



Friday, 7 October 2011

TrustPower Limited

McKays Creek / Kaniere Forks Hydro-Electric Power Schemes

**Joint Resource Consent Application before Westland District Council and
West Coast Regional Council**

Request for more information: Recreation effects

BACKGROUND

I have been asked to review the effects of the proposed redeveloped MacKays Creek and Kaniere Forks hydro-electric power schemes (HEPS) on recreation and tourism amenity on and around Lake Kaniere to advise TrustPower's response to the West Coast Regional Council's (WCRC) request for further information (section 92 request).

Several issues are of interest to the WCRC:

Matter	Reason	Information required
3. Recreational effects and mitigation	A large number of recreational activities and sporting events occur on the lake and its surrounds.	(a) Sufficient information and proposed mitigation measures have not been provided for the potential adverse effects on recreational users of the lake and river. In particular an assessment on the effects and mitigation for the water skiing course, boating and fishing and events such as boat races, skiing and fishing competitions. (b) An assessment of the loss of the natural experience and variety to be experienced when walking and biking the old track versus the wider and flatter new track and the closure of the track during construction works. Also comment on the proposal for the area to be incorporated into the national cycleway project. (c) Potential mitigation for infrastructure such as boat ramps and jetties becoming unusable due to lower lake levels.
4. Safety Issues	Lower lake levels could expose hazards that did not exist at the existing operational lake levels	(a) An assessment of the potential effects and mitigation against increased risks to swimmers from changes in lake depth. (b) Potential effects and mitigation for exposed hazards such as rocks and logs for boating and skiing.

These issues relate to:

- A change in the percentage of time that the Lake is proposed to be held at lower levels;
- An increase in the amount of beach area exposed at low lake levels; and
- Changes to the mountain bike and walking track between The Landing and Ward Road.

TrustPower has proposed a modified lake level regime with revised summer and winter lake operating levels. These are shown in Table 1. In summer, the revised seasonal regime will result in lake levels of less than 0.2m (which equates to 0.4m on the stage measure at The Landing) occurring as frequently as they currently do (less than 1% of the time). During winter, levels below 0.2m occur 4% of the time currently, and would occur 27% of the time under the revised seasonal proposal. The proposed operating limits are as currently consented.

My assessment is made with the revised seasonal regime in mind.

Table 1: Revised proposed lake level				
Annual exceedances				spill
Operating level	<0.3m	<0.2m	<0.1m	>1.0m
Existing	4%	2%	<1%	42%
W8M8 Proposed	41	28	14	8
W8M8 Revised Seasonal	27	16	5	11
Summer exceedances				
Operating level	<0.3m	<0.2m	<0.1m	>1.0m
Existing	1%	<1%	0%	48%
W8M8 Proposed	30	18	7	15
W8M8 Revised Seasonal	8	<1	0	20
Winter exceedances				
Operating level	<0.3m	<0.2m	<0.1m	>1.0m
Existing	7%	4%	1%	38%
W8M8 Proposed	49	34	19	3
W8M8 Revised Seasonal	41	27	8	4

BASIS OF REVIEW

My review is based on, first, a site visit at an operating lake level of -0.1m (0.1m on the stage measure at The Landing). 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 cycled the Kaniere Water Race Track from The Landing to Kennedy Creek. I have reviewed published, online and

popular information relating to recreation and tourism on and around Lake Kaniere. I have reviewed the TrustPower application.

My CV is appended. I am an Accredited Recreation Professional (a status conferred by the New Zealand Recreation Association). I have undertaken assessments of effect for many similar lake and river settings and have a professional and academic background in recreation planning and management spanning more than 20 years, including developing and managing mountain bike events. I am an experienced sailor and own a 9.5m keeler. It has been many years since I personally launched a power boat from a ramp, but have done so many times and know what it is like to drop a trailer off the side of one.

EFFECTS OF THE PROPOSAL

Lake Kaniere

The revised seasonal operating regime removes many of the potential adverse effects on recreation amenity that were likely under the original proposal.

Boat launching

My assessment is that the boat launching ramps at Sunny Bight and Hans Bay would only begin to be useful at an operating level of 0.2m (0.4m on the stage), which is 0.3m above the level that I observed. An additional 0.1m would support easy access for larger boats or less confident operators. Under the seasonal lake operating regime, there are no changes to the summer frequency of levels less than 0.2m and an increase of 8% of the time at which the level is below 0.3m. This will represent a minor loss of amenity. I understand that TrustPower is reviewing the formation of the ramps and has agreed to redevelop them to ensure access at low lake levels. This will remove any adverse effect from the proposal for the launching and retrieval of boats during both summer and winter.

Jetties

The jetties I observed at Sunny Bight and at Hans Bay were of no use 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 platform fixed to the existing deck leading to a fixed set of steps ending at a platform beside the existing jetty end at approximately 0.2m would facilitate 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 it would interfere with the ability to jump off the end of the wharf into the water, which is, no doubt, a popular activity.

Adverse effects of the seasonal operating regime will not, however, be great during the summer period. The net scale of effect on jetty use will be represented by an increase of 8% of the time that the lake is held below 0.3m.

Swimming

The revised seasonal operating regime removes most adverse effects on swimming amenity. Swimming amenity at an operating level of -0.1m, as I observed, would be less than at higher lake levels due to the immediacy to some beaches of drop-offs into deep water and the presence of weed

and sticks 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. Maintaining lake levels at the 0.2m mark for a comparable time to the existing situation, as now proposed, will cover most of these weedy areas and maintain amenity. 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 preferred locations. They should be located in consultation with experienced lake users, if they are desired, so as to not interfere with water skiing and boat launching. Such a development may be considered an enhancement rather than a mitigation, due to the minor scale of adverse effect likely to result from the revised seasonal operating regime.

Subsurface hazards

I note that the proposed operating regime relies on the same upper and lower lake levels as currently consented. Many hazards in the Lake that arise at very 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. There is therefore no way that any lake manager can assure anyone that hazards will not be present at any lake level, and certainly they should not. I would not, therefore, 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.

The revised seasonal operating regime removes changes to the frequency of very low lake levels below 0.2m and therefore there should be no change to the likelihood of striking a hazard that would be a risk at those levels.

It would be prudent for a scan of hazards in commonly used areas be completed periodically – such as at Hans Bay and Sunny Bight – and any known hazards buoyed or marked, regardless of the scheme proposal. However, this provides no guarantee that all risk would be removed, and no guarantee could ever be given under any scenario. An event manager should, for example, review their area of operation at any lake level. Similarly, all swimmers should check where they are diving at any water level.

Water skiing

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 seasonal summer operating regime will change levels below 0.3m by 8% and have no effect at levels below 0.2m. If any subsurface hazards are identified and avoided, and boat ramps operate with the same level of access as currently exists, changes to jet skiing will be represented by a reduction in the useable area of water by a matter of several metres from existing shallows at some times.

Lake Kaniere Water Race Track

The section of the Lake Kaniere Water Race Track, up to Ward Road, is a relatively easy ride and walk. From Ward Road to Kennedy Creek the track becomes more difficult and includes many short sections where bikes need to be carried. Nonetheless, this section is very pleasant as an intermediate standard ride. TrustPower's proposal includes maintaining much of the existing cycling and walking track up to Ward Road much as it is, and with no change proposed to the section thereafter. Up to Ward Road, 1780m of track will remain as is, but with the water race removed, while 2500m of new track will be developed adjacent to the new water race.

These changes represent a mixture of outcomes for cycling and walking. The track surface will become easier to ride, reducing conflict between walkers and cyclists, and between cyclists. Users may choose the more narrow and bushy old route, or the wider and faster new track.

The new water race will be straight and not have the sinuous and rather antiquated characteristics of the existing race. However, large sections of the old track will remain, and, with the old race decommissioned, will compare visually with sections of the track north of Ward Road. These feature a shallow adjacent trench where the race used to run. These sections of track retain strong visual amenity values and a heritage component, with old water race tunnels and the old race itself. A shift from a functioning race to an historic remnant is not an adverse effect in this case, but it *is* a change.

Walkers and cyclists will be able to experience much of the enclosed canopy on the original track. The net result will be an easing of the cycling and walking standard and a change in the local visual amenity values. However, the net effect on recreation need not be adverse and will include amenity enhancements. I understand that TrustPower and the Department of Conservation are contemplating redevelopment of the track from Ward Road to Lake Kaniere on the south of Lake Kaniere Road. Linking the Water Race Track with this would create a more complete local cycling experience. This would also provide an alternative access to Ward Road during the 12 month construction phase.

The Westland Wilderness Trail – a proposed Nga Haerenga National Cycle Trail – is planned to pass to the north of Lake Kaniere. The track standard is expected to be 'easy', which requires the track to be a (Ministry of Tourism Cycle Trail Design Guide 2010):

Flat, wide, smooth, trail. Trail feels safe to ride. Ideal as a first ride for non-cyclists, and those wanting an easy gradient or experience. Trail allows for cyclists to ride two abreast most of the time, and provides a social component to the ride. Cyclists will be able to ride the total distance of the trail without dismounting for obstacles.

The sections of track beside the new water race will easily meet this standard with a 4m width (the standard is a preferred minimum of 2.5m), and so the proposal will result in a suitable track from The Landing to Ward Road. Substantial work would be required to achieve this standard up to Kennedy Creek.

SUMMARY

The revised seasonal operating regime minimises adverse effects on the recreation amenity of Lake Kaniere. The mitigations that I propose 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 ensure that the projects are desirable and do not have any unintended adverse consequences – 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.

My recommendations are:

- A visual scan from a boat of the inshore areas at Hans Bay and Sunny Bight be carried out 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 continue its review of the construction of launching ramps.
- 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.

The redevelopment of the Lake Kaniere Water Race Track will result in a track standard suitable for the Westland Wilderness Trail. The development will result in a change in some of the amenity values of the setting, but these will soften over time. Development of the track from Ward Road to Lake Kaniere on the south side of the main road will provide an alternative access route during the construction period and create a new local cycling and walking opportunity. This will ultimately create an excellent 'easy' cycle loop, which is preferable to a one-way or return option on the same route.

These options represent a very balanced approach to the effects of the development programme, considering the revised seasonal regime.



Leisure and Open Space Planning



Rob Greenaway has an academic and practical background in recreation, tourism and conservation management. He is experienced in planning for and managing public, community and commercial facilities and services in parks and reserves, protected areas, in developing countries and for special events.

His strong skills in formal and informal data gathering, research analysis and journalism have been demonstrated in a wide variety of project reports, management plans, publications, submissions, and research papers over the past 20 years. Rob has published extensively in New Zealand, Australia and Asia (examples of articles and papers are available on www.greenaway.co.nz). He is a Director of the Pacific-based leisure planning consortium, the Global Leisure Group (GLG).

Work History from 1990	1997 - current:	Director, Rob Greenaway & Associates (R&R Consulting (NZ) Ltd) , Nelson
	2001 - current:	Director, Global Leisure Group (see www.glgnz.co.nz) (GLG)
	1995 - 1997:	Consultant in Parks, Recreation and Tourism, Boffa Miskell Limited (BML) , Christchurch.
	1990 - 1995:	Consultant in Parks, Recreation and Tourism, Tourism Resource Consultants (TRC) , Wgtn.

EXPERTISE

Assessments of effect	Comprehensive and robust assessments of effects of commercial developments and presentation of evidence, with experience in hydro, wind, forestry, subdivision, coastal and tourism developments and marine farming.
Recreation and tourism research and planning	Research, policies, strategies and management plans for developing and managing recreation, leisure and tourism facilities and services, including co-ordinating public consultation, visitor and community surveys, asset management processes, physical activity and reserve management plans, and negotiating concessionaire applications for tourism agencies.

SELECTED EXPERIENCE

Recreation and tourism planning and consultation	Nevis Snowmobile Adventure, 2011: Concession application to Department of Conservation.
	Porter Heights Ski Area, 2011: Review of tourism and recreation options for new summer product (with TRC).
	Tasman District Council, 2011: Long-term planning for community services provision.
	Kaiteriteri Reserve Board, 2011: Long-term planning and consultation for reserve redevelopment (with Ian Athfield and Megan Wraight).
	Whakatane District Council, 2010: Review of esplanade reserve policy and appeal mediation (with BECA).
	Nelson City Council, 2008–current: Reserve management planning (Rutherford, Trafalgar Parks), and general open space planning assistance.
	Woodlot Holdings, 2006–07: Subdivision planning assistance in and around Queenstown.
	Hauraki and Thames Coromandel District Councils, 2005: Physical activity and facilities plan (GLG).
	Auckland Regional Council, 2004: Consultation and reporting for Waitakere Ranges visitor study.
	Canterbury West Coast Regional Physical Activity Plan, Canterbury West Coast Sports Trust, 2003–04: Regional plan to co-ordinate inter-agency planning for delivery of physical activity initiatives (project leader with GLG, also team member on similar plans for Waikato and Top of the South).
	Orton Bradley Park Trust, 2004–05: Long-term park development planning and feasibility assessments (with Deloitte).
	Christchurch City Council, 2004: Consultation for re-development of QEII Park and development of design brief (GLG).
	Selwyn District Council, 2004, 2005–06: Resolution of community concerns over Prebbleton reserve development (review, chairing public meeting), ongoing consultation over long-term open space development.
	Sport and Recreation New Zealand (SPARC), 2003–04: National review and road show of recreation planning approaches to supporting the demands for community planning by the LGA 2002 and development of written guide to the Act (GLG).
	Asset Management Planning, Long-term Financial Strategies 1996–05: for the following territorial authorities: Whangarei District, Nelson City, Waimakariri District, Franklin District, Tasman District, Whakatane District (inc reserves contribution assessment), Western Bay of Plenty District, Christchurch City (waterways), Hurunui District, Auckland City, Gisborne District, Auckland Regional Council and Kapiti Coast District Council.
DOC Wanganui, 2003: Recreation planning workshop.	
Tuhaitara and Waikuku Beach Reserves Management Plan, 2002–03: For the Te Kōhaka o Tuhaitara Trust (with BML).	
Christchurch City Council, 2002–03: Port Hills Recreation Strategy, based on visitor survey and focus groups.	

Banks Peninsula District Council, 2001–03: Reserve management planning co-ordination and general policies.

Far North District Council, 2001–04: Recreation and sport strategy for Hokianga ('01), Northern ('02) and Kawakawa and Kerikeri ('03) Wards, District Facilities Plan ('04) (GLG).

Feasibility studies for community projects, 1996–03: Swimming Pool (Lyttelton), Recreation Centre (Lyttelton), Ice rink (Dunedin), Community halls (Rolleston, Waikouaiti), Therapeutic Pool (Dunedin).

Franklin District Council, 2002: Reserve contribution calculation for District Plan change.

Nelson City and Tasman District Councils, 2002: Regional Facilities Plan, with development of inter-Council co-operative funding tool (with Strategic Leisure).

Dunedin City Parks and Recreation Strategic Plan, 2002: Comprehensive long-term plan (with Strategic Leisure).

Manukau City Parks Strategy, 2000: Inception of parks strategy.

Christchurch City Council future trends, 1999: Facilitation of future recreation trends identification project (with Lincoln University).

Rakiura Adventure, 2001–02: Concession applications for tourism activities in Rakiura National Park.

Macraes Mining, 1999: Feasibility assessment and concept development for 'heritage and art park' concept to support mine rehabilitation at Macraes Flat (with BML).

Tauranga City Council, 1999: Performance review of tourism visitor centre (with Key Research and Marketing).

Nelson City Council, 1999–00: Beneficiary and general viability analysis for community and heritage assets.

Western Bay of Plenty District Council, 1999: Analysis of recreation and heritage values for reserves to produce costed development strategy (with BML).

Dunedin City Council, 1999–03: Signal Hill Reserve Management Plan

Wellington City Council, 1997: Open space strategy (with BML).

Transpower NZ, 1995–97: Land management agreements for transmission corridors between Transpower NZ and Fiordland National Park, and the Nelson City Council (BML).

Dunedin City Council, 1996: Track management strategy programme (BML)

Solomon Islands, 1995, MFAT: Planning for ecotourism micro-enterprise development for potential World Heritage sites in Marovo Lagoon and Rennell Island (TRC).

Samoa (formerly Western Samoa), 1995–96, MFAT: Management service contract for facilitating the NZODA tourism programme in Samoa (TRC).

Sarawak, Malaysia, 1995: Development of tour marketing material for commercial tour providers (Pelagus Rapids).

New Zealand Tourism Industry Association, 1995: Assessment of the DOC Visitor Strategy Discussion Document for the NZTIA and preparation of the industry representative submission (TRC).

Ecotourism Policy, Wellington, 1995: Draft ecotourism policy for the Wellington City Council (TRC).

Other recreation research

See www.nzrecreation.info for GLG on-line survey site: On-line surveys regularly run to support planning work.

TrustPower, 2011: Survey of recreational use of the Rakaia River.

Christchurch City Council, 2002–07: Visitor surveys for the Port Hills, Spencer Park, Sumner Beach, New Brighton Beach and users of the Avon-Heathcote Estuary.

Department of Conservation, 2004: Survey of Kaikoura anglers.

Department of Conservation, 2003–04: National survey to quantify recreation displacement.

SPARC, 2002/03: National territorial authority recreation planning review (GLG).

Meridian Energy, Project Aqua, 2001–02: Recreation survey of the Waitaki River and door-to-door survey of Waitaki Valley residents for AEE for recreation and community.

Environment Canterbury, 2000–01: Recreation survey of the Hurunui River and assessment of significance.

Otago Harbour User Survey, Dunedin City Council, 1996–97: Survey of casual users of Otago Harbour (BML)

Bay of Plenty Regional Council, 1996: Analysis of recreation and tourism use of waterways (BML).

Southland District Council, Invercargill City Council, 1999–00: Industry profiles for tourism, agriculture, fishing and manufacturing for use in regional economic promotion (with Butcher Partners Ltd and Key Research and Marketing Ltd).

Department of Conservation, 1993: Pilot programme to monitor visitor satisfaction regarding visitor centre facilities and services (TRC).

Waitangi National Trust, 1993: Visitor survey: satisfaction and user needs for the Waitangi Visitor Centre (TRC).

Energy and river-related

Genesis Energy, 2010–current: Assessment of effects for wind farm proposal.

Environment Canterbury, 2010: Review of Opihi/Opuha irrigation area within Canterbury Water Management Strategy (through Golder Associates and with Lindis Consulting).

Meridian Energy, 2004–current: Assessments of effect for seven hydro schemes (including Pukaki, Waitaki, Mokihinui, Manapouri), three wind farms (including Project Hayes) and two irrigation proposals. Evidence presentation for three proposals.

TrustPower, 2005–current: Effects assessment work on four proposed and two existing hydro schemes (Patea, Matahina). Evidence presentation at Wairau and Arnold hearings.

Contact Energy, 2010. Review of hydro options on Clutha River.

Norske Skogg, Tasman Joint Venture, 2010: Assessment of effects of mill discharge on Tarawera River.

Waimea Water Augmentation Committee, 2010: Recreation assessment for irrigation/flow augmentation proposal (with Tonkin & Taylor).

MainPower, 2008–2011: Mount Cass wind farm consent application recreation assessment and evidence.

Lincoln University, 2009–10: *A Significance Assessment Method for River Values*, peer review or main report and

activity-specific reports.

Pioneer Generation, 2009: Evidence for Kawarau Water Conservation Order in relation to the Nevis River.
Hurunui Water Project Ltd, 2009: Recreation AEE for water storage scheme on Hurunui River.
Fish and Game Council, Canterbury, 2009: Hurunui River Water Conservation Order evidence.
Boffa Miskell, 2007: Establishment of on-line survey for river flow perception study (www.nzrivers.info).
TrustPower, 2007, 08: Surveys of recreation use of the Arnold, Wairau and Rangitaiki Rivers.
Clutha River Parkway, 2006: Review of recreation and tourism benefits (with Kay Booth and GHD).
Environment Canterbury, 2005–06: Visitor survey for lower Waimakariri River.
Central Plains Water Trust, 2006: Recreation development planning for proposed irrigation scheme (with Steve Gurney and GHD).
King Country Energy, 2005: Expert evidence for proposed Mokau River hydro scheme.
Bay of Plenty Energy, 2005: Assessment of effects of proposed upper Kaituna River hydro scheme.
Contact Energy, 2005: Expert evidence for Clyde and Roxburgh hydro scheme re-consenting.
Meridian Energy, 2004–05: Review of Waitaki Catchment Water Allocation Regional Plan, preparation and presentation of evidence to Waitaki Water Allocation Board.
Hurunui Community Water Scheme, 2004: Assessment of effects for preliminary irrigation proposal (with BML).
Christchurch City Council parks, waterway and leisure plans, 2001–03. Comprehensive open space development plans for five Community Board areas (GLG).
Christchurch City Council Styx River asset management strategy, 2000. Recreation vision for waterway.
Ministry for the Environment, 1998. Recreation section of *Flow guidelines for instream values* river management guide (BML).
Water Supply Reserve, Nelson, 1996–99. Reserve management plan for Nelson's water supply reserve (BML)
ECNZ, 1998. Recreation research for resource consents for Tongariro Power Diversion Scheme (K Booth & BML).

Other assessments of effect and expert witness evidence

Buller Coal, 2011: Expert evidence in relation to an open cast mine.
Port Gore, 2011: Expert evidence in relation to marine farming.
Moutere Station, 2010: Expert evidence in relation to road stopping proposal.
Omaha Park Ltd, 2010: Expert evidence for coastal subdivision.
Darby Partners Ltd, 2007–2010: Presentation of evidence for subdivision at Parkins Bay, Wanaka. Preparation of evidence for Te Arai coastal park development. Review for West Wanaka development.
Port Marlborough NZ, 2010: Survey of current and prospective marina berth holders, recreation assessment of effect for Waikawa marina extension and expert evidence at Council hearing.
Lincoln Land Developments / Ngai Tahu, 2009: Expert evidence in relation to Dairy Block subdivision.
Fiordland Link Experience, 2004–2010: Assessment of effects of proposed monorail in conservation area.
Lakes Environmental, 2009. Expert evidence in relation to commercial jet boating on Wilkin River.
Auckland Regional Council, 2009: Bayswater Marina development Environment Court hearing.
Queenstown Airport Corporation, 2009: AEE preparation for gravel extraction on lower Shotover River.
Wairewa Rununga, 2006–07: Recreation assessment for proposed Lake Forsyth opening structures.
Lakeview Ventures Ltd, 2007: Preparation of evidence for a subdivision near Taupo.
Landco Ltd, 2007: Presentation of Environment Court evidence for subdivision at Long Bay, North Shore.
Riverrun, 2007: Presentation of evidence for a subdivision near Albert Town.
Blueskin Projects Ltd, 2006: Preparation of recreation evidence for subdivision at Potato Point, Dunedin.
Infinity Investments, 2005–06: Expert evidence for two subdivisions (Hillend, Peninsula Bay).
Macraes Mine, 2006: Review of consent compliance for Waitaki District Council (with Andrew Purves).
Royal Forest and Bird Protection Society, 2006: Expert evidence in regard to proposed Kaipara mussel farm.
Christchurch Estuary Association, 2005: Expert evidence in regard to proposed retrospective coastal permit.
Port Levy Coastal and Marine Protection Society, 2005: Expert evidence in relation to proposed mussel farm.
Tourism Resource Consultants, 2005: Peer review of assessment of effects for proposed wind farm (Belmont).
Kennedys Bush Developments, 2003–04: Expert evidence in relation to proposed Port Hills subdivision.
Royal Forest and Bird Protection Society, 2002: Expert evidence in relation to Taylors Mistake baches.

Journalism

More than 100 articles published in over 30 magazines and newspapers in Australasia and Asia since 1989. Interviews on over 20 radio stations for outdoor events and outdoor management issues. Instigated and appeared on two Television NZ items for outdoor recreation activities. Various publications, including the updated Tongariro National Park Handbook and the Samoa Visitors Bureau 'What to do and see' guide (with TRC). Several hundred photos published in books and magazines in New Zealand and Asia. Editor of Mary Hobbs' books *Kiwi Tucker for the soul* (2000), *Letters to America* (2001) and story editor for *NZ Outside* (1996-01).

BACKGROUND

Awarded the Ian Galloway Memorial Cup by the New Zealand Recreation Association: *To recognise excellence and outstanding personal contribution to the wider parks industry.* 2004.

- Education** *Diploma in Parks and Recreation Management (Distinction);* Lincoln University 1987. Postgraduate study – 18 months, Lincoln University 1988 – 89.
- Professional training and associations** Board member, inaugural Sir Edmund Hillary Outdoor Recreation Council, 2009 – current.
Accredited Recreation Professional, New Zealand Recreation Association (NZRA).
National Executive of the New Zealand Recreation Association, 2000 – 2005 (member since 1990). Currently Chair of NZRA Board of Accreditation for member accreditation to professional and practitioner status.
Member of New Zealand Association for Impact Assessment, 2006 – current.
Member of Australian & New Zealand Association for Leisure Studies, 2006 – current.
Member of Cashmere Forest Park Campaign for the Port Hills Park Trust Board, 2005 – current.
Member of Board of Management, Styx River Living Laboratory Trust, 2002 – 2006.
Presenting Persuasive Expert Testimony (for court hearings). Canterbury University Law, 2001.
Advanced Gender Analysis Programme, for international development projects, Lincoln International, 1996.
Introduction to Maori language, University of Canterbury, 1996.
- Recent conference papers and articles** *The effects of rural change on recreation and tourism, and vice versa.* NZ Association for Impact Assessment annual conference, Papamoa 2009.
Recreation impacts: Coastal and lake-front environments. NZ Association for Impact Assessment annual conference, Nelson 2008.
An exploration of recreation displacement in New Zealand. Annals of Leisure Research, Volume 10 (2007).
Impact assessments for recreation. NZ Association for Impact Assessment annual conference, Dunedin 2006.
Measuring the significance of multi-use outdoor recreation resources: A comparative analysis of three sites in New Zealand. Annals of Leisure Research, Volume 5 (2002).
Visitor profiling: To what degree are users of open space dedicated, loyal, frequent, alternative and local, and in conflict? New Zealand Recreation Association (NZRA) National Conference, Hamilton, 2002
Using Market Segmentation Analyses to monitor trends in recreation. NZRA National Conference, 2001
A values-based approach to sustainably managing Christchurch's waterways and wetlands. 8th International Conference on Urban Storm Drainage, Sydney, 1999. Joint presentation with Water Services Unit, CCC