

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.

**STATEMENT OF EVIDENCE OF PETER ROBINSON ON BEHALF OF
THE NEW ZEALAND SALMON ANGLERS ASSOCIATION INC.**

1. INTRODUCTION

- 1.1 My full name is Peter Robinson..
- 1.2 I am fifty three years old and have lived near the Waimakariri since 1963. I grew up at Pines Beach and currently live in Brooklands. I have chosen to live near the river since forming a lifelong love affair with the river and its natural environs from an early age.
- 1.3 I am particularly familiar with the lower reaches from the State Highway One Bridge to the mouth. I caught my first salmon at Kairaki at the age of eleven and have caught salmon at the mouth every season since. I also fish for trout in the lower reaches and whitebait at the mouth.
- 1.4 I have been actively involved in advocating for the instream values of the Waimakariri River. For example:
 - a. I was the secretary of the Waimakariri River Protection Association during the late 1980's and early 1990's. This organization successfully advocated for water quality reclassification in response to high pollution levels from effluent discharges in the lower reaches.
 - b. As a member of the NZSAA I am actively involved in enhancement work involving stripping of adult fish, egg rearing and ova planting.
 - c. I am an elected North Canterbury Fish and Game Councillor, and I participate in the Fish and Game, Fish in Schools project.
- 1.5 In my evidence today I will cover the following matters:
 - My personal angling experiences, with a focus on the lower river.
 - NZSAA enhancement work in the Kowai River area.
 - Effects of the proposed CPW scheme on the Waimakariri River salmon fishery.
 - Conclusion.
- 1.6 In preparing this evidence I have read the expert evidence of several witnesses for other parties, and I cite their evidence where relevant.

2. ANGLING EXPERIENCES

- 2.1 In this part of my evidence I describe the range of fishing activities I undertake on the Waimakariri, and when. I also explain my preferred flow range for fishing.
- 2.2 As noted above, my fishing usually takes place in the tidal reaches from State Highway 1 bridge down to the mouth, due to the convenience of being close to my home (Brooklands). This area attracts a high number of anglers due to its easy access and proximity to Christchurch. Although there is much competition among the crowd when the fish are running, the excitement and camaraderie is rewarding. There would be few places in the world where a quality fishing experience can be experienced within 15km of a major city.
- 2.3 My fishing season starts in the spring with whitebaiting. In my experience triggers for whitebait migration include river flows and moon phases. The best flows for whitebaiting are on a flood recession (similar to salmon). At this time, as a fresh

subsides between 1-4 days after a flood peaks, the river mouth comes alive with the juveniles of many species, including bullies, eels, flounder, shrimps, salmon, trout, mullet, smelts etc.

- 2.4 In early summer (November and December) sea run trout also enter the river on these freshes, often in large numbers, in pursuit of this food supply. A line up of 20-30 trout anglers can be seen most evenings in the vicinity of the highway bridges. I believe these trout fishing opportunities are directly related to the injection of fresh water into the ocean water of Pegasus Bay. The environment created in the plume of brackish water that extends kilometres into the sea must be of immeasurable importance in the life cycle of these and many other species.
- 2.5 The salmon start to arrive from the last week in November. If the river is fishable i.e. between modified 50m³/s and 100m³/s and not too turbid, there are chances of catching a fish. At this flow salmon migrate upstream and good fishing can be had throughout the river to the gorge and beyond through late November and December. There is often another run around mid January.
- 2.6 If the river is running low, say below modified 50m³/s and clear, the fishing can slow down through late January and February as the river warms up (above 17 degrees) and salmon stay in the sea waiting for a fresh.
- 2.7 The Waimakariri is at its best in March, the best weeks being the last in February and the first two in March (an old saying at the mouth is "fish the week of St Patrick's Day"). At this time over 300 people can be fishing each day, at the favoured time of the tide, between the bridge and the mouth.
- 2.8 I have a long term average of 7 salmon a season with a range from 1-13 fish. This past season was a bumper with 16 days straight in March where the total fish caught at the mouth averaged over 30 a day. I managed to land 12 for the season.
- 2.9 The major determinant of my success is river flow (and of course there being fish to catch). If too high, say above modified 100m³/s, the water is too turbid for catching fish - however this means many will escape to the spawning grounds. If too low, say below modified 50m³/s, the water warms and the fish wait for a fresh. If the fresh comes late in the season salmon bolt upriver and will be gone in a few days.

3. NZSAA ENHANCEMENT WORKS IN THE WAIMAKARIRI

- 3.1 In this part of my evidence I describe NZSAA enhancement activities in the Kowai River area, which is within the footprint of the proposed CPW scheme. I do not cover NZSAA enhancement activities further up the Waimakariri catchment, such as in the Porter River and One Tree Swamp.
- 3.2 Our organization has a long-standing (approximately 30 years) involvement with streams in the Kowai area. Streams in this area where works have been undertaken by the NZSAA include Hacketts Creek, Bills Stream, Little Kowai, Kowai, Cabbage Tree Flat Stream, and the Rubicon Stream.

- 3.3 Over this period the NZSAA has developed a cooperative relationship with many landowners in the area, particularly Bevan Mehrstens, the property owner adjoining Hacketts Creek.
- 3.4 Enhancement work by the NZSAA in these streams involves:
- a. Stream clearing, including pruning or removal of overgrown willows. This is done as required to enable fish passage and to enhance foot access for management purposes (e.g. to enable foot counts of spawning fish).
 - b. Gravel preparation, which involves raking of gravels to 'loosen them up' for natural spawning and also for planting ova boxes (known as 'Scotty boxes'). Again this work is done on a 'needs' basis.
 - c. Ova planting.¹ This is done during May and June each year. Ova are sourced from adult fish returning to hatcheries at Silverstream, Montrose and Tentburn. Ova are fertilised and incubated at Fish and Game's hatchery at Montrose. Up to 100,000 eyed ova are placed in specially constructed Scotty boxes, which are then placed in the stream bed. I have been actively involved in ova planting programmes in Hacketts Creek since 2003. In that year NZSAA planted 325 000 ova in the upper reaches of this stream.
- 3.5 These activities are only possible thanks to volunteers. Ova planting typically involves up to a dozen volunteers, while up to 40 volunteers at one time may assist with stream clearing and gravel preparation. The running of the Montrose salmon hatchery is also hugely dependent on volunteer labour.
- 3.6 The NZSAA also fund the building and installation of hatching boxes and the purchase of Scotty Jordan boxes, a product imported from Canada.
- 3.7 Thanks to these enhancement efforts, these streams collectively support a significant spawning resource. In good years, comprehensive records kept by fisheries ranger Bill Elson suggest these streams supported up to 1000 spawning fish (records available on request). In recent years when the run has been poor, returns to Hacketts Creek alone have been approximately 10% of the total Waimakariri run (figures based on foot counts undertaken by NZSAA volunteers).
- 3.8 The most productive stretch of the Hacketts Creek, that is, where the majority of the salmon spawn and fry develop, lies immediately in the path of the upper intake canal and will be seriously affected if not completely destroyed as a result.
- 3.9 The canal also appears to run closely adjacent to, or possibly through, Cabbage Tree Flat Swamp as well as crossing the Kowai below the confluences of the Kowai/Little Kowai, Bills Stream and Rubicon.
- 3.10 I enclose as Appendix 1 three maps of this area showing the path of the proposed canal in relation to these salmon spawning streams. Appendix 1 also shows a photograph of volunteers undertaking enhancement works in this area.

¹ This ova planting is undertaken by permission from Fish & Game, which itself has a permit from DOC to undertake such activities.

4. EFFECTS OF THE CPW SCHEME ON THE WAIMAKARIRI RIVER SALMON FISHERY

4.1 In this part of my evidence I turn to the specific effects of concern to the NZSAA. Many of these effects have been addressed in the evidence of witnesses for other parties, particularly Fish & Game and reporting officers for Environment Canterbury. To minimise duplication I cite where I agree with a particular witness about a specific area of concern.

4.2 The NZSAA submission was broad and encompassed most, if not all activities for which consent was sought that affect the Waimakariri. In my evidence today I focus on:

- a. Effects of the proposed diversion and take on:
 - River flows and associated instream habitat and angler amenity values;
 - Water quality; and
 - Salmon impinged on fish screens or entrained into scheme races.
- b. Effects of discharges, river works and permanent structures on:
 - Salmon spawning habitat in the Kowai area
 - Water quality;
 - Angler amenity values (natural character, etc.); and
 - Angler access to and along the river.

4.3 I expand on these concerns below.

Effects of proposed diversion and take

4.4 In relation to effects of the proposed diversion and take, I agree with the following witnesses:

- a. Mr Canham (Fish and Game) in relation to the national significance of the Waimakariri salmon fishery.
- b. Mr Bejakovich (Fish and Game) in relation to fish screening, and the need to set standards that ensure suitable protection of salmon fry from impingement or entrainment.
- c. Dr Hayes and Dr Olsen (Fish and Game) in relation to effects on instream habitat, noting in particular Dr Hayes concern about salmon passage, and their concerns about cumulative losses of invertebrate habitat (a key food source for salmon fry), and increases in periphyton growth (and the negative effects of that on key invertebrates).
- d. The evidence of various expert anglers (Fish & Game) in relation to flows necessary for salmon movement.
- e. Dr Meredith (Environment Canterbury), particularly in relation to effects on water quality resulting from increased flatlining, and consequent reduced dilution of existing point-source discharges (e.g. PPCS), and the likely increase in the turbidity plume from in-river gravel extraction activities.
- f. Mr Holland in relation to the shortcomings of the proposed take in relation to the relevant provisions of the Waimakariri River Regional Plan, particularly those parts of Objective 5.1 relating to salmon habitat and amenity values.

4.5 However I wish to raise some additional matters in respect of effects on fish passage, angler amenity values, and then on water quality in the lower river.

- 4.6 There has been much written about fish passage by expert angler submitters and NZSAA concurs in general with their evidence.
- 4.7 Under the CPW proposal the Waimakariri will be shallower overall and by truncating flood recessions returning adult fish will experience difficult upstream passage. The cumulative effects of this will be dire as fish experience difficult conditions for migrating most years, through February and March.
- 4.8 This 2008 season for example, there were only two freshes of any significance. The first lasted from Wednesday 13 February to Sunday 25 February. During this fresh salmon took the opportunity to run the river and ensured sufficient numbers of earlier returning salmon reached the headwaters. The second was lower and of much shorter duration toward the end of the season in late March. This was very important as its timing was crucial in moving the main run from a low flow situation up the river and to safety in the deeper water above the gorge.
- 4.9 Post CPW these freshes would have had a much reduced duration and thereby effectiveness. Salmon survival at all stages of the life cycle is subject to such a complex range and combination of random variables that in years with extended low flows these kind of isolated freshes, amid long periods of low flow, could prove the vital component in the species survival. Even Glova, for the applicant, is in agreement with the effect of extended low flows on salmon passage. *“The schemes takes will worsen the flow situation for adult salmon through lowering flows and harvesting small freshes-the occurrence of low flows will likely increase with Class A and B takes acting in concert. An extension of 30 days critically low flows may adversely affect the run size of that particular year class of salmon for several future generations.”*
- 4.10 In relation to angler amenity, as noted earlier, it is my experience that fishable flows for salmon angling (and also for whitebaiting and sea-run trout fishing) are between a modified 50-100 cumecs. This is a similar flow range to that put forward by expert angler Rick van der Zwet.
- 4.11 However a flow range of modified 60-80 cumecs is put forward by other expert anglers, and by Dr Hayes. The alternative option of an unmodified 100 cumec B block minimum flow (the “de Joux alternative”) has been shown by Dr Hayes to provide some protection of these flows. As I understand it, that would equate to a modified flow of just under 80 cumecs (i.e. 100 – [A block takes which should equal 22 cumecs]).
- 4.12 In my view, the de Joux alternative should have set the cut-off at an unmodified 120 cumecs. As I understand it, that would equate to a modified flow of just under 100 cumecs (i.e. 120 – [A block takes which should equal 22 cumecs]). This would provide protection of the modified range of 50-100 cumecs, which as shown by Dr Hayes have already been considerably affected by A block takes, and in my view should not be subject to any more pressure.
- 4.13 One other matter relating to angler amenity is the effect of the take on water temperature.
- 4.14 While I acknowledge the evidence of Dr Hayes who does not appear to be overly concerned about effects of the take on water temperature, I remain to be convinced

that this effect will be minor. Temperature is a prime determinant of salmon movement and activity. It is the experience of observant anglers that fishing often improves when a cold snap follows a period of warmer weather. Fishing is usually best in the first hour of the day and this is attributed in part to water cooling overnight. Longer periods of low flow and the resulting warming will impede fish movement and increase periphyton growth resulting in reduced angling opportunity.

- 4.15 Lastly I now turn to effects on water quality in the lower river.
- 4.16 In the lower reaches (tidal) of the river, prolonged periods of low flow result in algal blooms at which time the water quality becomes quite degraded. This is exacerbated by the effluent discharge directly into the river from the PPCS meatworks.
- 4.17 This effluent comes via an outflow located at the bridge on the Old Main North Road. PPCS have experienced difficulty in maintaining the discharge to within the conditions of their consent during low flow periods and rely on variable flows in order to maintain the conditions (Meredith para 69.). In 2007 PPCS were in breach for three months over the peak of the salmon season January to March (Ecan). During this time the tidal lower river up to 2kms downstream of the bridge, became badly polluted to the extent that silver fishing lures tarnished after a single cast. This situation will be exacerbated if river flows are kept lower for longer.
- 4.18 The excavation of gravel that contractors such as Ready Mix and Fulton Hogan undertake within the riverbed and river itself results in siltation and water discolouration throughout the lower river. Operating times are usually weekdays. On Sundays and Mondays the river is often beautifully clear in the lower reaches due to no excavation and no discharge from PPCS on the weekend. The best fishing is often experienced at these times. The siltation is most evident during prolonged low flows and periods without freshes. These conditions will be experienced more frequently under the CPW scheme.
- 4.19 Many of our members are also concerned that the Lower Waimakariri is becoming more silted in recent years with boaties experiencing difficulty in accessing boat ramps in the Brooklands lagoon and Kairaki Yacht Club where very shallow sand banks have formed. They attribute this silting to a combination of prolonged lower flows and the continued gravel extraction activities upstream that release silt that settles and builds up during these periods.

Effects of discharges, river works and permanent structures

- 4.20 In relation to effects from these activities, I agree with the following witnesses:
- a. Mr Canham, Ms Lucas (latter for Environment Canterbury), and expert anglers such as Mr McCrory in relation to the effects of river works and permanent structures on the high amenity values, natural character and general 'recreational settings' of the affected intake environments.
 - b. Mr Canham and Mr Holland in relation to effects of artificial channels (both in the riverbed and adjacent to it) on angler access to and along the river.
 - c. Mr Meredith and others in relation to effects of major discharges on salmon passage (as an attractant flow for upriver migrating adult salmon).
 - d. Mr Hay in relation to the effects on the Kowai area spawning streams.

- 4.21 As noted earlier in my evidence, the proposed scheme will have a major effect on the NZSAA's salmon spawning enhancement projects in the Kowai area.
- 4.22 In relation to Hacketts Creek, it appears the most productive reach would be completely destroyed by the placement of the headrace canal. Other directly affected waters include the Cabbage Tree Flat Stream and the Kowai River itself, although it is possible that effects on the Kowai may be less permanent.
- 4.23 I am not aware of any measures being put forward by the applicant to avoid, remedy or mitigate effects on these valued waters. As far as I am aware, the applicant has never attempted to consult with the NZSAA or Fish and Game regarding effects on these streams. This is despite the fact Fish and Game alerted Central Plains Water to this risk at least as early as 2003.
- 4.24 Appendix 2 includes email communication between those parties on this matter.

5. CONCLUSION

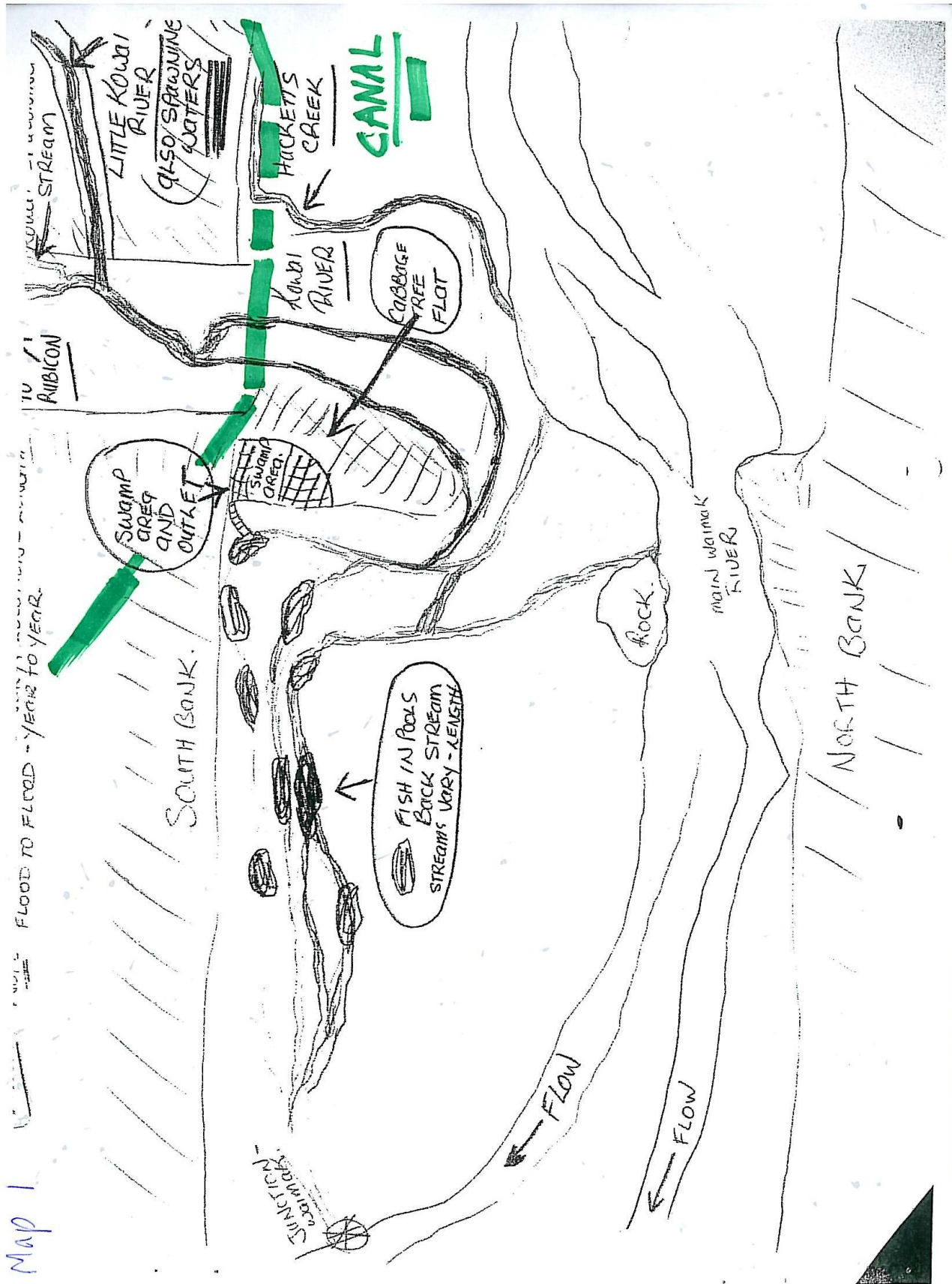
- 5.1 Based on the evidence which I have considered, as well as my own personal experience and knowledge of the Waimakariri, it is my opinion, and that of the NZSAA, that the proposed scheme as it stands would have significant and unacceptable adverse effects on the nationally significant Waimakariri River salmon fishery.
- 5.2 We are concerned by the apparent lack of attention to detail that exists in the application. Many expert witnesses for other parties have referred often to the lack of information provided by the applicant, and the difficulties this has raised for them to adequately form opinions. An example of this is the lack of attention to the Kowai area, which appears to have been completely overlooked by the applicant.
- 5.3 In general the NZSAA shares the opinions of witnesses for Fish & Game, and reporting officers for Environment Canterbury, regarding the effects of concern. In particular, we are convinced that relevant witnesses for these parties have provided compelling evidence that the cumulative effect of allowing current A and B permit allocations combined, will result in a degraded river system that will not sustain the salmon fishery. It is the opinion of NZSAA that the current flow regime as detailed in the Waimakariri River Regional Plan is set too low for both A permit and B permit water takes. If further abstraction is to be contemplated, this needs rectifying to suitably manage the cumulative effects of all abstraction on salmon habitat, and salmon angling, in the Waimakariri River.
- 5.4 However, as described in part 4 of my evidence, the NZSAA has its own views when it comes to some matters, some of which differ slightly from previous witnesses for other parties.
- 5.5 **In order to avoid, remedy or mitigate the effects of the CPW scheme it is our opinion that the consent should be declined.**

Peter Robinson
June 2008

APPENDIX 1: PHOTO AND MAPS OF THE KOWAI AREA

Salmon Enhancement work ova planting 2008

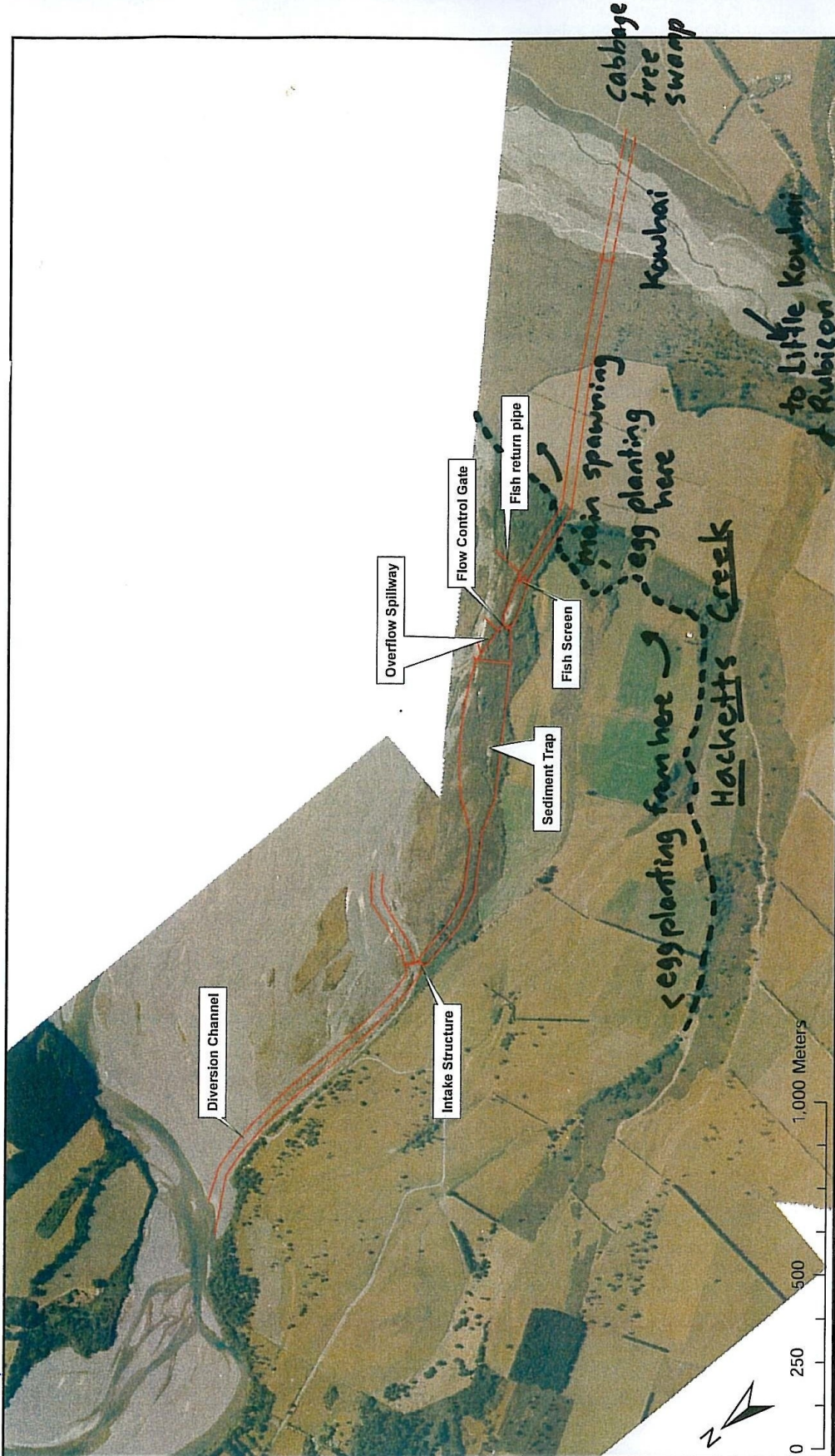
QuickTime™ and a
TIFF (Uncompressed) decompressor
are needed to see this picture.



Map 1

Map 1 Extract from Bill Elsons Diary

Map 2.



Rev	Description	App	Date

<p>Level 5 Lamborough House 287 Durham Street Christchurch P.O. Box 4479 Christchurch New Zealand</p> <p>Tel 03 374 8600 Fax 03 377 0655</p>		<p>File: 212647</p> <p>Scale: 1:10,000</p> <p>Original Size: A3</p> <p>Date Created: 23/02/2006</p>	<p>Designated: KO</p> <p>Drawn: FLO</p> <p>Checked: WL</p> <p>Approved: WL</p>	<p>CENTRAL PLAINS WATER ENHANCEMENT SCHEME</p> <p>General Arrangement Plan Upper Waimakariri Intake</p> <p>Status: Final</p> <p>Drawing Number: C-201</p> <p>Row: A</p>
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Map 2 showing Hacketts Spawning area

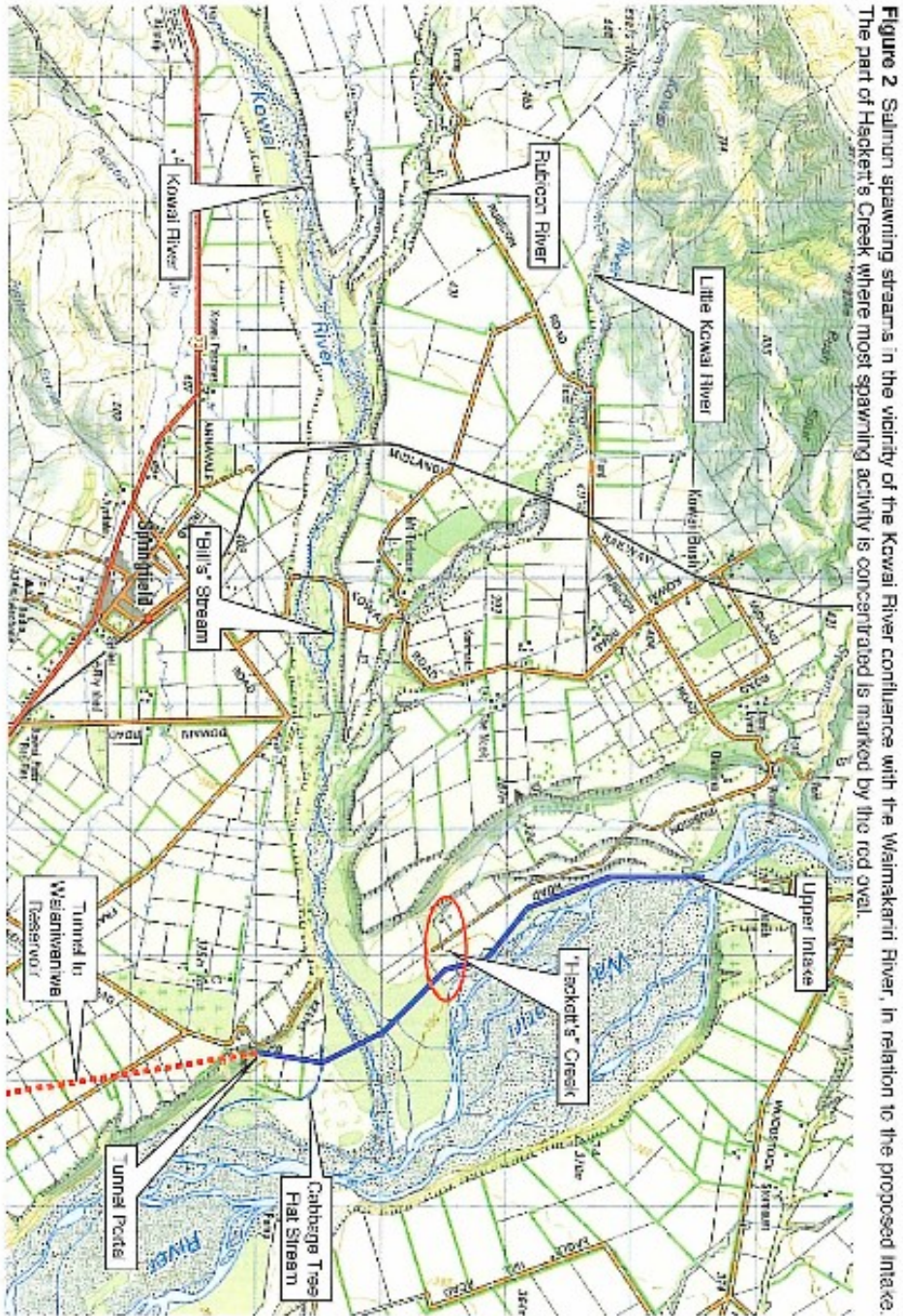


Figure 2 Salmon spawning streams in the vicinity of the Kowal River confluence with the Waimakariri River, in relation to the proposed intake. The part of Hackett's Creek where most spawning activity is concentrated is marked by the red oval.

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Map 3 Salmon spawning locations; Source Joe Hay Evidence

**APPENDIX 2: CORRESPONDENCE BETWEEN FISH AND GAME AND
CENTRAL PLAINS REGARDING KOWAI AREA**