



March 2008 Newsletter

Treetop Views

Hi all, hope you all had a good Christmas and are having a good start to the New Year which is well on its way. We are already well into March. Carolyn and I had Christmas at a place called Rosedale, North Yorkshire, England. Rosedale is a farming village with one little store and two pubs. We spent a week there with our two adult children who are working in the south of England. A winter Christmas was a little different for us, keeping things cold is not a problem, just leave the milk and drinks outside and they will keep nice and cold until you need them.

Some of our members did not have a very good end to the year with the fire in the Pukaka that started on Marlborough Regional Forestry land and spread to two neighbouring properties with approx. 50 hectares burnt and then the New Year started with two more fires. The first was a fire at Flight Timbers yard with the loss of their timber processing building, a huge blow to the production line. The second fire was on Marlborough Regional Forestry land at Para with approx 100 hectares burnt. Thanks to all those who helped with putting out the fires.

This year the export log prices have lifted slightly with an easing of shipping costs. Looking forward prices are flattening off and may ease back with the higher dollar and the slowing of the overseas markets. The return for saw logs has eased back a bit, they are becoming hard to move because the overseas market for sawn timber has slowed up with the fall out from the US housing mortgage crisis.

Port Marlborough had it's annual general meeting in December and we were hoping to get some new members on as directors. We put

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forward two names as nominees for the position of directors to Port Marlborough to try and get industry type people involved to help guide the direction of the port for the benefit of Marlborough's long term future instead of short time gains. Neither was successful this time. There were two new directors appointed, who are Ed Johnson and John Patterson. Ed Johnson is chairman of Fulton Hogan Ltd and Goldpine Ltd and a director of Port Otago. John Patterson is the Corporation Finance and Planning Manager for the Marlborough District Council.

We have employed **BERL** (Business and Economic Research Ltd) to do an economic study on forestry in Marlborough.

This study will examine the contribution of the forestry and wood processing sectors to the Marlborough regional economy, as well as analyse how these sectors contribute to the capability and capacity of a number of key industries in the region.

There are several areas that need to be addressed which are the economic contribution of forestry to Marlborough, issues associated with the forest and wood processing sectors in Marlborough, transport and port implications,

the impact of forestry on the environment, climate change and carbon trading initiatives, the social benefits of forestry to Marlborough, and the interconnection with the forestry industry in the Nelson region.

BERL proposes a three-stage approach to the study with **the first stage to consist of a largely quantitative evaluation of the current situation of the forest and wood processing sectors in the Marlborough region and how they contribute to the regional economy. They will look at a variety of indicators including contribution to employment, GDP, number of businesses, wood flows and output and calculate the relative importance of the sectors to the local economy in comparison with the importance of the sectors nationally.** We are hoping that the first stage will give us 90% of what we need for

NZ Wood Promotion

You may have seen the NZWood ads on tv recently. Did you hear the forest breathing?

a several million dollar promotion of the benefits of using more wood.

This program combines the resources of forest growers, wood processors and Govt FIDA funding for

You can see more on www.nzwood.co.nz.

Benefiting from Carbon Trading

The Environmental Intermediaries and Trading Group (EITG) have been advising foresters on forest carbon storage opportunities and carbon storage management since 1995. We invited Richard Hayes, one of the principals, to speak to a group of 40 foresters back in 2000. He gave a very good presentation of the situation as it was then and there was considerable interest from several growers to become involved. You can see more about EITG at www.eitg.co.nz. You can sign on for a free monthly newsletter to keep up with developments.

carbon storage to be estimated simply by looking at a table based on forest age, species, and region. These tables are already available for pre 1990 forests on the climate change website at www.cliamtechange.govt.nz. (Look for the forestry sector regulations).

Aaron Robinson and the field days committee are planning a carbon trading seminar for about 2 months time. This will include land valuers who need to know how emissions trading will affect forest land values. The MAF lookup tables should be available by then so we will have some base figures to work with.

Forest owners can take part in emissions trading as from the start of 2008. For most growers, especially those with single age class forests, it would be much better to join a Carbon Management Pool. There are still many details to be worked out by Govt such as how forests are to be measured. Some of these details are not expected until the middle of next year but MAF should have lookup tables available for post 1989 forests by the end of this month. This will allow

Four Marlborough Forest growers went to a seminar in Christchurch. Vern Harris gives a full report on page 6.

Michael Cambridge (Chairman of Climate Change and Marketing committee)

Wood for Bioenergy and Biofuel

A brief introduction

A few years ago Ralph Sims (NZ's Bioenergy guru) said that many bioenergy projects would become viable when oil reached \$US70 per barrel. Now the price of oil is regularly over \$100 per barrel and people are placing bets on when it will reach \$200. Emission trading will add to the cost of using fossil fuels and could double the cost of using coal.

Wood has been a traditional low cost fuel source. One kg of dry wood has the same energy content as 5 kwh of electricity. 350 kg of dry wood has the same energy

content as a barrel of oil. A 10 year study of household energy use in NZ showed that the warmest houses were those heated by wood burners.

Concern about Climate Change and adoption of emissions trading is likely to create a greater appreciation of wood as a fuel. Wood already provides about 5% of NZ's energy requirements, mostly for domestic heating and in the wood processing industry.

4 main ways to use the energy content of wood

Simple combustion	Burning logs or pellets in an appropriate domestic burner. Burn wood chips, sawdust and shavings in an industrial boiler. The 2 main sawmills by using wood energy are by far the biggest users of heat energy in Marlborough. Six other industrial users burn about 6,000 tonnes of coal per year between them. If the price of coal doubles because of emissions trading then some of these coal users may want to switch to using wood.
Gasification	Gasification by burning wood with limited oxygen was popular 100 years ago for providing electricity in remote locations before diesel generators took over. Now with the increasing price of fossil fuels, gasification plants are becoming more popular. An Indian company has supplied gasifiers for a whole range of applications where 4 kg of dry wood chips replaces one litre of diesel. To see more http://www.ankurscientific.com/main.htm .
Fast Pyrolysis for liquid fuels	Wood can be heated quickly in the absence of oxygen to produce bio-oil plus small quantities of gas and char. This oil can be used in large engines with low rpm, or used as a refinery feedstock. It is economic at small scales, and can therefore convert large quantities of solid biomass into a more valuable form. You can see a large scale example from Canada at http://www.dynamotive.com/ . The char by-product can be used to improve fertility of soils and to store carbon over hundreds of years. Massey University have recently won a \$2 million grant to research the production and use of this biochar.
Enzymes for liquid fuels	A \$1 million feasibility study undertaken by Scion (Forest Research), Agresearch, Carter Holt Harvey and an American enzyme developer have shown that we could get a large part, if not all NZ's transport fuels from wood. The approach is to use the large scale infrastructure of pulp and paper mills to prepare the wood to be broken down by enzymes into a liquid form. A report of this study has just been released on the NZ forest owners web site and can be seen at http://www.nzfoa.org.nz/news/forestry_news/2008/bio_fuels_from_forest_cellulose_a_reality .

Solid Wood panels for multi storey buildings

A new method of building with large cross laminated wood panels is causing considerable excitement in Europe and Japan. You may have seen it on a tv programme called Grand Design where wood panels from Sweden and Austria are seen as a smart way of building in the UK.

The high strength of these buildings is of particular interest to earthquake prone NZ. A research consortium in Italy called the Sofie project has been testing some of these buildings for fire and earthquakes. They sent a 7 storey solid wood building to Japan to be tested on the world's largest shake table. You can see a short video clip of this test at <http://www.progettosofie.it/ita/multimedia.html>

One of the advantages of this new building system is the speed of construction for multi storey buildings. You may have noticed a 4 storey concrete building being built in Hutcheson Street in Blenheim which has taken months so far. A similar sized 4 storey solid

wood building in Italy had all the main panels and roof completed in 6 days. Wood has many other advantages including low energy requirements, carbon storage, healthy indoor climate, renewable material etc. Watch this space.

Be prepared for forest fires

From Jan 2008 Over the Gate article

By Penny Wardle

Marlborough forest owners should be prepared for fires this season.

The warning comes from Marlborough Forest Industry Association (MFIA) fire safety and training committee chairman, Graham Sharland. While mid-summer rains had been welcome, the grass that grew has already become fuel for forest fires.

Sharland identifies two roads towards fire preparedness; insurance and prevention. The starting point for both is a map, inexpensive to produce and with multiple benefits. A 1/10,000 forest map showing vegetation types, roads, tracks, fire-breaks, entry points, (available water) and ideally contours would serve the purpose or even an aerial photograph with these features highlighted.

The type and extent of insurance needed varies from forest to forest, Sharland advises. Owners should think carefully about the probability of fire on their own block and potential damage to their own and others' property before signing up to a policy.

In Marlborough, fire risk ranges from extreme, for blocks adjoining public roads for example - to moderate, for plantations in high rainfall areas surrounded by tightly-grazed farmland.

“Being aware of historic claims is a good idea but the main thing is to assess your own property.”

Material facts critical

All forest owners should have and most would have the first level of fire insurance; public liability which covers costs if the insured party causes a fire which spreads to other properties, says Sharland.

The second level is forest and rural fire extension cover for the recovery of fire-fighting costs by a rural fire authority. If other fire-fighting services were called in - such as a forest owner directly requesting a helicopter for example, this would not be covered.

The third and fourth levels are non liability tree crop insurance and a fire-fighting costs extension which covers costs incurred in the insured party's forests. One reason for taking out these non liability insurances is the possibility that unless fault can be identified when a fire spreads to a forest, no-one will be liable for costs and losses, Sharland explains. Those affected may not be able to call on public liability insurance to cover costs.

There is some debate on this topic, but meanwhile forest owners need to consider taking out non liability crop cover, he advises.

Informing the insurer of what's known in the industry as “material facts” is critical, Sharland warns. A Marlborough example is a man whose business held public liability cover which he thought extended to his forest. Failure to inform his insurance company that he owned trees was regarded as a material fact which got in the way of a subsequent claim when the forest was burned.

Material facts are anything physically relevant to the likelihood of a fire claim being made; the presence of overhead transmission lines for example.

Fire avoidance

Avoiding major forest fires starts with making contact with the local fire chief, giving them a fire map and offering a familiarisation visit, Sharland suggests. This would help them get up to speed with relevant details such as tracks' accessibility to heavy fire-trucks or 4WD smoke-chasers and suitable water sources for fire-fighting with ample space for helicopters to land to fill monsoon buckets and add fire retardants.

Forest owners should check that secondary road signs and gate-side RAPID numbers are in place, so emergency services can quickly find the property.

While not 100% effective in stopping fires' spread especially in strong winds, fire-breaks (including roads, rivers, grazed paddocks and ploughed strips)

give a measure of protection and should be kept clear of combustible vegetation. Some foresters “remove rungs of the fire ladder”, taking lower branches off trees along roads, says Sharland.

Everyone with trees should have a health and safety plan in place including fire emergency procedures, he stresses. Being prepared includes having a fire extinguisher and shovel in the vehicle at all times.

In New Zealand, fires don't just happen, says Sharland. Being aware of probable causes – invariably people – can help with avoidance.

Often it's forest owners or employees who cause fires by failing to follow best practice. A carelessly tossed cigarette butt, vapour combustion when a chainsaw's started to close to where it was refuelled and hot exhaust pipes have all lit fires.

Carelessness by legitimate visitors to forests can cause fires, for example an off-road motor-cyclist who's bike lacks effective spark arrestors or someone boiling a billy.

Then there are the vandals, who think that they can even up some score with a box of matches.

Some solutions include putting a stop to forest work if conditions became dangerously hot and dry, checking chainsaw spark arrestors, ensuring re-fuelling is done at least three metres away from where chainsaws will be started, controlling smoking and requiring fire extinguishers to be carried on workers' belts. Public access to the forest should be limited, when fire risk is high.

Locked gates can discourage illegal access.

During logging, a lethal combination of damp soil and waste wood can result in “bird's nests” over the side of skid sites which can self-combust or be easily ignited. The Berwick Forest Fire in 1995 was thought to have been started by light rays projected from a concave can-bottom to such a pile.

Letters to the Editor

The MFIA represents a wide range of Marlborough interests including forest owners, wood processors, transport, loggers, forestry consultants, silviculturalists, the Port Company and the Marlborough District Council. We aim to produce 4 newsletters per year. If you have an opinion, or

Asking neighbours to keep an eye out for fires can be helpful.

Fires start small

If despite all efforts, a fire does begin in or near a forest the first step is to rapidly assess its size, location the danger posed to property and people.

“All fires start small. If you can control them before they grow, a lot of damage is avoided,” says Sharland. Small fires could sometimes be fought alone but if there's any doubt, outside help must be called in immediately.

Suitable clothing was essential; sturdy boots and clothes made from non-flammable materials like cotton or especially wool that cover the arms and legs.

Sharland strongly recommends that forest owners and employees enrol for basic fire training, available through the Fire and Rescue Services Industry Training Organisation (FRSITO) and Forest Industry Training and Educational Council (FITEC) and taking only a day.

FIND OUT MORE; Fire Management Guidelines for Small Forests are available from the local fire authority and National Rural Fire Authority.

Marlborough Forest Industry Association fire, training and education sub-committee chairman, Graham Sharland and his wife Linda own a 28ha mainly pine plantation in the Pelorus Valley plus 34ha of native forest and a small sheep-farm. They also manage two nearby forests for absentee owners.

Graham's experience with fires began as a fulltime metropolitan fireman for just under a year in his youth. He then moved on to lighting fires when clearing land to plant forest and nowadays is concerned with fire prevention. He holds a Forest and Rural Fire Association “red card”, recognising recent training.

information which would be of interest, or a subject you would like to know more about then email Michael@organicbuilding.com.

Michael Cambridge – Newsletter editor

Forestry Carbon Credit Opportunities In New Zealand

By VA Harris
NZIF Registered Forestry Consultant

A meeting held by The Green Air fund in association with Laurie Forestry Ltd, in Christchurch on Monday 3 March 2008.

Background

The New Zealand Government currently has legislation before the house – the proposed Climate Change (Emissions Trading and Renewable Preference) Bill, which is expected to pass into law around July 2008.

Carbon Credits and the New Zealand Emissions Trading Scheme

Under the Kyoto Protocol, carbon ‘credits’ are created by either reducing emissions of green house gases or sequestering (absorbing) carbon through forestry. The term carbon credit is generic and credits have different technical names and financial values depending on how they are created.

Once created, carbon credits can be bought and sold in national and international carbon credit markets, at a price determined by the market.

Businesses or countries purchase carbon credits to offset the greenhouse gas emissions they may have produced through activities such as:

- Deforestation (conversion of forest land to non-forest land);
- Burning fossil fuels for energy use; or
- Other industrial projects or activities that emit greenhouse gases into the atmosphere.

The unit of measure for carbon credits is tonnes to CO₂ equivalent (tCO₂e) of greenhouse gas emissions reduced or absorbed from the atmosphere.

In the case of forestry projects, the measurement is tCO₂e of carbon credits sequestered (absorbed) from the atmosphere by the trees in the forestry project.

The New Zealand Emissions Trading Scheme (ETS) expected to be introduced later this year under the proposed legislation will use carbon credits called New Zealand Units (NZUs).

Because forestry sequesters CO₂, NZUs can be generated from forestry projects such as carbon forestry management, planting new forest or replanting of forest that previously existed.

Forestry carbon credit opportunities

Under the proposed climate change legislation, potential forestry carbon credit projects in New Zealand fall under three categories, based on the status of the land as at 1 January 1990.

• Older (pre – 1990) exotic forestry

Owners of exotic forest that were planted pre- 1990 will be entitled to a one-off grant of NZUs from the Government, based on the size of the forest, to recognise the CO₂ sequestered from the atmosphere.

The Government allocation is to compensate owners for future deforestation liabilities, which are incurred if the land is converted to non-forest land.

Indications from Government are that approximately 39 NZUs will be granted per hectare of exotic pre-1990 forest.

Owners will need to make an application for the allocation of NZUs within 18 months of the introduction of the ETS legislation, expected later this year.

To avoid deforestation liabilities, the owner will need to ensure the forest is maintained.

The trees can be harvested however, provided the forest is subsequently replanted, or allowed to regenerate.

The Government has not yet decided if pre- 1990 indigenous forestry is to be included in the ETS.

• Existing (post- 1989) exotic of indigenous forestry

If existing forest was established post-1989 on eligible land, the owner can become part of the ETS and will be awarded NZUs by the Government for carbon dioxide sequestered by the forest each year. Once issued, the NZUs can be sold on the local or international carbon credit market.

Only forests that were established on eligible land post- 1989 can earn NZUs, and only for carbon sequestered from 1 January 2008 (there are no NZUs for carbon sequestered from 1989-2008). For this type of project, eligible land is land that was not forest land as at 31 December 1989.

The owner will be required to surrender NZUs to the Government equivalent to any carbon dioxide emitted from activities such as harvesting, deforestation, or fire, however with a carbon forestry plan the liabilities can be balanced against the NZUs generated.

To receive NZUs, owners will need to register with the ETS within 18 months of the introduction of the ETS legislation, expected later this year.

- **New exotic or indigenous forestry**

If new forest is established on eligible land, the owner can become part of the ETS and will be awarded NZUs by the Government for carbon dioxide sequestered by the forest each year.

Once issued, the NZUs can be sold on the local or international carbon credit market.

The owner will be able to earn NZUs for carbon sequestered each year, through afforestation or reforestation activities, or the promotion of natural regeneration of forest (provided it meets the Kyoto definition of forest).

Afforestation is the direct human-induced conversion of land that was not forest land on 1 January 1990 to forested land through planting, seeding and/or the human-induced promotion of natural seed sources after that date.

Only forests that are established on eligible land can earn NZUs, and only for carbon sequestered from 1 January 2008. For this type of project, eligible land is:

- Land that was not forest land as at 31 December 1989;
- Forest land that was deforested between 1 January 1990 to 1 January 2008;
- Forest land that was deforested after 1 January 2008 and for which any liabilities incurred by the Crown (for carbon emitted) have been remitted to the Crown.

As above, the owner will also be required to surrender NZUs to the Government for any negative carbon

stock changes, but with a carbon forestry plan this can be balanced against the NZUs generated.

To receive NZUs, owners will need to register with the ETS within 18 months of the introduction of the ETS legislation, expected later this year.

Values

The carbon sequestration rate however can vary depending on the species of tree. For example, in NZ ranges may be from 16t CO₂/ha/yr for indigenous tree plantation (kauri) to 30t CO₂/ha/yr (radiata pine).

The value of the NZUs will depend on the market, but will be influenced by the price of Kyoto Protocol units on the international market, such as European Union Allowances (EUA's). EUAs are currently trading at approximately NZ\$50, as at 29 February 2008. This equates to approximately \$1,950 per hectare.

Based on average carbon sequestration rate of 30t CO₂/ha/yr for radiata pine forest in New Zealand, and the price of Kyoto Protocol units, such as EUAs, on the international market as at 29 February 2008, an approximate value of potential NZUs per hectare would be NZ\$1500p.a.

Note: To avoid any errors the background and values information above is extracted directly from a handout provided to meeting attendees.

The Green Air Fund is Australian based and for New Zealand Forestry projects have linked with Laurie Forestry Ltd (South Island based in Waimate) and Environmental and Engineering Consultants Tonkin & Taylor Ltd.

As an item of local interest, Anna Warren, the Head of Marketing and Communications for the fund is originally a Marlborough girl, now Sydney based.

Following an introduction by Allan Laurie (Managing Director of Laurie Forestry), who provided background on The Green Air Fund and explained the mornings proceedings, there were two power point presentations.

1. **By Himanshu Dua – Founders Executive Director, The Green Air Fund**

Discussed what this is all about, including 'What is a carbon credit', explained some of the large number of acronyms now floating around, provided background on Green Air Fund and explained how the fund

operates, then provided his view on current values, the proposed quantification process and how Green Air can help forest owners (*please remember credits and liabilities remain with the landowner*).

Green Air will provide or undertake the following;

- GreenAir provides funding to complete the quantification, design and certification of a potential carbon credit project;
- GreenAir obtains debt or equity funding to implement the project, if necessary; and
- GreenAir brokers the sale of carbon credits from the project.

For which it will receive appropriate commissions or fees.

2. Measuring carbon of NZUs – Graham Ussher, PhD. Restoration Ecologist with Tonkin & Taylor Ltd.

Graham explained the need to measure to obtain accurate information on the carbon held within your plantation and discussed acceptable methods. The more accurate the measurement the more credits a landowner will likely receive up front.

However, a simple method, say a look up table, will probably be acceptable initially and this data can be improved on in later years.

Provided some interesting information on re-vegetation and accelerating carbon production in native regeneration.

Biodiversity, including the weight of fauna is being discussed as a concept by government.

My Personal Take

I found the meeting interesting in that it built on and added to information already obtained from previous meetings and other means. It was interesting to note a fairly large contingent of territorial local authorities (but not Marlborough) on the 35-40 participants.

It certainly highlighted the need for landowners to take an active interest in proceedings, particularly as the legislation is to be enacted shortly, or if not wishing to be involved directly themselves, landowners should be in contact with someone who can provide them unbiased information.

Until the legislation is in place the rules will not be known, so, there is still a lack of definition or detail, although the processes have been fairly well laid out.

As a Forestry Consultant I believe it is important there be ongoing discussion and landowner involvement, not just in the mechanics and detail of the process of carbon credits but also in the more philosophical questions this process is throwing up.

One particular concern is the increasing disconnect showing up between investing/growing trees for carbon – a legitimate business choice, and one which will, apparently, be rewarded with quite large sums, and the investing/growing of trees for wood – to date the main plank of a forestry investment.

The impact of climate change, carbon and emissions trading on the way in which we manage our production forest may well be dramatic. While business decisions may look quite straight forward, are they in the best long term interests of the grower, the industry, the region or country?

Somewhere in all this, provided we can enjoy rational debate, there will be a way forward that allows maximum carbon sequestration while retaining a viable production forest sector providing realistically priced wood – at least I hope so.

The power point presentations can be made available to you, so, should you wish to obtain them, or register your interest in having your forest or land holding involved in a future Marlborough/NZ carbon projects please contact me at;

palmsltd@xtra.co.nz

Registration implies no obligation



Flexible Land Use Alliance

Following the meeting there was discussion on the Flexible Land Use Alliance and the effect it might have. The proposal is to remove pre 1990 forests from the Emission Trading Scheme, or to allow forestry Ed

offsets where new forest can be planted on eroding hillsides to balance deforested land. The proposal has the support of several minor political parties. You can see more at <http://www.flexiblelandusealliance.org.nz/>



Forestry field trip to Merrill & Ring's Manuka Island Forest

When: Meet 9am Saturday March 29th.

Where: Meet at Broadbridge's Transport yard near Renwick to organise transport. Four wheel drive utility vehicles will be required so people can share with others if they don't have suitable vehicles.

What to bring: Sturdy footwear, warm clothes and lunch

The field trip is a general forest tour looking at establishment, silviculture practices, growth rates etc. Over lunch there will be a refresher talk on chainsaw use from an industry trainer.

We plan to be back at Broadbridge's yard at 3pm.

If wet the trip will be postponed.



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