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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STATEMENT OF EVIDENCE OF IAN HUNTSMAN ON BEHALF OF WHITEWATER CANOE CLUB

Background

1. My name is Dr Ian Huntsman.

2. I started kayaking on white water in England in 1977 in a borrowed hybrid fibreglass/canvas kayak. I started kayak racing in 1978 in a fully fibreglass kayak. I reached the highest level of wild water racing in Britain in 1983, racing in Division A. I also competed in slalom kayaking reaching Division 1. In 1990 I was a member of a British Canoe Union funded expedition to the Himalayas of North West Pakistan where we paddled on four rivers, two of which were first descents. The rivers would be classified as grade 5 with grade 6 sections that we did not paddle on. In 1991 I was selected to race in the combined British Universities team that competed in international kayak races in what was then Czechoslovakia. I moved to New Zealand in 1994 and started racing and organising events around Canterbury in 1995. I competed in the New Zealand team at the Wild Water Racing World Cup in 1999 when it was held in New Zealand. In 2005, 2006 and 2007 I was selected into the New Zealand team to attend the marathon kayaking world championships in Australia, France and Hungary respectively. I have also raced in the Avon Descent in Perth, Australia in 2005 and 2006 as a New Zealand representative. Each year the premier kayak river race in New Zealand is organised by the Arawa Canoe Club of Christchurch on the Waimakariri from Mt White to the Gorge Bridge. I won this race in 2005, beating an Olympic medallist, and again in 2007, coming second in 2006 and third in 2004. I have kayaked and rafted the Grand Canyon of the

Colorado River in 2001 and have kayaked extensively on the white water in the French, German, Swiss and Austrian alps.

3. I have been organising kayak events in and around Canterbury since 1995. I started organising the White Water Canoe Club Brass Monkey kayak races on the lower Waimakariri from the Pylons to the state highway 1 bridge in 1997 and have continued to be a member of the organising committee to this day. The races attract up to 150 paddlers to each race which are held on five weekends throughout winter. I am a member of the committee of the Arawa Canoe Club and have been on the committee since 2006 in one of two coaching roles. I am responsible for organising the coaching of beginners to kayak racing and training intermediate to advanced kayakers. I was President of Canoe Racing New Zealand for 2007. I am one of a small number of International Canoe Federation qualified marathon racing officials.

4. I am preparing this submission as an experienced kayaker but I will describe my education and employment history as they show an ability to understand some of the issues that may be raised. I have an undergraduate degree and a PhD from the University of Cambridge, UK. My specialist field is fluid dynamics, particularly aerodynamics of aircraft engines. I worked as a specialist aerodynamicist and turbomachinist for the University of Cambridge and Rolls Royce plc before moving to New Zealand in 1994 to start a lectureship and subsequently a senior lectureship in Fluid Mechanics at the University of Canterbury. I left the University of Canterbury in 2002 to begin a lectureship in turbomachinery, specialising in aerodynamics and hydrodynamics at the University of Cambridge, UK, which was half funded by Rolls Royce plc. In 2004 I returned to New Zealand and I am now employed as the Research Manager and principal hydrodynamicist at CWF Hamilton and Co Ltd where we design and manufacture water jets for marine propulsion. I have written and presented several academic papers concerned with various aspects of fluid flows and the experimental and computational modelling of fluid flows.

5. I have read the Code of Conduct for Expert Witnesses (Environment Court Practise Note 2006) and agree to comply with it.

Marathon Kayak Racing

6. I have for many years raced kayaks on rivers. Marathon racing is characterised as a long distance kayak race on either flat or moving water. When on moving water the competitor has to consider route finding skills and negotiation of river features as well as the opposition. Concentration levels are much higher, tactics play a much more important role and the race itself is much more rewarding than simply racing on flat water, in my opinion. In New Zealand there is an adaptation of triathlon racing, called “multisport” racing, where the competitors normally run, cycle and kayak over distances and water conditions that would internationally

be classified as marathon kayaking. One of the most well known examples of this is the Coast to Coast multisport race that uses the Waimakariri from Mt White to the Gorge Bridge for the kayaking stage.

Waimakariri river

7. I train regularly on the Waimakiriri River. From October to the end of February I paddle on either the Mt White to Gorge Bridge section of the river or the Willows (Thompson's Rd) to the state highway 1 bridge most weekends. During the winter from June to early September I paddle either the Willows or the Pylons (McLean's Island) to the state highway 1 bridge almost every weekend. In June each year I race in the South Island marathon championships. This race uses the Cam River in Kaiapoi and a stretch of the Waimakariri River beneath the state highway 1 bridge to the confluence with the Cam. This is normally one of four selection races for the New Zealand marathon kayaking team and is the only venue that can be used in the Christchurch area.

8. Each section of the Waimakariri has its own appeal. The Mt White to Gorge Bridge section is the Coast to Coast course and the course for the Arawa Canoe Club Classic River Race. This section is the longest section on the river that is regularly raced. Race times are around four hours for the 71 km paddle. It is also technically the most difficult section of the river that is raced on. The CPW scheme will not affect much of this section but the intake structure will be situated in a section of the river that is encountered by exhausted kayakers of all ability levels not registering danger as quickly as they would have been earlier in the day. The last part of this section of the river downstream from Woodstock is braided, fast flowing and shallow.

9. The lower sections of the Waimakariri River from the Gorge Bridge to the state highway bridge are all braided river sections where route finding is a skill that is learnt over a period of time. The banks of the river are lined with willow trees and man made features. Both of these are dangerous to novice kayakers should they venture too close. In low water there are fewer choices so kayakers often have to venture close to the willows.

10. The section of the Waimakariri River beneath the state highway bridge is flat and slow moving and is used for the South Island Marathon Championships and occasionally the national championships (last used in 2006). The kayaks used in these championship races use the Olympic rules and have rudders situated under the hull of the boat. If the boat runs aground the rudder damages the boat and renders the kayak useless. Courses for these races must have sufficient depth to avoid this occurrence. Championship races could be at risk as a result of the CPW proposal.

11. When the river flow falls below 60 cumecs, initially the boat slows due to shallowness of the river (the bow wave has a higher amplitude in shallow water and hence the wave drag component of the overall boat drag increases dramatically), paddles strike the bottom of the river and then the boat itself hits the bottom of the river as the river becomes progressively more shallow. More experienced kayakers tend to use narrower boats which are faster, more unstable and sit deeper in the water. As the river level drops below 50 cumecs these faster boats run aground more easily because they sit deeper in the water, rendering the speed advantage pointless. When this happens regularly as it has in the summer of 2007-2008 experienced paddlers stop training on the Waimakariri and do not attend the local races. When the experienced kayakers stop attending races so do the intermediates and then the beginners finally follow. Under this situation race entries reduce to very low numbers and should the low water levels continue the sport will move into decline.

12. I paddle on the Waimakariri River in flows ranging from 40-50 cumecs through to 500 cumecs. The different flows provide different features from choosing the correct braids and avoiding willow trees at the lower end to powerful fast flow and exhilarating waves at the upper end. In the range 120-200 cumecs the river is at its most enjoyable offering braids, route selection issues and interesting wave features.

13. A concern that I have with the CPW scheme is that the flows around 140 cumecs and higher move gravel banks in the river bed so that every few weeks the river is different and we have to maintain our skills at reading features and route finding. If the river were to spend significant periods of time at flows less than 140 cumecs then the river will flow in a well defined channel. Much of the enjoyment of paddling the river would disappear once we learnt the route of this channel and we would stop using the river as much as we currently do.

Rakaia

14. I have never paddled on the Rakaia River. I cannot comment on the effect of the CPW scheme on the kayaking on this river.

Future growth of the sport and importance of Waimakariri River

15. The Waimakariri River is a fantastic local asset that is used by many from all over New Zealand for recreational purposes. The sport of kayaking in Canterbury has grown dramatically in the time that I have been in New Zealand. With greater development in the North Canterbury area, for example the Pegasus township, it is likely that the number of kayakers and kayak races will increase further, providing the river character is not damaged by forming a shallow well defined channel or made unsafe by intake structures or the dangers of the willows on the side of the river.

Conclusion

16. The Waimakariri River is currently the main river in the Canterbury region that is used for kayak racing. The CPW scheme will significantly reduce the flows in the Waimakariri River and reduce its appeal to the sport of kayaking. Ultimately the sport of kayaking will suffer if the proposal is allowed to continue. It is my opinion that the scheme should be declined.

6 June 2008