

TABLED AT HEARING
Date 22/4/2010

IN THE MATTER OF The Resource Management Act 1991

AND

IN THE MATTER OF applications for resource consents to abstract water from Irishman Creek

RIGHT OF REPLY BY JUSTIN WILLS IN SUPPORT OF CONSENT APPLICATIONS FOR IRISHMAN CREEK STATION LIMITED

1. Introduction

1.1 My name is Justin Wills and I am the owner of Irishman Creek Station.

2. Scope of Evidence

2.1. This right of reply addresses matters relating to the recommended consent conditions proposed in the Reporting Officer's addendum S42A report covering our three resource consent applications CRC 011845, CRC 084263, and CRC 011846. We regard some of the proposed conditions as impractical and/or unnecessary.

The relevant paragraphs are 226 to 245 inclusive.

2.2. A copy of the addendum report is attached for ease of reference.

2.3. Paragraphs 226, 227, and 228 summarise the applications and matters raised in the original section 42A Report.

2.4. Paragraphs 229 to 244 identify additional matters and paragraph 245 summarises matters considered still outstanding.

3. Recommended Conditions and Outstanding Issues relating to CRC 011845

3.1. Cumulative water quality.

Paragraph 230 correctly notes that a draft FEMP was provided with our earlier evidence, and that an assessment of cumulative water quality effects was undertaken by MWRL. As a member of the UWAG we have been represented by Mr. Chapman in this regard. We reconfirm our commitment to maintaining water quality in regard to all activities on our property.

3.2. Annual Volumes. We have requested a volume of 720,000 cum pa, reducing after improved efficiencies are implemented to 672,670 cum pa. The latter figure includes 10% race losses, so the volume applied equates to 611,520 cum pa. This is less than the 624,000 cum pa mentioned in the Reporting Officer's paragraph 231.

It will take us five seasons to implement various system improvements as these have to be installed progressively and measurements taken to gauge increases in efficiency. I understand

the other UWAG members' renewal applications have requested a 5 year period for completing efficiency requirements. The recommendation that the system be inspected within 12 months of the grant of consent to ensure the system is being operated efficiently is not practicable. Furthermore, the reduction to a take to below that which the Reporting Officer regards as appropriate will show that we are meeting the criteria, without the need for inspection.

Therefore we reiterate our request for an annual volume of 720,000 cum pa reducing to 672,670 (including race losses) within ~~five~~ years of the consent being granted.

- 3.3. In paragraph 232 the Reporting Officer agrees with the various changes we proposed, with the exception of:

232 (d) Telemetry. We requested that this be voluntary as we were not sure of the practicality and expense involved. We understand now that Telemetry may be feasible and if so we accept that.

232 (e). The Reporting Officer agrees that the requirement for an electromagnetic or ultrasonic meter is not practicable in an open race system, and proposes amending metering conditions for those suitable for open race systems. We accept this, but would like to add that we are examining ways of piping the race at an upper point to allow accurate instantaneous measuring of the water taken to help with our efficiency improvements, and therefore request that this possibility be included in the metering conditions.

4. Recommended Conditions and Outstanding Issues relating to CRC 084263

- 4.1. In paragraph 233 it is proposed that a report be prepared to certify that the existing fish screen is effective in preventing fish from entering the penstock and turbine. I do not think any such report would reveal anything except
- a) fish do not actively seek to swim down penstocks towards fast spinning turbines;
 - b) the velocity of the water at the existing fish screen is low, and fish can easily swim away from it;
 - c) in my own direct experience over the last 21 years no fish has ever entered the turbine. Had it done so the turbine efficiency would have greatly reduced; even a single very small pine cone has this effect, the turbine being a Francis turbine rather than a Pelton Wheel.

If it helps I am prepared to certify the efficiency of the existing fish screen. I have difficulty in imagining anyone more qualified than I in this respect.

The Reporting Officer also raises the prospect of installing a fish screen at the head of the diversion race. Given that fish have had unimpeded passage up and down the system for the last 85 years this would damage the established ecosystem.

- 4.2. In paragraph 234 the Reporting Officer reports that, whilst the take and use of water for micro hydro electricity generation is exempt from the allocation limits, she considers it should not be exempt from the minimum flow requirements.

This is not a point that we had previously considered, and on re-reading both the WCWAR Plan and its Annex 1 we feel that the point is moot.

If this condition were to be applied it would render our micro hydro power generation system unviable, as it would require us to shut it down during periods of low flow. This would have the following effects:

- a) loss of electricity supply to the homestead, workshop and cookshop;
- b) loss of domestic water supply to all the buildings, including five dwellings;
- c) the draining of the lower dam and its water race; this provides a habitat for aquatic fauna, fish, and bird life. The environment would be destroyed if it was drained. The clay sealing of the system would also be damaged.
- d) the de-watering of the penstock and turbine. Having been immersed in water since 1925 the introduction of air would very quickly destroy it.

Therefore I request that this condition be omitted, even if it results in the consent becoming non-complying, on the grounds that this activity meets both

- the policies and objectives of the Plan in encouraging micro hydro power generation
- its effect is less than minor.

In seeking the omission of this condition we would add:

- i) the use of the water is non consumptive. It will have no influence on the minimum flow at the SH8 gauging point;
- ii) it is a renewal of an activity that has been continuous since 1925;
- iii) it satisfies the Section 7 criteria for efficient use of resources;
- iv) thanks to the governor system the amount of water used varies in relation to the power output, i.e. the load. Thus in summer, when the power required is low, the use of water is correspondingly low;
- v) it provides a substantial energy contribution to sustainable development at Irishman Creek, thanks to the very substantial investment in the related infrastructure;
- vi) it has important historic and pioneering significance. The micro power station and its associated works are the focus of the many visitors to the Station. Photographs are attached.

- 4.3. Paragraph 235 proposes that a flow measuring device be installed in the hydro power water supply. This is entirely logical if the minimum flow requirement is imposed but, as described above, this would make the hydro scheme unviable.

Therefore, assuming the minimum flow requirement is omitted, the need for measuring a non-consumptive use which is exempt from the allocation limit is unnecessary. The system is incapable of handling more than 500 l/sec, and this is only approached in winter when power demand is at its maximum and the Creek is well above the minimum flow. In summer water use is significantly less. A metering system to ensure that we remain within 500 l/sec is unnecessary.

- 4.4. Paragraph 235 proposes a measurement of minimum flow at SH8 be a condition of the consent. Our comments in 4.2. above apply and we request this condition is omitted.

- 4.5. Paragraph 237 refers to review conditions. We proposed that the review conditions should be the same for the discharge and divert consents. We note that ADO2 refers to cumulative effects which are irrelevant as we are the only user. However, this is a minor point.
- 4.6. Paragraph 238 refers to the effect on ecosystems in the river between the diversion and discharge points. We agree with the Reporting Officer's viewpoint that the environment has adapted to the current system which has been operating, with no minimum flow, since the 1920s, and would stress that a residual flow has always continued between these points even in the driest periods in spite of the diversion for power use. The electro fishing results came from this stretch and prove the vibrancy of its ecosystem. However, as outlined above, we ask that the minimum flow requirement be omitted.

5. Recommended Conditions and Outstanding Issues relating to CRC 011846

- 5.1. Paragraph 239. The Consenting Officer agrees with the deletion of the requirement to measure the rate of discharge.

6. Comments on Outstanding Matters

- 6.1. Paragraph 241 addresses water quality. This subject is being covered by Mr. Ewan Chapman on behalf of UWAG members.

However, with regard to the specific concern raised by Mr. McNae concerning the parameters used in the running of Overseer, we understand this was due to a misprint which showed the rainfall as 6 mm, not 685 mm. This misprint arose whilst reformatting the file, but all the calculations are correctly based on the 685 mm rainfall.

- 6.2. Paragraph 242 covers efficient and reasonable use, and is covered by 3.2. above.
- 6.3. Paragraph 243 relates to ecosystems, and is covered by 4.1. above (re fish screens), 4.2. above (re minimum flows) and 4.6. above (environment).
- 6.4. Paragraph 244 refers to cultural (Tangata Whenua) values. Mr. Chapman, on behalf of UWAG members has addressed this point. We would only add that Irishman Creek has considerable Pakeha historic and cultural values, and in particular the micro hydro power generation. Up to 250 people visit the power plant each year to marvel at its ingenuity.