

IN THE MATTER of the Resource Management Act 1991

AND

IN THE MATTER of applications by TrustPower Limited to the Westland District Council and West Coast Regional Council for resource consents to operate and maintain the Kaniere Forks Hydro-Electric Power Scheme, and enhance, construct, operate and maintain McKays Creek Hydro-Electric Power Scheme

STATEMENT OF EVIDENCE OF ROBERT JAMES GREENAWAY

JR Welsh / HC Andrews
p +64 9 357 0600
f +64 9 357 0340
P O Box 106 202
Auckland Central 1143



INTRODUCTION

1. My full name is Robert James Greenaway. I am in practice as a consultant leisure and open space planner. I operate a private Nelson-based consultancy called Rob Greenaway & Associates and I am a Director of the Pacific-based leisure planning consortium, the Global Leisure Group Limited.
2. I graduated from Lincoln University in 1987 with a three-year Diploma in Parks and Recreation Management with Distinction, and then completed 18 months of postgraduate study. Between 1990 and 1995 I worked with an international tourism and recreation development consultancy - Tourism Resource Consultants - on a range of large and small development and advisory projects. These included ecotourism development planning in Samoa, investigating potential World Heritage Sites in the Solomon Islands for the Ministry of Foreign Affairs and Trade, event management, and domestic reserve, tourism and recreation management planning.
3. Between 1995 and 1997 I worked for Boffa Miskell Ltd, focusing on recreation planning for local authorities and tourism development planning for private agencies. Since 1997 I have worked independently. The majority of my work is for local and central government, private companies, and environmental and community agencies.
4. I have been a member of New Zealand's leading professional leisure management association - the New Zealand Recreation Association (NZRA) - since 1990 and was a member of the Association's National Executive from 2000 to 2006. In 2004 I was awarded the Ian Galloway Memorial Cup by the NZRA, 'to recognise excellence and outstanding personal contribution to the wider parks industry.' I am the Chair of the NZRA's Board of Accreditation for assessing candidates for the status of Accredited Recreation Professional, and hold the status of an Accredited Recreation Professional. I am also a member of the New Zealand Association for Impact Assessment and the Australia and New Zealand Association for Leisure Studies.
5. Over the past several years, as an example, I have worked as either lead, co-lead or sole consultant in developing recreation, park and sport development strategies, and undertaking assessment of effects and research programmes, for a number of clients. These have included Meridian Energy, Contact Energy, TrustPower, King Country Energy, South Head Action Group, Mighty River Power, Genesis Energy, the Department of Conservation, Bay of Plenty Energy, Christchurch City Council, SPARC (Sport and Recreation New Zealand), the Royal Forest and Bird Protection Society, Summit Road Society, Landco, Fiordland Link Experience, Thames-Coromandel District Council, Hauraki District Council, Central Plains Water Trust, Christchurch Estuary Association,

Port Levy Coastal and Marine Protection Society, Far North District Council, Infinity Investment Group, Darby Partners, Auckland Regional Council, Blueskin Projects Limited, the Canterbury West Coast Sports Trust, Environment Canterbury, Selwyn District Council and the Dunedin City Council.

6. In undertaking this work, I have completed assessment work on the following rivers and catchments: Mokau, Rangitaiki (Lake Matahina), Patea (Lake Rotorangi), Tarawera, Kaituna (Lake Rotoiti), Mohaka, Waiau (Canterbury), Waiau (Southland), Waiau (Canterbury), Wairau (Marlborough), Arnold, Gowan, Hurunui, Waitaki, Waimakariri, Waitohi, Rakaia (Lake Coleridge), Opihi/Opuha, Mararoa, Kawarau, Clutha, Shotover, Waimea/Lee, and the Tongariro/Whanganui network, amongst others.
7. I have lectured at Lincoln University for several years on recreation planning, project design and professional development at under- and post-graduate level. In 1995 I wrote Massey University's original extra-mural third year outdoor recreation management course programme. I have had published over 100 articles on recreation and tourism in popular, professional and academic publications in Australasia and Asia and have managed several major multisport events.
8. I own a keeler – a Davidson 31 – which is a 9.4 metre yacht, based in Nelson and I am an experienced sailor.
9. Although this evidence has not been prepared for the Environment Court, I have read the Code of Conduct for Expert Witnesses in the Environment Court Practice Note 2011. This evidence has been prepared in accordance with it and I agree to comply with it. I have not omitted to consider material facts known to me that might alter or detract from the opinions expressed.

METHODOLOGY

10. For the purposes of undertaking my assessment and preparing this evidence, I carried out a site visit at Lake Kaniere and surrounding areas when the lake was at an operating level of -0.1m (0.1m on the stage measure at The Landing). During this site visit, I observed the launching ramps and jetties at Sunny Bight and Hans Bay and the beaches at Canoe Cove, Sunny Bight, and Hans, Camp and Big Bays. I also cycled the Kaniere Water Race Track from The Landing to Kennedy Creek.
11. In addition to my site visit, I have also reviewed published, online and popular information relating to recreation and tourism on and around Lake Kaniere, as well as the full suite of application documents and relevant technical assessments, particularly those of Dr Ryder and Dr Single.

EXISTING ENVIRONMENT

12. Lake Kaniere and the Kaniere River have important regional recreation values for the West Coast associated with boating, angling, camping, swimming and picnicking. The Lake Kaniere Valley is also valued for other terrestrial activities including walking, cycling and scenic driving. The Lake is promoted by, for example, Enterprise Hokitika, as a tourism attraction, and the area's scenic qualities are well-recognised.
13. Formed boat launching ramps are located at Sunny Bight and Hans Bay, and informal launching is carried out at several beach areas, such as at Tuhua Creek. Jetties are located at Hans Bay and east of Sunny Bight.
14. There is little quantitative data available to describe the level of recreational activity. Unwin (2009) reports very little angling activity on the Kaniere River (between 20 and 30 angler days per year, with a high margin of error), and a small amount on Lake Kaniere (500 angler days in 1994/95, 230 days in 2001/02 and 440 in 2007/08). Virtually all angling in 2007/08 was recorded between December and March, with almost two-thirds in December and January.
15. Booth *et al* (2010) did not identify the Kaniere River as being used for kayaking, although it could be used for this purpose in high flows.
16. The Lake Kaniere Water Race Track is a recognised walking and cycling track running from The Landing at Lake Kaniere to Kennedy Creek on the Lake Kaniere Road. This is of 'intermediate' standard for mountain biking.

ISSUES AND PROPOSAL

17. With the Kaniere enhancements being placed on hold, there are no new or additional recreation effects arising from the re-consenting of that scheme. The principal recreation issues arising from the applications occur on Lake Kaniere and Kaniere River, as a result of the operational changes required for the proposed enhancements to the McKays scheme.
18. I have been asked to review the recreation and tourism effects of TrustPower's proposal, and in particular those effects arising from:
 - A change in the percentage of time that the Lake can be held at lower levels within its existing consented range;
 - An increase in the frequency that areas of beach are exposed;

- Changes in the hydrology of the Kaniere River.
19. As explained by Mr Lennie Palmer, in response to submissions received on its application, TrustPower is proposing a lake level operating regime with seasonal restrictions. Table 1 shows: the corresponding average lake levels based on the 2002 – 2011 lake record for the existing situation; under the proposal without the seasonal level restrictions; and under the proposal with the seasonal restrictions.
 20. In my technical assessment, I considered that 0.2m was important from a recreational point of view as it is at this level that use of the existing boat ramps are compromised for launching some boats. That is because I was advised by TrustPower at the time that the 0.2m level equated to the necessary 400mm of depth at the end of the ramps at Sunny Bight and Hans Bay. At 400mm depth, the trailer axle and the rear of the trailer will extend into deeper water beyond the end of the ramps. However, subsequent measurements of the ramps by TrustPower show that 400mm of water is available at the ramps at 0.15m.
 21. At 0.15m, boat launching will generally be possible for most trailer craft, although some trailers and boats will require a lot of winching onto their trailers and harder pushing to get boats off the trailer. Larger boats, such as trailer yachts, may require additional depth up to 0.25m (500 mm depth at the ramp end). These larger craft may be moored in the Lake for a period rather than launched and retrieved every day.
 22. In summer, the proposed seasonal operating regime will result in lake levels, on average, below 0.15m (which equates to 0.35m on the stage measure at The Landing) occurring slightly more than they currently do. That is, 5% of the time. During winter, levels below 0.15m occur 7% of the time currently, and would occur 32% of the time under the proposed seasonal proposal. The proposed minimum lake level will remain as currently consented (i.e. -0.2m).
 23. It should be noted that Table 1 shows real and modelled data based on the 2002-2011 period. On average during this period, TrustPower did not operate the Scheme in such a manner where the Lake was drawn below 0.1m for more than 1% of the time in the summer months. Under the proposed seasonal operating regime, the lake will also not be drawn below 0.1m for very long (1% of the time) during that period. However, the seasonal regime does allow for the lake to be drawn below 0.1m for up to 10% of the time, and below 0.3m for 20% of the time. These lake level limits are shown in brackets in Table 1.
 24. Table 2 shows summer exceedances for two dry years as examples of worst-case outcomes for the three scenarios.

25. My evidence has been prepared on the basis of this proposed seasonal operating regime.

Table 1: Existing, and proposed with and without seasonal operating restrictions, showing percent of time levels are exceeded for Lake record 2002 – Sep 2011					
	Annual average exceedances with exceedance limits in brackets				
Operating level	<0.3m	<0.2m	<0.15m	<0.1m	>1.0m spill
Actual	8%	5%	3%	<2%	38%
M7K1 Proposed – No seasonal	46%	34%	24%	19%	9%
M7K1 Proposed - Seasonal	38%	25%	21%	9%	10%
Summer exceedances: November – March inclusive					
Operating level	<0.3m	<0.2m	<0.15m	<0.1m	>1.0m
Actual	4%	<2%	1%	<1%	44%
M7K1 Proposed – No seasonal	33%	23%	14%	10%	16%
M7K1 Proposed - Seasonal	16% (20%)	6%	5%	1% (10%)	18%
Winter exceedances: April – October inclusive					
Operating level	<0.3m	<0.2m	<0.15m	<0.1m	>1.0m
Actual	10%	7%	5%	3%	33%
M7K1 Proposed – No seasonal	55%	41%	32%	25%	3%
M7K1 Proposed - Seasonal	52%	39%	32%	14% (20%)	4%

Table 2: Dry Summer Exceedances for existing, and proposed with and without seasonal operating restrictions, showing percent of time levels are exceeded for Lake record 2002/03 and 2009/10					
Summer exceedance: 1 Nov 2002 to 31 March 2003					
Operating level	<0.3m	<0.2m	<0.15m	<0.1m	>1.0m spill
Actual	7%	2%	<2%	0	31%
M7K1 Proposed – No seasonal	28%	19%	14%	12%	18%
M7K1 Proposed - Seasonal	19%	8%	5%	2%	18%
Summer exceedances: 1 Nov 2009 to 31 March 2010					
Operating level	<0.3m	<0.2m	<0.15m	<0.1m	>1.0m
Actual	26%	6%	<3%	<1%	25%
M7K1 Proposed – No seasonal	50%	41%	30%	27%	26%
M7K1 Proposed - Seasonal	19%	10%	9%	3%	27%

EFFECTS OF THE PROPOSAL

Lake Kaniere

26. The proposed seasonal operating regime removes many of the potential adverse effects on recreation amenity that were likely to arise from the proposal as originally lodged. In this section of my evidence I review the effects of the proposed seasonal operating regime on the key recreation resources.

Boat launching

27. Mr Paul Rivett of Riley Consultants has examined the formation and depth of the formed launching ramps at Hans Bay and Sunny Bight. As discussed above, my assessment is that the ramps will operate for most boats with 0.4 metres of water at their ends; meaning that this would be the depth available at the trailer wheel, and the rear of the trailer would extend into deeper water beyond that point. Mr Rivett has recommended that the ramp at Sunny Bight be extended to allow for 0.4 metres at its end at all times. The ramp at Hans Bay requires some remediation at its end with the placement of rocks to repair a scour hole – probably caused by boaties using their motors to push their boats onto trailers. With the proposed operating regime in place, the Sunny Bight ramp will be operable all year for most boats. Hans Bay ramp will be operable 100% of the time in summer and 93% of the time in winter. This represents a high degree of reliability.
28. Table 2 shows that in very dry years the summer exceedances are little different for the proposed seasonal operating regime. In 2002/03, the frequency of levels at or below 0.15m would have been the same as the average (5%) and in 2009/10 the 0.15 mark would have been met slightly more frequently at 9% of the time.

Jetties

29. The jetties I observed at Sunny Bight and at Hans Bay would be unusable for boarding or mooring boats at -0.1m. Both would require at least 0.2m for a small boat to come alongside. The wharf at Hans Bay has a relatively high platform and no ladders, and would be difficult to use for boat boarding at levels below approximately 0.3 or 0.4m. The construction of a new platform and steps parallel to the existing jetty would facilitate its use at almost all lake levels. This is a common addition to marine jetties to permit all-tide use. A floating pontoon leading from the end of the jetty would provide easy all-level mooring and boarding options and would offer a higher level of amenity for boating – although I note this may interfere with the ability to jump off the end of the wharf into the water, which is likely to be a popular activity. The Sunny Bight jetty appears to be located in a more shallow area and would require a long extension to operate at all lake levels.

This structure appears to have a low degree of reliability under the status quo, and remedial work would be required under any scenario if it was to support recreational boating or swimming more frequently. For this reason I am not recommending any additional remedial works at this jetty.

Swimming

30. With the proposed seasonal operating regime, the proposal will also only have minor effects on swimming amenity. At an operating level of -0.1m, such as I observed, swimming amenity would be less than at higher lake levels, given that some beaches drop-off into deep water relatively quickly, and the presence of weed and sticks in the water near the shore. However, the scale of effect would vary from site to site, and within sites. For example, the lake bottom near the lake edge immediately north and south of the Hans Bay wharf at -0.1m has clean cobbles, but short distances away, cobbles are replaced by low turf and weed above and below the lower extent of the beach. Under the proposed seasonal operating regime, lake levels will be maintained above 0.2m during summer months for the majority of the time (94%), and for a similar duration as the existing situation (where lake levels are 0.2m or higher for more than 98% of the time). This means that most of these weedy areas will remain covered for much of the summer months, thereby maintaining amenity.
31. However, I recommend that consideration be given to the location of one or two swimming platforms offshore and adjacent to good swimming sites at Hans Bay and perhaps at Sunny Bight. These would focus swimming activity at locations which do not interfere with water skiing and boat launching. Such a development may be considered an enhancement rather than a mitigation, due to the less than minor scale of adverse effect likely to result from the proposed seasonal operating regime.

Subsurface hazards

32. I note that the proposed seasonal operating regime retains the same upper and lower lake levels as currently consented. Many hazards in the Lake that arise at low levels will have been encountered in the past, and, for example, would have been present during my site visit. However, any lake or marine environment is changeable, and submerged logs may move over time and arrive after storms and slips. It is therefore impossible for any lake manager to ensure that hazards will not be present at any lake level. Such a requirement would be unduly onerous, and unenforceable in any event. In my opinion, it is therefore not possible to state that the Lake is going to be any more or less safe at any particular level. Logs that were apparent on the beaches during my visit would be submerged and

hidden at high levels and anyone not familiar with the setting could strike these in a boat or when swimming.

33. The proposed seasonal operating regime means that during summer, the lake level will not be 0.2m or below much more frequently than it is now. As such, there should be no change to the risk of striking a hazard at those levels.
34. Mr Single recommends that a stage level indicator be placed in the water at the boat ramps so that lake users are more aware of what level the Lake is at when they launch. This is a good means of supporting safe boating practices in any variable lake setting. However, novice boaters should be cautious at any lake level. A frequent Lake user could note that at certain levels, known hazards should be taken into account – such as areas of shallow or submerged logs on the shore. However, the consented Lake level regime means that the levels currently proposed could arise at any time. I am therefore reluctant to advise that a periodic hazard assessment be completed as a result of this proposal, although I had considered this as a possible response in the advice I gave to support TrustPower's Section 92 response to Council. There is no guarantee that all risks would be identified or removed and new assessments would be required at unpredictable times to take log movements into account. No guarantee could ever be given under any scenario that hazards in the Lake had been mitigated. An event manager should, for example, review their area of operation independently and at any lake level. Similarly, all swimmers should check where they are diving at any water level.
35. In this case, it is not apparent to me that creating a consent condition for TrustPower to survey and manage hazards in the Lake would be workable or relevant. Nor are the proposal's effects of such a nature and scale as to require the imposition of such a condition by way of mitigation. Further, a one-off survey of the Hans Bay and Sunny Bight areas to identify and, if required, mark any fixed hazards – such as rocks – could not be considered a means of removing risk from lake recreation. It would, however, provide useful base information, and TrustPower is proposing to undertake such a survey on this basis.

Water skiing

36. At all lake levels, water skiers need to be aware of potential hazards, such as logs, other boats and shallows. Changes in any setting may force an avoidance of particular areas. In a marine environment, such changes occur at every tide. At Lake Kaniere, the proposed seasonal operating regime will increase the time Lake levels are below 0.3m during summer from 4% to 16%, and have very little effect on the time levels are below 0.2m, when compared to the existing situation.

37. I have already outlined above issues arising regarding the identification and avoidance of subsurface hazards, and mitigation required to ensure that boat ramps operate with the same level of access as currently exists. As such, the only impact on water skiing as a result of the proposal will be reduction in the useable area of water (being a matter of several metres from existing shallows, on some occasions).

CHANGES TO KANIERE RIVER

38. TrustPower proposes imposing ramping rate restrictions on flow changes in Kaniere River. These have not been in place previously and are a positive improvement given that there is public access to the riverbed.
39. I have reviewed the evidence of Mr Palmer where he describes the ramping rate proposal. I will not repeat his data here. The rates of flow change that Mr Palmer proposes are quite moderate considering the setting and the level and style of use of the River, and the natural scale of change in flow which has been recorded. There are no islands in the River where people can be stranded, and at flows below 5 m³/s, river users should be able to ford the flow if they are on the wrong side. At flows above this, users should probably not be crossing the River and not become stranded as flows increase. Anglers – the very few who fish in the River – will be accustomed to wading in bouldery rivers like the Kaniere. Kayaking would only be possible at high flows when ramping rate changes are irrelevant. Users of interest are those picnicking and/or fossicking and paddling at the River's edge at low flows, and the ramping rate changes are appropriate in this case.
40. Mr Palmer indicates that consent conditions require that signs be placed at access points warning of the potential for changes in river flow, and this is a sensible precaution.
41. Dr Ryder reviews aquatic ecology issues for the Kaniere River in his evidence. Notwithstanding the fact that little angling occurs in the River, his findings reflect little change in the setting for trout.

SUMMARY

42. The proposed seasonal operating regime minimises adverse effects on the recreation amenity of Lake Kaniere. The amenity developments that I propose, which are additional to those integrated with the proposal, reflect the reasonable management of the Lake for recreation considering that it is controlled for hydro generation. An important element of this is, however, working alongside users of the Lake to avoid any unintended adverse consequences of activities – such as locating a swimming platform in an event area or where it may interfere with boat launching (by attracting people and swimmers to a busy

boating area or being an obstacle in itself), or a pontoon preventing people jumping off the end of the Hans Bay jetty.

43. My recommendations are:

- A one-off visual scan from a boat of the inshore areas at Hans Bay and Sunny Bight be carried out by a knowledgeable, experienced user of the lake with TrustPower's support during a winter low level period to identify any unknown subsurface hazards. These can be buoyed. It must be noted, however, that there is no means by which anyone can state that all hazards have or can ever be identified at any lake level. For example, prudent event managers should complete their own scans regardless of the lake level and of any previous checks.
- TrustPower redevelops the launching ramps as proposed.
- Options be put to lake users for the construction of a stepped boarding platform or a floating pontoon to be added to the Hans Bay jetty.
- Options be put to lake users for the construction of one or two swimming platforms offshore from good quality beach areas.

44. These options represent a balanced approach to the effects of the development programme, considering the proposed seasonal operating regime.

SUBMISSIONS

45. Many submissions note a concern over the potential adverse effects on recreational use of the Lake due to more frequent periods of low water levels. These submissions were made in reference to the Lake operating regime as originally proposed in TrustPower's applications. As stated above, TrustPower now proposes a seasonal operating regime that will avoid most of the potential adverse effects of the project. Those residual effects relate to the management of the Lake for hydro generation in general. The mitigations that I suggest in my evidence will address the stated concerns.

46. The other key issue from submissions relates to changes in amenity on the Lake Kaniere Water Race Track. This is no longer part of the proposal currently before the Committee.

47. I am comfortable that the concerns of submitters have been addressed by TrustPower's proposed proposal and by the other amenity developments included in the project.

OFFICER'S REPORT

48. The officer's report was not available at the time of writing and I will refer to this at the hearing.

CONCLUSIONS AND RECOMMENDATIONS

49. The proposal has very little effect on recreation on the Kaniere River and the imposition of a ramping rate restriction is an improvement on the existing situation.
50. Changes of interest on Lake Kaniere relate to an increase in time that the Lake is held at lower levels than currently. I have recommended several activities to mitigate potential adverse effects resulting, and support the recommendations of Dr Single, although most of these relate to appropriate management of the Lake as a recreation setting under any circumstance. The key management activity is maintaining access at the boat launching ramps.
51. I recognise that some of my suggestions – such as swimming platforms and boarding ladders – are amenity developments that require some local decisions as to their location and relevance, and TrustPower will need to discuss these options with Lake users.

Rob Greenaway

18 May 2012

REFERENCES

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