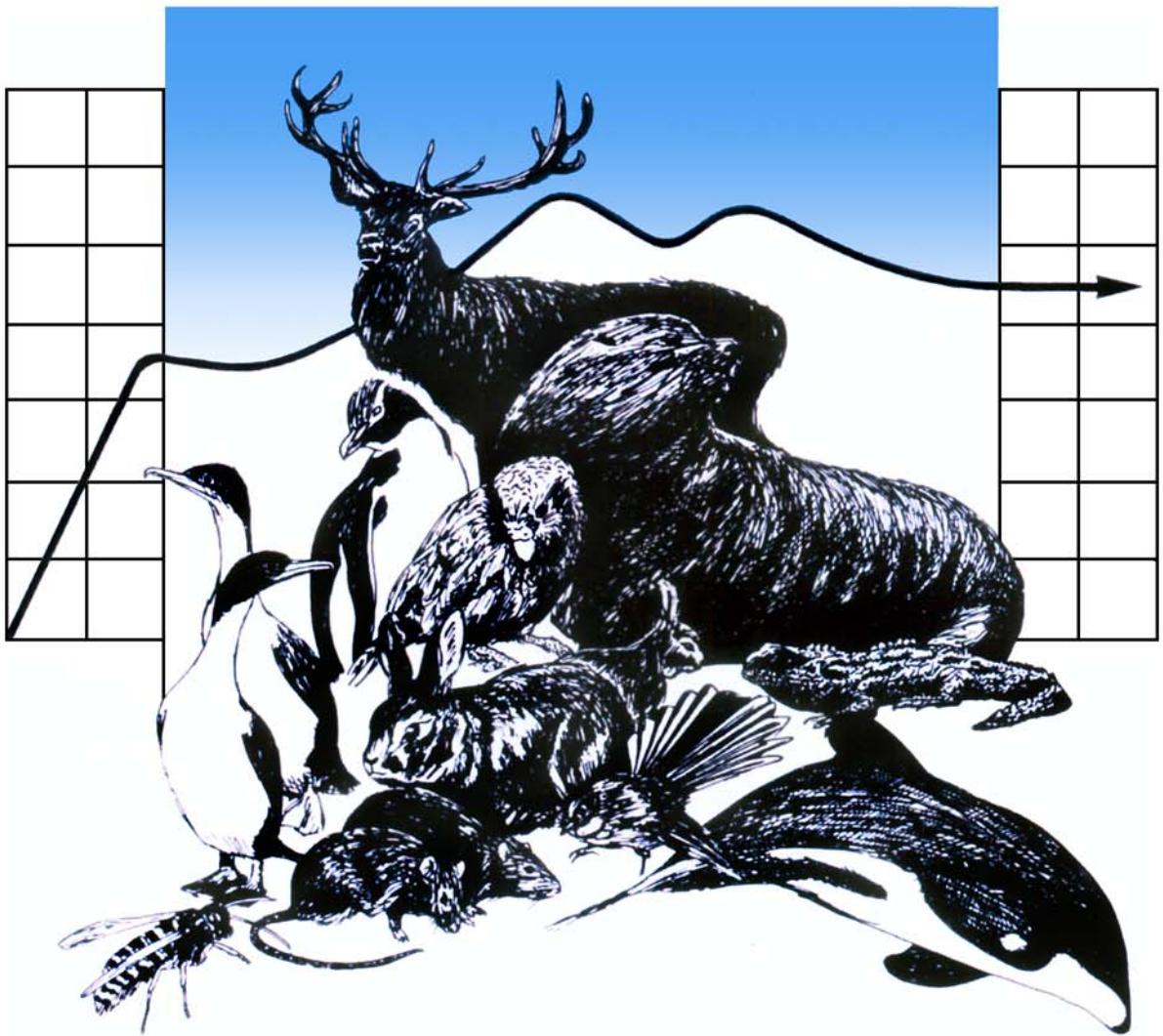


## DEPARTMENT OF ZOOLOGY



## WILDLIFE MANAGEMENT

High Country Tenure Review:  
Implications for the  
conservation of braided river  
systems

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## **Executive summary**

The South Island's high country is something of an enigma for many New Zealanders. The term 'high country', referring to approximately 25% of the country's land mass, is occupied by just 0.2% of the population. It is the land that falls in the foothills of the Southern Alps and is far from being the most productive farming land in the country – but it is certainly the most scenic. It is land steeped in history, romanticised by a good many poets and painters, and it is the high country that graces our tourism catalogues promoting the country as “100% pure.” As we will see this slogan is something of a misnomer, as for the past twenty years the process of tenure review has been encouraging the privatization and subsequent intensification of farming practices on many tracts of high country land with ecological value.

High Country Tenure review has been labeled everything from a “land-grab” to a “carve-up” and “hijack” by the popular media, and for a large part the discussion has focused on the legal and socio-political consequences of the tenure review process. Meanwhile, the environmental consequences of tenure review have been simmering away on the proverbial back burner – never absent, but never really addressed in a satisfactory manner either. There have been significant gains for the conservation estate but it has become evident that much of the land being entrusted into the Department of Conservation's care is similar in terms of the type of ecosystems it is protecting; a fact which has implications for braided river biodiversity. Attention has been drawn to this recently with the publication of a Parliamentary Commissioner for the Environment report (Wright 2009) entitled “Change in the high country: environmental stewardship and tenure review.” The report was presented to the House of Representatives in early April this year and makes several recommendations that we feel deserve support.

The scope of the current report is to address the impact that the high country tenure review process is having specifically for braided river ecosystems. A summary of the tenure review process is given, as well as an overview of the significance of braided rivers in question. We will then discuss instances where tenure review negotiations have had outcomes that may impact these rivers, particularly regarding the environmental impacts and conservation of biodiversity. Finally there will be a summary of recent developments in the tenure review process; our support for the PCE report is justified and we finish with further recommendations for how tenure review should proceed in order to produce more desirable outcomes for braided river ecosystems.

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## **Section 1: Background**

### *What is Tenure review?*

New Zealand's high country encompasses six million hectares of environmentally sensitive land situated beneath a rain shadow on the eastern side of the Southern Alps (Swaffield & Hughey 2001; Wright 2009). This land embodies a landscape and culture that many New Zealanders identify with. A large proportion of this land is legally owned by the Crown (White 2006), although much of it has been leased to farming families. In some cases, leasehold land has been in the same family for several generations. In the late 1980s the Crown began to develop and implement a process of selling and dividing land-use rights for these high country properties. Generally speaking, tenure review is a process in which land rights are exchanged between the Crown and high country leaseholders. The rights to areas with significant inherent values can be purchased by the Department of Conservation while the rights to areas containing the most productive land can be purchased freehold by the leaseholders. Tenure review is mandated by the terms laid out in the Crown Pastoral Land Act (CPLA) of 1998 (LINZ).

### *How does the process work?*

The tenure review process can be voluntarily entered at any time by high country leasehold farmers. This is done by filing an application form with the government department, Land Information New Zealand (LINZ). LINZ then consults with the Director-General of Conservation before the application can be accepted. Once accepted, LINZ hires a consultant, or “service provider”, to inspect and evaluate the leasehold land (Brower 2008). Other government representatives from the Department of Conservation, Fish and Game, and local Iwi are also invited to take part in this process. At this time the leaseholder is encouraged to hire a private evaluator to ensure a fair deal. Once all aspects of the property have been defined (i.e. areas with significant inherent values, productive and non-productive land) a preliminary draft is outlined by the consultant. This draft suggests how the land should be divided, how much each party (the Crown and the leaseholder) can expect to pay and receive in the exchange and any conditions that are attached to the proposal. The leaseholder is then consulted and invited to make comment. Once the

leaseholder has had their say, the Director-General of Conservation and the Minister of Conservation are consulted and a proposal is written. At this stage, the leaseholder can then either accept or decline the offer. If accepted, the preliminary proposal is then advertised for public submissions. LINZ then consults with the Director-General of Conservation and the Minister of Conservation in regards to the submissions and write a “substantive”, or final proposal. The leaseholder then has 90 days to accept or decline LINZ's offer (LINZ 2004).

### *How did the tenure review process develop?*

While most New Zealander's think of tenure review as being a relatively recent development, the first high country lease to undergo tenure review was Mt. Difficulty Station in the late 1980s (Brower 2008). The tenure review process has been complicated by changes made to legislation since the 1980s. The process evolved out of several decades of competing interests between vested and public interest groups, as well as governing bodies. To an outsider, or general public, the concept of tenure has been difficult to grasp, which may be partially due to hype within popular media (White 2006).

After the signing of the Treaty of Waitangi in 1840, the Crown continued to acquire much of the high country from Maori until 1864. In order to cope with this new ownership of land the Crown began to administer 1-14 year pastoral licenses in 1856, and increased this to 33- year, perpetually renewable leases in the Land Act of 1948. This Act clearly defined the rights held by both parties involved; the Crown and the leaseholder (Table 1).

**Table 1.** The Land Rights held by the Crown and high country leaseholders, and additional duties of leaseholders under the New Zealand Land Act (Brower 2008).

<b>Crown's Rights</b>	<b>Leaseholder's Rights</b>
Control subdivision and other commercial development of land	Exclusive pasturage, which is subject to Crown imposed stocking limits
Discretionary consent over all non-pastoral uses	To own any improvement that has been made to the land. If a lease is terminated than the leaseholder will recoup improvement costs.
Hold the Land Title	To sell or bequeath a leaseholder to another private party (subject to the Crown's consent)
To control irrigation, fertilisation of the soil and seeding of any kind	<b>Leaseholder's Duties</b>
To control the number of stock grazed on the land	To farm the land "diligently"
To charge the leaseholder rent (which is 2.25% of the value of unimproved land for 11 years)	To practice "good husbandry"
To control public use of waterways via the Queens Chain	To keep the land free of pests and the waterways clear of weeds
To control the exploitation of subsurface minerals	To avoid committing "waste"
To maintain a visionary interest in the land upon lease termination	

Additionally, the leaseholder became legally bound to fulfilling four duties aimed to ensure that the land was properly cared for (Table 1). The terminologies used to define these duties are open to interpretation and has formed the basis of a ongoing debate between high country farmers, environmentalist groups and political parties.

Under the Land Act the New Zealand public has access to lease-held properties, at the leaseholder's discretion. By law the leaseholder is only allowed to deny the public's access if they are interfering with grazing practices (i.e. lambing). However, during the early 1980's, a growing interest in the lucrative sport of helicopter-based deer hunting gave the high country leaseholders a financial incentive to deny land access to local deerstalkers (Brower 2008). This led to the formation of the Public Land Coalition, which included members of the Federated Mountain Club, the Deerstalkers

Association, and the Royal Forest and Bird Protection Society. This coalition created the first public outcry of Tenure review when they began the “Campaign for Change”. This campaign aimed at restoring public access to leased land above 1000 meters by returning full ownership to the Crown (Brower 2008). Meanwhile, farmers had already spent several decades lobbying the Crown to convert their leasehold land to freehold property. Under pressure from these interest groups the Minister of Lands initiated the Clayton Commission of Inquiry in 1982. This commission produced a report which suggested that the restrictions placed on leases' under the current lease agreements had resulted in the underdevelopment of the pastoral estate.

The lead up to the Tenure review process included numerous changes within Governmental departments and agencies. These were typically initiated by the most influential political party of the time. The history of these changes is clearly outlined in Brower (2008). In the late 1980s the Labour government radically changed the structure of public agencies by disestablishing the NZ Forest Service and the Department of Lands and Survey. As a result the Department of Conservation (DoC), the Department of Survey and Land Information (DOSLI; in 1996 this became LINZ) and LandCorp were established. This was significant in that the ownership of pastoral leases were passed to DOSLI/LINZ, while the administration of those leases was passed to LandCorp. Despite recommendations that grazing intensification and diversification of land use would help to combat the country's rabbit problem, the Government failed to act on these until 1995, when Dennis Marshall (acting as both the Minister of Lands and the Minister of Conservation) introduced the Crown Pastoral Land Bill. In 1998 this Bill was passed and made into an Act (CPLA) by a National led Government (Brower 2008).

As pointed out in the CPLA the primary objectives of tenure review are: 1) “Promoting the management of reviewable land in a way that is ecologically sustainable”; and 2) “Enabling the protection of the significant inherent values of reviewable land, by creating protective mechanisms, or preferably, by restoring the land to full Crown ownership and control” (Section 24 of CPLA, summarised in Wright 2009 p. 19). At first glance, these objectives appear to err on the side of caution when it comes to conservation values. However, there are a series of “subsidiary” objectives that expand on those mentioned above: 1) “Enabling



reviewable land capable of economic use to be freed from management constraints resulting from its tenure status”; 2) “Making easier the securing of public access to and enjoyment of reviewable land”; and 3) “Making easier the freehold disposal of reviewable land” (Section 24 of CPLA, summarised in Wright 2009 p. 19). The process of tenure review operated relatively unhindered under these objectives until 2006, when Richmond Station, located on the eastern shore of Lake Tekapo, applied to undergo the process in order to freehold lakeside property. This particular case will be discussed in detail later (see section 5 on recent developments).

## **Section 2: The importance of braided river ecosystems**

Some of the most unique features of the high country are the large braided river systems that make up many of the valley-floors. Features of braided rivers include multiple shifting channels, unstable or variable flows, and an abundant supply of shifting sediment (Piégay et al. 2006; Tockner et al. 2006). Nowhere is this crucial supply of sediment more abundant than coming off the ranges in and around the Southern Alps; indeed this is where New Zealand’s largest and most impressive braided rivers can be found.

Both complex and dynamic, braided rivers are typically capable of supporting high biodiversity – and the gravel-bed braided rivers of the central South Island, such as the Waitaki and Ahuriri, are no exception (Hicks et al. 2006; Tockner et al. 2006; Todd 2007). These rivers are of particular conservation value because of their rarity (as a landscape) on a global level and for the high level of endemism among the species found there (Caruso 2006; Tockner et al. 2006; Todd 2007). The critically endangered black stilt or kaki (*Himantopus novaezelandiae*) is possibly the most notable endemic braided river inhabitant, but there are many others, including the banded dotterel (*Charadrius bicinctus*), South Island pied oystercatcher (*Haematopus ostralegus finschi*), wrybill (*Anarhynchus frontalis*), black-fronted tern (*Sterna albobriata*) and blue duck (*Hymenolaimus malacorhynchos*) (Maloney et al. 1997; Todd 2007; Wright 2009). Endangered natives include the Australasian bittern and southern crested grebe (Wright 2009). Several native fish and reptile species are also at home in and around braided rivers (Todd 2007; Wright 2009).

The dynamism of braided river systems can be disrupted by human activities (Tockner et al. 2006), and especially relevant in the New Zealand situation are the impacts of damming for hydro-electric power, and the removal of water as land use changes occur – a process that is being facilitated by tenure review (Swaffield & Hughey 2001; Caruso 2006).

### **Section 3: Linking tenure review with braided river conservation**

One of the objectives of tenure review is to free the leaseholder from the Crown's land-management constraints and diversify land-use in the high country. As a result, the new land owner can develop their property as they wish as long as they obtain resource consent. Parliament passed the Resource Management Act (RMA) in 1991 in an effort to decentralise the authority of environmental and sustainable management (Brower 2008). While the Minister of the Environment acts as the hierarchical head, the Act is implemented by both Regional and District Councils. Councils are responsible for ensuring that new development proposals promote both sustainable management, and the protection of indigenous biodiversity as outlined by the RMA (Table 2).

**Table 2.** The responsibilities of Regional and District Councils as outlined in the Resource Management Act, 1991 (Nicola Wheen, pers. comm., July 22, 2008)

<b>Sustainable Management</b>	<b>National Importance</b>
Sustaining the potential of natural and physical resources (excluding minerals) to meet the reasonably foreseeable needs of future generations	Preserving the natural character and protection from inappropriate subdivision, use and development in areas of coastal, wetland, lake, and river (including their margins) environments
Safeguarding the life-supporting capacity of air, water, soil and ecosystems	The protection of areas of significant indigenous vegetation and significant habitats of indigenous fauna
Avoiding, remedying, or mitigating any adverse effects of activities on the environment	The maintenance and enhancement of public access to and along the coastal, lake and river areas
	The protection of historic heritage from inappropriate subdivision, use and development

However, the responsibilities laid out in the RMA are loosely defined and open for interpretation. Furthermore, each Regional and District Council has their own plan with a subset of responsibilities relevant to their particular district. This inconsistent implementation of the RMA has allowed for many significant developments to occur on former pastoral lease land. For example, in Otago such developments include; vineyards, forestry plantations, dairy farms, lifestyle blocks, and popular tourist ventures (i.e. the Waiorau Snow Farm, located near Queenstown) (Wright 2009). This highlights the insufficiencies of the RMA, as these sorts of developments, if poorly planned, can often contradict the Acts responsibilities.

Jan Wright (2009) outlines several reasons why the responsibilities outlined by RMA have not been upheld; a few are particularly noteworthy. Firstly, consents are made on a site-by-site basis, which leads to the difficulty of standardising restrictions. Secondly, any proposed policy changes meant to rectify this issue cause great debate and end up in the Environment Court; for example, the Mackenzie District Council notified the public of the proposed “Plan Change 13” in December 2007 (Mackenzie District Council 2007). This Plan aims to provide greater protection of the Mackenzie Basin's landscape values, largely by restricting new subdivision developments. While acknowledging the pressure for future growth, Plan Change 13 proposes a new designated rural zone in order to preserve the characteristics of the Mackenzie country. While Plan Change 13 seems sensible to those wanting to preserve the district's landscape values - not everyone agrees, and unsurprisingly, has been held up in Environment Court, which is set to reconvene on the issue May 22, 2009 (Nathan Hole, pers. comm. May 3, 2009). In the meantime, if the tenure review process continues to freehold land under current guidelines – the future of the high country, and therefore braided rivers, is left to the jurisdiction of an inadequate RMA.

To date, tenure review has caused an uneven split of land going into the conservation estate, and land which has become freehold (Brower 2008; Wright 2009). Because of the greater productivity of lower land, and the potential for diversifying land-use, farmers have greatly sought this land over the less productive higher land (e.g. alpine or sub-alpine). In general, farmers have been successful in gaining this land, resulting in DOC being left to manage large tracts of higher-altitude land (Swaffield & Hughey 2001; Mark et al. 2003; Patrick 2004; Wright 2009). While this has resulted in

significant gains in the total land area of the conservation estate, the usefulness of this approach is being questioned because it is producing a homogenous situation where many high-altitude areas are becoming protected and the opportunity to conserve low-altitude land such as valley floors, river-beds, wetland has been lost (Walker et al. 2008; Wright 2009). This approach shows that there has been a lack of strategic direction from the tenure review process so far (Wright 2009).

Much of the land directly beside braided rivers is not in tenure review, or at least has not completed tenure review. This means there is still the chance to protect these invaluable ecosystems, before irreversible effects take place. Glentanner, Glen Lyon, Lilybank, Godley peaks and Huxley Gorge 2 are all blocks of land bordering braided rivers, none of which have yet entered tenure review (LINZ). An important point raised in the recent PCE report (and others, see Patrick 2004) is that evaluating the outcomes of tenure review negotiations is difficult since there is no centralised database where the public can access information concerning the outcomes of review decision.

Mount Potts, on the eastern side of the upper Rangitata River, has completed tenure review. The Crown received 8,670 ha and only 1,022 ha went to freehold. It is difficult to find which land is now owned by whom, but is expected that freehold owns lower more productive land. There is a range of biodiversity observed in this area including black-fronted tern, wrybill, banded dotterel, NZ shoveler, grey duck, NZ scaup, white-faced heron and black shag (LINZ) There is the potential for private ownership and a change in land-use to have severe negative impacts on these species.

Mesopotamia, on the western side of the upper Rangitata River, is in the fifth of the six stages in tenure review (Substantive Proposal Accepted by Lessee). If tenure review is completed the Crown will receive 20,888 hectares, with 5,252 ha going to freehold. While this is a significant parcel of land now being managed by DOC, the section that is becoming freehold could put bird species such as wrybill, black-fronted tern and blue duck at risk (all have been observed on this block of land) (LINZ).

Other stations close to braided rivers where tenure review has recently been completed include Richmond, Birchwood, Quailburn, Ben Avon, Killermont, and Longslip Stations.

## **Section 4. Potential and/or realised impacts of tenure review for braided river ecosystems**

In many tenure negotiations completed to date, the Crown has taken more land than has been given to freehold title, and has therefore paid the leaseholder (in some cases relatively large sums of money) to take productive land. In some cases, very little restriction has been placed on land use, not incorporating the use of covenants. These events have caused several key issues to arise relating to the conservation of braided rivers. As discussed in sections 2 and 3, changes in land use can have negative impacts on braided river ecosystems (Tockner et al. 2006). When areas of land become freehold, these changes and impacts may occur, depending largely on the landowners' decisions.

The most obvious, and probably most common, issue relating to land becoming freehold is the increase in stock densities. If land becomes freehold, farmers will generally seek to increase stock levels. Stock levels may be increased until the highest density allowed is attained or until the land will support no more animals. This results in a new concern – to achieve higher results from the land more nutrients often need to be added to the soil. Therefore, to maintain higher stock levels, fertilizers are used. Any changes in the lower country (physical or biological) may have a large effect on braided river biodiversity. Because this land is close to braided rivers, there is little chance for excess nutrients in farm runoff to be taken up by vegetation. Increases in nutrient levels can alter river communities as it often promotes algal growth (Twilley et al. 1985).

Increased vegetation in catchment areas can occur when land becomes freehold, causing negative effects on river ecosystems. Wilding conifers, if not controlled effectively, can increase at alarming rates, resulting in dense areas of trees. Once present, these established conifer stands can be particularly expensive and time consuming to remove (Wright 2009). They also reduce the base flow of streams, which ultimately results in decreased river flow (Piégay et al 2006; Wright 2009).

The relative lack of lowland areas going in to the conservation estate is a concern for the required monitoring of indigenous species. The lowland areas around braided

rivers have a wide range of vertebrate and invertebrate species, some of which are in decline (Patrick 2004; Tockner et al 2006, Todd 2007; Wright 2009). As this lower, more productive land is primarily becoming freehold, it is more difficult for DOC to monitor populations of important endemic species. If a sudden change in land use occurs it is possible that these populations could experience rapid decline, resulting in an associated loss of genetic diversity. If this decline were to go undetected by conservation managers, extinction could eventuate. It is therefore paramount to maintain ownership of the underrepresented lowland areas before these issues arise.

One advantage to lowland areas becoming freehold, is that farmers take on costs of pest control, allowing DOC more resources for other biodiversity protection and restoration methods. It is probable that rabbits are having indirect negative effects on braided river biodiversity, as high rabbit numbers support larger predator populations. When these rabbits are eradicated the predators may prey switch to indigenous species (Rebergen et al. 1998). Because of the potential damage this could have on biodiversity, it is advised that a representative area surrounding braided rivers is managed by DOC.

Uncontrolled spread of wilding conifers can have an effect on biodiversity in braided rivers, as a reduced flow results in less water to act as barriers to river islands. It is possible that lower velocity and more narrow channels will alter the likelihood of predators crossing onto these islands where birds may nest (Rebergen et al. 1998; Tockner et al. 2006). Reduced flow may also have an effect on river invertebrate or vertebrate abundance (Schlosser & Ebel 1989, Dewson et al. 2007). If nutrient levels are relatively high, then less water will cause an increase in nutrient concentration. This will have a particularly negative impact on vertebrates which are susceptible to high nutrient concentrations, and may decrease the fitness in fish and bird species which prey primarily upon these organisms.

## **Section 5: Recent developments in the tenure review process**

The New Zealand Biodiversity Strategy was produced by the Ministry for the Environment and DOC in 2000. In the 2003 review of objectives for the high country, the government sought to acknowledge this by bringing the objectives in line with the Biodiversity Strategy (Walker 2008). Two years later in the 2005 report the objectives concerning ecological sustainability and environmental protection (and thus biodiversity) were considered a priority, although in 2008 the objectives report provided ‘no data’ on the following objectives: “To promote the management of reviewable high country land in away that is ecologically sustainable”; and to “Ensure that conservation outcomes for the high country are consistent with the New Zealand Biodiversity Strategy (DOC, LINZ, MAF 2008; Wright 2009 p. 22).

In the 2008 objectives report, the acquiring of 89,230 hectares through tenure review negotiations is noted under the heading of “ecological sustainability” (Wright 2009 p. 20), while under “protection of ecosystems” the report states DOC research as showing only “58% of lowland biodiversity values identified in property assessments have been protected” and that “most recently completed reviews have improved on this record from earlier reviews” (Wright 2009 p. 21). So while the current level of protection can be viewed as something of an improvement, we would suggest that achievements relating to ecological sustainability and biodiversity have been less than satisfactory. At the end of June last year approximately half the total pastoral lease land area yet to come into tenure review, so there is considerable room for improvement on order to achieve goals set out by the Biodiversity Strategy, which would benefit the conservation of biodiversity associated with braided rivers (Wright 2009) .

### *The case of Richmond Station and the last 3 years*

On August 1, 2006 the Crown privatised 9 kilometres of Lake Tekapo's waterfront, part of the former Richmond Station. Not only did the leaseholder obtain the development rights for this land but the Crown paid them \$325,000 in exchange for 40% of the station, which was deemed to be the least productive (Brower 2008). When the public became aware of the transaction an immediate stop of the tenure

process was proposed. Conservation groups united and the Chief Executive of Environment Canterbury (ECAN) wrote to the Minister of Land Information asking him to halt the tenure review process. Not long after this news break, Susan Walker and associated ecologists released their findings that tenure review was failing to protect the high country's most threatened areas, specifically, the lower altitude areas (Walker et al. 2006). The government reacted to this by holding a series of separate briefings with high country interest groups and produced the Armstrong Report which strongly supported the high country leaseholders.

Since 2006, a series of court cases, public meetings and debate have led to several changes in the tenure review process. While it was too late for government to reverse the Richmond Station deal, in June 2007 further protection mechanisms were adopted (LINZ 2008). Properties with significant lakeside, landscape, biodiversity or other values were withdrawn from tenure review (LINZ 2008; Wallace 2009), if these values were unlikely to be protected “to the Crown's satisfaction” (Wright 2009 p. 20). Government funding was restricted to tenure reviews which met these conditions (LINZ 2008).

Many land owners have decided to continue with the tenure review process under more stringent conditions. As of October 31, 2008, leaseholders of 20 of these 38 lakeside properties have agreed to the new conditions (LINZ 2008).

Additionally, the government decided that it would raise leaseholder's rents in order to reflect amenity values. Rents charged on pastoral lease properties were historically set at a token rate, allowing farming to continue on areas which were of marginal productivity. Lessees are able apply for rent adjustments to help them manage the increases in exchange for participating in “additional land husbandry, heritage protection activities, or provision of public access” (LINZ 2008 p. 11).

This move was accompanied by an expression of the Crown's willingness to remain a leaser indefinitely, and a decision requiring all tenure review plans to obtain approval from LINZ senior staff, the Minister of Land Information in consultation with the Minister of Conservation (LINZ 2008).



## **Section 6: Tenure review & the future of braided rivers; recommendations for management**

Given limited resources and money we agree with the guidelines set forth by Dr. Jan Wright (Parliamentary Commissioner for the Environment), even though they may result in less total land going into the conservation estate. This would result in the inclusion of more representative areas and ecosystems of greater importance. In theory this would include full altitudinal sequences, the underrepresented lower altitude regions and wetland areas. Essentially, gains to date have been useful but the focus should now be on quality, not sheer quantity. Dr Wright suggests this can be achieved by trading off land with already well represented conservation values for multiple uses, or by disposing such sites to fund other acquisitions rather than having them become part of the conservation estate (Wright 2009).

The PCE report and others (Swaffield and Hughey 2001) have highlighted one of the key issues with tenure review to date as being the fragmented approach with which it has proceeded. The report observes (p.56) “Each pastoral lease is only part of larger-scale features such as ecological districts, catchments and landscapes. The decisions made in respect of one pastoral lease are relevant to decisions about others. If there is no plan for the joint outcome, several individually reasonable decisions can have unforeseen cumulative consequences.” A further call is made for DOC and LINZ to work together within a holistic framework, and later the report states “the split model [the dichotomous situation with land either going into *either* production *or* conservation]... does not provide effective protection to some waterside SIVs [significant inherent values] and endangered bird habitats” (p.75). Evidently for braided rivers to be adequately protected, a modified approach is required. In some instances (such as St. James Station and Hakatere), where the Nature Heritage Fund has purchased whole properties, the so-called split model has been avoided altogether. A more flexible, integrated approach is well overdue so that tangible progress toward the environmental targets in the objectives report can be made in the near future (Swaffield and Hughey 2001; Wright 2009). In particular, the protection of lowland areas and more complete altitudinal sequences is desirable (Mark et al. 2003). Properties should not be considered in isolation as this may lead to fragmentation of conservation areas and prevent the protection of greater ecological sites spanning several properties such as watersheds and catchments. By having an overall focus for

tenure review, values in neighbouring properties could be considered simultaneously allowing for more effective protection of such areas.

We agree with Dr Wright's proposal of setting up a High Country Commission. A Commission, in which interested parties each have a representative, would allow for greater protection of public interest and conservation considerations in tenure review processes which have previously been underrepresented. The formation of such a group also allows for the establishment of clear goals, which gives the review process vision and a sense of direction. The setting of clear overall goals also allows for the tenure review progress to be more easily monitored. The establishment of a High Country Commission allows greater opportunities for further research into the outcomes of tenure review and further possible improvements to the process in association with other groups such as Landcare and University researchers.

The losses and achievements of tenure review have been largely absent in literature, and through a more comprehensive approach the collective outcomes of tenure review could be more readily documented. It is also important for this data to be accessible to the public. There is currently a low level of awareness regarding tenure review, which is in many ways due to the myriad of emotive, contradictory and highly technical data available. The provision of clear, objective and representative overviews of tenure review discussions by the commission, including the views of many groups, could assist in increasing public involvement and awareness of tenure review related issues.

Further to the recommendations made by Dr Wright we would ideally also like to see following elements considered future tenure review.

We believe there needs to be an emphasis on setting measurable goals and objectives, which are monitored to assess and guide tenure review decisions. Once negotiations are completed, these objectives need to be monitored, and followed up with incentives, such as the waiving of rent-charges if obligations are met as is the case with Henroost covenants (Wright 2009), and penalties, such as fines if they are not. This provides opportunities to further incorporate conservation and farming in an integrated model.

Setting objectives like this can allow for the inclusion of obligations which protect riparian values in freehold properties, such as water use standards to prevent degradation of catchments and braided river systems; fencing stock out of water ways; maintaining weed control and the creation of buffer zones around braided river systems. Adherence and management of such obligations would require a greater use of covenants and a strengthening of local government involvement in freehold property management.

In 2007 the Government decided to withdraw certain properties with significant lakeside, landscape, biodiversity values from tenure review if they were unlikely to be protected satisfactorily (LINZ 2008; Wallace 2009; Wright 2009). This stance should be further extended to explicitly include properties adjacent to significant rivers, tributaries and catchments. We believe this would provide another opportunity to better protect water quality by creating effective buffer zones, and improve access.

Currently the assessment of the ecological value of tenure review sites largely focuses on current assets and disregard areas of historic conservation values, in particular underrepresented areas such as drained wetlands. Such areas are often disregarded because the extent of modification on the land would require long-term commitments to costly and time-consuming restoration. Regardless of this we suggest such significant areas need to be considered and protected for future restoration. As an example, a significant proportion of New Zealand's wetlands have been lost, an estimated 92% (Jones et al. 1995), making it all the more important for such areas to be restored as has been done successfully with sites such as the Sinclair wetlands (QEII 1988).

## **Conclusion**

We conclude that although completed tenure review negotiations have made considerable gains for conservation, the process now needs to proceed in such a way that observable progress is made to fulfil the Government's commitments under the Biodiversity Strategy. This is crucial so that previously underrepresented ecosystems can receive protection; in doing so we foresee that the result would be more meaningful outcomes for biodiversity conservation in unique ecosystems such as braided rivers.

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