



Forest Partnership Report

Mid year report 2019

Greetings!

Christmas cheers to you all.

It's been a busy second half to the year for the forestry sector and our forests. Since July of this year our harvesting forests have been through a significant price adjustment (both down and back up).

Yields of our pruned forests are proving to be very good and we receive regular praise for the quality of our logs supplied, and demand for our logs is strong.

This year we've purchased another six properties totalling 2,640 plantable hectares. As well, we launched 'Seaview Forest LP' our first partnership investment under the new Managed Investment Scheme legislation. Interest continues to be very strong in new forestry investment.

Forestry in the News

The Billion Tree Programme. The government's ten year, Billion trees programme is somewhat smoke and mirrors. 600 million trees, about 600,000 ha of planting, is simply existing foresters replanting around 60,000 ha each year of already existing forests, as they are harvested. This is normal course of business for more than 95% of foresters. To the best of our knowledge none of this planting receives any subsidy of any kind from government. The other 40,000 ha of planting each year is new planting. Some of this is for smaller non-commercial forest areas on farms, as well as council planting and other types of planting in a variety of places. This is eligible to apply for some planting subsidy but the vast majority of the hoped for 40,000 ha per year will be planted by commercial organisations like ourselves and as such will receive zero subsidy from the government



or any other source. Investors are incentivised to plant new forests because of the strong log prices as well as the good carbon (NZU) prices arising from the carbon sequestered in newly planted forests.

Farming lobby groups complaints about new forest planting. You have probably read about the minority farming pressure groups making noises about (what they claim are) vast areas of farmland being converted to unproductive forestry. As the previous paragraph shows this is simply not true.

To give that some perspective. There are currently 1.7 million hectares of plantation forestry in New Zealand (10% of this is plantation forestry on dry-stock farms). In total there are 12.6 million hectares of farmland in New Zealand, and of this, 8.5 million hectares is sheep and beef (hill country land that lends itself to conversion to forestry). So for the government to meet the billion tree target sheep and beef land might need to reduce from 8.5 to 8.1 million ha over a ten year period – every farm has paddocks/areas that would be far more suited to forestry (exotic or native) and farmers (not us as commercial foresters) are being offered government grants to do so.

There has been urban drift from rural areas for at least 40 years. In 1982 sheep numbers peaked at 70 million, today there are 27 million. 10 million sheep occupy about 1 million ha of good hill country land so 4 million ha has been changed from sheep farming to other land uses. Most of this change is a result of farmers understandably reacting to varying economic signals for different land uses. As well, farmers have become much more efficient and reduced labour numbers in the past 40 years, this has led to significant rural depopulation.

As to claims around employment and expenditure in farming versus forestry a high producing hill country farm will spend around \$600 to \$700 per ha per annum – total expenditure of \$19,000 over 29 years of farming. A production forest will spend around \$300 per ha per annum over the first 25 years and a further \$60-\$70,000 per ha over the following four years. A total of \$80,000 per ha or an average of \$2,500 per ha per year versus farming at around \$650 per ha per year.

Independent employment figures in the Wairoa District showed 2.6 employees per 1000 ha for farming and 9.4 for forestry.

Additionally, while our existing forests might not be eligible for carbon sequestration, they are still absorbing carbon from the atmosphere at a rate at least 4 times quicker than native forest, and every time we harvest our trees and build houses, tables or wooden products this is additional carbon removed from the atmosphere, making our forests environmentally friendly and socially responsible, as well as providing a cash return. As forest owners we can be confident that our trees are making positive impact in the environment and for those contractors and sub-contractors who work in them.

I feel that hill country farmers probably have more pressing issues than the planting of a few forests. With the majority of the populations' focus on environmental matters, hill country farmers probably need to figure out how they can reduce sedimentation in water ways and improve water clarity. Other concerns include reducing nutrient flow (from aerial applied fertilisers) into streams and rivers, reducing E.coli invasion of waterways as a result of hill country streams being unfenced and used for stock water supply. Other issues of severe erosion of steep pastureland, flooding of lower river flats and reducing animal's contribution to greenhouse gases are also important.

Efficiency of production is another factor being looked at by environmentalists. A forest will sequester carbon and produce around 13 tonne of sawn wood per ha per year with no artificial inputs. A hill country farm will produce around 300 kg of edible meat per ha per year.

Log price fluctuations and log markets

Our investors in forests that were either preparing to harvest or already harvesting, received numerous communications from us after log prices suffered a significant fall in July 2019.

At Wharf Gate (AWG) prices set at the beginning of July fell between \$30 to \$38 per tonne (approximately 25%) from \$135 in the previous months. The July prices for A-grade logs (the price of A-grade logs is the benchmark for all other log grade prices) fell to between \$97 to \$105.

This fall was largely driven by Chinese importers of logs and lumber as a result of various factors. China takes most of New Zealand's logs. A summary of drivers below:

- **Economic slowdown** – It is evident that both China and the US are experiencing slower economic expansion, partly driven by the trade war. Exports of sawn timber to the US has slowed in line with US housing starts and renovation data, as well, US markets for Chinese manufactured goods now have 25% tax applied.
- **Currency** – The trade war has also devalued the Chinese Yuan, albeit modestly. The weaker Yuan drives weaker purchasing power for their importers who are bringing in logs.
- **Spruce Bark Beetle** – Climate change (stress from drought and wind storms) has brought about increased presence of the Spruce Bark Beetle, in some places now breeding twice a year, and is overwhelming the Spruce which is grown in Russia and other European countries. The response has been a large increase in harvest volumes and these low-priced salvaged logs are being exported to China
- **One Belt, One Road** – Creating and incentivising the opportunity for the backhaul of logs and lumber on trains. Rail that enters China through Russia is transporting that Spruce up to 8,000kms, usually to inland mills, but in some cases those logs are making it to the coast which is usually dominated by logs from ports, namely radiata pine from New Zealand.
- **Wall-of-wood** – NZ can take some blame, the increase in our production has seen significant supply chain infrastructure issues in New Zealand, however more logs are being exported each year and this is also impacting the supply/demand dynamic in China.
- **Importers** – Log importers, in seeing the market weaken, were quick to dump any excess supply.



This seemed to exacerbate the fragility of the market and subsequent price movements.

- **Seasonal Impacts** – Traditionally a low season for log demand due to the extremely hot and rainy season in China.
- **Chinese Government** – Some sellers of logs to China have noticed that under the present Premier Xi, there is more state involvement in log purchasing entities.

In response to these lower log prices our harvest crews were instructed to reduce weekly tonnes harvested to 75%. This was in line with what several other similar forestry operators were doing. For Harvest crews it meant reduced working weeks, with some working 4 days each week, others brought forward staff holidays. This shortening of supply has helped the log market recover since July. In October, crews were put back on 100% capacity. Log prices for December have settled around \$129 (average) for Napier and \$131 for Gisborne.

Our log exporters remain cautiously optimistic that the current prices are sustainable.

It takes 30 to 48 months to harvest one of our average forests. Log prices vary during that period and low log prices for just a few months have a small effect on the average outcome for the entire forest. Our harvesting forests have been fortunate to enjoy the historically high log prices being realised for some months before July.

Forestry in the ETS, eligibility for existing forests planted before 2019

There is much discussion going on about this subject, it may be that eligible forests (i.e. first rotation planted on pasture) under the age of 17 years can sell some carbon. We will keep you informed once decisions are known.



Logs on Landing 4 at Belmont Forest Partnership

Wairoa to Napier Railway line

This line was reopened in June with some fanfare from politicians and officials. The rail operators are very reliant on our logs to make this service work, however, someone in Kiwi Rail neglected to calculate the price at which it would work for us and we declined to participate. Reality has now set in and an appropriate price has been calculated and our first logs will soon be moved from Wairoa to Napier Port.

Insurance

Again, the insurance market continues to tighten. To maintain our current wind cover there is a significant increase in gross premium (45%) despite only a 25% increase in forest values.

When looking at a selection of our existing forests, our insurance premium now makes up approximately 38% of our total annual expenditures. This is a frightening number. The insurance subcommittee has looked at options to reduce the cost. Our current policy allows for \$40 million in claims in any one year, this accounts for less than 5% of total crop value, so we are reluctant to reduce the cover.

Interestingly there were no other re-insurers who wanted to provide quotes, and we are aware of some forests in other areas (not ours) that have been unable to get any cover. We are doing more research here and overseas and will discuss this at next years AGM's.

As well, due to major losses in the timber market around the world including USA, Australia and New Zealand (Nelson Fires). The re-insurers have taken measures to reduce the impact of these losses by changing the excess limits. The excess has changed from \$100,000 per event, to 1% of sum insured of every partnership that is making a claim. All forestry owners have had this new excess structure applied to their renewal.

Forest AGM & Visits Dates

The forest AGM and visit dates for next year are now on our website. For many of you there are some significant changes in meeting format from past events. This is because more of our forests are harvesting or preparing for harvest. The annual turnover is significantly increased for these forests and we are therefore allocating more specific time to each forest. This is going to result in more input from our office and FMNZ office staff.

Secondary Market

We have active buyers in our secondary market. The trend seems to be very few secondary sales in our established forests as they get nearer to harvest. In other age classes sales slowed since July when there was a shift in log prices – this has subsequently recovered. We currently have some remaining shares available in Waikare and Maxwell forests. These second rotation forests have the advantage of established roading and skid infrastructure, along with proven returns. For further information on these, or to be registered for any other forestry options when they become available, please speak to Grant in the office.

New Sales and New Opportunity

In November this year we promoted another greenfields forest under the new Managed Investment Scheme (MIS) with a registered Product Disclosure Statement (PDS). Seaview Forest LP was our 99th forest and is located in Waimarama, Hawkes Bay. The offer had overwhelming support and opened and closed fully subscribed with a significant waiting list of interested investors. We've been actively searching the market for further partnership properties which we hope to be able to offer in the new year.

New Forests that we are establishing are grown on a framing regime to begin harvest in 26 years' time. They are eligible to sequester and sell Carbon Credits in the New Zealand Emissions Trading Scheme (ETS). This provides income from year seven.

Sustainable production forests planted today are a proven way to help meet our climate obligations as well as being socially responsible, environmentally friendly, and a profitable way to provide income in perpetuity for you and your family.

Enjoy the festive season

Regards



Roger Dickie



Will Dickie



Seedlings 1 year old and growing well at Maxwell Forest

MAXWELL

Forest Partnership



Forest Managers Report September 2019

The past six months have been fairly consistent weatherwise. All of our forests have experienced warmer and drier than usual winter conditions and fortunately there have been no weather bombs to affect the trees or damage forest infrastructure. Long may these conditions prevail!

Forest Health

Forest health is generally very good with all of the young trees making strong growth and showing healthy green foliage.

Little Waikare Harvest

The small 8.8 hectare stand of 1991 trees was harvested at Little Waikare during June. The harvest summary was:

- Total gross revenue was \$761,734.29
- Total costs are \$447,994.60
- Net income was \$313,739.69
- Tonnes harvested was 5,349.25 tonnes
- Total area harvested was 8.8 Hectares
- Recovered tonnes per hectare was 607.87 Tonnes
- Net return per tonne was \$58.65
- Net return per hectare was \$35,652.24

We were fortunate to get all bar six loads of logs to market before the export log prices fell in July.

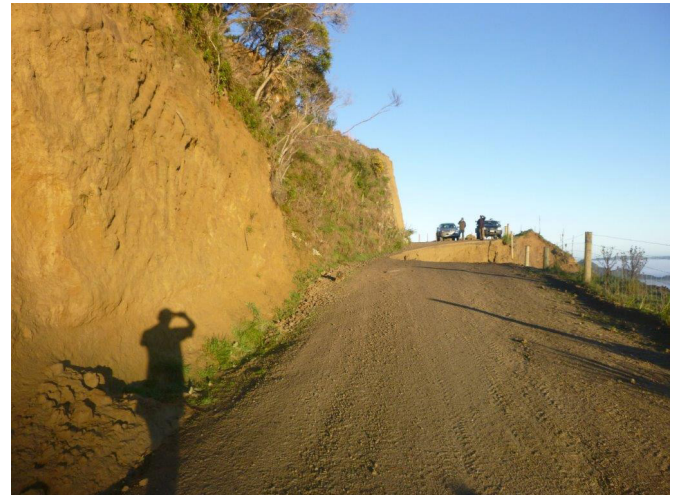
The stand will be replanted in the winter of 2020.

Replanting Cutover

In preparation for planting, the aerial desiccation was carried out in March. This came in under budget by \$11,928.

We had budgeted the last of the replanting of the cutover for July. The planting contractor is well behind in their schedule and will not get to the forest until late September/early October. This is our biggest planting season since 1994 and we are certainly noticing the loss of capacity in the workforce since then.

The later than planned planting also means our releasing programme is behind schedule. Given that our cutover areas are aerially released, this will have no impact on seedling survivals.



Drop out at main entrance

Tracking

The tracks at Maxwell are generally accessible however we have had to carry our repairs to the tracks to facilitate access for the planting crew. There was a large dropout on the Goldsworthy that damaged a section of boundary fence and the neighbours' track below it. To restore access we had to cut back into the hill and end haul the material back to Skid 1.

Our tracking budget is currently \$150 over budget and this does not include the work described above. We have \$4,000 in the budget for December and it is likely we will finish the financial year over our tracking budget.

Weed and Pest Control

While there are plenty of weeds in the forest, mainly gorse, inkweed, fireweed and tobacco plant, there are none causing a particular concern at present.

Our goat control budget is \$600 over budget at the end of the half year. Goat control is ongoing and as well as our staff visiting the forest, we have hunters in the forest most weekends.

We have made no allowance in the budget for possum control but are starting to see increasing signs of these pests around the forest. We will need to make some allowance for control in next years' budget.

Carbon Sales

No NZUs have been sold over the past six months.

The NZU holding as at the end of August was 11,906 units. This is comprised of 6,840 pre 1990 units and 5,066 liability free units.



Planting operation

NZU Price

Over the past six months we have seen a peak price of \$25.30 recorded in March. This moved down to \$22.95 by mid July and since then has climbed back to \$24.20 by the end of August.

Market commentators pick the NZU price will remain in the \$24.25 to \$25 over the next few months with both the demand and supply sides of the market remaining relatively quiet. We await more details on the proposed cost containment reserve and auctioning and expect more information around the introduction of auctioning should be provided by government later in the year.

NZETS

Following on from the ETS consultations carried out during 2018, one of the changes announced by the government in March is the intention to change the carbon accounting method currently used to carbon averaging.

Under the current accounting method, a participant must account for any loss of carbon in their forests, even if it is a temporary loss. This includes harvest, storm damage etc, which triggers the need to surrender NZUs to the Crown, even if the forest is being replanted.

Emissions returns submitted during harvest can be complicated as the harvested area may not be for an entire CAA (carbon accounting area) and the calculations can be complex and confusing. For this reason, we generally deregister a forest from the ETS prior to commencement of harvest.

Carbon averaging removes the requirement to surrender NZUs when there is carbon loss. Instead, participants receive NZUs as their forest grows up to an average level

of long term carbon storage. Depending on the rotation length, this is around 17 or 18 years worth of carbon (approx. 440 units per hectare). Provided the land is replanted, the participant has no carbon liability.

This simplifies the cost and complexity of the ETS for forest owners and allows them to sell NZUs up to the average level without the need to surrender units which gives forest owners an early income stream for their forest.

Carbon averaging will apply from January 2021 however, forests planted in 2019 and 2020 can also participate. Although the government is yet to release more detailed information on carbon averaging, we understand forests that have been registered in the ETS prior to 2019 will not be eligible to participate. This means the ETS will essentially be running two different carbon accounting methods at the same time!



Eastern boundary fence

Pix4d - Technology of the future

Digitisation technology has been changing the way we work at FMNZ as over the years, it has greatly improved in accuracy and precision. We are progressively embracing more technology in our day to day operations, particularly software which brings productivity benefits to our business.

Pix4d is photogrammetry software that is used for creating large orthophotos and making accurate measurements using photographs. This software can do a range of 2d and 3d measurements including precise volume calculations. These are very useful in forestry for measuring stockpiles and monitoring changes over time. The software can also be applied to vertical measurements which potentially could be useful for monitoring growth and tree height.

Pix4d can stitch thousands of photographs together. Orthophotos are aerial photographs that are geometrically accurate. These can be used in GIS for a wide range of uses. Environmental monitoring can easily be done with these high resolution orthophotos. They can be used to inspect culverts, fluming, slash controls, streams and wetlands. Large orthophotos can also be used for marking cutover and validating the accuracy of GIS data.

Drones are most commonly used to collect photos as they can cover large distances and take off and land in small areas. Automated flight paths can be set up to cover specific areas. Drone technology has come a long way with sensors and return to home features which make drones a safe and reliable option. We already use a drone and programs such as Pix4d help make this a more productive tool.

We can see the benefits for our forest owners of the implementation of photogrammetry technology to FMNZ as it provides a quick and cost effective means of calculating, displaying and measuring various types of data.



Steve Bell
Forest Manager



3d representation of Puture stockpile where volume calculations can be made



3d representation of Millbrook used to monitor enviromental changes



An example of using orthophotos to check the alignment of roads and skids