to have a trout release programme initiated on the Waipara River. Unfortunately we do not have a ready supply of hatchery raised Brown trout available to accommodate their concerns. I suspect that the dewatering effects of extensive areas of pine forestry development over the past 20 years in the headwaters would be a significant contributor to the cause of diminished flows.
17. It would seem that existing Brown trout present are no longer able to support even modest angling pressure. The river is now characterised by extensive periods of low to no flows, interspersed by short-lived but damaging, flood events with high silt loadings.
18. When these two conditions are combined along with a lack of any meaningful trout recruitment, the river can not maintain itself as a productive Brown trout fishery, and therefore it is no longer the popular fishing location it once was.

## The Ashley River

19. This is yet another example of a once abundant, self supporting Brown trout fishery, and a small but self sustaining Chinook salmon fishery, which is now for all intents and purposes gone. Indeed, it would be unusual these days to find evidence of Chinook salmon having reached their spawning grounds in the upper Ashley River and tributaries in Lees Valley. The failure of salmon to successfully spawn for three or four years in a row would effectively cause the extinction of that species there.
20. The reason for this is simply because of the fact that most summers, when the salmon ought to be running upstream on their spawning migration, there is no river flow in the Ashley River from just above SH 1 upstream to beyond Rangiora. This has increased in extent since the early to mid 80's, and would have also been exacerbated by natural drought conditions.
21. This is also an area requiring fish salvage operations by Fish & Game on an annual basis, and it is not uncommon to have to relocate several hundred mostly adult Brown trout up to 4kg to permanent waters upstream. In latter years, it is rare to find Chinook salmon smolts and even more rare to find adults in need of rescue.
22. The initial dewatering of the river over summer I believe to be a related effect of previous extensive wetland drainage and development in Lees Valley, in the early 1970's, where the huge wetland there acted in much the same way as a sponge, releasing the water contained therein at a controlled and gradual rate.
23. Since that time, there has also been further ground water abstraction for mostly agricultural use, from aquifers connected to the river. Water quality has also been compromised, due to continual low flows with the toxic algae phormidium reported as being responsible for the death and near death of pet dogs this summer and last.
24. I agree with the sentiments expressed by Mr Bell that the fact that the river dries up impacts negatively on the fishing experience, however, from my own observations, the Ashley River still supports a reasonably healthy Brown trout fishery in those areas of permanent flow, notwithstanding the annual dewatering of the area around Rangiora.

Continued use of Ashley River is possibly due to the fact that salvaged fish are transported upstream to permanent water, which would have the effect of boosting trout numbers in these areas. Fish and Game have also (for at least the last 2-3 years) been promoting the Ashley as a “close to Christchurch” fishery particularly in the early season or later in the permanently flowing reaches.

### **The Waikari River**

25. I know very little from personal experience about the Waikari River, which just goes to show that even after 31 years Fish & Game work there are still some places I have yet to learn about!
26. However, from what Mr Bell states in his evidence, and from what little knowledge I have gleaned from anglers who used to fish there, I have no doubt that what he says about it is correct. I suspect that it was one of those fisheries that had a loyal but somewhat secretive following, that is, it was not widely advertised to all and sundry as a top trout fishing location.
27. I can confirm however, that from what I have seen of the Waikari River, it is either dry or as good as these days, and thus it would be true that the trout would have also gone with little or no available habitat.

### **The Hurunui River**

28. From the information I have provided, there appears to me to be a number of characteristics in the past that were common to those rivers mentioned previously, and that they now have some quite different things in common today.
29. The first thing that stands out is the fact that flood events aside, there was more water in the rivers for much longer periods, and for much longer periods that water made a connection either to Lake Ellesmere for the Selwyn, Hororata and Hawkins Rivers, and to the Pacific ocean for the Ashley, Waipara and Waikari Rivers. Brown trout from Lake Ellesmere or from the estuarine or ocean environments made their way upstream to spawning grounds thus sustaining the fishery.

30. It is plain to me to see that this connection no longer happens to anything like the extent it did in the past. So it is little wonder that lack of water combined with the other degrading environmental effects, such as nutrient enrichment of the rivers, means that these rivers can no longer sustain healthy self supporting Brown trout (or in some cases Chinook salmon) populations.
31. Another thing these rivers had (and still have) in common is that they are all relatively close to Christchurch, where most of our anglers live. With the gradual demise of these local fisheries, for they did not all suddenly become trout-less overnight, anglers either were forced to seek alternate fisheries further a field or give up fishing. Given that the “give up fishing” option is to any serious angler not an option many of them would even consider in their wildest dreams, the next river north, the Hurunui, and still only an hour to an hour and a half away from Christchurch, must have been the logical next step for many anglers.
32. And they were proven to be correct, for here was a medium to large free flowing river from its source to the sea, that not only had a self sustaining population of quality Brown trout, but it also supported a moderate size fishery of Chinook salmon to boot. Compared to the degraded rivers they had left behind, the Hurunui River must have indeed seemed like the “Anglers El Dorado” that famous American angler and author Zane Grey referred to when he visited New Zealand in the early part of the 1900’s.
33. Of course the Hurunui River was always a well known fishery to local anglers, from Christchurch or Rangiora, and a few foreigners, who were probably quite happy to keep it that way. However, good news, as they say, travels fast, and so the river today attracts anglers from throughout the province and from further a field as well.
34. While the Rakaia and Waimakariri Rivers attract far larger numbers of anglers, as rivers they are not really comparable to the Hurunui River, being much larger braided rivers. The Hurunui River on the other hand is much more compact, and offers a much more unique and varied angling experience, including the landscape, from the river mouth to the high country beyond Lake Sumner, and up the South Branch. The upper reaches are

truly best described as backcountry fisheries. I have also heard of these areas described as “wilderness” fisheries, but this is a term I am not that comfortable with.

35. The Waiau River to the north is also unlike the Hurunui River for it is a much larger braided river, although it too is also uninterrupted and free flowing. However, the headwaters in St. James Station, and its tributaries such as the Hope, Boyle, Doubtful, Nina and Lewis Rivers also offer anglers a unique backcountry angling experience, including “trophy” Brown trout, not unlike that on offer in the upper Hurunui River and South Branch.

## **Conclusion**

36. In conclusion, and taking all things into consideration, while the Selwyn, Hororata, Hawkins, Ashley, Waipara and Waikari Rivers listed by Mr. Bell in his evidence, were undisputed quality Brown trout fisheries in their own right, they are what I would call “foothill” rivers and therefore the Hurunui River can not be considered as being “representative” of the way these rivers used to be.
37. The Hurunui River does have aspects of these foothill rivers, but having its headwaters near to the main divide certainly sets it apart from them. I also believe that the Hurunui River to be quite unlike the other larger east coast braided rivers of Canterbury. It offers a far wider range of angling opportunities in a more compact and accessible form, including a top quality self sustaining Brown trout fishery from its source to the sea, including the South Branch, and a sustainable but variable run of Chinook salmon.
38. The angling experience offered by Lake Sumner and the other Hurunui lakes only add value to what is I believe to be a truly outstanding fishery that is unique in Canterbury, if not a rare thing to find in the South Island these days.

## **Dr Richard Allibone, evidence dated 23 March 2009**

39. At paragraph 52 Dr Allibone states that in his evidence Mr Williamson claims that there were no issues with sports fish entrainment with the Amuri Irrigation Company Balmoral

take. At paragraph 53 Dr Allibone states that the Balmoral fish screen is effective in fish exclusion because it complies with the relevant consent conditions

40. Mr Williamson's evidence was not available for me to review but I am familiar with the Balmoral intake and potential issue with fish stranding there. I disagree that there are no issues with fish entering the scheme and that the fish screen is effective in fish exclusion to the standard currently sought by Fish and Game.

41. Fish and Game looked into doing fish salvage operations at the Balmoral scheme in the mid 1980's, however it soon became apparent that the conditions of the settling pond near the fish screens meant that we could not work in the depth of silt there, and the distribution race downstream was much too deep (when shut-down) for staff to safely electric fish there. Given the design of the fish screens Fish and Game has every reason to believe that sports fish would get past the screens just as they do at the Waiau River irrigation scheme, where I organise annual fish salvage operations (upon the scheme shutdown at the end of irrigation season). As far as the Hurunui scheme being considered as suitable fish habitat for the entrained fish, of course it can not be considered as such because of the annual shutdown and resulting dewatering during the winter months. It is likely that trout do survive in the siphons, but there can not be much food to sustain them during the relatively unproductive winter months. I would expect that adult trout would eat all of the native fishes and smaller trout and salmon that they could find during that period.

**Brian Ross**

**8 April 2009**