



Ministry of Agriculture and Forestry
Te Manatu Ahuwhenua, Ngaherehere

Toitu te
Land *whenua*
Information
New Zealand



Report to South Island High Country Ministers

Earning capacity rents for Crown pastoral leases



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1. Summary of proposed new system and the analysis supporting it

In this report we analyse how to implement the Government's policy to charge lessees of Crown pastoral land rents based on the earning capacity of the property.

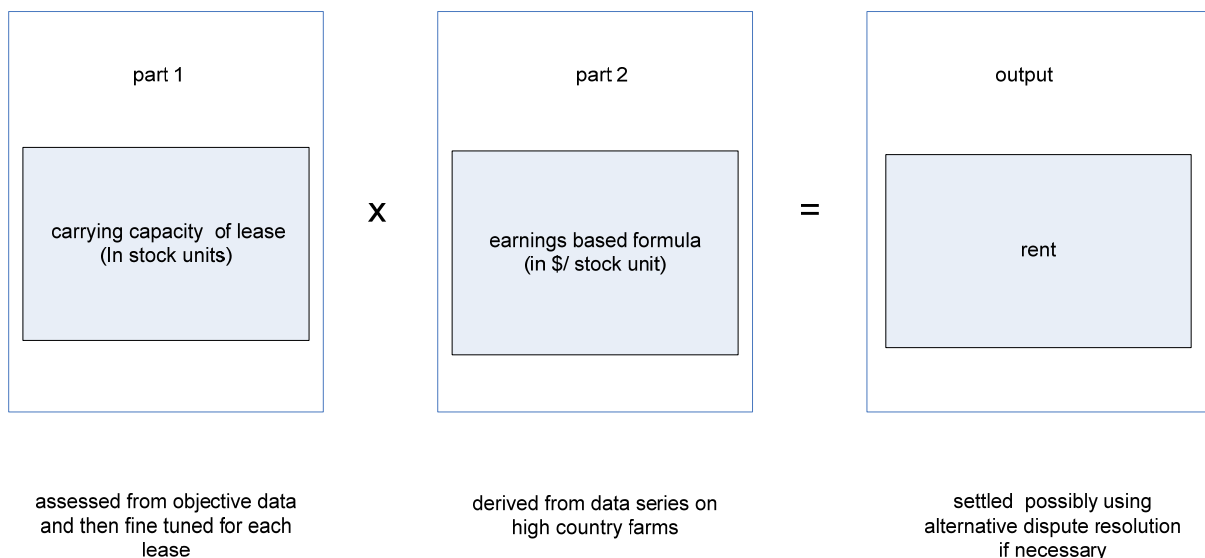
We propose a significant shift from the current valuation based system to one which focuses on the capacity of pastoral leases to produce outputs from pastoral farming.

The production based system would set rents by

- assessing the productive capacity of a lease as a pastoral farming operation
- using statistical data about farm revenues and how much revenue farmers are paying to use land with the same productive capacity.

An outline of the proposed formula for setting rents appears in the figure below.

Figure 1 outline of proposed formula for setting rents



We propose the new system

- draw as much as possible on objective data
- has its main elements fixed in primary, secondary, or tertiary legislation
- operate under Rules and guidance from an independent statutory officer, the Valuer-General
- has some flexibility so it produces rents which reflect the nature of each pastoral lease.

We tested three options in arriving at our proposed system.

Option 1 is the existing system (based on land values) extrapolated into the future. In constructing this scenario we assume that the current statutory framework will be implemented in accordance with the decision in the *Minaret* test case. In particular, intrinsic amenity values will not contribute to rent calculations.

Option 2 is option 1 improved by reducing some of the uncertainty about valuation concepts and providing guidance on valuation methods.

Option 3 is the production based system we have developed and propose in this paper.

We consider that option 3, the production based system, will be significantly better at capturing and tracking earning capacity than either the existing land value based system or any improved version of it.

We base our recommendation on a framework for analysing the options shown in the table below. We constructed the framework from the terms of reference for this paper, (see section 2) and some elements that should, on first principles, form part of any policy analysis. These added elements include income to Crown from rents, administration costs, horizontal equity, and incentives on lessees.

We discerned two distinct elements to the parts of the terms of reference which talk of the current legal framework. These two elements address whether an option

- conforms with the nature of the pastoral lease
- requires legislative change

so we built these elements explicitly into the analytical framework.

Table 1 Analytical framework and options

criteria	option 1 current system	option 2 improved version of current system	option 3 proposed production based system
captures earning capacity	✓ (poorly)	✓ (poorly)	✓✓
clearly specified	✗	✓	✓✓
certainty for lessees	✗	✓	✓✓
avoids disputes over rent and litigation	✗ (potential for ongoing dispute)	✗	✓✓ expect to be significantly less
legislative change needed	none	minor	new code for rent setting needed in primary legislation
basis for settling <i>Minaret</i> case	?	✓	✓✓
conforms with the legal nature of the pastoral lease	✓	✓	✓
income to Crown from rents	same	same	similar within the limits of our modelling
administration costs	same	slightly less	lower

horizontal equity between lessees	same	same	appears to be similar within the limits of our modelling
Incentives on lessees	rent does not provide incentives that change lessee behaviour	rent would not provide incentives that change lessee behaviour	weak but in right direction

Main reasons why the current Land value system fails against the criteria

Any system which sets rent on a fixed proportion of land value will not directly capture or track the earning capacity of the activities carried out on the lease.

For pastoral leases the disjunction between land values and earning capacity is evidenced by

- land values that are increasing while
- plausible measures of earning capacity from pastoral farming are decreasing.

The decrease in earning capacity shows in long term and recent data on real gross revenue, real farm surplus, and real EBIT (earnings before interest and tax).

The particular land value based system under the Land Act 1948 has its own specific problems. It is not transparent, predictable or auditable. It leaves most of the rent setting process to the discretion of valuers. These problems are summarised in the table below.

Table 2 Problems with the current VLEI based system under the Land Act 1948

<p>Section 131 of the Land Act 1948 requires rent to be 2% (net) of a specific measure of land value: value of land exclusive of improvements (VLEI).</p> <p>The section prescribes the formula capital value (CV) less improvements by the lessee (VI) equals (VLEI)</p> <ul style="list-style-type: none"> • the reductive formula (CV-VI = VLEI) is a statement of principle. It does not of itself provide an implementable valuation method • the formula is extremely sensitive to how improvements are defined and valued to arrive at VI • there is general agreement about the basic notion of LEI: it is the land leased in a state where essentially no improvements have been made to it • the value of LEI (VLEI) is generally thought of as having two components <ul style="list-style-type: none"> ○ the value in an unimproved base state ○ the value as a platform for pastoral development (which the lessee realises through making improvements) • valuers, whether working for the Crown or lessees, have different approaches to defining the precise meaning of LEI • there is now no land still in the LEI state so there is no comparable sales evidence for valuers to use in establishing VLEI • valuers have to imagine what the LEI state would be and though they can use historic data, the exercise remains highly subjective and very sensitive to the assumptions made
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- in practice valuers use a number of cross checking methods including adjusted data from real markets (sales and values per stock unit) to help them assess VLEI
- in reality valuers appear to backsolve the $CV-VI=VLEI$ equation to arrive at a fair rent. They tend to refer to these adjusted data from real markets and use experienced based assumptions to estimate what rents would be if there actually was a rental market for land in a LEI state
- the valuation practice draws on and sometimes adds to the valuation case law. The body of law and practice is not thought sufficiently complete or specific to produce a clear, transparent or auditable set of rules
- the law and practice is so complex that only a small and reducing cadre of highly experienced valuers have the knowledge and skills to produce LEI valuations for pastoral leases.

The existing land value based system copes poorly with significant changes in the environment. The Crown and lessees conducted the *Minaret* test case in part to determine the very significant issue of whether intrinsic amenity values which became significant from the mid 1990s are included in LEI.

Under the existing system disputes about rents become complex disputes about valuation methods rather than routine commercial negotiations.

Main reasons why option 2, improving the current approach, fails against the criteria

Some elements of the current system could be established more clearly, in legislation or guidance to valuers. Our exploration of the underlying notion of LEI (and the difficulties in valuing it) summarised in table 2, mean that large parts of the system would still rely on valuers' discretion.

There would be less room for disputes, but they would still be very difficult to resolve because the system would still not have a full and explicit framework against which disputed rents and processes could be tested.

More critically, any improved version of the current system would still be based on land values and remain poor at capturing or tracking earning capacity.

Why we recommend a paradigm shift to a production based system for setting rents

Our analysis shows a system to set earning capacity based rents should draw directly on

- objective data about the productive capacity of leases for pastoral farming
- real statistical data about what farmers can and do pay to use land of similar productivity.

If source data are clear and unambiguous we can use them in a simple algorithm to determine a rent. Such a system can be very clear, transparent, and auditable. Once it is set up the system should be easy and cheap to administer.

We also discern another advantage to a system based on productive capacity. It appears that the current land value based system is contentious precisely because it is based on valuations of land.

Lessees appear to be concerned about VLEI in part because they see that under the current system LEI carries considerable freight beyond rent setting because the legislation states $LEI + VI = CV$. In particular CV is relevant in other contexts such as tenure review.

A production based algorithm would delink rent setting from both land and capital values. Delinking rents from land values should make the rent setting process much less contentious.

Designing a new production based system against the criteria

Looking at the analytical framework it was clear that a new system for setting rents based on productive capacity must

- conform with the pastoral lease
- use data that capture and track productive capacity of the lease
- use data that capture and track the earning capacity of that productive capacity
- be clear and transparent
- fix some components so they are clear
- allow some flexibility so the components produce fair results on different leases.

Conforming with the legal nature of the pastoral lease

Our analysis is premised on the basis that rent can be set only on what is actually leased under the pastoral lease.

Pastoral leases were created in 1948 to encourage ongoing development and stewardship of land where returns were, at the time, marginal or unknown.

Lessees pay for and own improvements. The improvements do not form part of what is leased and we see them as essentially off limits for rent setting.

Since 1948 lessees have made investment decisions on the basis they will get the full benefits of increased value or production, and these benefits can't affect their rent.

Pastoral lessees have been developing their properties for many years. The total productive capacity of the properties with improvements is typically much higher (the median appears around seven times higher) than the productive capacity of the land leased.

If the Government were to change the fundamental nature of the lease and rent on improvements there would be a transfer of value (capitalised) of at least \$200M (ignoring intrinsic amenity values) from lessees to the Crown.

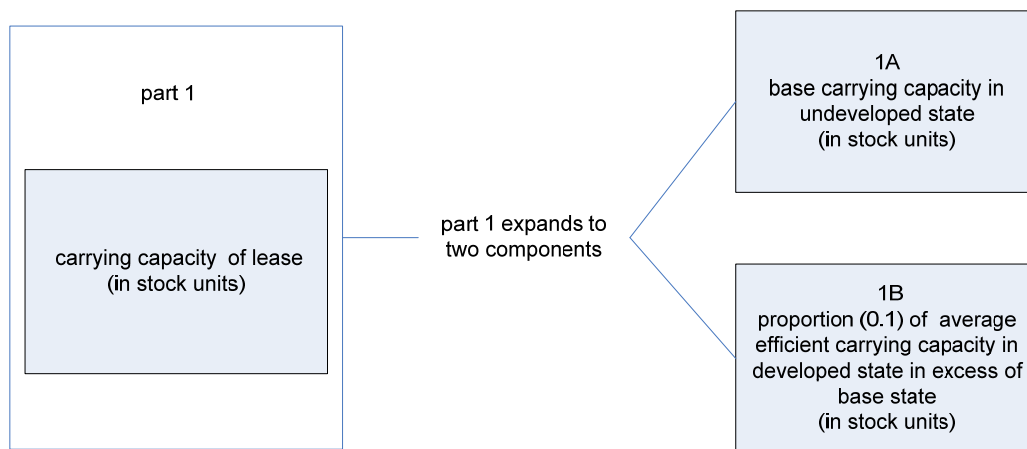
Data that capture and track the productive capacity of the lease

We propose using an expansion of part 1 of the formula for setting rents (figure 1) into two components which together assess the productive capacity of a lease. The components are

- the land in an unimproved base state (1A in the figure below)
- the land as a platform for pastoral development, which the lessee realises through making improvements (1B in the figure below).

These two components have always existed in pastoral leases. The formula is new only in that it attempts to capture their productive capacity.

Figure 2 Components of the proposed new system for setting rents that capture productive capacity



Part 1B in this formula tries to capture the value of the lease as a platform for development by using a factor of 0.1. The factor of 0.1 represents the development potential of the lease, which is attributable to the lessor.

By implication the 0.9 not captured in element B represents the productive capacity created by the lessee actually making improvements that realise the potential captured in the 0.1.

The stock numbers produced by element B will increase over time as innovation, technology, and better management allow greater production.

Data that capture and track earnings from productive capacity

We looked at and discarded several approaches to getting data that capture the value of productive capacity

- balance sheets of individual farms as they are actually operated
- an idealised balance sheet for individual farms operated optimally
- a set of six or so model operations against which individual properties would be calibrated.

We found that balance sheets use accounting conventions rather than useful economic measures, and also report on entities that include operations other than pastoral farming.

It would be possible to strip out non pastoral farming components and normalise balance sheet data to a set of measures purely related to pastoral farming. We explored how such normalisations are done in other contexts and determined it would be too complex and expensive to do such an exercise over the 247 pastoral leases.

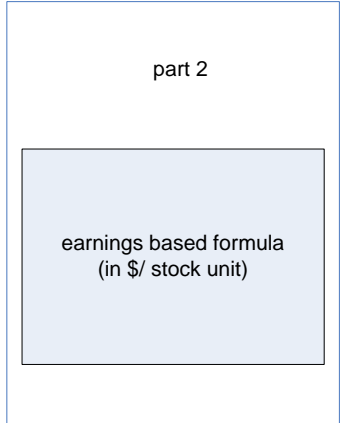
Another problem in using balance sheets is that lessees, who generate the data, could easily game the system.

We could use an idealised balance sheet constructed on the assumption that the pastoral farming business was operated optimally. This would involve a detailed and subjective enquiry into how individual farms might ideally be run. We think it would be too complex, contentious and expensive.

The idea of using a limited set of model operations to set rents has been explored in the past. We consider the pastoral lease properties are too diverse for this approach to produce fair rents across all leases.

We determined that the most efficient approach was to use objective statistical data. This data is captured in part 2 of the formula for setting rents (figure 1). This part of the formula is shown below.

Figure 3 Part 2 of the proposed rent setting formula



We considered using several statistical series sources of such data and this analysis is set out in more detail in Annex A.

The analysis showed Meat and Wool New Zealand Economic Service Sheep and Beef Survey, Class 1 South Island High Country captured the necessary information reasonably well, and better than other data series. This series uses 20 or more farm operations. Around half the land area captured is in pastoral leases.

We looked at various options for extracting values from this data series. In this report we use an EBIT measure as a working measure. The working measure is

The long term average proportion (it is 0.49) of EBIT spent on (rent + debt servicing) Beef Survey Class 1 smoothed by a five year rolling average and expressed in current dollars.

This working measure produces \$6.90 per stock unit as at today. Further work is needed to refine the approach. We modelled \$5 and \$7.50 as plausible upper and lower bounds.

Once the approach is fully refined it would track the value of production from high country farms reasonably well. In particular any sustained upturn in the economics of high country farming would see a significant increase in rents.

The formula would also need to establish a plausible floor level for the \$/stock unit figure so that rents do not fall below a reasonable level.

Designing a new system: prescription vs flexibility

Having determined that many of the problems with the current system have to do with its lack of transparency and predictability we see that any new system should, where possible, fix its constituent parts rather than leaving them to the discretion of those carrying out rent reviews.

This objective requires a balance between

- objective data fixed into the system
- flexibility for each lease.

Flexibility is important because properties vary significantly across the pastoral lease portfolio. We recommend the following mix of fixed and flexible components.

Table 3 Fixed and flexible components in the proposed new system for setting rents

Component	Fixed into the system	Flexibility applied to setting rent for each lease
<div style="border: 1px solid black; padding: 5px; text-align: center;"> <p>1A base carrying capacity in undeveloped state (in stock units)</p> </div>	<p>Indicative numbers are set and guidance provided by the Valuer-General on the advice of an expert panel using land use capability data.</p>	<p>Assessed for each lease once and for all using the indicative numbers, land use capability data and detailed information about each leased property.</p> <p>The assessment will have regard to the indicative numbers and guidance promulgated by the Valuer-General.</p>
<div style="border: 1px solid black; padding: 5px; text-align: center;"> <p>1B proportion (0.1) of average efficient carrying capacity in developed state in excess of base state (in stock units)</p> </div>	<p>Carrying capacity in developed state is assessed objectively by assessing how many stock the property would carry in the hands of an average efficient farmer.</p> <p>Indicative numbers are set by Valuer-General on advice of an expert panel using land use capability data.</p> <p>Valuer-General provides model calculations on benchmark properties and guidance on calibrating assessments against them.</p>	<p>Average efficient carrying capacity would be assessed for each lease at each rent review using detailed current information on each lease.</p> <p>The assessment will have recourse to the indicative numbers and guidance promulgated by the Valuer-General.</p>

<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <p>earnings based formula (in \$/ stock unit)</p> </div>	<p>Set by Valuer-General on advice of an expert panel.</p> <p>Updated at least every year.</p> <p>Our working figure is \$6.90.</p>	<p>No flexibility. The \$/stock unit figure would be applied automatically.</p>
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We propose an important role for the Valuer-General in guiding the rent setting process. The Valuer-General is an independent statutory officer. We see the Valuer-General as more suited to these functions than the Commissioner of Crown Lands who should remain focussed on performing the Crown's function as landlord.

Revenue to the Crown from rents

We modelled income to the Crown from rents under each of the options. The results appear in the table below. Note that option 1 (the current system) and option 2 (an improved version of the current system) produce the same revenue.

Table 4 Revenue to the Crown from pastoral lease rents modelled for 3 options

	113 ¹ of 247 leases	all 247 leases
Current system or improved current system carried into the future (option 1 or 2) low scenario	\$0.9M	Not able to be modelled
Current system or improved current system carried into the future (option 1 or 2) high scenario	\$1.6M	Not able to be modelled
Proposed new production based method (option 3) at \$5 /stock unit	\$0.9M	\$1.9M
Proposed new production based method (option 3) at 7.50 /stock unit	\$1.4M	\$2.9M

We have included a low and a high scenario which cover both options 1 and 2. The high and low scenarios are needed because, following the *Minaret* test case we must envisage rents calculated on a VLEI that excludes intrinsic amenity values and there are limited data on what those values might be.

The revenues in the table are those that would be received once all leases have their rents reviewed. In practice revenue would build to those levels as the reviews occur.

The modelled revenue from the proposed new system assumes that the economics of high country farming remain as they are today. If there was a significant upturn the rents would be greater. The floor proposed for the new system would prevent rents falling to unrealistic levels.

Given the margins of error in our modelling for this paper we do not discern any significant difference in revenues to the Crown under any of the options.

¹ We have much more detailed information for the 113 properties than the remaining leases due to the information generated about the leases currently before the Land Valuation Tribunal.

Administration costs

We anticipate that over time there would be small savings to the Crown and lessees in the costs of administering rent reviews. It costs the Crown roughly \$10,000 per review by the time rent is settled. Overheads attributable to rent setting are about one full time equivalent employee.

Initial analysis suggests the ongoing costs of the new system would be lower, around a few thousand dollars, per review and carry lower overheads. There would be a one-off set of costs to the Crown while the elements of the new system are established.

We have no hard data on the cost of the current system to lessees, though they say it is too cumbersome and expensive. We anticipate their costs would be reduced under the new system, perhaps by about the same factor as the Crown's.

Horizontal equity between lessees

We modelled the effects of the new system fairly accurately on 13 representative leases and much more roughly on all 247. We found that within the limits of our modelling the existing relativities between rents for the leases would be maintained.

Incentives on lessees

Rents for pastoral leases are not a very significant lever to alter the actions of lessees. The incentives created by the proposed system for setting rents, would encourage development (though quite weakly). This is so because any investment made or risks taken by lessees to produce returns above those of an average efficient farmer would not increase rents.

Settling the *Minaret* appeal

If Ministers agree to the proposed new system the specific subject matters of the appeal against the *Minaret* decision (which mostly relate to statutory interpretation issues around VLEI and capital value) would become moot.

The appeal could therefore be abandoned as the new system would be consistent with two pivotal elements in the *Minaret* decision that

- intrinsic amenity values should not count in calculating rent
- rent should relate to the lease used for pastoral farming.

The remaining 113 cases before the LVT will still be subject to the current land value based system.

We expect many lessees could settle for a rent which would be consistent with figures produced by both the existing system and the one we propose. Our modelling shows a fairly high degree of correlation between the two systems in terms of final rent. We intend that the rents generated by the proposed new system be used as a platform for negotiated settlements.

We think such settlements could be acceptable because lessees would see the result as both consistent with their position following the *Minaret* test case and the future system which they broadly seem to support.

Further and more detailed work would be needed to support possible settlements of the 113 individual cases, including for each of them a plausible post *Minaret* VLEI. These VLEI figures for settlement could plausibly be produced partly from a desktop exercise without needing full blown and expensive revaluations. The work to support individual settlements should include assessments of

- base unimproved carrying capacity
- average efficient carrying capacity
- \$/stock unit figure

This work would let lessees see that settlements would also be broadly consistent with the future system. The work should be programmed so it feeds usefully into the detailed design of the legislation for the new system.

Lessees views on the proposed new system

We discussed our analysis and the proposed new system as they evolved with a subcommittee of the High Country Accord.

The Accord agrees that the proposed new system would be a better method of determining earning capacity rents than the current system, or an improved version of it, for reasons which follow.

The Accord notes that the current system, or even an improved version of it, would rest on VLEI which will, in the absence of a real transactional market, remain hypothetical and not produce a consistent approach between valuations. It would remain expensive, time consuming, and uncertain.

The Accord is particularly concerned that the new system reflect and maintain the balance of property rights formed through the pastoral lease contract.

The Accord has a concern with two elements of the proposed new system

- determining base carrying capacity in an unimproved state
- assessing current carrying capacity in the hands of an average efficient farmer.

The Accord considers property specific factors as critical. Each leasehold property has different characteristics. The Accord prefers a starting role for the fixed objective evidence proposed by officials. Then, should the need arise, the property would be examined against evidence readily available from records for the specific property (lessor and lessee records).

The Accord agrees that a fixed component like the 0.1 factor may usefully be included in the new process as a reflection of the potential of the unimproved pastoral proposition. But since the 0.1 factor will be fixed, it considers that some level of cross check of the factor against the result formed through the \$/SU should be made in the first instance to insure 0.1 is a fair reflection to be applied to the average lease.

The Accord is in favour of the proposed new system but thinks the components of the new system need to be refined and developed so that they produce fair rentals across all pastoral leases and that lessees too can see the reason for the relativities in rents.

2. Terms used in this report

average efficient carrying capacity The stock units which the land in a pastoral lease could carry in the hands of an average efficient farmer.

average efficient farmer A farmer whose ability to extract the productive potential of land is around the average of efficient farmers typically around the 75th percentile of all farmers.

base unimproved carrying capacity The number of stock units that the land in a pastoral lease could carry without any improvements arrived at through the new rent setting method we propose.

The method we propose sets base carrying capacity starting from objective and available data about the capability of various classes of land (LUC data) and refines the figure by looking at factors specific to each lease.

The current system contains an element (carrying capacity in LEI state) which produces similar numbers.

We use the term ‘base unimproved carrying capacity’ to reflect a very important distinction between the current system and the new one we propose.

Proposed new system	Current system
base carrying capacity calculates stock units starting from objective data as part of a rent setting algorithm with no valuation component	carrying capacity in LEI state estimates stock units following a subjective estimation of LEI state as part of a more general and subjective valuation exercise

development platform The lease as a platform which the lessee can use to increase production and value by making improvements.

development potential The potential for development which a lessee can realise from the development platform.

intrinsic
amenity
values

These are values associated with views, iconic locations, conservation, privacy and other matters unrelated to pastoral farming. Since the 1990s purchasers of pastoral leases have been willing to pay millions of dollars for the intrinsic amenity values in some pastoral leases.

The term probably has its origins in RMA practice. The RMA contains the following definitions

Amenity values means those natural or physical qualities and characteristics of an area that contribute to people's appreciation of its pleasantness, aesthetic coherence, and cultural and recreational attributes

Intrinsic values, in relation to ecosystems, means those aspects of ecosystems and their constituent parts which have value in their own right, including—

(a) their biological and genetic diversity; and

(b) the essential characteristics that determine an ecosystem's integrity, form, functioning, and resilience

These values are largely unrelated to pastoral farming.

improvement

The Land Act defines improvement as

substantial improvements of a permanent character, and includes reclamation from swamps; clearing of bush, gorse, broom, sweetbrier, or scrub; cultivation; planting with trees or live hedges; the laying out and cultivating of gardens; fencing (including fencing); draining; roading; bridging; sinking wells or bores, or constructing water tanks, water supplies, water races, irrigation works, head races, border dykes, or sheep dips; making embankments or protective works of any kind; in any way improving the character or fertility of the soil; the erection of any building; and the installation of any telephone or of any electric lighting or electric power plant.

The *Minaret* test case also included burning as an improvement. Valuers vary in their detailed approach to defining and valuing improvements.

LEI

Land exclusive of improvements. There is general agreement about the basic notion of LEI; it is the land leased in a state where essentially no improvements have been made to it, except for improvements made as a requirement of good husbandry under the lease. Views on the meaning of LEI at a more detailed level vary.

LUC Land Use Capability as set out in the New Zealand Land Resource Inventory maintained by Landcare Research. LUC is based on fundamental characteristics of land (like underlying geology, soils, and climatic limitations and susceptibility to erosion). It contains classes and units that capture these fundamental characteristics across New Zealand

LUC can be and frequently is used to estimate the productive potential of land, and this often expressed in stock units/ha.

LUC based data In this report we use this term to mean LUC data together with other objective information about soil types, climate, or other data that help predict productive capacity.

Minaret test case *The Commissioner of Crown Lands v Minaret Station Ltd* an unreported decision of the Otago District Land Valuation Tribunal LP 2/09, 31 July 2009.

Pastoral lease A lease created under section 66 of the Land Act (now repealed). The nature of the lease is defined by other provisions of the Land Act 1948, the Crown Pastoral Land Act 1998, and the lease document (which is registered under the Land Transfer System). In practice the role of the Commissioner of Crown Lands under the Land Act 1948 is also important.

The Commissioner of Crown Lands effectively administers the Crown's role as landlord and his consent is needed for any significant development including increases in stock units.

stock unit

A stock unit is a measure used to compare the nutrition requirements of different livestock raised in pastoral farming. A standard stock unit is based on one breeding ewe of 55kg live weight, producing one lamb. Current coefficients for other animals are frequently based on a 1992 review of the system by NZ Meat & Wool Board Economic Service and MAF. The original work was done by I.E Coop and published in 1965 (A review of the ewe equivalent system; New Zealand Journal of Agricultural Science; Volume 1 (3)).

We use stock units as a measure of the productive capacity of a lease.

There is some variation in practice around how stock units are defined and assessed. The system we propose for setting rents would need to incorporate an authoritative definition.

VLEI

Another concept central to the current system of setting rents. VLEI is the value of LEI. Valuers typically conceive of VLEI as having two components

- the value of the land in an unimproved base state
 - the value of the land as a platform for pastoral development which the lessee realises through making improvements.
-

3. Background

Policies

In July 2009 Cabinet agreed to a strategic direction for Crown pastoral land, including an end outcome that “Crown pastoral land is put to the best use for New Zealand”.

The Government’s objectives on economic use for Crown pastoral land are

- the contribution of Crown pastoral land to the New Zealand economy is promoted
- lessees of Crown pastoral land will be charged rent on the basis of the earning capacity of the property.

The Minister of Agriculture and Forestry and the Minister for Land Information developed terms of reference for this report in August 2009, and asked officials from Land Information New Zealand (LINZ) and the Ministry of Agriculture and Forestry (MAF) to write it.

Terms of Reference

The terms of reference are reproduced below

In scope for the report are methods for setting

- earning capacity rents for Crown pastoral leases
- charges for exemptions allowing lessees to generate farming income, which are not already governed by a separate fee charging system
- changes to the legal framework that may be necessary to accommodate the methods for rent setting.

The objectives of the report are to

- propose an efficient and effective method for setting rents under Crown pastoral leases based on the earning capacity of properties, including a discussion of the impact of retrospective application
- determine whether the proposed method can be implemented within the current legal framework
- if the proposed method cannot be implemented within the current legal framework, then recommend changes required to implement the method.

A method for setting rents should

- be clear and able to be implemented
- not generate legal proceedings focused on method, though appeals on how the method is applied are acceptable
- as far practicable avoid further litigation on valuation and methods for setting rents
- give a reasonable level of certainty to lessees
- allow a clear decision to be made on whether to abandon elements of the Crown appeal against the *Minaret* decision.

Any changes to the legal framework to accommodate the method for setting rents should

- integrate with the existing legal framework as much as possible
- as far as practicable provide certainty for the Crown, lessees, and valuers.

The report will not look at

- Government outcomes, objectives, or principles for Crown pastoral land. These are a given for the purposes of the report
- policy rationales for setting rents according to earning capacity
- several related issues—though the report may signal a need for future work on them
 - transition, backdating, and back rent
 - implications for the treatment of capital from sale of pastoral leases
 - implications for tenure review
 - resolution of the cases currently before the LVT
 - fees and charges for recreation permits on Crown pastoral land.

Process

Peer review panel

Ministers appointed a peer review panel and agreed its role on 29 October 2009. The role of the panel is to undertake a quality control and review process for this report by officials. The panel has separately provided Ministers with an assessment of the quality of this report and the confidence that Ministers can have in this report.

The conclusions contained in this report are the conclusions of officials and not the panel.

During the development of this report officials met with the panel (individually or together) on a number of occasions in late 2009 and early 2010: 2 November, 9 November, 17 November, 23 November, 30 November, 21 December, 12 January and 15 February.

These meetings ranged from providing background to pastoral leases to discussing the early conclusions and the analysis behind the conclusions. The panel provided officials with indications of the level of analysis they expected to see in this report.

A joint meeting between the panel, representatives from the High Country Accord (the Accord) and officials took place in Wellington on 17 November 2009. During the course of this meeting the panel met separately with officials and the Accord. A joint session was also held to provide the panel with an indication of how officials and the Accord worked together.

The High Country Accord

A sub-committee of the Accord was created to work with officials on the development of this report. Officials and the Accord and its advisers have met on four occasions to discuss this report: 15 October, 3 November, 17 November and 9 December. Officials have been in contact with the Chair of the Accord on multiple other occasions during the development of this report.

Valuers for the Crown and the Accord also met several times based on instructions issued to them.

Officials and the Accord discussed the basis for the lessee/lessor relationship and discussed in detail the options for a new rental methodology.

We attempted to get agreement on the principles of this report and have largely done so. Where the Accord has indicated they do not agree with our conclusions we have attempted to set out where those differences are and why the Accord does not agree.

Officials

LINZ and MAF officials worked together with valuation experts representing both the Crown and lessees. LINZ and MAF agreed that LINZ officials would be the principal authors of the report. MAF officials have provided valuable specific analysis and input into the process as a whole.

LINZ discussed the fundamentals of pastoral leases with valuers, legal experts, economists (including MAF), LINZ employees, contractors, and the Commissioner of Crown Lands. A modelling workshop was held on the 13th and 14th of October.

4. Crown Pastoral Leases

Origin of the pastoral lease

As early as the 1850, provincial governments issued pasturage licences. These licences were issued to encourage the alienation and use of waste lands not already freeholded by the colonial Government.

A variety of leases and licences on different terms and conditions were issued under several pieces of legislation, for instance the Waste Lands Regulations Amendment Ordinance 1856, the Land Act 1877, the Land Amendment Act 1882, the Land Act 1885, and the Land Act 1892.

By the 1940s most of the land now in pastoral leases was governed by the Land Act 1924 either as

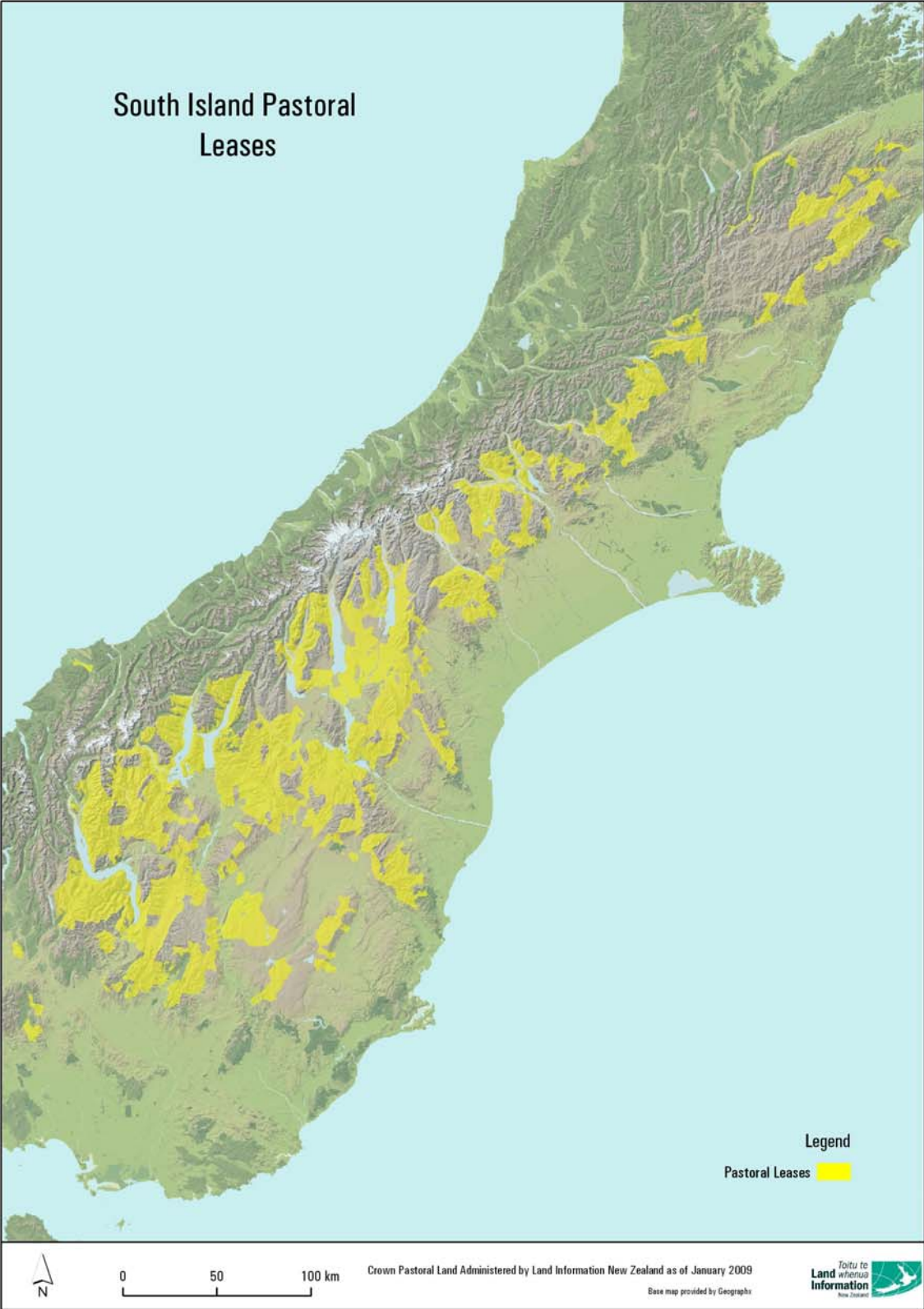
- pastoral licences
- the small grazing run tenure.

Both of these were usually issued for 21 years, had a right of renewal, and carried a right to freehold.

The Land Act 1948 consolidated many types of lease and licence into four land classifications, each with an associated tenure. The only one remaining in significant numbers today is the Crown pastoral lease.

There are now 247 Crown pastoral leases, all in the South Island and predominantly in the high country. The map on the next page shows the locations of pastoral leases.

Figure 4 Map showing the location of pastoral leases



The pastoral lease: original policy

The government saw that pastoral farming (appropriately managed) could help control erosion and invasive animal and plant species.

Lessees were encouraged to develop the leases through

- the granting of a perpetual term
- the fact lessees could invest in improvements to increase production without affecting their rent.

Extracts from the introduction speech of the 1948 Bill that became the Land Act and a letter from the Minister of Lands to pastoral lessees in 1949 illustrate some of the policy intent behind pastoral leases under the 1948 Act.

The incentive effects of the perpetually renewable lease are covered in the 1949 letter to leaseholders:²

I referred previously to pastoral land being held on pastoral lease or pastoral occupation licence. Neither of these tenures gives the lessee the right to acquire the freehold, for the reason that there are special circumstances relating to pastoral lands (soil erosion, control of rabbits, prevention of overstocking, prevention of indiscriminate burning, and so on) which can best be provided for if the land is held under lease or licence rather than on freehold tenure. However, to give as many holders of pastoral land as possible absolute security of tenure, provision is made for pastoral lands to be let on lease for thirty three years, perpetually renewable as of right. This will be a considerable advance on the present pastoral run licence, under which on expiry the Governor General determines whether or not the land is to be again let on licence and, if it is to be let again, whether the run should be subdivided. Where the land is not suitable for a pastoral lease, it will be let on pastoral occupation licence for any term up to twenty one years.

The 1949 letter also referred to the fact that lessees can make improvements without affecting rent:³

Actually, th[e legislation]...affords a lessee the opportunity of having what, in my opinion, is the ideal tenure, particularly for rural land: that is, a renewable lease with a rental based on the value of the land exclusive of all improvements, and with the lessee owning all the improvements.

Crown control over land use is covered in the introduction speech by the Hon. Mr C. F. Skinner, Minister of Lands (Parliamentary Debates, November 24, 1948, page 3999):⁴

The reason behind the establishment of a lease of this kind is that it may be necessary for some control to be exercised over the type of land contained in these leases for soil conservation purposes, to prevent erosion and regenerate some of the hill country contained in the leases. If there is any doubt as to suitability of the land for permanent alienation, obviously the Crown must retain some control over it. That is why there is no right of purchase in these hill country leases...

² Office of the Minister of Lands, Wellington, 15 March 1949.

³ Office of the Minister of Lands, Wellington, 15 March 1949.

⁴ The Clayton Report at 2.23. Crown pastoral leases and leases in perpetuity, Report of the Committee of Inquiry, Wellington, May 1982.

The pastoral lease: basic terms

The basic terms of the Crown pastoral lease have not changed significantly since 1948. The lessee gets

- the exclusive right of pasturage over the land
- a perpetual right of renewal for terms of 33 years
- exclusive possession of the land
- no right to the soil
- no right to acquire the fee simple of any of the land.

The lessees' obligations as currently configured include

- farming the land contained in the lease diligently and not committing waste
- keeping the land free from wild animals, rabbits and other vermin, cutting and trimming live fences and hedges, clearing land of noxious weeds and generally complying with the provisions of the Biosecurity Act 1993
- properly cleaning and keeping clear from weeds and keeping open all creeks, drains, ditches and watercourses upon the land
- not felling, selling or removing timber without consent unless for authorised uses or planted by the lessee
- not burning vegetation, ploughing, top dressing soil, forming paths or cultivating any part of the land, or do anything that disturbs the soil unless authorised by the Commissioner of Crown Lands
- complying with any other covenants specific to the lease (such as conservation covenants).

These obligations mean lessees must get consent from the Commissioner of Crown Lands for any significant work on the lease. The Commissioner sets maximum stock numbers which can be carried on the lease.

These stock limits are configured as exemptions personal to the lessee but all other things being equal, a purchaser of a lease could expect to get permission to carry the same stock as the person they bought it from.

When assessing whether to grant authority for lessees to undertake development work the Commissioner of Crown Lands must take into account under Crown Pastoral Land Act 1998

- the desirability of protecting the inherent values of the land concerned (other than attributes and characteristics of a recreational value only), and in particular the inherent values of indigenous plants and animals, and natural ecosystems and landscapes
- the desirability of making it easier to use the land concerned for farming purposes.

It is significant that the detailed controls exercised by the Commissioner of Crown Lands predate modern land use controls as they have developed through the Water and Soil Conservation Act 1967, the Town and Country Planning Act 1977, and other legislation. In addition to consent from the Commissioner of Crown Lands, lessees must also get any consents now required under the Resource Management Act 1991. They also have to comply with pest management strategies under the Biosecurity Act 1993.

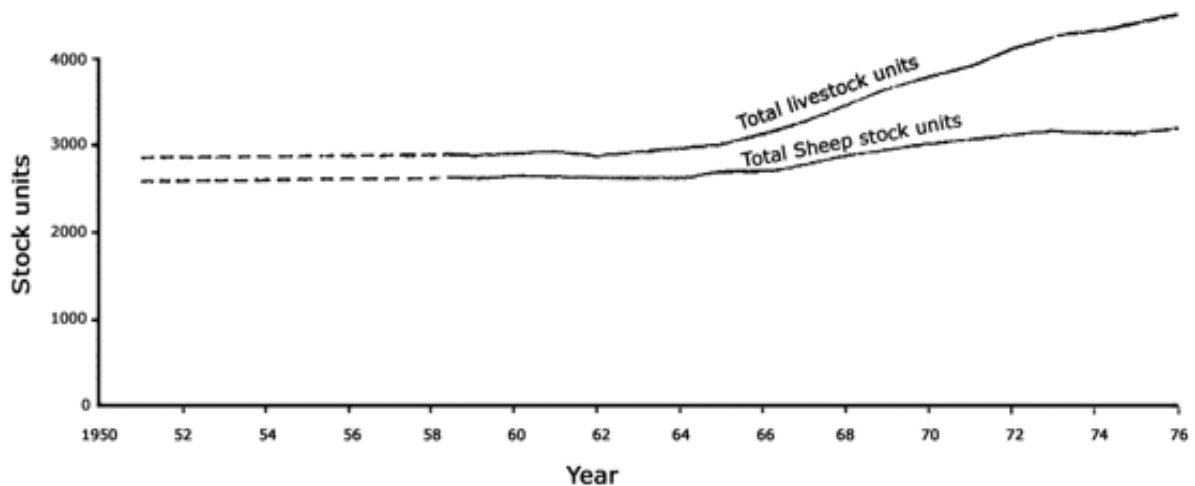
Stock numbers also appear in the lease itself, expressed as a right to carry a certain number of stock. These numbers are of historic interest. Various practices were used to arrive at them and incorporate them in original lease documents or new leases created on amalgamation or subdivision.

Pastoral leases: development over time

The development of pastoral leases is recorded (by various metrics) in the following examples from work done in the 1970s. **Note the quality of the graphics is limited by the source material.**

In terms of stock unit limits (Kerr, Frizzell, and Ross 1979).⁵ This graph records a steady rise in the limits on stock numbers set by the Commissioner of Crown Lands or his predecessors.

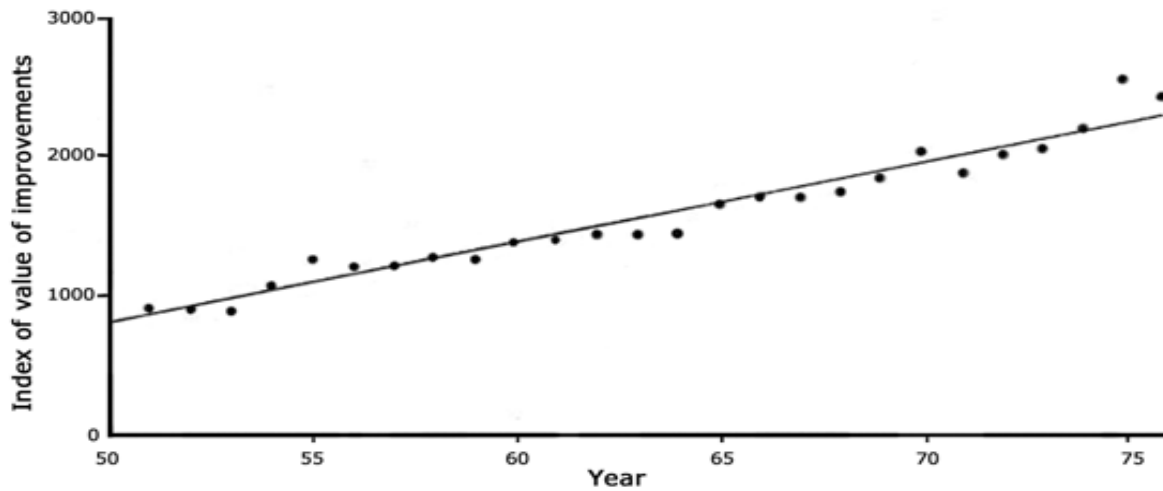
Figure 5 Mean stock limitation (in stock units) pastoral leases (1950–1976)



⁵ Kerr, Frizzell, and Ross A review of Pastoral Lease Rents, Tussock Grasslands Institute 1979.

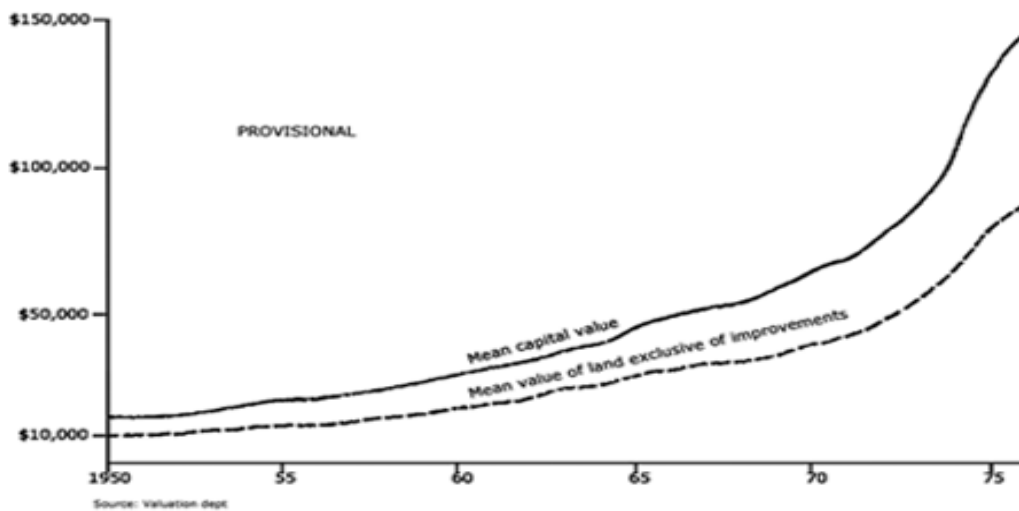
In terms of increasing value of improvements (Kerr, Frizzell, and Ross 1979).⁶ This graph shows lessees investing at a steady rate in improvements to pastoral leases.

Figure 6 Index of mean value of improvements—real terms pastoral leases (1950–1976)
(Base 1950 = 1000)



In terms of capital value (which includes improvements) and VLEI (Kerr, Frizzell, and Ross 1979).⁷ This graph shows VLEI increasing over time and capital value increasing more quickly over the same period. We suspect much of the difference over this period was due to improvements. After the mid 1970s inflation would probably have caused a steeper increase in capital values.

Figure 7 Mean valuations 346 pastoral leases 1950–1976



What is happening on pastoral leases today

The extent of property development varies greatly between leases, due to the nature of the properties, access to roads, infrastructure, and the objectives of individual farmers.

⁶ *Ibid.*

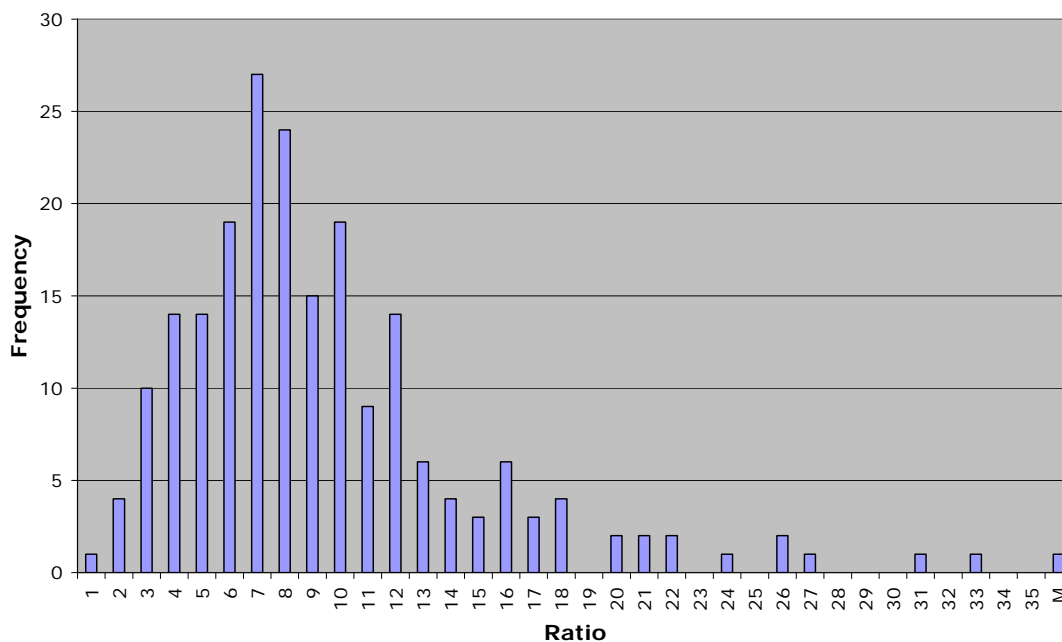
⁷ *Ibid.*

Some leases are in a highly developed state and are near (or are at) the maximum productive capacity of the lease, while others have further room for development. In a number of cases, the physical nature of the property (or access constraints) have constrained development.

The figure below shows the ratio of estimated base unimproved carrying capacity to current personal stock limits. It shows that most leases have been developed to between three and twelve times the estimated base carrying capacity (with a median of seven). Note that these data roll together variations in both

- the development capacity in leases
- the extent to which lessees have realised it.

Figure 8 Ratios—personal stock limits/base carrying capacity 247 pastoral leases 2009



Capital value of pastoral leases

In the past decade, the value of high country land has increased significantly. The increase is driven, in large part, by growing public (and investor) appreciation of the intrinsic amenity values associated with high country properties. Intrinsic amenity values are particularly high on lakeside properties, for example those on the boundaries of Lake Wanaka, Lake Hawea and Lake Wakatipu.

The increase in high country land prices came to the public attention with the purchase of the 24,700-hectare Motatapu and Mount Sohu Stations, by interests associated with Shania Twain, for \$21.5million.

It is also evidenced by the Crown purchases of Birchwood Station and St James Station for significantly more than the properties' valuations, due to the Crown attributing significant value to the conservation values on these properties. These purchases by private entities and the Crown highlight the potential value of the land, other than for its productive value.

The recent history of lease sales shows that buyers are prepared to pay a premium, over the productive value of the land, where there are intrinsic amenity values. In these cases the lessee has received, at least in part, financial benefit from the amenity values

associated with the property. Following the *Minaret* test case this component of value is not being considered in the calculation of rentals.

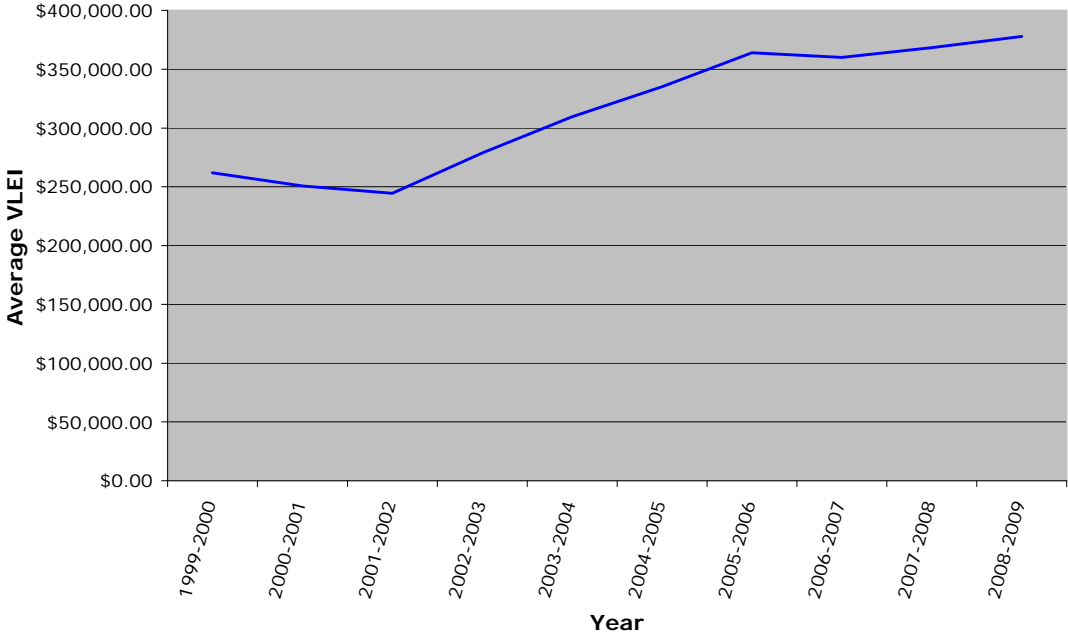
Land values of pastoral leases

Valuers have advised that there is no usable independent source of information about land values outside of the rent review process itself. Local authorities do obtain assessments of land and capital value for rating purposes but

- the rating units do not correspond with pastoral leases
- the methods for setting land values (though appropriate for rating purposes) are not accurate enough to be useful for the analysis in this report.

One source of data on land values is the rents actually received. This is so because under the current system VLEI is by statutory definition 50 times the rent.

Figure 9 Average VLEI for pastoral leases imputed from rents received 2000–2009 nominal dollars



We think the data which generated the graph above are likely to significantly understate the growth in VLEI of pastoral leases because

- significant lags are built in because rents are reassessed only every 11 years
- we think valuers may backsolve to get a low VLEI to generate a more market based rent
- the data include many cases where lessees are paying rent at an old rate while they are in dispute about their most recent rent assessment.

Farming returns

While there are a range of pastoral activities in the high country, the Merino industry provides an appropriate indication of the overall financial health (and performance) of property managers within this region. The merino industry has experienced difficult trading conditions over recent seasons, due to low returns for lamb and fine wool. These trading conditions have meant that farming operations have been experiencing a bottom line cash deficit. Meeting this deficit normally requires increased borrowing. On-going deficits raise concerns as to the longer-term viability of these properties.

The fine wool clip is the single largest contributor to the incomes of merino farmers. Despite the diminishing returns from merino wool farming in recent years it still represents a unique part of our farming sector. Merino sheep are farmed on large properties, often passed down through the generations. Adaptable to climate and temperature, they thrive in the harsh conditions of the high country and other mountainous regions of New Zealand. The grandeur of such scenery, with fine-wool producing sheep grazing across hills and valleys, is a New Zealand icon for town and country dwellers alike.

Both long term and short term trends reveal a grim picture of increasing costs and decreasing revenue.

Figure 10 Meat & Wool data on EBIT and real total gross revenue per stock unit for class 1 high country farms 1969 to 2008

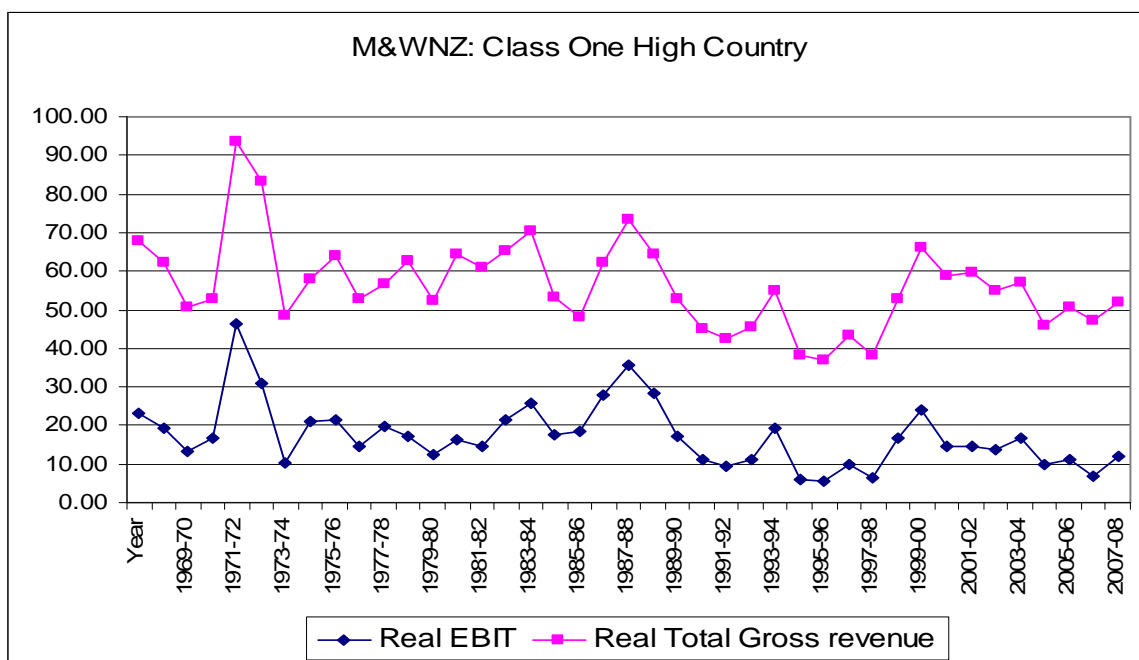
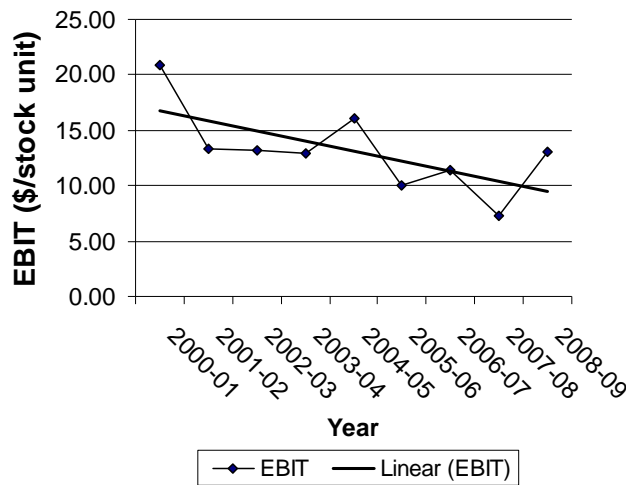
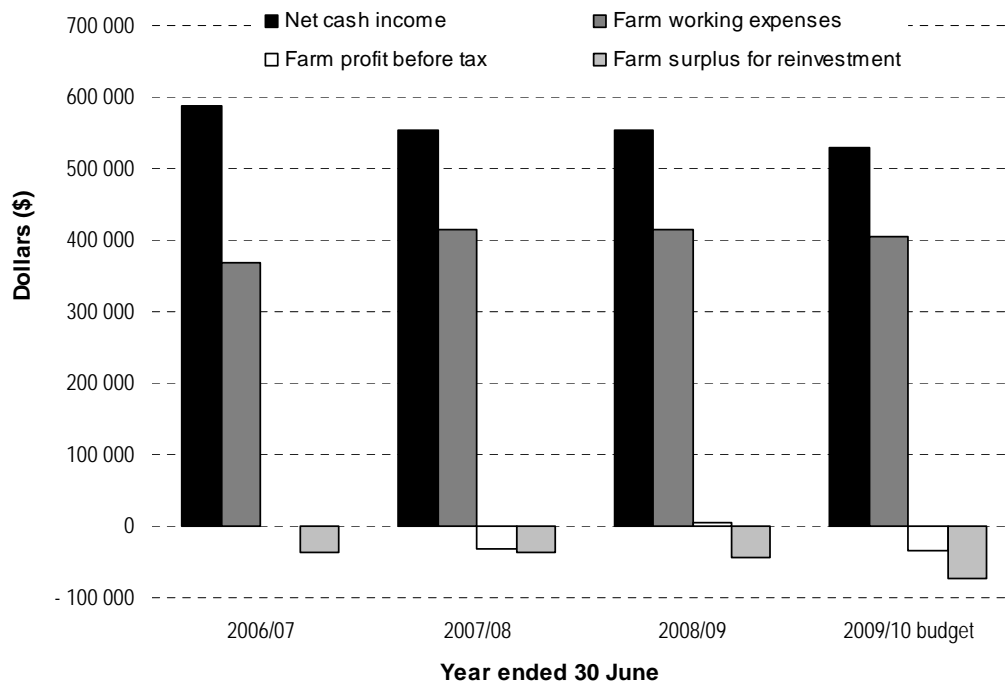


Figure 31 Meat & Wool data on EBIT for class 1 high country farms 2000/01 to 2008/09 with trend line



Other data series which also capture pastoral leases (along with different sets of other farming operations) show similar trends.

Figure 42 MAF pastoral monitoring report 2009 South Island High Country Sheep and Beef Model



Recreation

A number of lessees and third party operators have permits to manage non-pastoral activities on the Crown's high country estate. These are usually recreational ventures. Examples of these ventures include ski-fields/heliskiing, mountain biking, guided/safari hunting, horse trekking, skidoo tours, restaurants, guided walks/canyoning/climbing, airstrips, and golf courses.

These activities enable the lessee to generate revenue in addition to their pastoral operation. Where these operations are run by a third party the lessee is though unlikely to receive a significant amount of income from the venture. The Crown also receives income from recreation permits under a separate charging system (s66A Land Act 1948).

While opportunities are available, large-scale recreational developments are normally seen as an option for a future generation. This reflects the age structure of the high country farming community.

Environmental threats

Outlined below are some factors that threaten the viability of high country pastoral systems. It is important to note that these factors are common across all high country farms, not just Crown pastoral leases. Lessees though have a requirement under their lease to maintain the land by applying good husbandry.

Quite apart from their obligations under the lease farmers need to manage the environmental problems to maintain the viability of the production system. For example, if no rabbit control is undertaken on a property it is likely that within a fairly short time, there would be no feed left for stock.

These environmental threats are relevant to an earning capacity based rental system as they impact on the viability of the farming system and the costs to farmers in managing them.

Hieracium (hawkweed) is an invasive weed that has been colonising much of the extensive grazing land of New Zealand's hill and high country. Hieracium poses a major threat to soil stability, water retention, conservation, and landscape as well as the productive capacity of the land. The spread of hieracium is undermining the sustainability of grassland vegetation. Estimates in 2006 suggest that one million stock units are at risk from reduced production, representing a loss of up to \$76M per annum.

Rabbits are an ongoing threat to high country farms because they compete with livestock for feed. Rabbits are also a food source for ferrets, which are a vector for bovine tuberculosis. In high numbers rabbits can have a significant impact on pasture composition, vegetation cover, soil degradation, erosion, and water quality. Rabbits also threaten the integrity of natural ecosystems, plant communities with high conservation values, threatened species, and their habitats.

The combination of 150 years of pastoral farming and the ongoing cycle of booming rabbit populations has caused a significant amount of soil erosion resulting in the loss of productive values that are difficult to revive. Rabbit control costs range from \$1.50 per stock unit to as much as \$7 per stock unit annually.

The climate change predictions for New Zealand indicate that the western districts will experience a higher annual rainfall, while the east will get drier. The majority of high country land is on the eastern side of the main divide and therefore may face drier conditions. This may mean the snowline recedes, increasing the area of productive land at high altitude. There will also be an increase in extreme events such as floods, droughts, and snowstorms exposing stock to the elements.

The implications of the Emissions Trading Scheme for the high country are still to be worked through. It is expected that operating costs will increase once the industrial and energy sectors come into the Emissions Trading Scheme in 2010. In addition, farmers will have to pay for their emissions of methane and nitrous oxide from 2015 via meat processors.

Wildings are the natural regeneration or seedling spread of introduced trees, occurring in areas not managed for forest production. Most wildings grow close to the parent seed

source and are termed fringe spread. Wildings can establish on any pasture but have emerged as a particular problem on the drier and more exposed soils of the east coast of the South Island. The more extensive forms of grazing at higher altitudes (coupled with the tendency for stock to graze unevenly on largely unimproved land) provide more opportunity for wildings to establish and to reach a seeding age. The majority of the wilding spread has been caused by ten introduced coniferous species.

Wilding spread has the potential to affect

- landscape values – particularly disruption of existing open and often treeless landscapes
- conservation values – spread can dominate or degrade the habitats of indigenous flora and fauna
- existing pastoral uses – grazing species can be shaded out by taller-growing trees
- future land use options – wilding dominated land is more expensive than open grassland to convert to other uses such as improved pasture or managed forest
- existing hydrology – dense wilding stands covering a significant percentage of a catchment will reduce water yields.

The Department of Conservation estimated that 210,000 hectares of Crown conservation land was at risk from wilding pines in the South Island. Including private land and pastoral leases, the potential area would be closer to 500,000 hectares.

Even where wildings are at a low density they can be expensive to remove, due to their physical location (e.g. on isolated tops, accessible only by helicopter). The cost of clearance can be from \$2 - \$3 per hectare for the removal of widely scattered, lone outliers through to \$1,000 per hectare for aerial spraying and upwards of \$5,000 per hectare for the clearance of dense stands of trees.

The socio economic trends occurring in the South Island high country

In 2007, MAF commissioned the Agribusiness and Economics Research Unit (AERU) at Lincoln University to undertake an in-depth study of the socio-economic trends that are taking place in the South Island high country.⁸ The study examined the financial health of high country farmers, and the communities in which they operate. This assessment covered a ten-year period and focused particularly on the drivers for change.

The findings from this report are summarised in the points below

- the main operating constraint on high country farmers has been the sustained low returns experienced over the past decade (principally for wool). More than a third of the farmers interviewed considered the financial viability of their properties to be at considerable risk
- the majority of high country farmers have modified their management practices or undertaken some form of land development to improve returns. While these initiatives have generally been positive (in a financial sense), they have not offset the impact of lower commodity returns
- the move to more intensive production systems means that real farm costs have generally risen in recent years. This higher cost structure limits the capacity of

⁸ Greer, G. 2008, The Socio Economic Status of the South Island High country, Agribusiness and Economics Research Unit Research Report No. 306, Lincoln University, Christchurch.

farmers to respond to downturns in commodity prices or to adverse climatic conditions, such as drought

- the cost of debt servicing has been rising steadily in recent years
- the majority of the farmers interviewed for the study identified development opportunities for their properties. These included tourism, active recreation and agricultural intensification.

5. Rents

Two methods have been used to set rents for pastoral leases, roughly stated

- from 1948 to 1979 rents were calculated per stock unit on a base carrying capacity
- from 1979 to the present rents are calculated at (effectively) 2% of the value of land exclusive of improvements (VLEI).

1948-1979: Rents Calculated per stock unit on base carrying capacity

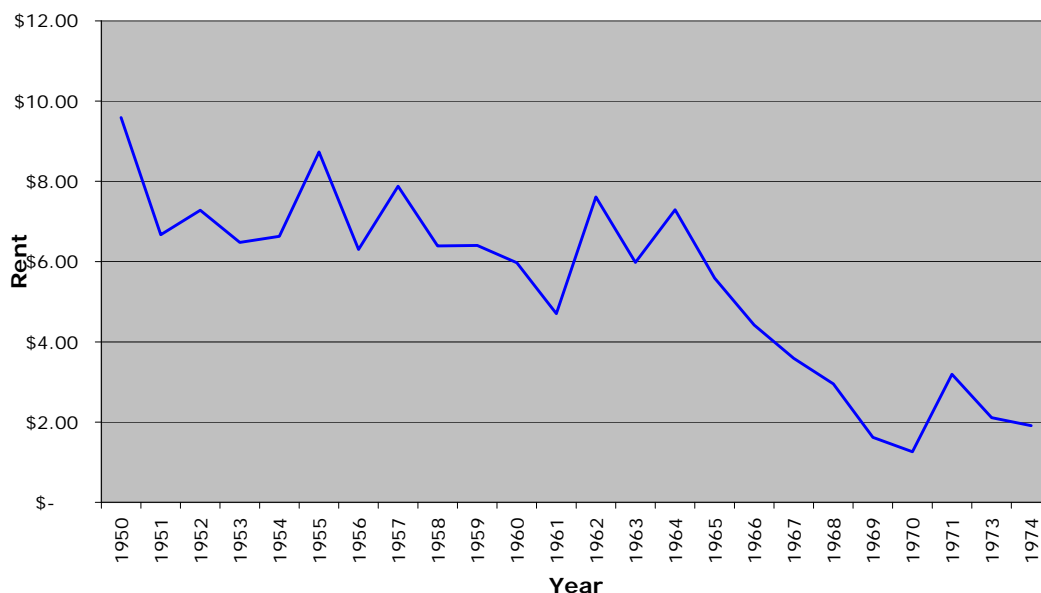
During this period rents were set to achieve either “fair annual rent” (under ss66(4) Land Act 1948) or set by the Land Settlement Board.

In practice, from 1948 to 1979 rent was mostly calculated on a formula using a base carrying capacity (usually expressed in sheep or other stock numbers) determined by the Commissioner of Crown Lands or his predecessors and recorded in the lease.

The formula was typically \$0.14/sheep with adjustments for matters like management, altitude, aspect, snow risk, ease of mustering, access and isolation, death rate, lambing, wool weight per sheep, distance from rail, school cartage, and the presence of noxious animals.

The rents per stock unit in real dollar terms are illustrated below.

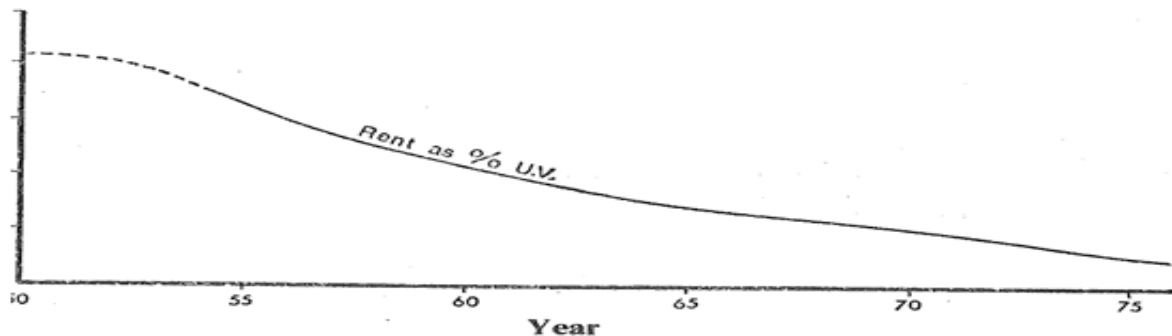
Figure 13 Rents per stock unit in leases as renewed 1950–1974 adjusted by CPI to Q3 2009



By the 1970s Crown parties appear to have been concerned that rents on the stock unit basis were not tracking land values, which had begun to increase rapidly as had general inflation.

The following graph extracted from Kerr, Frizzell, and Ross 1979⁹ illustrates the concern that rents were falling behind land prices.

Figure 14 Mean rent as a percentage of unimproved value 1950-1976



The main problem with the pre 1980s stock unit system appears to have been that the rate per stock unit (\$0.14/sheep) did not vary with any economic indicator.

We see that any modern production based system that uses \$/stock units should be keyed very carefully to economic data so it is appropriate to begin with, and then rises and falls with the real value of production.

1979 to present rent set at 2% of VLEI

VLEI has been incorporated in rent setting since 1970, when the first 11 year period for rent was set based on LEI, with subsequent periods set on a fair annual rent.

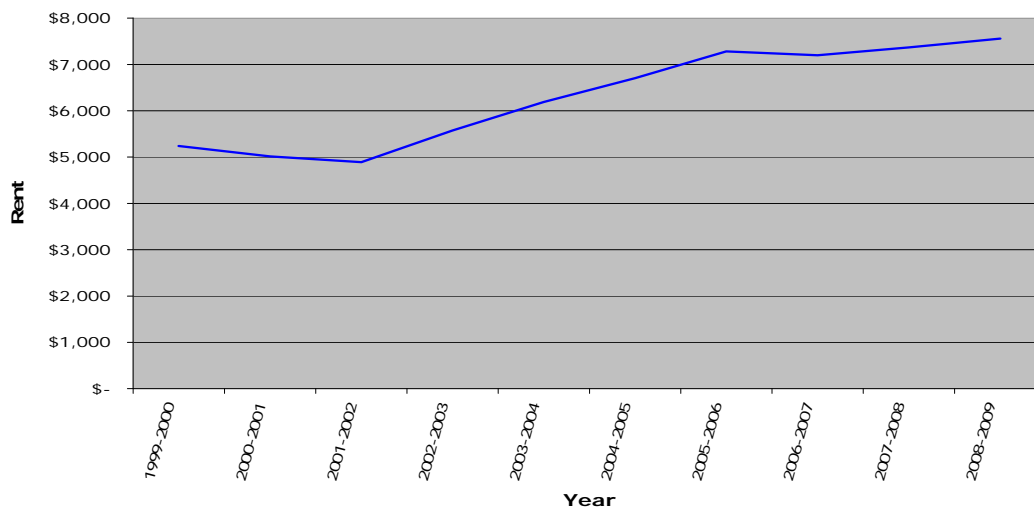
Since 1979 LEI has been the only basis for setting rent. Rent is to be calculated at 2.25% of VLEI. Lessees receive a discount for prompt payment resulting in a net payment of 2% of VLEI. In this report we assume rents are 2% VLEI unless otherwise specified.¹⁰

We do not have reliable data for rents from the mid 1970s to 1999. The trends in rents since 1999 are shown below.

⁹ Kerr, Frizzell, and Ross A review of Pastoral Lease Rents, Tussock Grasslands Institute 1979.

¹⁰ For simplicity, this report uses the figure of 2% in discussions and calculations. For the majority of leases the rental rate is 2.25% discounted to 2% for prompt payment. For a subset of leases the rate for the first eleven years is 1.5% (discounted to 1.25%), but these are an historical anomaly

Figure 15 Rents received from pastoral leases 1999 to 2009



These figures are from accounting data that record rent actually received. The line is nearly flat for the last few years because many lessees have been paying rent at an old rate while disputing their new rent assessments at the Land Valuation Tribunal.

What is LEI?

LEI is a notional construct that requires valuers to imagine the state of the subject land as if no improvements or work have ever been made to it, except for improvements made as a requirement of good husbandry under the lease. Land in that state no longer exists and LEI exists only as a valuation concept for setting rents on a range of ground leases mostly created by legislation.

The value of LEI : VLEI

Once a valuer has determined the LEI state of the land, he or she must place a value on it. This value is VLEI.

Calculated correctly, VLEI contains both

- the value of the land in its LEI state
- the value of the land in its LEI state as a platform for development.

The difficulties with VLEI are not so much about its theoretical contents but the difficulty in applying the concept in practice.

The problems with VLEI

The notion of VLEI is hard to apply in practice because it is inherently uncertain, does not lead directly to a simple valuation method, and responds poorly to changes in the context in which it is applied.

Uncertainty

Numerous court cases dealing with the valuation of land in an unimproved state have commented on the difficulty and artificiality of the exercise. Some excerpts from relevant judgments are set out in Annex B.

These comments note that the act of ascertaining the LEI state of the land is a difficult exercise heavily subject to the valuers' knowledge and expertise. The Judges also comment that assigning a value to the LEI state is difficult as there is a lack of truly comparable evidence. It is often noted that these problems will only increase with time as the land moves further away from the LEI state.

The complexity and subjectivity of LEI valuations means there is a high likelihood of legitimate differences between valuers that may not be amenable to resolution by agreement.

Method

Section 131 Land Act 1948 sets out the equation capital value (CV) – value of improvements (VI) = VLEI. As noted in some of the cases this reductive formula does not produce an implementable valuation method.

The problem with the residual approach is that in most cases the valuer must start with a relatively large value (CV) and subtract another relatively large value (VI) to reach what is a relatively small value (VLEI). The room for error that exists in the two relatively large values has a correspondingly more significant impact on the smaller value at the end of the process.

Valuers in practice need to use methods other than the residual formula. Typically these other methods

- try to infer VLEI from actual sales of developed land
- attempt to set a VLEI which will produce a rent that seems appropriate given the productive capacity of the land and costs of developing it.

We think it is significant that in order to get the system to produce workable results valuers in practice consider productivity and earnings.

Context

We see an increasing need for valuers to backsolve to get VLEIs that produce plausible rents. If land prices continue to rise and farm incomes continue to fall, the level of back-solving will only increase over time.

The existing system depends on a set of shared understandings among expert valuers about how the existing system can be made to work. This means the system can be poor at adapting to new inputs.

The consideration of significant intrinsic amenity values in the 1990s is an example of such a new input. The fact the parties decided to pursue the *Minaret* test case and the 113 appeals at the Land Valuation Tribunal show how difficult it can be for the existing system to adapt.

There are only a small number of valuers who have the experience and expertise to produce workable LEI valuations in the South Island high country. The system could become more unstable as they age and leave the profession.

6. Details of the proposed new production based system

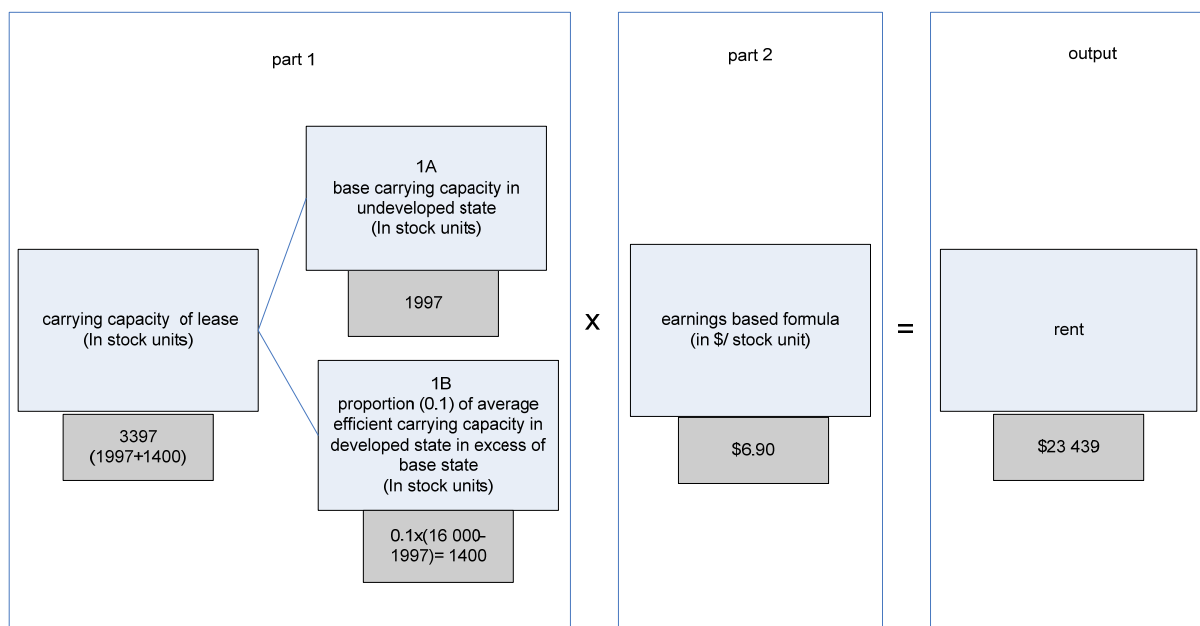
The diagram below shows how the proposed system would work on one of the properties we looked at in detail, Minaret station. Minaret Station provides the following numbers for the rent setting formula.

Table 5 Minaret station, numbers to illustrate the rent setting formula

base carrying capacity in undeveloped state	1997
current carrying capacity in developed state (in the hands of an average efficient farmer)	assume 16 000
current carrying capacity	22 000
stock limit exemptions	30 000
assumed rent per stock unit	assume \$6.90

The formula would operate as set out below

Figure 16 Application of proposed system using numbers for Minaret Station



The following sections set out in more detail about how each component of the rent setting formula would work.

Fixing base unimproved carrying capacity

Figure 17

1A
base carrying capacity in
undeveloped state
(In stock units)

The LUC based approach

Land Use Classification (LUC) is a systematic way of classifying areas of land according to its capacity for long term sustained production.

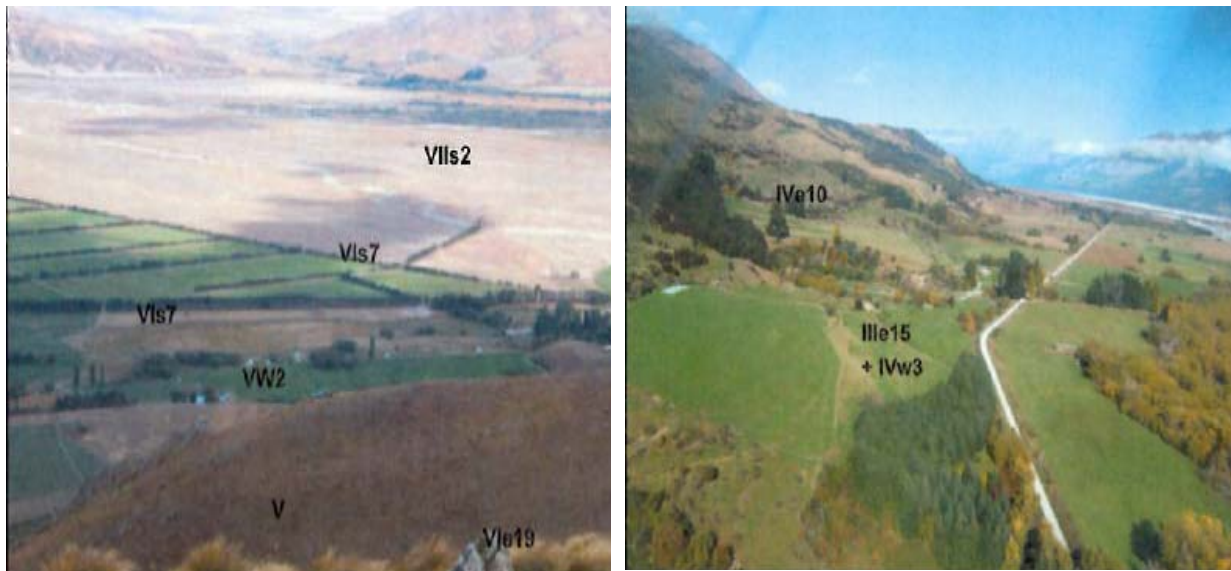
The current dataset is maintained by Landcare Research and is available in formats allowing easy use of the data in geographic information systems. LUC is widely used and understood by farmers, farm advisors, farm suppliers, and scientists.

We think LUC is useful because productivity is highly dependant on the physical attributes of the land, soil and the environment that LUC captures.

The following images illustrate common LUC classes in the high country, roughly stated

- the roman numerals show the 8 main classes in the LUC system (I has the highest potential VIII has the least)
- the small letters denote a limitation (for instance s is soil, e is errodability)
- the arab numerals describe the extent of the limitation.

Figure 18 Common LUC classes in the South Island high country





We propose refining LUC by adding Tussock Grasslands and Mountain Lands Institute (TGMLI) categories produced in the 1970s and other data (like soil types) that capture the effects of the environment on productive capacity.

The new rent setting system would use these data to provide an indicative base carrying capacity (in stock units) for any pastoral lease. The indicative carrying capacity would be modified as needed and as a one time exercise in the light of more detailed information about a particular lease.

Much more detailed and fine grained information is often available for individual pastoral leases. For instance Catchment Board officers and lessees prepared run plans for many pastoral leases in the 1970s and 1980s, such a run plan for Minaret station appears in on the next page.

Table 6 LUC based assessment of base carrying capacity illustrated for Minaret station

Land area in LUC (ha)	Land use capability class or unit	Main soils on this class on this lease	Indicative LUC carrying/ha	Total LUC indicative carrying	Carrying per refined for this pastoral lease	Total carrying refined for this pastoral lease
30	IIIe	Wakatipu	1.5	45	1.5	45
178	IVe2	48b	1	178	1	478
168	IVe3	99a	1.5	252	0.25	42
67	IVs	Bourke	0.6	40.2	0.3	20
310	Vis1	Bourke	0.25	77.5	0.3	93
61	VUs2	99a	0.25	15.25	0.25	15
55	VIws	99a	0.25	13.75	0.25	14
45	VIw	99a	0.25	11.25	0.25	11
243	VUs3	99a	0.25	60.75	0.25	61
1267	Vie1	Creighton	0.2	253.4	0.1	127
1214	Vie2	Creighton	0.2	242.8	0.1	121
1267	Vie3	50bH	0.25	316.75	0.2	253
939	Vie4	57d	0.2	187.8	0.2	188
55	VIIs	99a	0.4	22	0.15	8
125	VIIc1	53c	0.1	12.5	0.15	19
1323	VIIc2	65e, 57d, 57e	0.1	132.3	0.1	132
607	VIIe1	57d	0.1	60.7	0.1	61
4227	VIIe2	57d, 57e	0.15	634.05	0.1	423
1161	VIIe3	50b, 57d	0.1	116.1	0.1	116
138	VIIe4	57d	0.1	13.8	0.1	14
1112	VIIe5	57d (v limited)	0.12	133.44	0.05	56
1789	VIIs	65d, 57d, 57e	0	0	0	0
3371	VIIIe	100, 57e	0	0	0	0
30	IIIe	Wakatipu	1.5	45	1.5	45
178	IVe2	48b	1	178	1	478
168	IVe3	99a	1.5	252	0.25	42
19752				2819		1997

The valuers found the process worked well on the 13 properties they looked at. We then extrapolated the results over the rest of the 247 pastoral leases. The details of the extrapolation are described in the annex on modelling.

Officials would need to

- refine the classifications and fix indicative carrying capacities for them (expert valuation advice is needed)
- capture this information in a database (ideally one with a spatial component) that can output the indicative base unimproved carrying capacity for any lease.

The base unimproved carrying capacity fixed by the proposed system would not change over time. We propose that it be set once and recorded on the lease for all future rent reviews.

Assessing the lease as a platform for development: current carrying capacity in the hands of an average efficient farmer

This section explains the highlighted component of part 1B of the proposed rent setting formula.

Figure 20

1B proportion (0.1) of average efficient carrying capacity in developed state in excess of base state (In stock units)
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Why use average efficient carrying capacity?

The system we propose must in some way capture the current development potential of a pastoral lease.

Our analysis showed that using current carrying capacity in the hands of an average efficient farmer was an effective measure.

We rejected two other possible measures of current carrying capacity

- the stock actually carried
- stock limit exemptions granted by the Commissioner of Crown Lands.

If we used actual carrying capacity the results would disadvantage good farmers while rewarding those who carried suboptimal stock numbers. Lessees could also game the system since they are the only source of actual numbers.

We could use the stock limit exemptions granted by the Commissioner of Crown Lands, but these numbers represent a kind of consent. Lessees often get their stock limits increased well before they actually add the permitted stock.

Exemptions are often conditional on the lessee carrying out other work, some of which will or will not be completed at any particular date. We would have to invent a complex set of rules to arrive at a fair indication of potential carrying capacity from this information.

Average efficient carrying capacity

We think the formula (current stock carrying capacity in the hands of an average efficient farmer in excess of base carrying capacity) is, almost by definition, a usable and fair measure of the development potential of a property.

The “average efficient” concept is well understood by rural valuers, farmers and farm advisors. This concept represents the average of what efficient farmers could achieve with a similar lease.

Average efficient production generally lies above the average or median of actual production, but falls short of what the outstandingly successful farmers are achieving on similar country.

Valuers we spoke to indicated that they need to apply some subjective judgment to fixing “average efficient” stock levels but the task is easier, better understood, and quicker than trying to assess VLEI.

We worked with a group of valuers and agricultural economists to scope how average efficient carrying capacity could be cost effectively assessed as part of the proposed rent setting process.

A set of assumptions about a notional average efficient farmer would be needed, and the following are suggested as a starting point. An average efficient farmer

- is average efficient at pastoral grazing activities permitted under the lease
- is assessed ignoring any non-pastoral uses
- sits at around the 75th percentile of his peers
- has typical equity and access to capital at typical cost
- takes a long run view of investments and returns
- faces prices for inputs and outputs at actual levels and makes reasonable median assumptions about future levels.

LUC based guidance on average efficient carrying capacity would be provided in a similar way to the indicative figures proposed for base unimproved carrying capacity.

This process would output a working estimate of average efficient carrying capacity for any pastoral lease. Valuers could use this data as a starting point in their assessments.

We also envisage that assessments of average efficient carrying capacity would be fed into a database as they are made. Valuers (and perhaps anyone) would have access to it.

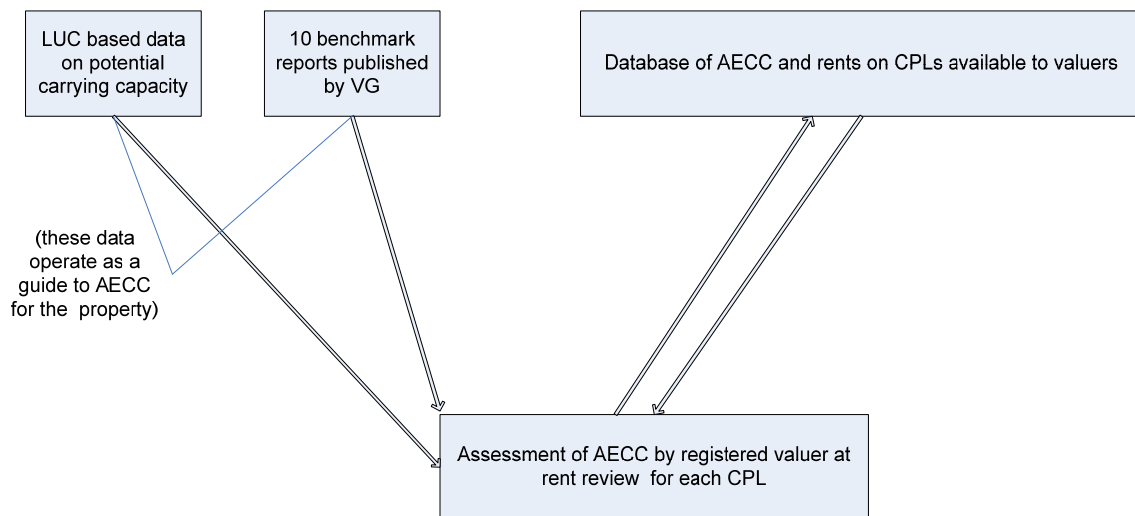
Valuers would then have all the potentially comparable or relevant assessments of average efficient carrying capacity to use when setting rents on individual leases.

We envisage the Valuer-General would also publish model assessments of average efficient carrying capacity and material explaining how they were done. The model assessments would be done on properties that give valuers reference points on the range of qualities they will find across the pastoral lease portfolio. These qualities include

- input and output costs generated by location and access
- properties run in conjunction with non pastoral lease land
- pastoral leases run as standalone entities
- shape
- small, medium, and large scale operations.

The following figure shows how our proposals for assessing average efficient carrying capacity (AECC) would work.

Figure 21 Illustration of how AECC would be assessed



A valuer assessing average efficient carrying capacity on a particular lease would

- look at the outputted estimates of average efficient carrying capacity from the LUC based data
- make a more fine grained assessment using LUC based data from run plans and other material
- look to see where the property fits against the benchmarked properties
- look at what the property is actually carrying; wool weights, carcass weights, condition scores lambing percentages, and other metrics
- consider constraints like the cost of inputs and outputs to and from that location
- consider complementarity; whether the property is run in conjunction with non-pastoral lease land and what this means for carrying capacity
- consider constraints specific to the property like shape and internal access
- consider all the environmental issues that are not fully or correctly captured in the LUC based data like rainfall, slope, aspect snow risk and winter length
- consider constraints created by plant and animal pests.

We think this work (which would be the major part of a rent assessment) should cost a few thousand dollars at most. The reports which are currently used to start the rent setting process cost roughly \$8,000.

The experts we worked with thought that valuers would generally agree on an assessment of average efficient carrying capacity to within 10-15%. The rent setting algorithm we propose isn't particularly sensitive to average efficient carrying capacity so this level of variation seems workable.

Assessing the platform development: applying a factor of 0.1

This section explains the highlighted component of part 1B of the proposed rent setting formula

Figure 22

1B
proportion (0.1) of
average efficient carrying
capacity in developed state in
excess of base state
(In stock units)

Once the development potential of the lease has been established there needs to be a mechanism for fixing the proportion that is attributable to the lease as a platform for development.

We propose fixing the proportion at 0.1. A fixed factor is essential to a workable system. In the absence of a fixed proportion development potential would need to be assessed at each rent review. This would reintroduce all the uncertainty and risk that currently surrounds LEI valuations.

Our modelling shows that 0.1 gives plausible rents around the levels that would be expected from calculating VLEI. Experienced high country valuers considered the levels of rents we modelled as reasonable.

Fixing a rent per stock unit

This section explains part 2 of the proposed rent setting formula.

Figure 23

earnings based formula
(in \$/ stock unit)

The system we propose for setting rents requires a rent per stock unit which

- captures and tracks the earning potential of the productive capacity assessed in part 1
- sets rents as a fair proportion of that earning potential.

What economic data to use

We looked at and discarded several approaches to getting data that capture the earning potential of productive capacity

- balance sheets of individual farms as they are actually operated
- an idealised balance sheet for individual farms as though there were operated optimally
- a set of six or so model operations against which individual leased properties would be calibrated.

We found that balance sheets use accounting conventions rather than useful economic measures, and also report on entities that include operations other than pastoral farming.

It would be possible to strip out non-pastoral farming components and normalise balance sheet data to some standard measures. We explored how such normalisation exercises are done elsewhere and determined it would be too complex and expensive to conduct over the 247 pastoral leases.

Another problem in using balance sheets is that lessees could easily game any balance sheet based approach to setting rents, since they construct balance sheets themselves.

Any approach using an ideal balance sheet for a notional ideally run operation would involve a very detailed and subjective enquiry. We think it would be too complex and expensive to perform across the pastoral lease portfolio.

The idea of using model operations to set rents has been raised in the past. We consider the pastoral lease properties are too varied for this approach to produce fair rents across all the leases.

We determined that the most efficient approach was to use objective statistical data that capture

- current actual earnings
- information about what proportion of earnings farmers pay to use comparable land.

The analysis showed Meat and Wool New Zealand Economic Service Sheep and Beef Survey, Class 1 South Island High Country captured the necessary information reasonably well, and better than other data series. This series uses 20 or more farm operations. Around of half the land area captured is in pastoral leases.

We looked at various options for extracting useful values from this data series. In this report we use an EBIT measure as a working measure. The working measure is

The long term average proportion (it is 0.49) of EBIT spent on (rent + debt servicing) taken from Meat and Wool New Zealand Economic Service Sheep and Beef Survey Class 1 South Island High Country currently smoothed by a five year rolling average and expressed in current dollars.

We propose a five year rolling average to smooth out any short-term variability in income and costs.

This working measure produces \$6.90 per stock unit as at today. Further work is needed to refine the approach so in this report we model \$5 and \$7.50.

More work on refining a \$/stock unit figure

Although we favour an EBIT based figure more work is needed to fix a fair proportion for rent.

The \$/stock unit figure might (despite the problems with valuation methods) look to market evidence of rents for partly developed land in the high country. This (though it reintroduces valuation concepts) is a significantly simpler exercise than inferring VLEI from market sales data under the current system.

Comparable rent data are very scarce (we are aware of only seven cases ranging from \$4 - \$7 per stock unit) and they are potentially contaminated by non arms-length transactions.

There is more evidence of rents in hard hill country. These properties differ from those in the high country but valuers could make adjustments to infer what rentals of high country property might be. We suggest caution with using these data, as they require significant modification to apply them to high country properties.

There must be a floor to the \$/stock unit figure

The final formula for \$/stock unit would need to incorporate a floor so that economic data don't drive rents to unfeasibly low levels if returns from high country farming continue to fall.

The rent data discussed above might effectively provide a floor, or another mechanism might need to be devised.

7. Implementing the new system

In this section we look at the legislation and other work needed to set up the new system, settling the *Minaret* appeal, and the results of some of our modelling which show the rents the new system could produce.

Legislation and administrative arrangements for the proposed new system

The Land Act 1948 and the Crown Pastoral Land Act 1998 would need to be amended to support the proposed new system for setting rents. Much of the technical detail could sit in Rules made by the Valuer General. A carefully designed Rule making power would need to be inserted in the primary legislation.

Potentially s6, s7, and s8 of the Crown Pastoral Land Act 1998 might be repealed and new rent setting provisions inserted (perhaps as a new part) into the same Act. Section 131 Land Act 1948 would be repealed. Some consequential amendments would be needed too.

We envisage the new provisions would operate as a code for pastoral lease rent setting and not affect land or capital values for the purposes of other parts of the legislation.

Frequency of rent reviews

Land value systems typically produce large stepwise increases in rent at each rent review. The proposed system could lend itself to more frequent application than the 11 year cycle in the current legislation.

Rent reviews do though carry associated costs. We have not yet explored or modelled the costs and benefits of more frequent rent reviews in any detail.

The High Country Accord have concerns both about departing from the review current cycle (which is valued into their leases), and the costs of more frequent reviews.

We think that this area needs to be explored in more depth.

Alternative dispute resolution

The legislation could also provide recourse to an alternative dispute resolution system. We envisage that there will be fewer disputes under the proposed new system than the current one but recognise that disputes will still arise on occasion.

The proposed new system lends itself to alternative dispute resolution measures rather than adversarial ones. Further work will be undertaken to develop this system.

Settling the *Minaret* appeal

If Ministers agree to the proposed new system the specific subject matters of the appeal against the *Minaret* decision (which mostly relate to statutory interpretation issues around VLEI and capital value) would become moot.

The appeal could therefore be abandoned as the new system would be consistent with two pivotal elements in the *Minaret* decision that

- intrinsic amenity values should not count in calculating rent
- rent should relate to the lease used for pastoral farming.

Work to support settlements

The remaining 113 cases before the LVT will still be subject to the current land value based system.

We expect many lessees could settle for a rent which would be consistent with figures produced by both the existing system and the one we propose. Our modelling shows a fairly high degree of correlation between the two systems in terms of final rent.

We think such settlements could be acceptable because lessees would see the result as both consistent with their position following the *Minaret* test case and the future system which they broadly seem to support.

Officials have begun working on the legal and practical issues involved in such settlements and the functions of the Commissioner of Crown Lands in the period between any policy decision and enactment.

Further and more detailed work would be needed to support possible settlements of the 113 individual cases including, for each of them, a plausible post *Minaret* VLEI. These VLEI figures for settlement could plausibly be produced partly from a desktop exercise without needing full blown and expensive revaluations.

The work to support individual settlements should include assessments of

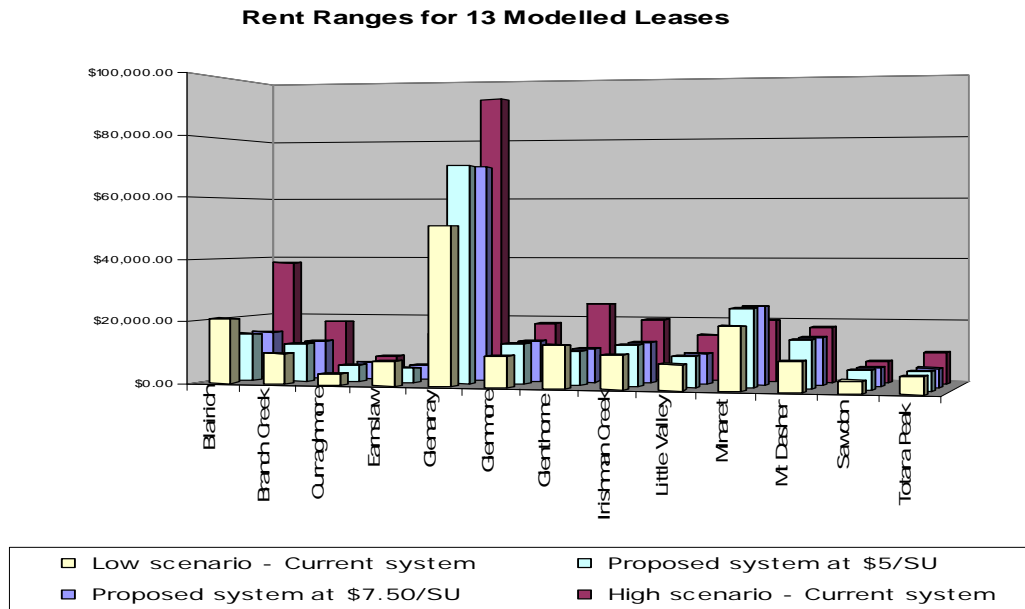
- base unimproved carrying capacity
- average efficient carrying capacity
- \$/stock unit figure

This work would let lessees see that settlements would also be broadly consistent with the future system. The work should be programmed so it feeds usefully into the detailed design of the legislation for the new system.

More detailed effects of the proposed system

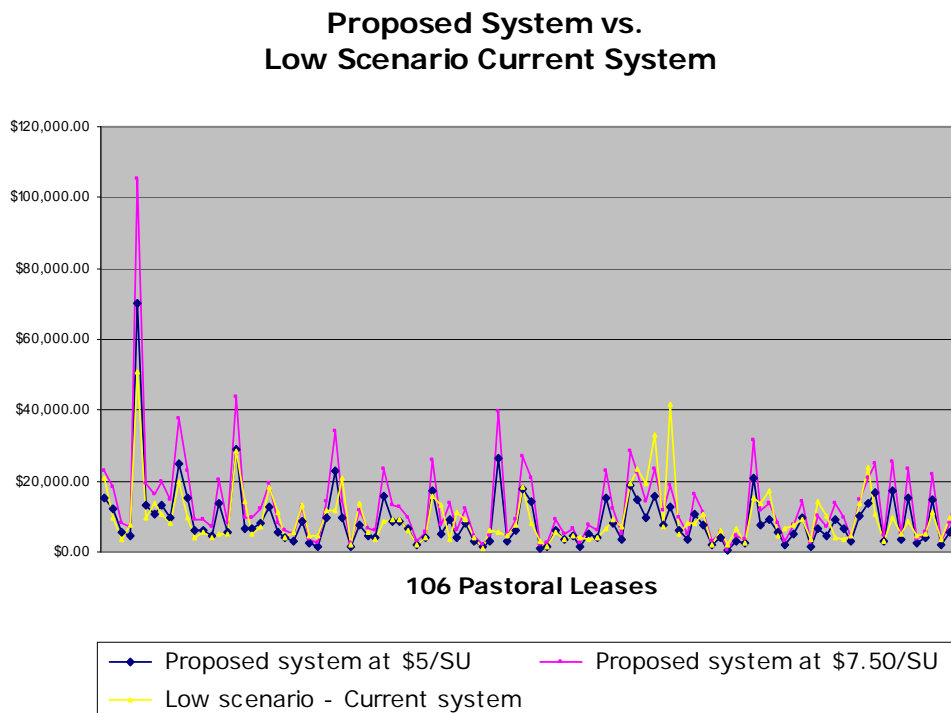
In this section we describe some of the outputs from the modelling that supports the analysis in this report. The figure below page shows the four scenarios we modelled by looking in detail at 13 representative leases. We got expert valuers (including one nominated by the High Country Accord) to select the leases.

Figure 24 Comparison of proposed rents for 13 sample



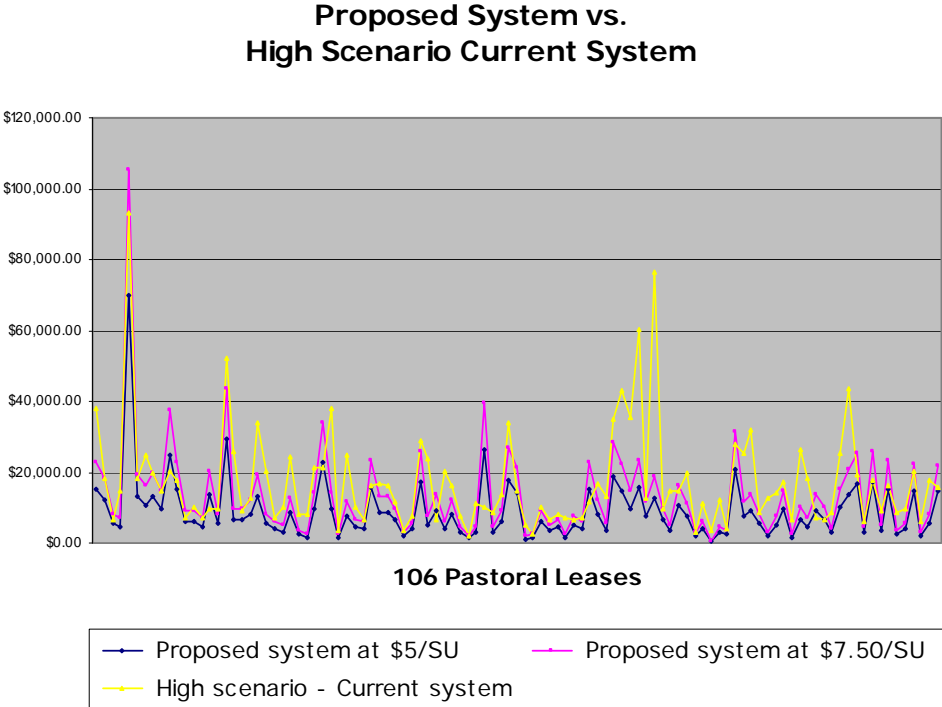
The figure below shows the proposed system (at both \$5 and \$7.50 per stock unit) with the low scenario for the current system.

Figure 25 Proposed System vs Low Scenario Current System



The figure below shows the proposed system (again at both \$5 and \$7.50 per stock unit) against the high scenario for the current system.

Figure 56 Proposed System vs High Scenario Current System



8. Issues outside rent setting

This report focuses on setting rent for pastoral leases. The terms of reference allow for this report to signal a need for future work on a number of other issues.

In this section we briefly canvass some issues around the income the Crown can receive for non-pastoral uses of leases as well as the management and future of pastoral leases.

Most of the issues arise from changes that have occurred since pastoral leases were established in 1948, especially the growth in non-pastoral values and the development of statutory regimes that control land uses.

We suggest Ministers direct officials to carry out work on the issues discussed.

Recreation permits

The legislation has since 1977 recognised possible uses and revenue from recreation purposes. Recreation permits are authorised by s66A Land Act 1948 and are subject to s18 Crown Pastoral Land Act 1948.

The Commissioner of Crown Lands may permit the use of any land in a pastoral lease for

“... any commercial undertaking involving the use of the land for any recreational, tourist, accommodation, safari, or other purpose that ... may be properly undertaken on that land”.

The activity

- must be consistent with the intent of the Land Act 1948
- must be compatible with any soil or water conservation objectives
- is subject to the same balancing of farming and environmental matters as consents to develop the land for pastoral purposes.

Recreation permits can be granted to the occupying lessee or, with the lessees consent, a third party.

Recreation permits are likely to generate more income for lessees and third parties in the future so long as incomes from pastoral farming remain low. The Crown’s share of these revenues is very low around \$52,000 per year.

We question whether the current framework for recreation permits is a sound model for the future, in particular the current framework

- treats recreation as an exceptional activity (when it is increasingly common)
- tests recreation against pastoral farming objectives (which may not be appropriate)
- lacks provision for monitoring and assessment of recreational operations
- does not contain any principles on how the Crown should share in revenue from recreation.

We suggest Ministers may want to direct officials to carry out further work on recreation permits to address the issues listed above.

Carbon

Carbon credits and the possibility of using pastoral leases for carbon farming were not envisaged in 1948.

Lessees are increasingly requesting permission for plantation forests. This has implications in terms of both land management and the Emissions Trading Scheme.

We propose that Ministers direct officials to carry out further work to consider the

- growing scope for using pastoral leases for carbon sequestration
- impacts that this may have on the environment and the Emissions Trading Scheme.

Specific consideration will need to be given to the following questions

- what incentives does the Emissions Trading Scheme create for high country farmers with wilding pines?
- how much high country land is eligible to enter the Emissions Trading Scheme?
- ownership of carbon credits received through entry into the scheme.

The land management controls under the Land Act 1948

One of the drivers for the creation of pastoral leases was to enable land management by the Crown through its role as lessor. The Commissioner of Crown Lands still exercises a very detailed level of control over land management including land cover, burning, clearing, and stocking decisions

The generic regimes under the Resource Management Act 1991 and Biosecurity Act 1993 are now significantly more developed than the controls that existed under planning and pest legislation in 1948. There may no longer be a need for such detailed controls under the Land Act 1948 as well as the generic legislation.

We propose that Ministers direct officials to carry out further work to consider whether the controls on land use under the Land Act 1948 are still appropriate and options for altering or removing them.

Tenure review

Tenure review is a major driver of change for pastoral leases and is a major undertaking for both the Crown and lessees. Third party groups involved in the process also invest considerable time, effort, and money in it.

In 2009, the Parliamentary Commissioner for the Environment presented a report containing nine recommendations about environmental stewardship and tenure review. While the PCE report recognises the progress and gains made by tenure review it also highlights areas for future consideration.

Given the importance of the tenure review process and the resources that are involved, we suggest that a high level review could be carried out to determine if tenure review is delivering the desired results cost effectively.

Annex A The economics of high country farming

John Greer, MAF Policy

Introduction

It is proposed that one method of assessing earning capacity based rents on Crown Pastoral Leases would be through assessing the unimproved carrying capacity of the land, adjusting that for a ranking that reflected the properties other features including development potential and multiplying this adjusted carrying capacity by a rent per stock unit. This paper addresses the calculation of rent per stock unit. It is intended that the rent per stock unit would be based on a proportion of the earnings per stock unit.

Method

Meat and Wool NZ (M&WNZ) carry out an annual survey of a sample of high country farms and report their physical and financial performance. This has been done since 1952 but data is available electronically for the 1968/69 year onwards. The survey covers leasehold and freehold high country farms and covers all stock so is an assessment of the performance of the stock on developed and unimproved land and thus probably overestimates the return from stock on unimproved land. It does however provide an accurate assessment of the returns per stock unit and as long as the unimproved stock units are adjusted for performance most distortion will be removed.

The M&WNZ data was chosen as it is based on a randomly selected sample and is thus representative and the data are adjusted to remove any distortions from within business transactions. It is readily available and can be expected to be available in the future. The MAF farm monitoring information has been shown to closely parallel the M&WNZ data and for the last three years has been based on the survey data collected by M&WNZ. Some leading accountants report surveys of their clients but this data may not have been normalised to remove within business transactions and is also likely to be biased by the makeup of the accountants' client base. Data from one accountant survey has been compared with the M&WNZ data for comparison.

To provide a fair and consistent estimate of the earning capacity of these farms the gross farm revenue less the farm working expenses, including rates, insurance, ACC and depreciation have been calculated to give earnings before interest and tax (EBIT) on a per stock unit basis. The payments for interest and rent were also calculated as this provides an insight into the debt servicing the average farmer is prepared to pay.

The EBIT and the rent and interest were then adjusted by the CPI to provide real, ie inflation adjusted, figures. The CPI was obtained from the Statistics NZ website.

Historical Profitability and debt servicing

Real EBIT has averaged \$17.30 per su while debt servicing has averaged \$6.39 per su. This data is shown in the graphs below. While the averages are as reported above, the trend shows that over time the real earnings per stock unit have deteriorated and the real interest and rent per stock unit has increased, particularly over the last four years.

As reported by Greer (reference to be obtained) in the past high country farmers were able to reduce spending when income went down and thus be resilient through fluctuations in wool price. Wool has historically been over half of the income on these properties and is often a higher proportion. Greer reported that in the last ten years farmers have been less able to reduce costs in times of low income as they have developed more intensive systems in an attempt to be less reliant on wool income.

This historical data show that over the period analysed farmers have been prepared to spend 49% of their EBIT on debt servicing. For the first 20 years of the period the average was 33% while for the last 20 years the average is nearly 65% indicating a change in farmers' investment attitudes.

Based on this survey data it is proposed that a starting point for rent per stock unit should be the average that farmers have been prepared to pay ie \$6.39 per stock unit with subsequent adjustment for the commercial rentals for unimproved land found by valuers.

This may then need to be adjusted to take account of the fact that unimproved stock units have a lower financial performance than the stock on developed land. However most of this difference will already have been accounted for in the calculation of the base stock units which will include the performance of the stock so further adjustment for this reason should be minimal.

There doesn't appear to be a case to adjust the rent per stock unit to reflect the stewardship requirements on the farmer in terms of stocking, weed and pest control, etc. Any stocking adjustment for stewardship should be taken into account in setting the base carrying capacity. In addition, the historic rent and interest charges show the amount of debt servicing farmers have been prepared to pay WITH the current stewardship requirements so it would seem that stewardship has already been accounted for.

Note that once a rent is agreed to would need to be converted back to nominal figures using the CPI. The average real debt servicing and rent per stock unit of \$6.39 equates to \$6.90 in 2008/09 dollars.

Alternative indices

Alternative data that could be used to calculate an earning capacity based rental include the ANZ commodity Price index and the Statistics New Zealand Farm Expense Price index. Both data sets do not go back in time as far as the M&WNZ data. However when the meat, skins and wool component of the ANZ commodity price index was compared with the M&WNZ Class one revenue data they had a very strong correlation and this index was not considered to add any value over and above the M&WNZ data.

Similarly, when the Statistics NZ Farm Expense Price index was compared with the farm working expenses per stock unit for the M&WNZ class one data they had a high correlation and again seemed to add little value.

Revenue only based rental

It has also been proposed that a simpler system of basing rentals on earning capacity would be to use the revenue figures on their own. Real total gross revenue has averaged \$56.32 over the last forty years with a standard deviation of \$11.62. When the five year rolling average is taken the standard deviation is only 7.45 so this is a less variable (more stable indicator). There is some logic to this as the EBIT is a much smaller number but with the same inherent variability ie it is still affected by the income variability. However farmers increase in spending (and decrease) tends to lag behind a change in income by a year or so and this probably exacerbates the variability in EBIT. Basing the rentals on total gross revenue also places the incentives in the right direction by not rewarding increases in operating expenses. Farmers may argue that operating costs need to be taken into account as these are necessary to earn the income. Both

Overall there seems some merit in basing the rental calculations on revenue rather than EBIT and this possibility should be considered further in developing the operating guidelines for the expert panel which will determine the rent per stock unit value.

Comparison with Accountant client surveys

Some accountants produce surveys of their clients' data. Typically these are leading farm accountants and as such often attract better farmers to their practice so the data is potentially biased. The table below compares three years data from an accountant's survey with the M&WNZ survey data.

Annex Table 1 Comparison of Meat and Wool NZ survey data with a farm accountant's client survey

	2005-06		2006-07		2007-08	
	M&WNZ	Ibbotson Cooney	M&WNZ	Ibbotson Cooney	M&WNZ	Ibbotson Cooney
Total Gross Revenue	\$45.90	\$50.26	\$51.76	\$53.91	\$49.90	\$54.78
Farm Working Expenses including ACC, insurance, rates and depreciation	\$32.05	\$44.58	\$36.28	\$46.94	\$38.87	\$44.29
Total debt servicing	\$7.54	\$10.99	\$8.41	\$13.57	\$10.02	\$15.29
Earnings before interest and tax	\$10.03	-\$0.37	\$11.38	\$0.60	\$7.31	\$4.70

The comparison shows that the average farm in the M&WNZ survey has higher earnings before interest and tax. The accountant's survey includes 40 merino farms in its high country groups.

A group of high country farmers have formed the Merino Benchmarking Group as part of their performance improvement approach. This data may be available as a contribution to assessing earning capacity based rents. Permission to use the data will be sought and it will be compared with the M&WNZ data. However it is expected to encounter the same issues of representation and normalisation as accountant data.

If either of these data sets were to be used in determining rentals then further detail and analysis would be required to ensure it was representative and normalised. This could be time consuming and expensive.

Distribution of profitability

The information above addresses the average earning capacity of high country farms. For rents to be fair they need to be affordable for most lessees. Individual farm data from the last three financial years has been analysed to identify the range in incomes and expenses on high country farms. This data indicates a normal range of profitability amongst high country farmers. Some are very profitable and some are very unprofitable, usually when analysed further for one off extraordinary reasons, but the bulk lie between EBIT of \$2 and \$19. Of course some farms are run at a loss because the owner has other enterprises or have financial resources that enable them to pursue the high country lifestyle without undue concern for profitability. Where farms have non farm income as part of the business and this exceeds 20% of revenue then they are excluded from the M&WNZ survey so the survey does reflect commercial farms as far as possible.

Annex Table 2

	EBIT 2005/06	EBIT 2006/07	EBIT 2007/08
Average EBIT	10.69	11.23	7.70
Standard deviation	8.35	9.41	9.05

The accountants' surveys include some upper quartile and top 20% data. This shows that the more profitable farms have higher income and equal or lower expenses than the average farm and hence generate much larger cash surpluses per stock unit. Perhaps the lesson from this is that there is still opportunity to improve farm incomes and that rentals do not need to be excessively discounted to provide incentives for farmers to continue the lease.

Mechanism for determining rent from earning capacity

The proportion of EBIT that should be paid as rent is difficult to estimate. In farming circles (banking, accounting and consulting) sheep and beef farms are considered to be able to pay a maximum of 30% of their gross income as debt servicing and still be viable although only high performing farms can achieve this. Typically it is advised that debt servicing should be less than 20% of gross farm income. In 2008/09 MAF Farm Monitoring showed that debt servicing to gross farm income ratio for the national average sheep and beef farm was 17 percent.

Enquiries have been made of performance indices for other businesses to inform the decision of what is a fair proportion of net income to be paid as rent. But these are almost all based on the earnings related to the price of the business, not the income of the business, and as such are valuation based methods.

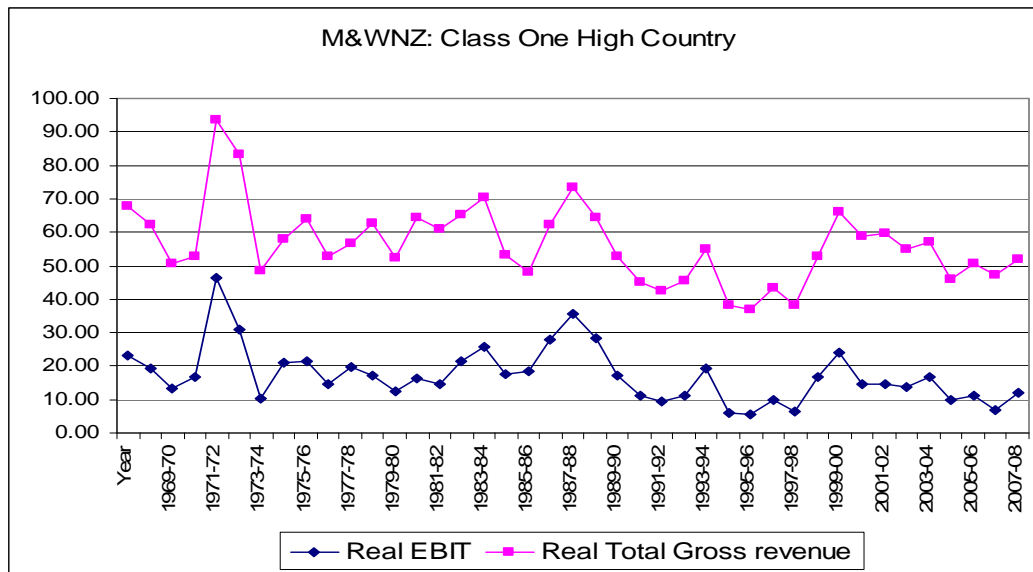
Valuers have information on the rent charged per stock unit for commercial leases in the high country and other sheep and beef farms and this will also provide insight as to an upper and lower limit.

Rental Updates

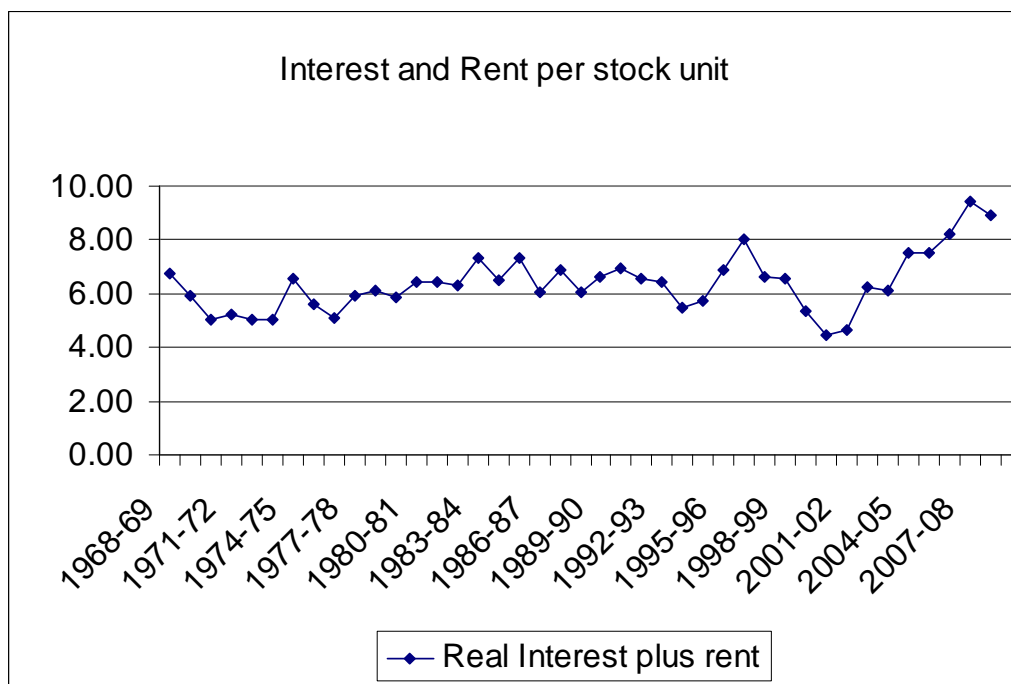
While informing what might be an earning capacity based rent the above data does not provide a mechanism for regularly updating the rental. A five year rolling average has been proposed and this does have much lower variability than the raw data. For instance on average real EBIT was \$17.30 with a standard deviation of \$8.27 whereas the five year rolling average was \$17.32 with a standard deviation of \$5.36.

It would also be appropriate to consider what might be an absolute minimum which the rent would not go below. Over the last few years rent has been a relatively small proportion of farm expenses and farm profitability has been driven by wool, lamb and beef prices, drought and increased borrowing.

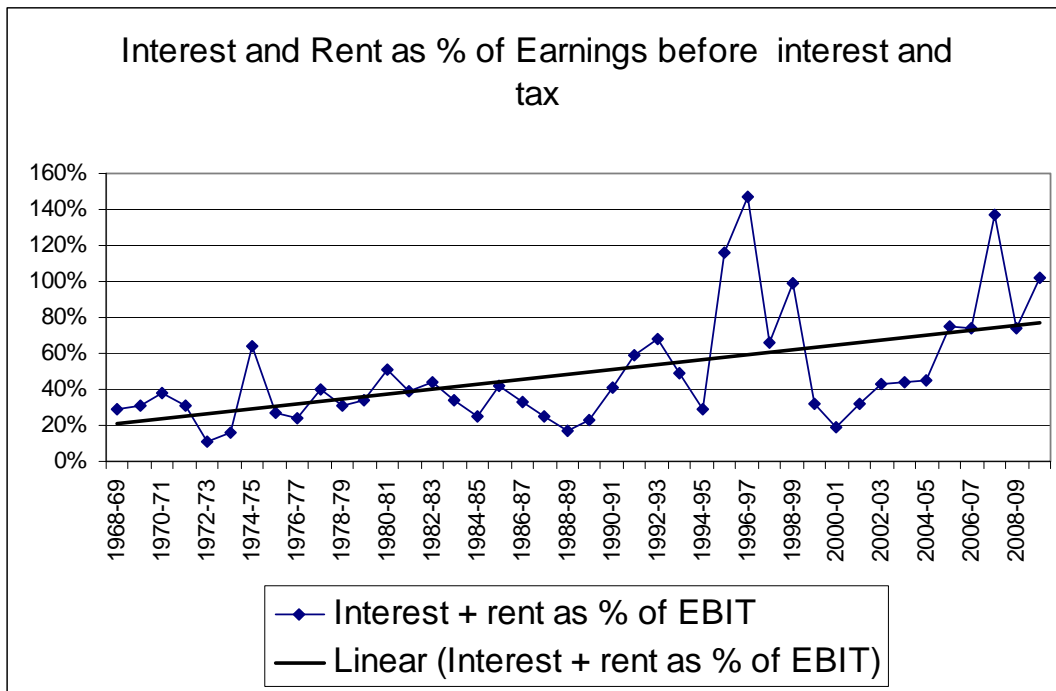
Annex Figure 1



Annex Figure 2



Annex Figure 3



Annex B Assessing LEI—judgments and excerpts

Cox v Public Trustee [1918] NZLR 95

Thomas v Valuer General [1918] NZLR 164

Patangata County v Valuer General (1954) 9 MCD 33

Re Wrights Objection [1959] NZLR 920

Valuer General v Sullivan 18 NZ Valuer 4,154

Butler v Commissioner of Crown Lands [1964] NZLR 760

Commissioner of Crown Lands v DJ & PJ Kinney (1964) Published NZVJ 19/7/1965

Valuer General v Johnston (1968) (Reported Land Valuation Cases 1965–1992, 888)

The Proprietors of Atihau–Wanganui v Malpas & Others; [1977] NZLR 609; [1979] 2 NZLR 545; (1982) NZVJ Vol 25, 43; [1985] 2 NZLR 468

Assistant Commissioner of Crown Lands v Associated Taverns Limited (1983) (Reported Land Valuation Cases 1965–1992, 10)

Walker v Commissioner of Crown Lands (1992) (Reported Land Valuation Cases 1965–1992, 959)

Commissioner of Crown Lands v Emmerson (1999) (Unreported Decision of the Otago Land Valuation Tribunal)

The following excerpts from judgments highlight some of the issues with LEI [TBC]

Re Wrights Objection [1959] NZLR 920

“...the practice of purporting to list and value the improvements separately is likely to lead to error unless the valuer is constantly on his guard against the placing of too much reliance upon his allowances for invisible improvements. ”

“The danger of the practice is that valuers who have made such a valuation of the improvements may be tempted to deduct the amount of that valuation from the capital value, in order to find the unimproved value. Such a method is contrary to the directions of the highest Courts...”

“We recognize, of course, the difficulty of assessing unimproved value in the matter prescribed by the Act. The valuer must first satisfy himself as to the unimproved state of the land, a problem which may involve him in difficult questions of law and fact, and one likely to be complicated by a dearth of evidence as to the condition of the land in its original state. Having decided on the state of the land as he has to value it, the valuer has to decide what it might have been expected to realize if offered for sale on reasonable terms and in that condition, at the relevant date. It is generally agreed that the best method of assessing market value is by reference to comparable sales of similar land, but in many cases there are no sales of unimproved land which can be claimed to be comparable or to provide a suitable basis for assessing the unimproved value of the land under consideration. The valuer, in short, is likely to have difficulty in ascertaining the condition of the land as he has to value it, and to be unable to find reliable evidence on which to reach an opinion as to its market value if it were offered for sale in that condition. We believe that these practical difficulties are already making the assessment of unimproved values speculative and uncertain, and that this situation is bound to

become worse as the passage of time makes it progressively more difficult to envisage the sale of land in an unimproved state. ”.

Valuer-General v Johnson (1958) (Reported Land Valuation Cases 1965-1992)

[After discussion on the lack of comparable sales evidence]

“The assessment of unimproved values is in consequence very much a matter of opinion which, however well informed, must be subject to a wide margin of error and uncertainty. By reason of this uncertainty we doubt whether unimproved value is still a satisfactory basis of valuation for rating and other purposes.”

Walker v Commissioner of Crown Lands (1992) (reported Land Valuation Cases 1956-92)

[After discussion of valuation evidence]

“[all of the comparable properties used had been improved] at least to the extent where any assumptions made about their carrying capacity in a natural unimproved state is little more than guess work”

“It is also clear that with the passage of time and the continued improvement of rural land the comparable sales approach disappears further into the mists of unreality.”

Annex C Current legislation

Part 1 of the CPLA sets out the rent requirements for pastoral leases. The CPLA states that the rent setting process should be in accordance with s131 of the Land Act, with two major differences

1. all references to 4.5% are to be read as either 1.5% or 2.25%, depending on the date of the first renewal of the pastoral lease
2. the rental value of the land must not include any potential that the land may have for subdivision for commercial purposes or commercial or industrial use.

Section 131 of the Land Act sets out the values required to calculate rent, the timeframes for calculating those values, and the timeframes for notifying the lessee of those values. Section 131 of the Land Act, and s6 – s9 of the CPLA are set out in full below.

Land Act 1948

131 Valuation for calculation of renewal rent

- (1) Not earlier than 2 years and not later than one year before the expiry of a renewable lease the Board shall cause the following values to be ascertained:
 - (a) The value of the improvements which are then in existence and unexhausted on the land included in the lease:
 - (b) The value at the commencement of the lease of all improvements included in the rental value at the commencement of the lease:
 - (c) The value of the land included in the lease exclusive of the improvements referred to in paragraph (a) of this subsection:

Provided that, subject to the provisions of this Act,—

- (i) In ascertaining the values under paragraphs (a) and (c) of this subsection, equal emphasis shall be placed on the value to be ascertained under each paragraph:
 - (ii) The values shall be ascertained on an equitable basis, having regard to the relationship between lessor and lessee:
 - (iii) The sum of the values under paragraphs (a) and (c) of this subsection shall be equal to the capital value of the land.
- (2) For the purposes of the last preceding subsection, the expression **capital value** means the sum which the land and improvements thereon might be expected to realise at the time of valuation if offered for sale, unencumbered by any mortgage or other charge thereon, on such reasonable terms and conditions as a bona fide seller might be expected to require.

- (3) In respect of the improvements referred to in paragraph (b) of subsection (1) of this section the lessee shall, as the Board may determine, either—
 - (a) Purchase the improvements at the value determined either for cash or by instalments, together with interest at such rate as may be fixed by the Minister of Finance, over such period not exceeding 30 years as may be determined by the Board; or
 - (b) Pay interest at the rate of 4½ percent per annum on the value so determined, in the same manner as rent.
- (4) The rental value of the land for the first period of 11 years of the term of the new lease shall be the value of the land as determined under paragraph (c) of subsection (1) of this section, and where the lessee is required pursuant to the last preceding subsection to pay interest on the improvements referred to in paragraph (b) of subsection (1) of this section, shall include the value of those improvements as determined under that paragraph.
- (5) The yearly rent for the first period of 11 years of the term of the new lease shall be 4½ percent of the rental value as defined in subsection (4) of this section.
- (6) As soon as possible after the values have been ascertained under subsection (1) of this section, and not later than 9 months before the expiry of a renewable lease, the Commissioner shall deliver to the lessee a notice in writing informing him of those values, and requiring him to elect whether he will accept a renewal lease at the rent based on those values for the first period of 11 years of the term of the lease
- (7) If the Board omits to cause the said values to be ascertained, or the Commissioner omits to deliver the said notice to the lessee within the prescribed times, the lessee may require the values to be ascertained and notice to be given at any time thereafter so long as he remains in possession of the land, whether the term of his lease has or has not expired, and his right to a renewal of the lease shall not be affected by any such omission or delay.

132 Lessee's election

- (1) Within 3 months after the receipt of the notice referred to in section 131 of this Act, notice in writing shall be given to the Commissioner by the lessee to the effect—
 - (a) That he accepts the offer of a renewal lease and agrees to pay rent based on the values set out in the notice for the first period of 11 years of the term of the lease, and agrees to purchase the improvements at the value and on the terms and conditions determined by the Board in accordance with subsection (3) of section 131 of this Act or to pay interest on the value so determined in the same manner as rent, as the Board may require; or
 - (b) That he does not desire a renewal lease, and agrees to the value of improvements as ascertained under paragraph (a) of subsection (1) of the said section 131; or

- (c) That he does not desire a renewal lease, but requires the value of the improvements as ascertained under paragraph (a) or paragraph (b) of subsection (1) of the said section 131 to be fixed by the Land Valuation Tribunal as hereinafter provided; or
 - (d) That he desires a renewal lease, and requires the values specified in subsection (1) of the said section 131 to be fixed by the Land Valuation Tribunal as hereinafter provided.
- (2) If the lessee of a renewable lease omits to give to the Commissioner within the time limited therefore the notice referred to in the last preceding subsection, he shall be deemed to have agreed to accept a renewal lease at a rental value ascertained in accordance with subsection (4) of the last preceding section, and to have agreed to the values set out in the notice given to him by the Commissioner.

132A Review of annual rent under renewable lease

- (1) Not earlier than 2 years and not later than one year before the end of the first and second periods of 11 years of the term of a renewable lease, the Board shall cause to be ascertained the values specified in subsection (1) of section 131 of this Act in the same manner as if for the renewal of a renewable lease.
- (2) As soon as possible after the values have been ascertained under subsection (1) of this section, and not later than 9 months before the end of the current period of 11 years of the term of the lease, the Commissioner shall deliver to the lessee a notice in writing informing him of those values and requiring him within 3 months after the receipt of the notice to advise the Commissioner in writing whether he agrees to pay the yearly rent stated in the notice for the next ensuing period of 11 years or whether he requires the values referred to in subsection (1) of this section to be fixed by the Land Valuation Tribunal as hereinafter provided.
- (3) If the lessee omits to give to the Commissioner within the time limited therefore the notice referred to in subsection (2) of this section, he shall be deemed to have agreed to pay the yearly rent stated in the notice given to him by the Commissioner under that subsection for the next ensuing period of 11 years.
- (4) The yearly rent for the next ensuing period of 11 years shall be 4½ percent of the sum of—
 - (a) The value specified in paragraph (b) of subsection (1) of section 131 of this Act; and
 - (b) The value specified in paragraph (c) of that subsection, as applied for the purposes of this section by subsection (1) of this section.

133 Appeal to Land Valuation Tribunal

- (1) Where the lessee requires the values specified in subsection (1) of section 132 or subsection (1) of section 132A of this Act to be determined by the Land Valuation Tribunal as provided in subsection (1) of the said section 132 or subsection (2) of the said section 132A, as the case may be, the Commissioner shall, as soon as possible after the lessee's notification of his election is received, file in the appropriate office of the District Court (as defined in section 2 of the Land Valuation Proceedings Act 1948) an application to have the said values determined by the Tribunal. The application shall be accompanied by a copy of the Commissioner's notification to the lessee pursuant to subsection (6) of the said section 131 or subsection (2) of the said section 132A, as the case may be, and a copy of the lessee's notice of election pursuant to subsection (1) of the said section 132 or subsection (2) of the said section 132A.
- (2) After hearing the application, the Land Valuation Tribunal shall determine the values as required by the lessee or any of those values, as the case may be. Subject to any right of appeal to the High Court vested in any party, the rental value of the land for the purposes of any renewal lease or, as the case may be, for the next ensuing period of 11 years of the term of a renewable lease shall be fixed in accordance with the value of the land included in the lease exclusive of improvements as so determined by the Tribunal and the value of improvements, if any, as ascertained by the Board under paragraph (b) of subsection (1) of section 131 of this Act:

Provided that, notwithstanding anything hereinbefore contained, the Land Valuation Tribunal or the High Court shall not determine the value of the improvements referred to in paragraph (b) of subsection (1) of section 131 of this Act to be less than the value of improvements on the land at the commencement of the lease as recorded in the schedule to the lease:

Provided also that where, on a revaluation under section 139 of this Act or the corresponding provisions of any former Land Act, the value of the improvements referred to in the said paragraph (b) has been reduced, then, for the purposes of this section the value of those improvements as determined on that revaluation shall be deemed to be their value at the commencement of the lease.

Crown Pastoral Land Act 1998

6 Special provisions relating to calculation of rent payable for first 11 years of first renewal of pastoral lease granted before 30 November 1979

To the extent only that the land held under a pastoral lease granted before 30 November 1979 is pastoral land, the yearly rent payable in respect of any of the period comprising the first 11 years of its first renewal must continue to be calculated as if the reference in Part 8 of the Land Act 1948 to the proportion of 4 1/2 percent were a reference to the proportion of 1.5%; but—

- (a) The rental value of that pastoral land continues not to include any potential value it may have—
 - (i) For subdivision for building purposes; or
 - (ii) For commercial or industrial use; and
- (b) The holder continues not to be entitled to any rebate in respect of the payment of any amount of rent falling due during that period.

7 Special provisions relating to calculation of rent payable for first 11 years of pastoral lease granted after 29 November 1979

To the extent only that the land held under a pastoral lease granted after 29 November 1979 is pastoral land, the yearly rent payable under it for the period between—

- (a) Its commencement; and
- (b) The expiration of 11 years from 1 January or 1 July (whichever is the sooner) next following its commencement, continues to be 2.25% of the land's rental value, as determined by the former Land Settlement Board (or, as the case requires, the Commissioner) at the time the lease was granted.

8 Calculation of rent payable under pastoral leases after first 11 years

Subject to section 6, to the extent only that the land held under it is pastoral land, the yearly rent payable under a pastoral lease for every period of 11 years after the expiration of 11 years from 1 January or 1 July (whichever is the sooner) next following its commencement must continue to be calculated as for the renewal of a renewable lease; but—

- (a) As if the references in Part 8 of the Land Act 1948 to 4 1/2 percent were references to 2.25%; and
- (b) With the rental value of the land ascertained under section 131 of that Act not including any potential value that the land may have—
 - (i) For subdivision for building purposes; or
 - (ii) For commercial or industrial use.