

# De-forestation of the Canterbury plains?

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## Abstract

In this article I will discuss the implications of the current trend to remove forests from the Canterbury plains. The Selwyn Plantation Board Ltd (SPBL) is one of the leading players with plans to sell or convert 50% of its forest land to other uses. For the reasons set out more fully below, this forest conversion raises very serious concerns as regards (a) its compliance with the company's statutory obligation to provide shelter for the plains, (b) its true cost, (c) the potential impact on other land uses, (d) the impact on the sustainability of the plains environment, and (e) its economic wisdom.

## Introduction

In his chapter on exotic forests in the Natural History of Canterbury H V Hinds said, "*the absence of trees on the plains was a strong stimulus to tree planting in Canterbury, firstly for shelter and firewood and later to insure against a future timber shortage.*" (Hinds 1969)

Plantation forestry became a feature of the Canterbury Plains over the province's first 150 years. However, recently these forests have undergone some very major changes. Not only has the expansion of dairy farming on the plains resulted in the removal of many farm shelterbelts, but the SPBL, a significant plantation owner on the plains, has shifted its focus to the hill country and is in the process of selling or converting all its plains plantations to farm or lifestyle blocks. In a quest for short term gain, plantation forests are being converted at a rate that is materially altering the plains' environment. At 1 April 2005 there were an estimated 114,731 net stocked hectares (ha) of planted production forests in the Canterbury region. Of that an estimated 15,761 ha were in the Selwyn District (NEFD 2006) where the SPBL indicated, in its 2005 Annual Report, that it owned a net stocked area of 8,952 ha. As the SPBL, alone, has either sold or scheduled for conversion approximately 6,800 ha of its plains' forests more than 40% of the total forest area of the Selwyn District will be removed within the next few years.

The development of plantation forestry on the plains is well illustrated in the history of the SPBL. In the mid 19<sup>th</sup> century the Canterbury Association made provision for tree planting on the windswept Canterbury plains in order to provide much needed shelter. Successive provincial and local governments pursued the tree planting ethic. By 1911 the responsibility for providing shelter and wood production on the central plains devolved onto the Selwyn Plantation Board (SPB), a local authority pioneer in plantation forestry. (SPB. 1986) In 1993 this responsibility was passed to a Council owned company, the SPBL, which over the last 3-4 years, because of perceived short-term commercial imperatives, consider that small to medium sized plantations on the plains of Canterbury no longer fit its model. This is somewhat surprising given that:

- the bulk of the SPBL's plains plantations were protected by the SPBL's governing legislation;
- the SPBL's plains' forests were acquired from the Crown for specific conservation and shelter purposes; and
- such a significant change can take place without the usual and full public debate of a major land use change.
- SPBL's governing legislation.

The SPBL Empowering Act 1992 ('the Act') made

*"...provision for the sale and transfer of forestry activities vested in the Selwyn Plantation Board to a limited liability company formed for the purpose of successfully maintaining, developing, utilising, and managing plantation resources ..."* and vested *"...the shares in such company in the Selwyn District Council and the Christchurch City Council"*. Firmly cemented into the Act is the requirement that the company maintain the function of providing shelter on the plains, the principal objective that SPBL's predecessors had pursued since the birth of the Canterbury province. This is encapsulated in section 4 of the Act which states that *"...the principal objective of the company shall be to operate as a successful business consistent with the principles of conservation and the provision of shelter on the plains of Canterbury"*. Section 10 subjected the land in the First Schedule of the Act, essentially the original vestings of Crown land plus some of the land purchased pre-1950, to a covenant requiring that whenever the owners *"...clear fell trees from the land, or any part of the land"* they shall *"replant the same in trees suitable for shelter and commercial production in a manner and within a period of time consistent with the then current good production afforestation practices."*

The replanting covenant was inserted at the instigation of the Treasury, Audit, and Lands Departments who, at the time the Bill was going through the House, could not be persuaded from their position that this was necessary to maintain the purpose of the original vestings of Crown land for plantations to ensure shelter on the Canterbury Plains. While they softened their position a little they were insistent that the covenants remain in place. At the time the legislation was before parliament, the then Board of SPB felt that the covenants could constrain the company using the land as collateral when borrowing. Despite strong argument, Treasury, Audit, and Lands would not budge. The legislated principal objective, as contained in section 4, also required the company to provide shelter on the Canterbury Plains and was a further constraint as it obliged the SPBL to remain in Canterbury. Removal of the covenants by the company for commercial reasons is understandable. To apparently ignore the statutory requirement to provide *"shelter on the plains of Canterbury"* without an amendment to the Act is, however, another matter. It will be of considerable interest to learn how this was achieved without changes to the company's governing legislation.

Since 2002 the SPBL's Annual Reports have alerted the stakeholders to the change in direction. Before that the principal objective of the SPBL, as prescribed by section 4 of the Act and as noted in its Annual Reports, had been *"to operate as a successful business consistent with the principles of conservation and the provision of shelter on the plains of Canterbury"* (SPBL. 2001). In the 2002 Annual Report

this changed to "...the primary objective of the company shall be to operate a profitable, sustainable, and innovative business consistent with shareholders' expectations." By 2005 SPBL's mission statement was "... to operate a financially successful forestry and land utilisation business on the plains and foothills of Canterbury in an environmentally and socially sustainable manner." (SPBL, 2005) All mention of shelter had been removed. Indeed, in their Annual Report of 2005, the Chairman and Chief Executive stated that the company had been successful in removing all the covenants required by the Act. The Act had made provision for the Commissioner of Crown Lands to remove them under carefully defined circumstances. The Annual Report is silent on the Company's obligations under section 4 to provide shelter on the plains, but reported that a project had been established to ascertain the most cost effective and environmentally sustainable method of converting the plains forests to an alternative land use.

An article in *The Press* on Friday 20<sup>th</sup> January 2006 confirmed that the SPBL's plains forests were either being sold or converted to farmland. (Cronshaw, 2006a) The reporter, Tim Cronshaw, interviewed the SPBL's CEO, Kerry Ellem, who referred to its predecessor SPB's policy of expansion into the foothills. This policy had been reluctantly initiated in the 1950s at the instigation of the then North Canterbury Catchment Board with the purchase of a small 77 ha parcel of land to the north of Downs Road in the Harper Hills near Hororata. The area was initially planted in 1952 but a fire in the late 1950s destroyed most of these trees. Although the forest was replanted in 1961 and 1963, the fire did little to heighten the then management's enthusiasm to move to the foothills. The acquisition and planting of foothills' forests was only pursued further during the 1970s when the 730 ha Lowmount block was acquired, and planting finally started in 1975. By 2000 SPBL's almost 10,000 ha of stocked forest land was distributed 39% in the hills, 50% on the plains, and 11% in the coastal region.

### Farming versus forestry

The conversion of forest land to farming is not a new phenomenon. In the case of the SPBL there was often the temptation in the past to convert its forest land to farming. For instance with the high wool prices in the 1950s the then Board, despite being dominated by farmers, had to resist, with some vigour, calls to convert the land. There were a number of plains farmers who, chasing high wool prices, were determined to take over the SPB's plains plantation land from the Crown. Again, after the 1975 wind blow the farmer members of the SPB Board resisted moves to convert the land to the then higher yielding goats, kiwi fruit, and deer. The SPB, however, confirmed its *raison d'être* was to provide shelter on the Canterbury plains as well as being a sustainable supplier of timber to the Canterbury market and a source of finance for the constituent Local Authorities. Any temptation to farm was put aside with the SPB sticking to its knitting. Successive Boards felt plantation forestry on the Canterbury plains provided sufficient challenges.

Given the vicissitudes of farming, and the very considerable costs of forest conversion, it will be interesting to see which is the better long-term investment: forestry or farming. In the most recent edition of the *New Zealand Journal of Forestry*, Peter Brown examines dairy farming profitability relative to forest investment (Brown 2006). Brown backs his claim that, despite the evidence of ripped out trees and nice pasture being put in their place, the figures do not seem to support the commonly held view that dairying is booming. This, on commercial grounds alone, should encourage stakeholders to carefully re-examine the policy of converting plains' forests to farming. It is a little early to make any final predictions on the policy, but returns to date from the company's farming activities in the last two Annual Reports, indicate a loss on trading of almost 2%.

### Costs of converting forest land to farming

Forest land conversion raises a number of issues and incurs substantial costs. Following the development of mechanical land clearing systems in conjunction with equipment suppliers (NZLM, 2005), SPBL has also employed Lincoln University to develop best practice to convert former plains' plantation land to pasture. On 4<sup>th</sup> April 2006 they held a field day to demonstrate progress and to discuss the major issues involved in the future development of SPBL's plains' forest estate, with particular emphasis on Lincoln's new findings and contributions to the conversion process. In its 2006 Annual Report the SPBL attested to the success of the Lincoln trials. (SPBL, 2006)

Tim Cronshaw reported the field day in the *Christchurch Press* on 28<sup>th</sup> April 2006. He said that by the end of 2007 "lush pasture" will grow where 2000 ha of forest used to stand on the Canterbury Plains. The SPBL is converting as much as 3,500 ha of forest on the plains and will have spent between \$4 million and \$12million by the time that it has "ripped out" all the trees. This area must be added to the 3,386 ha of plains forest land to the south of the Selwyn River which it sold last year as soon as the covenants had been lifted. The price variation of land clearing is dependant on whether the final use is as highly productive pasture or prepared for subdivision. Much of the area he said will be used for lamb and cattle finishing, with certain areas split off into lifestyle blocks and residential sections.

Kerry Ellem, the SPBL CEO, was reported as saying that because of high wind, low rainfall and small log sizes, a better return could be obtained from converting the forest estate on the plains to farming and rural lifestyle blocks. He went on to say that from the SPBL's perspective, conversion is a way of unlocking a lot of potential capital, and gives the company flexibility and a way of moving forward. Conversion maximises the asset. He added that as forest the land's commercial potential could not be realised. It was also reported that the SPBL is committed to operating a financially successful forestry and land utilisation business and wishes to plant more trees on hill country. At this stage, however, it is struggling to gain a satisfactory afforestation consent for a hill block it owns at

Te Oka, Banks Peninsula. (Cronshaw. 2006b)

Irrigation is a topical issue that, too, will impinge on the conversion of forest land to farming. In an article in the Christchurch Press on 1st May 2006, Stan Darling reported the concern of a number of Burnham residents at the series of applications that the SPBL had lodged with the Regional Council to source irrigation water for its Burnham conversions. The company claims there is no guarantee it will need irrigation on all the blocks which are being developed for dry-land farming. Various Burnham residents, however, are sceptical about the sustainability of dry land farming in the district. They feel that the SPBL's converted land is destined for water hungry dairy farming. Indeed Janet Scott, who farms on the Burnham Road, said they are "*talking rubbish about dryland farming*". Her 30 year old irrigated farming operation "*really hinges on the water*". Without water the land "*does not really grow anything*". (Darling. 2006)

## General issues raised by the conversion of forest land to farming

The conversion of forest land to farming raises a number of environmental and resource management issues which in the case of the Canterbury plains are of particular significance:

- Forest companies have increasing difficulty in securing resource consents to plant new forests. This is especially so in Canterbury's hill country. As the SPBL's resource application to afforest Te Oka has shown, it can be a protracted and costly process and, at the end of the day, rarely can the whole area be planted.
- Te Oka was purchased on 7<sup>th</sup> April 2004. The 2004 SPBL Annual Report stated that the company's intention was to plant 735ha of the farm during the next 3-5 year. Over two years later no trees have been planted and in its 2006 Annual Report the company indicated it was having difficulty obtaining an acceptable resource consent and was "assessing the ongoing viability of continuing with this project."
- To then argue that hill country, despite its higher growth potential, is preferable to the production from plains' forests seems dubious when the SPBL's plains' land had existing and legislated forest use rights that would have lasted in perpetuity.
- Has there been any public debate about the heritage issues associated with eliminating a land use initially promulgated by the Canterbury Association in its planning of the province?
- Is there sufficient water available to ensure the successful conversion of plains' forest land to farming?
- Have the environmental consequences of forest land conversion been taken into account? In particular:
  - altered wild life habitat and biodiversity; and
  - ground water nutrient build up from animal effluent and fertiliser application.
- Trees provide shelter from the winds which are a feature of the plains. Have the consequences of their elimination

been fully considered? In particular, their effect on the:

- stabilization of the plains' soils which in the past, in the absence of shelter, have suffered from major wind erosion;
- reduction of land use diversity;
- reduction in visual diversity; and
- substantial alteration of the developed plains' landscape.

## Conclusions

It is axiomatic that forest management must be conducted in a business like fashion. For management decisions, however, to be predicated largely on annual accounting is frequently to the detriment of the environment and of any carefully nurtured long-term investment that is a managed forest. Over the last decade the New Zealand forest industry has been dominated by short-term decisions. It is essential that the forestry profession add rational argument to what are becoming environmentally damaging reactions directed by short-term decisions. In smaller well-reported forest companies these trends are particularly apparent. The benefits from New Zealand's plantation forests will only accrue to those investors who have a long-term outlook.

In the case of the SPBL it has, in recent years, frequently stated its intention to move totally off the plains and onto the foothills to improve shareholder value. As the SPBL appears to be of the view that it is no longer constrained by legislation "*to operate as a successful business consistent with the principles of conservation and the provision of shelter on the plains of Canterbury*", then the creation of short term shareholder value could be greatly enhanced were it to follow the lead of foreign pension funds and sell all its land in Canterbury and invest in New Zealand's established forestry regions where the returns may be higher if, indeed, its determination is to remain in the New Zealand forest industry. Perhaps the commercial imperative would be solved by selling up in New Zealand and either investing the money generated in a different and higher yielding local industry. Alternatively, if the wish is to remain in forestry, to invest in irrigated Eucalypt plantations on the plains of Brazil where costs are lower and yields are 2-3 times better than the best Radiata pine yields New Zealand has to offer.

Shelter is a vital ingredient in creating the very successful farming environment that is the basis of Canterbury's prosperity. It took 150 years to develop this shelter; but in less than 5 years a significant amount of it has been eliminated without any public debate. In an age when land use changes, particularly those involving major changes to the environment, are subject to intense public scrutiny it seems incredible that the elimination of some 6,500 ha of plantation forests on the Canterbury Plains can have fallen below the environmental radar.

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## Setting the NZIF agenda

Mark Bloomberg, Committee member, NZIF Canterbury section

The concluding session of this year's NZIF conference in Wellington developed five key themes of importance to New Zealand forestry. The five key themes were: Carbon Markets, Encouragement of the Provision of Non-Extractive Values, Forestry Sector Strategic Plan, Research Strategy and Communications Strategy

The NZIF now needs to follow up on the themes identified by the conference.

To that end, the NZIF Canterbury section convened a discussion meeting in July of this year which was attended by local members and also members of the NZIF Council. The meeting was charged with answering three questions:

1. What role if any should the NZIF play with respect to each of the five key themes?
2. What specific actions might the NZIF take with respect to the five key themes?
3. What can local sections do to assist the NZIF with respect to the five key themes?

After some introductory comments by the meeting chair and by the national president, the meeting was divided into three groups, who proceeded to discuss questions 1-3 above. The leader of each group then reported the group's findings; the groups did not entirely agree with each other about the answers to questions 1-3 but there was some consensus. The following pulls together the views of the three groups on each question.

1. *Communications Strategy*: A communication strategy for the forestry sector is important. Public policy is ultimately derived from public opinion, so if the forestry sector wants better public policies, it has to tell the forestry story to the New Zealand public.

2. *Encouragement of the Provision of Non-Extractive Values*: New Zealanders and the politicians who represent them are mostly uninformed about the "non-extractive" values of forests, with the exception of recreation and (possibly) carbon dioxide sequestration. If the NZIF were to play a role in a communication strategy for the forestry sector, then it should promote the non-extractive values of forest as an important message.

3. *Carbon Markets*: The role of the Institute in the developing markets for carbon credits should be similar to the one that it plays in relation to forest valuation. That is, the NZIF should develop and promote standards for measurement and accounting for forest carbon credits.

4. *Forestry Sector Strategic Plan and Research Strategy*: The discussion groups generally rated the final two themes (the forestry sector strategic plan and a forestry research strategy) as the lowest priorities. New Zealand forestry lacks a cohesive strategy in these two areas, but the discussion groups thought this was more the responsibility of the wider forestry sector. The NZIF may have a supporting role but this needs to be appropriate to its status as a professional institute.

5. *The role of local NZIF sections*: Although not discussed in depth, local sections are important because they are a forum for members to meet outside the strictures of the workplace. They are also important to any communication strategy, as it is the local sections which do much of the advocacy for forestry at a community level.

*In conclusion*: The 2006 conference identified five themes for action by the NZIF, but five themes are possibly too many to pursue for a small voluntary organisation such as ours. Perhaps the NZIF needs to concentrate on "doing one thing well"? If so the Canterbury meeting suggested a way forward. The most important themes identified at the Canterbury meeting were:

- There is a need to communicate the benefits of forestry to the New Zealand public.
- There is a need to promote the non-extractive benefits of forestry as a land use.

Therefore, in its role as an advocate for forestry the NZIF's highest priority is to develop a communication strategy. This strategy should emphasise forestry in the broadest sense i.e. as a land use that provides not just timber but many other benefits as well. And last but not least, it should not just be a national initiative but should also involve the local sections of the NZIF.