

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

**AND**

**IN THE MATTER OF**      Resource Consent Applications by Central  
Plains Water Trust to take and use water  
and undertake other activities for the  
construction and operation of the Central  
Plains Water Enhancement Scheme

**EVIDENCE OF PETER FRANCIS CALLANDER FOR WAIMAKARIRI IRRIGATION  
LIMITED (WIL) AND WAIMAKARIRI DISTRICT COUNCIL (WDC) REGARDING  
PROPOSED CONSENT CONDITIONS FOR CENTRAL PLAINS WATER LTD (CPW)**

**INTRODUCTION**

1. My name is Peter Francis Callander.
2. My qualifications and experience have been set out in my previous statement of evidence to this hearing panel.
3. I confirm that I have read the Environment Court's Code of Conduct for expert witnesses and this evidence is prepared in accordance with that code. I agree to comply with the code's terms. In that regard, I confirm that the statements made in this evidence are within my area of expertise and I confirm that I have not omitted to consider material facts which might alter the opinions stated in this evidence.
4. This brief of evidence relates to the comments on the proposed consent conditions for the Central Plains Water scheme that are of concern to WIL and WDC.

**ISSUES OF CONCERN TO WIL and WDC**

5. WIL and WDC are concerned about the potential for works in the Waimakariri River and the resulting diversion, taking and discharge of water associated with CPW's ability to operate their own intakes at Browns Rock. The proximity of the intake is shown in Figures 3 and 3a and the concern is that works to allow abstractions, diversions and discharge on the true right bank for the CPW intake, sediment pond and fish bypass could adversely effect the operation of the WIL/WDC intake at Browns Rock.

6. This concern is partly recognised in Condition 7 of two of the consents related to the construction and operation of the Waimakariri River intake (CRC102330 and CRC102331, covering excavation works to construct and operate the intake) as proposed by ECan and CPW which states:

*“7. There shall be no activities undertaken by the consent holder in the bed of the Waimakariri River at the intake site, that would adversely affect the ability of Waimakariri Irrigation Ltd to train the river towards its intake at Browns Rock and the Waimakariri District Council stockwater scheme intake at the same site.”*

7. However, with respect, this seems a relatively ineffective condition because irrespective of what CPW are doing there would always be an ability to “train the river towards” Browns Rock. However, the amount, frequency and/or distance over which that training occurs may all increase due to CPW activities to an extent that constitutes a significant adverse effect.

8. The real effect that must be avoided or mitigated is any effect that CPW activities have on the ability of WIL and WDC to operate their intakes at the rates authorised by their existing consents. To achieve that outcome, the following condition is considered to be a more appropriate wording for Condition 7 in consents CRC102330 and CRC102331:

*“No works in the river bed, or the diversion or discharge of water shall be carried out in a manner that contributes to a loss of the ability of Waimakariri Irrigation Limited and/or Waimakariri District Council to operate their intakes at Browns Rock to abstract water as authorised by consents CRC000585 and CRC012907.”*

This proposed condition has been worded to cover all river works, diversions and discharges that CPW will carry out at their Waimakariri River intake and it should be placed on all consents that authorise those activities, namely: CRC102325, CRC102326, CRC102328, CRC102329, CRC061943, CRC102332, CRC102333 and CRC061982. These consents all relate to activities in or around the Waimakariri River intake, as specifically mentioned in the consent conditions, or through reference to Schedule C2 which identifies the intake site.

9. To further protect the existing WIL and WDC operations, the following new conditions are proposed for consents authorising CPW’s operational activities at the Waimakariri River intake, namely CRC102326, CRC102329, CRC102331, CRC061943, CRC102333 and CRC061982.

*“The consent holder shall maintain regular and ongoing liaison during the construction, commissioning and operation of their scheme with the operators of the Waimakariri Irrigation Limited /Waimakariri District Council Browns Rock intakes (authorised by consents CRC000585 and CRC012907) to identify any effects on the operation of these intakes resulting from the consent holder’s activities.”*

*“The consent holder shall operate its scheme in a manner that avoids, mitigates or remedies any adverse effects on the ability of the Waimakariri Irrigation Limited/ Waimakariri District Council Browns Rock intakes (authorised by consents CRC000585 and CRC012907) to operate effectively.”*

10. Consent CRC061972 authorises the taking of water from the Waimakariri River is naturally of considerable interest to WIL and WDC. They want to ensure that the reliability of supply to existing consent holders is protected. The currently worded conditions do not necessarily achieve that because they allow CPW to abstract water down to an unmodified flow of 66.1 m<sup>3</sup>/s, based on measurements at the Old Highway Bridge. In contrast, many of the Class A consent holders have restrictive conditions based on “measured” flows at the Old Highway Bridge, as determined by ECan, rather than the “unmodified” flow. Therefore, if ECan choose to interpret the measured flow without a correction for upstream abstractions, as is their current practice, the resulting pattern of restrictions is shown in Table 1 attached to my evidence. This demonstrates how the currently worded conditions allow CPW to still be abstracting some of their Class B water whilst Class A users are subject to restrictions. In particular, there are 20 A permit consent holders abstracting a combined total of 4.82 m<sup>3</sup>/s who are most disadvantaged because their abstractions are reduced in a pro-rata fashion from measured flows of 63 to 41 m<sup>3</sup>/s. Figure 1 shows the proportional availability between these users and the CPW B permit water and highlights the inequity in the allocations.

11. Clearly that is an unsatisfactory situation, however the CPW sharing rule in Condition 3 is correct because it uses “unmodified” flow measurements, as specified in the operative Waimakariri River Regional Plan. The problem arises because many of the existing Class A consents have been granted without reference to the “unmodified” flow regime.

12. To avoid the inequitable situation that would be created by the currently proposed conditions, a new sub-clause to Condition 3 should be added which states:

*“(vi) The abstraction of water at “unmodified” river flows of greater than 66.1 cubic metres per second shall only occur at times when A permit holders are authorised to exercise their full allocation.”*

13. WIL and WDC support the concept in Condition 3(iii) that CPW can only use A permit water with the agreement of A permit holders. To provide greater certainty, the Note at the end of Clause (iii) should state that "... written agreement must be in the form of a fax or signed written document".

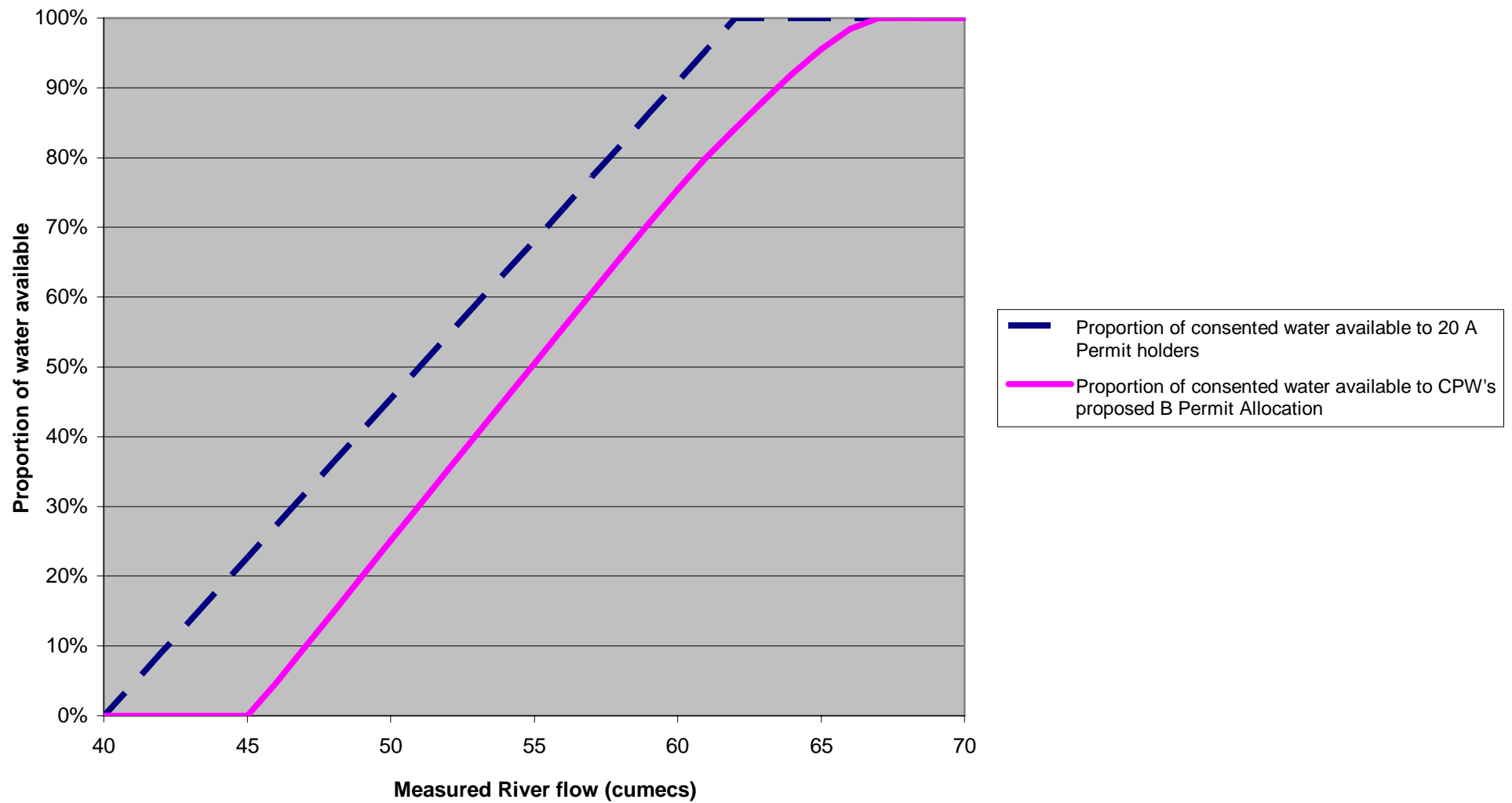
14. It is also assumed that the 40 m<sup>3</sup>/s mentioned in the second introductory paragraph of CRC061972 is in error and the number should be 24 m<sup>3</sup>/s.

15. Regarding the consent review condition (Administration condition 29), WIL and WDC would like to see a further reason for initiating a review to be:

*"... adjusting the Waimakariri River abstraction discharge and river works conditions to avoid adverse effects on both river levels and river bed levels."*

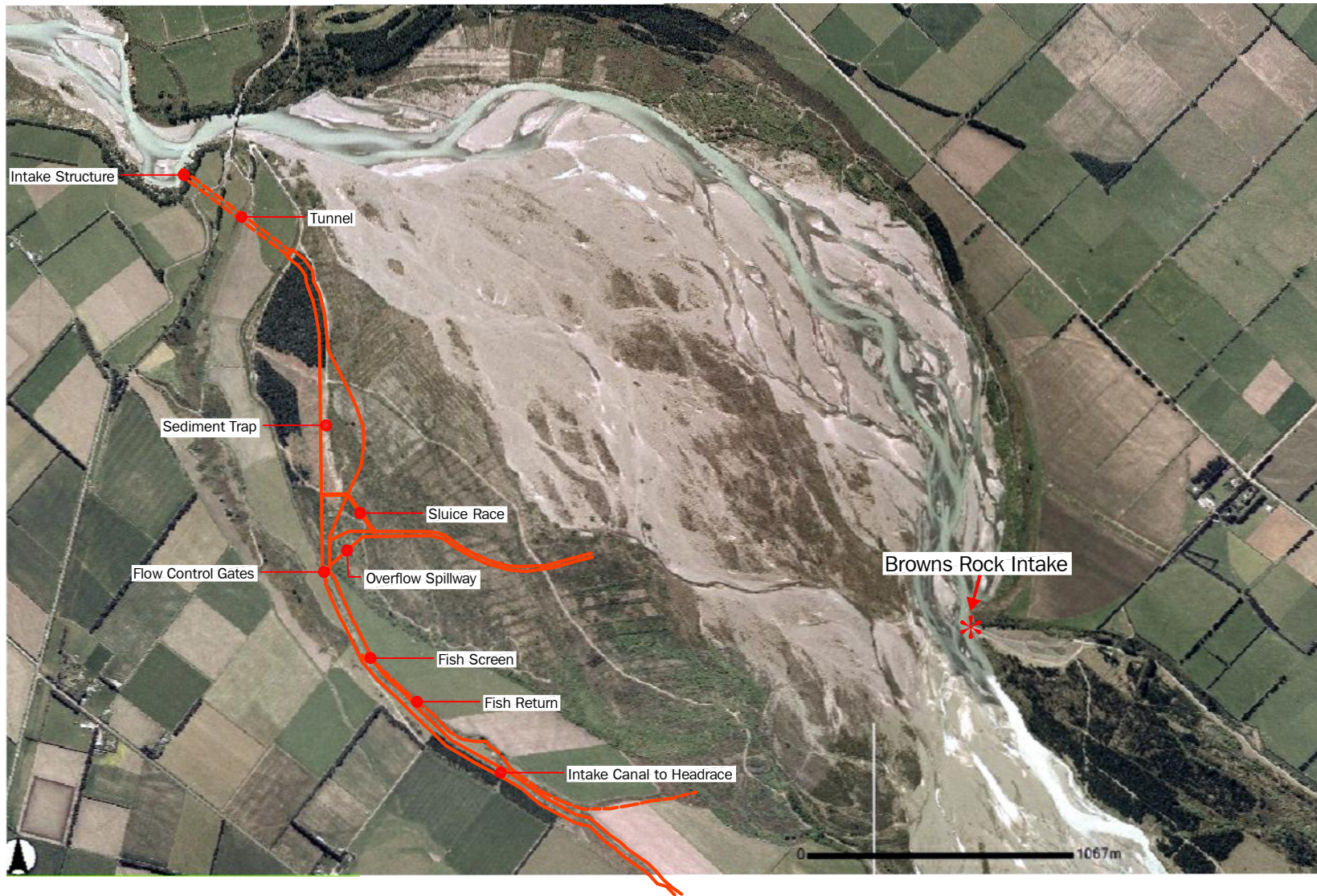
<b>Table 1. Comparison Between A Permit Holders and CPW B Permit Allocation in Proposed Conditions</b>			
<b>Measured River Flow at Old Highway Bridge (m3/s)</b>	<b>Total A Permit Water That Can be Abstracted (m3/s)</b>	<b>CPW B Permit Water Authorised by Proposed Conditions (m3/s)</b>	<b>Unmodified Flow at Old Highway Bridge (m3/s)</b>
70	22.3275	24	116.3275
69	22.3275	24	115.3275
68	22.3275	24	114.3275
67	22.3275	24	113.3275
66	22.3275	23.6138	111.94125
65	22.3275	22.9206	110.2481
64	22.3275	22.0741	108.4016
63	22.3275	21.1508	106.4783
62	22.3275	20.1891	104.5166
61	22.1057	19.2083	102.3140
60	21.8839	18.1070	99.9909
59	21.6620	16.9454	97.6075
58	21.4402	15.7537	95.1940
57	21.2184	14.5470	92.7654
56	20.9966	13.3327	90.3293
55	20.7748	12.1146	87.8894
54	20.5530	10.8947	85.4477
53	20.3311	9.6738	83.0050
52	20.1093	8.4525	80.5618
51	19.8875	7.2309	78.1184
50	19.6657	6.0092	75.6749
49	19.4439	4.7874	73.2313
48	19.2220	3.5657	70.7877
47	19.0002	2.3438	68.3441
46	18.7784	1.1220	65.9004
45	18.3283	0	63.3283
44	16.9652	0	60.9652
43	15.3505	0	58.3505
42	13.6641	0	55.6641
41	11.9689	0	52.9689
40	10.2725	0	50.2725
39	8.7978	0	47.7978
38	7.3506	0	45.3506
37	5.9067	0	42.9067
36	4.4632	0	40.4632
35	4.2275	0	39.2275
34	4.2275	0	38.2275
33	4.2275	0	37.2275
32	4.2275	0	36.2275
31	4.2275	0	35.2275
30	4.2275	0	34.2275

Note: Inferred restrictions based on the flow shown in the preceding row (as might occur in a recession)



**Figure 1: Comparison of Water Availability**





Source: Aerialphoto derived from <http://www.ecan.govt.nz/ECanMapping/viewer.htm>.

**Figure 3a : LAYOUT OF LOWER WAIMAKARIRI RIVER INTAKE**  
(Photo taken on 20 October 2004. Mean daily river flow at old Highway Bridge = 123.8m<sup>3</sup>/s)