

## **Crown Pastoral Land Tenure Review**

**Lease name: BEN NEVIS**

**Lease number: PO 241**

### **Public Submissions - Part 10**

These submissions were received as a result of the public advertising of the Preliminary Proposal for Tenure Review.

**July**

**10**



Department of Conservation  
*Te Papa Atawhai*

File Ref: PAL-14-04-241

27 March 2008

David Paterson  
Tenure Review Consultant  
QV Valuations  
PO Box 215  
DUNEDIN 9054

Dear David

**Ben Nevis Tenure Review**

I refer to your email of 26 March 2007 and subsequent requests for a letter expressing a definitive statement from the department that it is satisfied with the outcome of this review and that there are no inherent values of significance within the land proposed to be designated as freehold.

I have widened your brief to comment on all key aspects of the Preliminary Proposal.

The tenure review proposal for Ben Nevis largely incorporates the original recommendations made in the department's proposed designations report in 2002, and subsequent revised recommendations prepared in 2005.

Some 67% (~9745 hectares) of the pastoral lease is proposed for return to full Crown ownership as public conservation land. The area comprises high mountains exceeding 2300m, alpine lakes, fell fields, tussock grasslands and shrublands. Closer to the valley floor, extensive alluvial flats and fans contain representative examples of severely threatened wetland and dryland ecosystems which support a suite of rare and endangered plant species.

The area is suited to a variety of recreational activities including sightseeing along the Nevis Road, picnicking, fishing, kayaking, hunting, tramping, ski touring and hell skiing. The proposed conservation area will adjoin some 21,500 hectares of existing public lands comprising the Remarkables Conservation Area and Rastus Burn Recreation Reserve. In time, this area will become a core part of a Remarkables Conservation Park. Practical public access will be available into the area via the formed legal Nevis Road which adjoins the proposed conservation area for some six kilometres. Elsewhere the proposal will be accessible via 3 public access easements providing for foot, mountain bike and horse access.

The alpine basins are to be subject to a concession for hell skiing for 10 years from signing of a substantive proposal. The limited term will allow the department to undertake a management planning process commencing with the next conservation management strategy and possibly extending to more detailed planning after the creation of a Remarkables Conservation Park, with a view to providing for a range of recreational opportunities.

A separate 140 hectare conservation area protects a series of gold workings from the 1930's depression era, while a scenic reserve protects an intact red tussockland. Two separate foot access easements allow these areas to be explored as a short loop walk from the Nevis Road.

In recognition of concerns raised by four wheel drive groups regarding the range of access provisions being achieved through tenure review, seasonal vehicle access is to be secured over a farm track which links the Nevis Valley to a rough legal road which traverses a spectacular and remote section of high country, before exiting to the Kawarau Valley via Coal Pit Saddle. The department will administer a key and permit system for this route and will accept primary responsibility for road maintenance.

The entire area proposed as freehold is subject to two conservation covenants. These areas form an integral part of the impressive Nevis Valley landscape. The lower levels are overlaid with a rich veneer of historic features ranging from Moa hunter sites, early pastoral relics and a suite of mining sites. The Nevis Valley is widely acknowledged as being Otago's most intact goldfields landscape, with sites ranging from 1863 to recent. A general landscape covenant protects the majority of the area including its myriad of scattered historic sites from development beyond what has occurred to date. The level of covenant protection is similar to that afforded by the Central Otago District Plan for outstanding landscapes. The second covenant provides additional protection for areas with significant biodiversity values not being returned to full Crown ownership.

Several areas identified as having significant inherent values and originally recommended as conservation land are proposed for freeholding (but not unencumbered freeholding). In the context of securing an outcome which is overwhelmingly in the public interest, these compromises are acceptable.

A summary of these areas follows:

1. Upper sunny faces in Doolans Creek Left Branch. These lie above an unfenced boundary with extensive shrublands below proposed as conservation estate. The proposed freehold is subject to a conservation covenant which confines grazing to sheep only. It is not anticipated that sheep will push into the dense shrublands below.
2. A corridor of land in the Nevis Gorge. Scattered shrublands and a spectacular craggy landscape in this area will be adequately protected under the property wide conservation covenant.
3. Sunny faces in the Nevis Burn. Shrublands and tussockland values will be protected under a biodiversity orientated covenant which places restrictions on stocking rates, vegetation clearance and other farming related activities.
4. Sunny faces supporting shrublands and tussocklands are also proposed for freeholding in Schoolhouse Creek. These faces proposed are subject to a biodiversity orientated covenant which places restrictions on stocking rates, vegetation clearance and other farming related activities.
5. Some 200 hectares immediately to the north of Schoolhouse Flat originally recommended as conservation estate is being freeholded subject to the generic landscape covenant. This area supports some threatened wetland plant species; however most if not all of these grow in an area of red tussock, which is proposed for protection as a scenic reserve. Given that the entire Schoolhouse Flat area has a combination of farming and conservation values, it is acceptable that the most modified portion comprising some 200 hectares be freeholded, while 950 hectares are designated conservation land.
6. Approximately 45 hectares in the vicinity of the Ben Nevis homestead, recommended for protection for its historic and biodiversity values is proposed for freeholding. This area lies inside or on the margins of land which will be affected if the holder proceeds with plans for hydro electric development. The biodiversity values in this area are well represented within conservation land proposals at Schoolhouse Flat. The area contains five documented historic sites, of which one, the Ben Nevis homestead complex is

ranked as being of highest significance and is not replicated elsewhere in the Nevis Valley. Landscape and historic features are to be protected under a conservation covenant, which does however contain a clause stating that the Minister of Conservation will not unreasonably withhold consent for a hydro electric dam or its associated impoundment of water.

During consultation on Ben Nevis and Craigroy, it was agreed to freehold all areas required by Pioneer Generation Limited for possible hydro electricity development. The holders have always made it clear that their primary reason for entering tenure review is to secure freehold title over these sites. The department has endorsed the freeholding of these areas for two reasons:

1. Freeholding land required for hydro purposes is the key to achieving tenure review outcomes on Ben Nevis and Craigroy. The completion of these tenure reviews will result in net gains for conservation. These tenure review proposals protect a substantial area which is extremely important for biodiversity, contributes to the future conservation parks network, secures new public recreation opportunities and protects our historic heritage. To the extent that historic heritage may be inundated, it is of minor significance compared with the rest of the valley that will be protected, and it can be fully studied before any inundation.
2. The department made an agreement with Pioneer Generation's predecessor Central Electric, which achieved their support for the Kawarau Water Conservation Order (WCO) in return for allowing an exception in the WCO for the Nevis hydro proposal. It is the department's view that as a matter of good faith this carries over into tenure review.

The department's stance on the Nevis Valley floor does not inhibit other affected parties such as the Fish and Game Council and kayakers from advocating for the protection of the entire valley floor, under the public submission process. The Associate Minister for the Environment has now set up a special tribunal to consider the Fish and Game Council's request for an amendment to the WCO to close off the Nevis exception. That is part of a process under the Resource Management Act which is separate from the tenure review.

On balance, and in association with tenure review on Craigroy, the department considers Ben Nevis to be a good tenure review outcome and strongly supports its progression to Preliminary Proposal stage.

Yours sincerely



Jeff Connell  
Conservator / *Manabautū*



# Hon David Parker

APPENDIX 3

PARLIAMENT BUILDINGS, WELLINGTON, NEW ZEALAND TELEPHONE 64 4 470 6559, FACSIMILE 64 4 472 3617

To: Brian Usherwood, LINZ

24 MAR 2009

- For your action
- Returned with thanks
- For comments
- For your information
- For your approval
- Please return
- As requested
- For draft reply
- As per our telephone conversation
- With compliments

Brian - Ben Mevius a Craigroy TRS have gone to Minister of Conservation's Office today for the Minister's consideration. Our note to her is attached, and raises a range of issues.

From: John Blincoe

Position: Snr Advisor

Date: 7/11/08

7 November 2008

Senior Private Secretary (Attn: Gavin Rodley)  
Minister of Conservation

**BEN NEVIS AND CRAIGROY TENURE REVIEWS  
PRELIMINARY PROPOSALS**

1. Hon Parker has received reports of 8 July 2008 from Land Information New Zealand on these preliminary proposals, prepared under delegation from the Commissioner of Crown Lands (CCL).
2. Hon Parker has an opportunity to comment on the proposals, which before they proceed must receive his funding approval.
3. In this process, he is required to consult the Minister of Conservation on both proposed outcomes and funding. Accordingly, the reports are attached for your Minister's consideration.
4. In consulting your Minister, Hon Parker brings to her attention the matters outlined below.

**Cabinet policy**

5. Table 1 of both reports records the point raised by the Otago Fish and Game Council re its opposition to

... a hydro-electric development proposed by Pioneer Generation Limited post-TR that will inundate some areas of land adjacent to the Nevis River

and responds to the point by stating that

Post-TR land use is not a matter that can be dealt with under the CPLA, and is therefore outside the scope of this TR. Fish and Game has been advised of this, and that any issues with the proposed hydro development will be addressed under the appropriate legislation, which includes the RMA 1991.

6. However, last year Cabinet [see CBC Min (07) 23/19]:

agreed that high country pastoral lease properties with highly significant lakeside, landscape, biodiversity, or other values that are unlikely to be protected to the satisfaction of the Crown by the tenure review process be excluded from the process

agreed that for all non-lakeside properties currently in tenure review, the process should continue until DoC has identified a property's significant inherent values [SIVs] and whether they are practical and realistic to sustain through tenure review.

7. The response to the Fish and Game point does not appear to be consistent with the Cabinet policy, which was developed because Cabinet was unconvinced that RMA processes would adequately protect certain values post tenure review. In these tenure reviews, therefore, should potential future developments be considered in assessing whether SIVs would be adequately protected on the land proposed for freeholding?

**Water Conservation (Kawarau) Order 1997**

8. A Special Tribunal has before it an application from the New Zealand and Otago Fish and Game Councils to amend the Water Conservation (Kawarau) Order 1997, in respect of the Nevis River. The application seeks to impose a prohibition on damming the river, along with conditions on minimum flows. The Order as it stands could allow inundation of a specified stretch of the river if certain conditions were met. The application is being made in light of increased knowledge of values in the

Nevis since the original Order was finalised in 1997. (Note that Hon Parker is familiar with the original Order because he acted as legal counsel on it in the early 1990s.)


9. The Ministry of Economic Development (MED) has made a submission to the Tribunal (with Hon Parker's approval in his capacity as Minister of Energy) outlining the Government's energy objectives for the Tribunal's consideration, while not commenting on the potential local environmental effects of particular developments. MED notes, *inter alia*, that:

- energy developments should not occur at any cost and that decision-makers must have regard to the adverse environmental effects associated with proposed generation technologies
- a hydro scheme on the Nevis would make a modest contribution to increased generation capacity
- this contribution may need to be seen in the context of the significant amount of existing hydro generation development in the Otago-Southland region, and the use of a number of other rivers in the region for irrigation purposes
- while the Government's renewable electricity target would be met by some new hydro generation, the majority of new renewable generation would likely be wind or geothermal, which would be economic to develop.

#### **Informing Hon Parker's response to the CCL**

10. Hon Parker would particularly appreciate your Minister's views on whether:

- he should be satisfied that CBC Min (07) 23/19 has been appropriately applied to these tenure reviews and, if not, whether he should defer making a decision on funding the reviews until he is so satisfied
- it would be appropriate to defer a funding decision until the Special Tribunal has made a decision on the application to amend the Water Conservation (Kawarau) Order 1997, so he can be informed as to what further restrictions may be imposed on land proposed for freeholding in the tenure reviews
- the assessments by the Department of Conservation (DoC) of the SIVs in the areas proposed for freeholding (including the area that would be inundated by the hydro proposal) are up to date from a 2008 perspective
- the proposed inundation footprint has been taken as a given in the tenure review proposals (subject only to RMA etc processes), notwithstanding any SIVs present
- the landscape covenants to be held by DoC (see paras 12 and 13 respectively of the two reports) allow for the proposed inundation footprint and, if not, whether, in respect of the footprint, they can be displaced by the water conservation order or any amendment to it, or by other resource management processes.



John Blincoe  
Senior Adviser to Hon David Parker  
**Minister for Land Information**

*Attachments:*

08. B. 0493

12 MAR 2009

Hon Dr Richard Worth  
Minister for Land Information

Dear Richard

Just prior to the General Election, the previous Minister of Land Information sought the view of the previous Minister of Conservation on the proposed outcomes and funding of the Ben Nevis and Craigroy Tenure Review Preliminary Proposals.

I have studied the proposals and I believe they should proceed and be publicly notified.

Yours sincerely

**Signed Tim Groser**

Tim Groser  
Minister of Conservation





**Media statement: Ben Nevis and Craig Roy Tenure Reviews**

5 May 2009

Two properties in the Nevis Valley in Central Otago, Ben Nevis and Craig Roy, currently undergoing tenure review are nearing the public submission stage.

"There has been speculation in the media about whether or not the Department of Conservation has entered into an agreement with Pioneer Generation that it would be allowed to build a power station in the valley," said Land Information New Zealand (LINZ) General Manager Business Support, Brian Usherwood.

"LINZ wishes to clarify this situation with regard to tenure review.

"The Crown Pastoral Land Act 1998, which governs tenure review, does not provide for decision-makers under the Act to take into account what could happen in the future to land that is freeholded as a result of tenure review.

"Future land use is a matter for regional and district planning processes under the Resource Management Act," said Mr Usherwood.

"LINZ is not aware of any agreement to 'build a power station in the Nevis valley'. While we understand there was an historical agreement between the Department of Conservation and Pioneer Generation's predecessor Central Electric regarding the Kawarau Water Conservation Order, this information is outside the scope of the tenure reviews for Ben Nevis and Craig Roy and not considered as part of the statutory process.

The tenure review proposals for the two properties are nearing the point where they will be released for public submission. Mr Usherwood said this provides any member of the public or interested organisations with an opportunity to make a submission on the proposed outcome of the tenure reviews.

The submissions are then analysed and taken into account before the next stage of the tenure review process.

Ends

For more information about the tenure review process, visit [www.linz.govt.nz](http://www.linz.govt.nz)

Contact for media queries:  
Dionne Barton  
Land Information New Zealand  
Ph 04 460 2718 or 027 444 4223

# Dam consents would override Nevis covenant

By MARK HOTTON in Cromwell

**COVENANTS** designed to protect land in the Nevis Valley will be worthless if Pioneer Energy obtains the consents required to build a hydro-electric dam.

The revelation was made by Department of Conservation Otago conservator Jeff Connell yesterday at a special tribunal hearing in Cromwell that is considering whether damming of the Nevis River should be prohibited.

Pioneer is the leaseholder of the Ben Nevis and Craigroy stations in Nevis Valley, which are undergoing tenure review.

The electricity-generation company wants to freehold the footprint of a proposed 40-megawatt dam on the Nevis River that would flood up to 8km on the river and create two dams, one the size of Lake Hayes, near Queenstown.

In return for obtaining freehold of about 7800ha, Pioneer plans would vest significant sections of the stations into DOC protection, including 8800ha on the Hector Mountains that would become public conservation land.

DOC has taken a neutral stance on the application by Fish and Game to prohibit dams on the Nevis. This is in part because of a deal done with Pioneer 13 years ago when the electricity generator



Jeff Connell

agreed to support a water conservation order for the Kawarau and its tributaries, which include the Nevis River, in exchange for allowing a section of the river to be flooded for

hydro-electricity development.

Mr Connell yesterday told the hearing that if Pioneer did not obtain consents for the proposed dam, then the covenants would protect the land for perpetuity. But, if approval was obtained, the Conservation Minister would be contractually required under the tenure review agreement to move the covenants off to one side and allow the land to be flooded.

DOC could not support an application to prohibit damming the river as that was allowed under the existing water conservation order, which it had agreed to.

Going against that agreement would mean it was acting in bad faith.

Mr Connell said DOC had to constantly weigh up whether the Government's policies and the public interest were better served by making a compromise in a tenure review.

# Heritage 'needs preservation'

By MARK HOTTON in Cromwell

**THE** Nevis Valley's heritage was of national importance and needed preservation from possible destruction from any proposed hydro-electric scheme, a tribunal in Cromwell was told yesterday.

Representatives from New Zealand Historic Places Trust gave evidence yesterday, outlining the Maori and goldmining heritage sites and their significance.

Otago Southland area manager Owen Graham said little was known about the valley's historic and cultural heritage values when the previous order was being considered, in 1992. Since then, there had been more assessment in 1994 and 2005, which helped develop a better understanding, he said.

The trust was concerned about the potential damage any power generation scheme would have on the sites.

Tribunal chairman Richard Fowler asked why there were only

two sites - Maori middens and stone hotel ruins - listed on the trust's register of historic places.

Mr Graham said there was only a limited understanding of the valley's heritage and the application offered an additional chance to protect what was yet to be found.

Trust archaeologist Dr Matthew Schmidt said there were 62,000 recorded archaeological sites in New Zealand and while the trust was trying to register as many as possible, it was a lengthy process.

In his evidence, Dr Schmidt said the archaeological landscape of the lower Nevis Valley was of "national importance".

The impact of development in Central Otago along other mined rivers meant no other valley or waterway in the province could be seen to offer a virtually undisturbed snapshot of the varied human use during a 700-year period. The loss of any part of that heritage would "severely diminish" the valley's history, he said.

APPENDIX 6

File: PAL-14-04-241

27 May 2005

David Paterson  
 QV Valuations  
 PO Box 215  
 Dunedin

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Dear David

**DOCs Response to Ben Nevis/Craigroy Counter Proposal**

**1. Introduction**

The holders of the Ben Nevis and Craigroy PLs have proposed both the use of covenants to provide protection of significant inherent values (SIVs) and the designation as unencumbered freehold over a number of areas as part of the tenure review consultation process. The Crown is currently proposing a combination of full Crown ownership and covenants over the entirety of both leases to protect a wide variety of SIVs.

During consultation DOC has recommended a lessening in the significance of the SIVs within the footprint of the lessee's proposed hydro development if the balances of SIVs on both leases are adequately protected.

The proposed covenants are modelled on those produced by DOC for the respective leases DPPs and provide freehold ownership, ongoing grazing, trespass and other rights as well as several conditions not included in the original documents i.e. the right to remove indigenous woody vegetation. Section 2 contains a summary of the lessee's counter proposal.

The appropriate use of covenants has become clearer in recent times. The guidance of the CPLA 1998 and subsequent government policies is outlined below:

- The CPLA states a preference for the protection of SIVs by full Crown ownership and control rather than protective mechanisms i.e.: covenants.
- Government policy is to progressively establish a network of high country parks and reserves. This suggests that full Crown ownership is required for their establishment.

The following points have been extracted from Cabinet Policy Committee Minutes dated 7 February 2005.

14. In order to protect SIVs, full public ownership and control of reviewed pastoral lease land is preferable to covenanting:

- Where active conservation management requires the sustained exercise of rights associated with ownership for example, to carry out the pest control to achieve the desired conservation outcomes. - ownership also enables this to be carried out far

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more efficiently and effectively than having to negotiate access and management proposals with a third party on an ongoing basis;

- When public interest in the land is high, such as for secure and free access to enjoy recreational opportunities, or for involvement in management decisions;
- Where doing so will facilitate public enjoyment and use through appropriate activities provided by competing provider concessionaires; and
- Where it is possible to protect large and contiguous areas of indigenous vegetation or habitats that have high conservation value.

15. Covenants are preferable for:

- discrete areas:
  - surrounded by land to be disposed of as freehold;
  - where the conditions of the covenant will provide protection for the SIVs;
  - the SIVs of the area do not require active conservation management ;
  - where public interest in access is low;
  - it is more cost effective to use a covenant than full public ownership; and
- larger areas where the SIVs are sufficiently robust not to require any conservation management (e.g. certain landscape features).

Given the guidance from the CPLA, the policies outlined above, the presence of a multitude of SIVs and the analysis of the LENZ data the department strongly recommend that the areas designated in the DPP as conservation areas on Ben Nevis continue to be so. Therefore, the lessee's proposed designations over the areas outlined on the attached plan as A, B, C, D, E and F (a combination of covenants and unencumbered freehold) has neither been analysed nor has comment been supplied.

For the same reasons the area marked G on Craigroy has not been commented on.

In the following analysis of the remainder of lessee's counter proposal firstly I have summarised the entire counter proposal. Secondly I have broadly described the landscape, landform, vegetation, historic and LENZ values within areas H and I (being the extent of the designations proposed by the lessee that fall outside areas A- G) and assessed these against the SIV guidelines. Thirdly I have described the SIVs and management issues specific these two areas and described the threats the proposed covenants pose to the SIVs. Finally I have evaluated the portions of the proposed designations within areas H and I against the CPLA.

## 2. Summary of the Counter Proposal

Two types of designations have been proposed by the lessee, termed Landscape Covenant Areas A and B (hereby referred to as LCAA and LCAB). As previously mentioned, these are modelled on the DOC produced s77 Reserve Act covenants that formed part of the respective leases DPPs.

The lessee has proposed covenanting approximately 25% of Ben Nevis, with approximately 2/3s of this area being subject to LCAB and the remaining area being subject to LCAA. The

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lessee has also proposed the unencumbered freehold of approximately 20% of the lease. On Craigroy the lessee has proposed the covenanting and the unencumbered freehold of approximately 50% and 30% of the lease respectively. On Ben Nevis the two Conservation Areas proposed by the Crown have been reduced in extent, while on Craigroy the extent of the upper Conservation Area has been decreased and the lower Conservation Area eliminated.

The major differences between the covenants produced by DOC and those produced by the lessee are listed below.

### LCAA

#### Operative Parts

- Clause 3.1.8, being the damming, diverting or taking of Natural Water has been deleted.
- Clause 3.1.9, being any action which will cause deterioration in the natural flow, supply, quantity or quality of water of any stream, river, lake, pond, marsh, or any other water resource affecting the Land is assumed to have been deleted.
- Clause 3.2.3 has been softened, so the owner must use their best endeavours to keep the land free of exotic tree species.

Schedule 1 - the description of the values of the land to be protected has been altered. Of particular concern to and disputed by DOC are the assertions that:

- a) the regenerating shrublands on the lower slopes are thought to be partly induced by fertiliser use and therefore will not be protected;
- b) higher areas have landscape values attributed to the vegetation pattern which is a transition between tall tussock and the more exotic oversown areas; and
- c) the historic values are represented by the hand stacked stone tailings from ground sluicing and the tailings from dredging.

#### Schedule 2 (special conditions)

- DOC will pay to the owner a proportional share of the cost of any work under clause 3.2 (lists owner's obligations including weed/pest control, fire control etc) if the Minister has first approved the work.
- Amendment of clause 3.1.5 to allow for burning and chemical spraying of exotic weeds.
- Amendment of clause 3.1.6 to allow for the excavation of material less than 20m<sup>3</sup> (volume) and/or disturbance of any land 50 m<sup>2</sup> in area in any one hectare in any continuous period of 5 years but excluding cultivation of areas previously cultivated and any such activity required to maintain vehicle tracks etc .....

Schedule 3, the Management Prescription has been deleted. The monitoring regime has not been practically detailed.

### LCAB

The amendments listed above for LCAA have been incorporated into LCAB, as well as the following changes.

- Clause 3.1.2 is deleted, therefore allowing the felling, removal or damage of any tree, shrub or other plant.

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- Clause 3.1.5 is deleted, therefore allowing burning, chemical spraying, top dressing or sowing of seed.

### 3. Summary of the Landscape, Vegetation, Historic and LENZ SIVs

The landscape, vegetation and historic SIVs are interrelated. For example, historic SIVs i.e. mining tailings influence both the landscape and by being suitable habitat, the vegetation SIVs.

In combination, these SIVs are of greater value than their individual parts. This combination is why the Nevis Valley, of which the leases form a significant portion of, is undisputedly regarded as a special and unique place.

The summaries of these three SIVs are adapted from the respective leases CRRs while the LENZ summary is recent. The emphasis of each summary is on the areas H and I, with the exception of the proposed hydro development footprint which has been expressly omitted. Each summary is concluded by an assessment of these values against the SIV guidelines. \*

#### Summary and assessment of significant landscape values

##### Landscape Character

The Nevis Valley landscape is defined by the homogenous dominant gold tussock cover, a distinctive, highly diverse and visible landform and cultural influences from mining and pastoralism. These factors together with the enclosed remote and relatively isolated nature of the valley contribute to a landscape that is visually memorable. In a regional context, there is a scarcity of substantially unmodified valley floor landscapes as within Otago, the only close equivalents being the upper Manuherikia and upper Dunstan Creek valleys.

##### Visual and Scenic Values

The Nevis Valley is well recognised as being visually very impressive. Important vantage points are gained from the Nevis Road, Duffers Saddle Road and from the tops of the surrounding mountains.

The diversity in landform e.g. flats, gorges, terraces together with tor-lined gullies and slopes contribute to the spectacular nature of the valley. The farm buildings, the old gold workings plantings and other cultural features add interest and diversity.

The wild and scenic characteristics of the Nevis River also contribute to the scenic values of the Nevis Valley. The meandering river adds to the scenic remoteness of the valley above Nevis Crossing. Downstream of the Nevis Crossing, the Nevis River is confined within a narrow enclosed gorge, which drops steeply giving a wild stretch of water. The diversity of water and landscape types within the Nevis Valley contributes to the outstanding wild and scenic characteristics of the river system as a whole. The visually impressive, remote but accessible nature of the Nevis Valley makes it a popular destination for recreation.

Assessed against the SIV guidelines, the landscape SIVs have the highest significance (guidelines 107), high significance (108, 109) and significant values (110 -113).

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In conclusion the Nevis Valley (of which the both areas H and I form a significant portion) has landscape values of national significance. The whole Nevis Valley landscape requires consistent management as fragmentation would reduce the landscape values.

### Summary and assessment of botanical values

The Nevis intermontane basin supports a diverse range of plants and communities. The high conservation status of intermontane basins, especially of the Nevis Valley, has recently been highlighted by Walker et al (2002a). A summary of the significant floral values in areas H and I follows.

#### Ben Nevis- Area I

Narrow-leaved tussocklands are the dominant vegetation of the montane bioclimatic zone while diverse shrublands occupy riparian zones and some montane slopes, such as the gorge below the Nevis Crossing. These are highly significant as remnants of woody cover with a species mix that reflects the likely pre-human extensive burning state. Elsewhere matagouri shrubland is present, which is likely to have responded to fertilizer applications. Future restoration and rehabilitation of the woody shrub cover in this part of the landscape will require nucleus seed sources such as these. The importance of shrubland remnants has recently been given prominence by Walker et al (2002) who highlight the conservation importance of low altitude woody vegetation and associated fauna. This importance applies to all the shrublands discussed here on in.

The faces of the main ridge systems are covered in largely intact tall tussocklands at mid to higher elevations. At lower altitudes, snow tussocks become more scattered and mix with pasture grasses and short tussock. Despite extensive grazing use, these ridge faces contain dominant tall tussockland which contribute to their natural appearance.

#### Craigroy- Area H

An extensive community of *Carex muelleri* is present on the flats just north of Coal Creek mouth, with plants scattered elsewhere along the Nevis riverbank.

Relatively diverse shrublands associated with tors located near the Nevis Road are significant as remnants of woody cover with a species mix that reflects the likely pre-human extensive burning state. The widespread matagouri shrubland present south of Barn Creek is relatively short statured, and represents the first stage in the transition back to a woody cover following early fires. Their spread and vigour has probably been enhanced by the application of fertiliser and their conservation significance is moderate.

In conclusion both areas H and I are notable for the overall good condition of the major indigenous vegetation communities present and the high degree of natural character they impart at a landscape scale.

Assessed against the SIV guidelines, these SIVs have the highest significance (guidelines 51, 63), high significance (53, 68) and significant value (74, 75).

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The mining workings contained on area H form unusually intact systems of alluvial gold mining sites, from which much more can be learnt than from parts of systems on their own. These workings are set in a landscape that has been little modified since nineteenth century. Cultivation has had minor effects only in the area around the Crossing.

A wide range of technologies and eras are represented from 1860s ground sluicings through 1900s dredging and hydraulic elevating to 1930 hydraulic sluicings. This is unusual since dredging and hydraulic lifting often destroys all earlier workings e.g. Gabriels Gully. The association of the remnants of a bucket dredge, the Nevis Crossing dredge, with workings that are extensive in both area and time, cannot be matched anywhere else in Otago or Southland. Other such clearly identified 1930s workings are not so far known for Otago, and cannot be protected under the Historic Places Act. All these groupings and their good survival give the area as a whole regional significance.

Families who still rent or own properties at the Nevis Township provide a strong link with the past therefore much more historic documentation and identification of names with sites are available in the Nevis compared with most other alluvial workings, such as the Bannockburn sluicings.

The wide open landscape and lack of forest and shrubland makes the sites highly visible and particularly easy for visitors to appreciate. Nationally there is no other alluvial gold field known that has both such high heritage values and such ease of interpretation, which gives the field national importance.

Other significant sites in areas H and I include the early farmstead at Ben Nevis.

Assessed against the SIV guidelines, these SIVs have the highest significance (guidelines 32), high significance (32, 33) and significant value (34, 35, 36, 38, 39).

**Summary and assessment of LENZ values**

Approximately 60 % of area I contains LENZ environments N3.3a, N5.1c and N4.1d assessed as being "much reduced/acutely threatened/chronically threatened" and are therefore accorded the highest significance (guideline 62). Approximately 39% contains LENZ environments Q2.2a, Q1.1b and Q1.1c assessed as being "critically underprotected/underprotected" and therefore accorded significance (guideline 76). The remaining 1% contains LENZ environment Q1.1a that is not accorded a threat category.

Approximately 30% of area H contains LENZ environments N4.1b, N4.1d, N5.1a and N5.1c assessed as being "much reduced/acutely threatened/chronically threatened" and are therefore accorded the highest significance (guideline 62). Approximately 65% contains LENZ environments Q1.1b, Q2.1b, Q2.2a, Q3.3a and Q3.3b assessed as being "critically underprotected/underprotected" and therefore accorded significance (guideline 76). The remaining 1% contains LENZ environment Q3.3a that is not accorded a threat category.

**4. BEN NEVIS**



**Portion of LCAB 1 within area I**1. Extent

Encompasses the southern half of the landscape covenant, with the exception of a 1 km wide riparian strip encompassing Trig Y, the Nevis Crossing and the Ben Nevis homestead.

2. Specific SIVsLandscape

- The homogenous gold tussock cover and the highly legible landforms of the front face, with wide uninterrupted views across open features and low stature vegetation give important open space characteristics.

Botanical

- Ecological sequence running from ~720 m to ~1300 m.
- *Chionochoila rigida* throughout, increasing in extent with altitude.
- Remnant shrublands on toe slopes and in riparian areas.

Fauna

- Kea "nationally endangered" are highly likely to utilise habitat within LCAB 1.
- New Zealand falcon "gradual decline" utilise habitat within LCAB 1.

Threats to these SIVs under conditions contained within LCAB 1

- Amendment of clause 3.1.1 removes any control of the number of stock permitted in the covenant area. This amendment therefore poses a significant threat to landscape, vegetation and faunal SIVs.
- Deletion of clauses 3.1.2 and 3.1.5 removes any control on vegetation clearance by chemical spraying, burning or by other means. This poses a significant threat to the botanical, faunal and landscape values.
- Deletion of clause 3.1.5 removes any control on ASTOD, therefore allowing farm intensification. This poses a significant threat to the botanical, faunal and landscape values.
- Deletion of 3.1.8 and 3.1.9 creates a significant threat to all Natural Water and water resources.
- Conflicting conditions between clause 3.2.3 and the operative ORC Weed/Pest Strategy regarding woody weed control is likely cause sub-optimal weed control, a significant generic threat to all SIVs.
- Unjustified assertions (listed below and disputed by DOC) in the description of the Values to be protected:
  - a) the regenerating shrublands are induced and therefore don't warrant protection; and
  - b) only the higher areas have landscape value; are a significant generic threat to all SIVs.
- Absence of a management prescription, highly likely to cause sub-optimal management and subsequent protection of the values contained within covenanted area. This poses a significant generic threat to all SIVs.

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**Ben Nevis Unencumbered Freehold (BNUF) within area I**

Extent

Encompasses the northern and eastern portions of the proposed landscape covenant

2. Specific SIVs

Landscape

- The homogenous gold tussock cover and the highly legible landforms of the front faces, with wide uninterrupted views across open features and low stature vegetation give important open space characteristics.
- Below the Nevis Crossing, incised streams become a prominent feature with which rocky outcrops and grey matagouri-mingimingi shrubland are associated. The Nevis Gorge itself is the most significant of these and is steep, incised, with extensive rock outcropping and bluffs.

Botanical

- Riparian shrublands (matagouri, *Hebe* and *Coprosma* species) are common.
- Rock dwelling plants such as *Anisotome caudicola*.
- Ecological sequence running from ~600 m to 1322 m.
- *Chionochloa rigida* throughout, increasing in extent with altitude.

Faunal

- New Zealand falcon "gradual decline" utilise habitat within BNUF.

Historic

- Early Ben Nevis homestead.

Threats to these SIVs

Should this area become unencumbered freehold the relevant Central Otago District Plan Rule, rule 4.7.6L will not apply. Subsequently there would be no control on the erection of structures, cutting of new roads, excavating and/or cultivation, establishing production forestry or subdivision. A lack of control of these and similar activities would be an extreme threat to all the SIVs.

\*

5. CRAIGROY

**LCAA within Area H**

1. Extent

Extends down from the Carrick Range water race into CA 1 and down onto upper section of landscape covenant.

2. Specific SIVs

Landscape

- The dominant vegetation cover, tussockland, gives the hillslopes a homogenous tawny gold texture.
- Tor studded ridges and hillslopes, a distinctive and highly diverse and visible

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landform.

Geology, Landform and Soils

- There are good examples of mass movement and saw cut gorge landforms in the narrow gullies.

Botanical

- Relatively diverse shrublands associated with tors located near the Nevis Road are significant as remnants of woody cover with a species mix that reflects the likely pre-human extensive burning state.

Faunal

- New Zealand falcon "gradual decline" utilise habitat within LCAA.

Threats to these SIVs under conditions contained within LCAA 2

- Amendment of clause 3.1.1 removes any control of the number of stock permitted in the covenant area. This amendment therefore poses a significant threat to landscape, vegetation and faunal SIVs.
- Amendment of clause 3.1.5 to allow as-of-right burning and spraying of woody weeds poses as significant threat to the vegetation and faunal SIVs, as both these activities are non-selective.
- Deletion of 3.1.8 and 3.1.9 creates a significant threat to all Natural Water and water resources.
- Conflicting conditions between clause 3.2.3 and the operative ORC Weed/Pest Strategy regarding woody weed control is likely to cause sub-optimal weed control, a significant generic threat to all SIVs.
- Unjustified assertions (listed below and disputed by DOC) in the description of the Values to be protected:
  - a) the regenerating shrublands are induced and therefore don't warrant protection;
  - and
  - b) only the higher areas have landscape value;are a significant generic threat to all SIVs.
- Absence of a management prescription, highly likely to cause sub-optimal management and subsequent protection of the values contained within covenanted area. This poses a significant generic threat to all SIVs.

**LCAB**

1. Extent

Lies on landscape covenant taking in upper Coal Creek catchment northward.

2. Specific SIVs

Landscape

- The homogenous dominant tawny gold tussock cover.
- Tor studded ridges and hillslopes, a distinctive and highly diverse and visible landform.

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- Cultural influences from mining and pastoralism.

Botanical

- South of Barn Creek is extensive matagouri shrubland which represents the first stage in the transition back to a woody cover following early fires. Their spread and vigour has probably been enhanced by the application of fertiliser and their conservation significance is moderate:

Faunal

- New Zealand falcon “gradual decline” utilise habitat within LCAB.

Threats to these SIVs under conditions contained within LCAB 2

- Amendment of clause 3.1.1 removes any control of the number of stock permitted in the covenant area. This amendment therefore poses a significant threat to landscape, vegetation and faunal SIVs.
- Deletion of clauses 3.1.2 and 3.1.5 removes any control on vegetation clearance by chemical spraying, burning or by other means. This poses a significant threat to the botanical, faunal and landscape values.
- Deletion of clause 3.1.5 removes any control on ASTOD, therefore allowing farm intensification. This poses a significant threat to the botanical, faunal and landscape values.
- Deletion of 3.1.8 and 3.1.9 creates a significant threat to all Natural Water and water resources.
- Conflicting conditions between clause 3.2.3 and the operative ORC Weed/Pest Strategy regarding woody weed control is likely cause sub-optimal weed control, a significant generic threat to all SIVs.
- Unjustified assertion (disputed by DOC) in the description of the Values to be protected that the regenerating shrublands are induced and therefore don't warrant protection is a significant threat to the vegetation SIVs.
- Absence of a management prescription, highly likely to cause sub-optimal management and subsequent protection of the values contained within covenanted area. This poses a significant generic threat to all SIVs.

**Craigroy Unencumbered Freehold (CUF)**

1. Extent

Takes in lower faces, lies on landscape covenant and CA 2.

2. Specific SIVs

Landscape

- The homogenous dominant tawny gold tussock cover.
- Tor studded ridges and hillslopes, a distinctive and highly diverse and visible landform.
- Cultural influences from mining and pastoralism.

Botanical

- An extensive community of *Carex muelleri* “sparse” is present on the flats just north

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- of Coal Creek mouth, with plants scattered elsewhere along the Nevis riverbank.
- *Carex kaloides* "sparse"

Historic

- Mining tailings near Coal Creek considered representative of the 1860-1880s mining period.
- Dredge ponds and associated tailings formed by hydraulic elevating and dredging.

Recreation

- The historic sites are a significant recreational resource.
- NGOs have indicated that any land returned to full Crown ownership will be welcomed and utilised by outdoor recreationalists and recreational use will increase once access is assured.

Threats to these SIVs

Should this area become unencumbered freehold the relevant Central Otago District Plan Rule, rule 4.7.6L will not apply. Subsequently there would be no control on the erection of structures, cutting of new roads, excavating and/or cultivation, establishing production forestry or subdivision. A lack of control of these and similar activities would be an extreme threat to all the SIVs.

Also the lack of:

- a) secure access for active conservation management;
- b) public involvement in management decisions; and
- c) opportunities to facilitate both public enjoyment and use of the area by competing provider concessionaires;

is a significant threat posed by this proposal.

**6. Evaluation of the entire counter proposal against the government policy and the relevant CPLA object.**

Neither individually nor as a whole do the designations proposed by the lessee that lie within areas H and/or I protect the SIVs. Therefore the department strongly recommends that as this counter proposal does not meet the objects of the CPLA, particularly s24(a)(i), it should be rejected in its entirety.

Yours sincerely

Bruce Hill

**BEFORE THE SPECIAL TRIBUNAL**

No.

In the matter of

The Resource Management  
Act 1991

And

In the matter of

an application to amend the  
Water Conservation  
(Kawarau) Order 1997 by The  
New Zealand & Otago Fish &  
Game Councils

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**EVIDENCE OF PETER JAMES DOWLING**

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**BUDDLEFINDLAY**  
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Christchurch

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### Introduction

1. My name is **Peter James Dowling**.
2. I have been the Chief Executive Officer of Pioneer Generation Limited for the last 10 years.
3. Before being appointed to my current position I was the Generation Manager for Pioneer Generation's predecessor: Central Electric Limited, which position I held from 1996 until 1999.
4. I qualified as a Mechanical Engineer in the United Kingdom, earning a Higher National Certificate in Engineering (UK) which was conferred on me by Southall College of Technology in 1966. I am a member of the Institute of Mechanical Engineers (UK).
5. I began my career with the New Zealand Electricity Department ("NZED") in 1972. From about 1982 onwards there were several reorganisations within NZED, the last set of which culminated in the electricity industry reforms of 1987 and the forming of Electricity Corporation of New Zealand ("ECNZ"). My final job with NZED was Assistant Regional Manager based in Dunedin. All of my work for NZED, prior to entering managerial positions, was in hydroelectric operations. For example, between 1979 and 1982 I was based in the Dunedin office of NZED as Generation Engineer, responsible for the operation and maintenance of Roxburgh and Manapouri power schemes. From 1982-86 I was employed as District Design and Construction Engineer responsible for the substation and transmission line design and construction staff of NZED south of the Waitaki River.
6. I was then appointed Assistant Regional Manager between 1986 and 1987. In 1987 NZED was corporatised and became ECNZ establishing area

offices in Alexandra, Twizel and Benmore. I moved to Alexandra to take up the position of Area Manager responsible for Roxburgh, Clyde and Manapouri power stations.

7. I joined Central Electric Ltd in July 1996 as Generation Manager and I was appointed to my current position with Pioneer Generation Limited in 1999.
8. I confirm that I have read the Code of Conduct for expert witnesses contained in the Environment Court Practice Note and that I agree to comply with it. I confirm that I have considered all of the material facts that I am aware of that might alter or detract from the opinions expressed here.

#### **Pioneer Generation Limited Described**

9. Pioneer Generation Limited was established in July 1999 as a direct result of the Electricity Industry Reform Act 1998.
10. Prior to 1993 the company was known as the Otago Central Electric Power Board (OCEPB). The OCEPB was a community-owned organisation which was governed by an elected board of trustees.
11. In 1993 Central Electric Limited was established and the Government appointed a Board of Directors. The shares in the company were held by Otago Central Electric Power Trust on behalf of the community.
12. In 1998 a decision was made by Parliament that power companies could not be generators and own distribution lines and divestment was required. Central Electric Limited was both a power generator and a lines company and therefore had to divest itself of either its lines or generation business.
13. Central Electric Limited decided to sell its lines business unit to Dunedin Electricity (now Aurora Energy Limited) which is a company owned by Dunedin City Council. The retail business unit of Central Electric Limited was sold to TrustPower as was the name "Central Electric".



14. The generation business unit assets of Central Electric Limited were retained and the company was renamed as Pioneer Generation Limited. As a result of these reforms, Pioneer Generation Limited is a power generating company and it has no retail customers.
15. Prior to electricity reforms in 1993, Central Electric Limited had exclusive rights, by statute, to supply electricity to a geographical area covering Millers Flat, Omakau, Makarora, Wanaka, Queenstown and Milford Sound. Under previous legislation Power Boards were granted a defined geographical area in which they generated and supplied electricity. That area remains the area of most interest for Pioneer Generation now.

#### **Ownership**

16. The shares in Pioneer Generation Limited are held by the Central Lakes Trust. The Central Lakes Trust is the successor to the Otago Central Electric Power Trust which I described earlier. It was necessary to establish a new trust, because as a result of the electricity reforms, the Otago Central Electric Power Trust was left without direct beneficiaries.
17. The assets of Central Lakes Trust are: Pioneer Generation Limited, plus the proceeds of the sale of its former lines business and retail business units. Central Lakes Trust is the only shareholder in Pioneer Generation Limited, and the beneficiaries of the Central Lakes Trust are the rate payers living in the geographical area I described earlier.
18. Central Lakes Trust distributes the income which it generates from all of its assets, primarily the returns provided by Pioneer Generation Limited, into the community. Typically the Trust distributes approximately \$6 million into community projects each year.
19. Central Lakes Trust appoints all of the directors of Pioneer Generation Limited. Membership of the trust itself is subject to triennial elections. There

are six trustees. Each of the trustees are entitled to serve a maximum of three terms, after which they are no longer eligible for appointment.

20. Having made the point that Pioneer Generation Limited is community owned, the mandate which it received from the Trust requires it to act as a responsible commercial enterprise and to seek appropriate returns from its capital.

**Pioneer Generation Limited's present assets**

21. Pioneer Generation is a relatively small distributed or embedded generator of electricity based in Alexandra (It owns and operates 12 small power stations which, because of their small size, are not required to sell their electricity to the electricity market which is operated by Transpower.
22. Pioneer has 12 power small hydro generation power stations. They are:
  - (a) The Teviot River scheme which incorporates the Onslow dam (with the Onslow storage lake), a dam at Horseshoe Bend, the Horseshoe Bend power station, the Marslin dam, the Michelle power station, the Head Pond, the George power station and the Teviot Bridge and the Ellis power stations. We are presently building a 2 megawatt power station called Kowhai, which is between the Marslin Dam and the Head Pond on the Teviot River. The Kowhai station will be completed in about May 2010.
  - (b) The Fraser Dam and Fraser River power station.
  - (c) Two small power stations called the Upper Roaring Meg and Lower Roaring Meg in the Kawarau Gorge.
  - (d) At the Wye Creek scheme there is small intake weir, with a single power station situated adjacent to SH6 between Frankton and Kingston.
  - (e) The other power stations are located at Glenorchy, Monowai and Falls Dam, near St Bathans.

23. All of Pioneer Generation's power schemes at the present time are hydro-electric ones, although it is currently building a small wind farm at Horseshoe Bend (three turbines of 750 kilowatts each) which is due to be commissioned in 2009.
24. The currently consented generating capacity of all of Pioneer Generation's power generating power assets is 32 megawatts. Once the Kowhai power station, and the wind turbines at Horseshoe Bend are operative, the power generation capacity will be about 36.5 megawatts.
25. The power which is generated by Pioneer Generation is fed directly into the local distribution network. The Central Otago network is owned by Aurora Energy Ltd. Power generated at Monowai is fed into PowerNet network and the Falls Dam production is fed into the OtagoNet distribution network. The distribution network company is effectively a "trucking" system meaning that it transports power from the generators to the retailers customers. In a retail sense the power generated by Pioneer Generation is mostly sold by TrustPower.
26. The majority of Pioneer Generation's power is sold into the local distribution network, not into the national grid. So long as any power station produces less than 10 megawatts of power it is not required to bid its generation into the electricity market operated by Transpower.
27. Occasionally there are times when Pioneer's generation exceeds the load on the local distribution network. On those few occasions it is fed into the national grid at Clyde, but there is a price disincentive for Pioneer Generation created by the Transpower pricing methodology. Pioneer is charged substantial fees for using the Transpower network, which makes it a cost disincentive.

28. About 95% of the time all our generation is fed into the local distribution networks. The Teviot scheme output is injected into a substation, owned by Aurora Energy Ltd, adjacent to the lower Teviot river stations.
29. Wye Creek generation is fed into the Frankton substation (near Queenstown). Glenorchy is supplied into the local 11kV network and distributed in the Glenorchy region. The Roaring Meg stations generation goes into Aurora Energy substation in Cromwell. The Falls Dam energy is fed into the OtagoNet 33kV network at Ranfurly and Monowai goes into the PowerNet network.
30. Of all of these stations it is only Teviot generation which has the occasional need to be fed into the national grid. The rest of our generation is embedded and does not enter the national grid as the stations are all generating at levels well below the local load demand.

#### **The Nevis**

31. Pioneer Generation Limited considers the Nevis River an attractive development proposition because the river has reliable flows and a good operating head (i.e. a fall over distance which allows energy to be developed by the drop from point A to point B).
32. An overview map of the Nevis River is attachment 1. The points marked A, B, C, and D on that map and the corresponding grid references in the accompanying table indicate the locations referred to in the 1997 water conservation order. Point C marks the headwaters of the river, point D marks the upper limit of any inundation that could occur under the 1997 order, point B marks Nevis Crossing, and point A is where the Nevis River meets the Kawarau River.

33. In general, when I and Pioneer's other witnesses refer to the Upper Nevis, we mean the section of the River and the valley from around the Whitten Creek area to the headwaters at point C. When we refer to the lower Nevis, we mean the area from around Schoolhouse Flat, above the confluence with Schoolhouse Creek, downstream to a short distance below Nevis Crossing. When we refer to the Gorge, we are referring to an area that starts some distance below Nevis Crossing, where the river becomes difficult to access and descends steeply down to where it ends at its confluence with the Kawarau River at point C.
34. The possibility of using the Nevis River has been considered by Pioneer Generation, or its predecessors, since the late 1960's. It was the difficulties with transmission issues and unfavourable economics of generating power on the river that prevented a viable scheme from being proposed for consideration earlier.
35. Options for possible development of the Nevis River became attractive when power prices increased faster than the construction costs, and transmission options opened up with changes in legislation.
36. Other activities which have made the generation of power on the Nevis potentially attractive are technological changes. As Mr Mulvihill will explain, all of the options for power generation on the Nevis River involve tunnelling into the adjacent hillside. The improvement and techniques for tunnelling, have reduced the cost. Generating plant technology has also been improving over time increasing performance and reducing costs.
37. Having made the point that the Nevis River is an attractive option for electricity generation, Pioneer Generation has no present plans to establish a power system on the Nevis River and is not yet in a position to make an application for resource consent to do so. From the 1960's Pioneer (and its

predecessors) considered a number of options but they have never got beyond a conceptual stage. Pioneer Generation is interested in pursuing options for potential development on the Nevis River, but it has not chosen one option over any other option; nor has it made a commercial decision to attempt to proceed with a hydro scheme. Pioneer Generation's interest in the Nevis River is to seek to develop a hydro generation scheme in the future. The company does not want to see options for the future development of hydro generation precluded; but it accepts that any application will need to pass very stringent environmental tests, and potential opposition before it might succeed.

38. For completeness I need to add that Pioneer owns the leasehold of two farm properties on the banks of the Nevis River, Ben Nevis and Craig Roy. The company has had a financial interest in both properties since 1992 and purchased both leases in 1997. Craig Roy is leased back to its original owner. Ben Nevis is leased to a local farmer.
39. Both stations are Crown leases and they are currently subject to tenure review. A Draft Preliminary Proposal was signed by Pioneer Generation about two years ago. This proposal is currently with the Minister of Lands for consideration and approval prior to being advertised for public submissions.
40. Neither farm property is a profitable leasing proposition for Pioneer. A rental return is obtained, but does not represent a commercial return on capital invested. Pioneer's core business is power generation, not farming. But both stations do provide access to suitable land, and development sites, for locating any future power scheme.

### Power Generation Options

41. Mr Mulvihill will describe the options which may be available for power generation on the Nevis. Two broad options are conceivable at this stage. One of them is a small head pond, which might lead to a station capable of producing between 33 and 45MW megawatts (MW). In this option the proposal would essentially be run of river, because there would be no storage lake.
42. Another option is for a 45 megawatt station with peaking capacity which would need a storage lake.
43. There are a number of obvious restrictions or constraints on the ability to develop either scheme. Aside from the need to be able to convince Pioneer Generation's Board that any project is financially viable, there are a number of other issues as follows:
  - (a) *Residual Flows.* Pioneer accepts that it would be appropriate in any resource consent to make sure that there are adequate residual flows maintained in the Nevis River on the downstream side of any water take. Any consent conditions, and particularly those relating to the residual flow in the Nevis River, could make either of the options uneconomic. It is an unfortunate consequence of hydroelectric power that they are long-term projects; essentially they become multi-generational and do not really provide a sustainable return on investment until many years after the construction costs have been incurred. At its simplest, even if the company commits to the capital costs, the conditions of any consent may render the process completely uneconomic.
  - (b) *Transmission Issues.* No matter which option is chosen, Pioneer Generation needs to be able to transmit the electricity to a market

place. At the moment there are two broad options. One is to supply into the existing Transpower Cromwell to Frankton 110kV line. The other option is to follow the Nevis River downstream to join into the Aurora Energy network in the Gibbston Valley and then transmit either/or back into Queenstown and/or Cromwell.

No decision has been made as to which alternative might be preferred, as the economics of each option need to be judged on the relative pricing regimes in place at the time in which the scheme is proposed to go ahead.

(c) *Other Consent Conditions.* An obvious constraint if Pioneer was to apply for consent for the peaking option project, with a bigger impoundment, is the operating range of the proposed lake, or lack of it. In any large storage reservoir there is a drawdown from the maximum operating level in order to generate power. It might not be viable, or consentable, to expect to create an impoundment with a large drawdown leaving substantial areas of exposed ground uncovered by water from time to time.

44. At this stage the economic, and other conditions, lean towards a run of the river power station with a small impoundment, not much more than a head pond, with a tunnel and power station.
45. While present conditions favour a run of the river scheme as current electricity demands do not have a premium for peak energy, this may change in the future. The Water Conservation Order as it stands allows for a peaking option to be developed if future generations decide that the need for peak energy is greater than other values associated with the region. The Water Conservation Order as it stands allows future generations to make this choice.



### **The destination of any power**

46. Electrical energy is freely interchangeable and short lived. It is not possible to definitively track the path of the electricity once it is generated, or to say categorically where it goes, once it is put into a network. How electricity passes through the various nodes connecting the grid and goes from one place to another, is referred to as a participation factor i.e. how much generation from one plant or another has reached a load destination.
47. In this case, however, I consider that most of the power that would be generated from a station in the Nevis River is destined for Central Otago and the Southern Lakes region; Queenstown, Cromwell and to other centres in Central Otago. I can make that statement because the power would go via the Aurora Energy Lines, or through a spur line on the Transpower grid to Queenstown, because we can actually make connections in a way that ensures that outcome.
48. Security of supply is a difficult issue for all power generation. At the present moment Queenstown, as an example, is serviced by a double circuit 110kV spur line from Cromwell to Frankton. Queenstown is at the end of the line. There are no backup supplies to Queenstown in the event that there is a major failure of the line from Cromwell. The electricity system works on an N-1 (normal minus one) system; so that it is designed with a fail safe. If one method of power supply fails the system can nevertheless continue to supply load. Queenstown has two circuits supplying it from Cromwell but they are both on the same transmission towers. A failure of a tower or series of towers would leave Queenstown without supply. While events of this type are very rare the Cromwell to Frankton lines cross some rugged and exposed country which leaves the line vulnerable to major earthquake and weather events.

49. If Pioneer Generation creates a hydro electric power scheme on the Nevis River, and connects into the Aurora network, there would be two points of supply into Queenstown.
50. Queenstown has a growing demand for electricity, it has base load of between 35-40MW and a peak demand closer to 80MW. The base load of 35-40MW is similar to Gore which has three points of supply.

#### **Conclusion**

51. Pioneer Generation accepts that the existing Water Conservation Order is appropriate and acknowledges that it will take a substantial effort to obtain appropriate resource consents. Having made that point Pioneer does not seek to lessen the terms of the order, or to revoke the restrictions it has. They were accepted as being appropriate in 1997 and nothing has changed.

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**P. J. Dowling**

**6 May 2009**