

Carbon Forests

With the dramatic increase in the price of NZUs over the last few years, a number of rural land owners are starting to think seriously about carbon forestry. Anderson Lloyd has advised a number of clients about the legal options and structures for implementing a carbon forestry project.

Carbon Forests are forests that are planted with the sole goal of generating NZUs, and often have non-economic goals such as increasing biodiversity, preventing soil erosion or mitigating climate change. Previously, Carbon Forests would have been established under the "permanent forest sink initiative" (PSFI), however this is coming to an end on 1 January 2024. In 2023 a new category called "permanent post-1989 forest" will be introduced to the New Zealand Emissions Trading Scheme (ETS) to replace the PSFI. This new category is for forests that will not be clear-felled for at least 50 years, appropriately termed Permanent Carbon Forests. Permanent Carbon Forests may provide an attractive investment opportunity for forestry owners wishing to diversify their investment and for landowners seeking to turn marginal land into forestry for economic gains.

Permanent Carbon Forests

The addition of this new category to the ETS is intended to increase the area of permanent post-1989 forests in New Zealand, containing either exotic or native species. It applies to forests that will not be clear-felled for at

least 50 years after they have been registered in the ETS.

Trees absorb CO₂ from the atmosphere and store it in their trunks, branches, leaves and roots. The amount of carbon stored in a forest depends on species, stocking, site conditions such as soil and rainfall, and how long the forest is left to grow. The longer a forest is protected and maintained, the better the climate and environmental outcome.

The amount of CO₂ absorbed each year by a forest registered in the ETS is calculated by the Ministry for Primary Industries (MPI), based on emissions returns undertaken by the participant (the forestry owner or a holder of a forestry right or a forestry lease). Once verified, MPI issues one NZU (carbon credit) to the participant for every tonne of CO₂ that has been removed from the atmosphere. The participant can decide to do an emissions return every year, but must complete a mandatory one every five years.

Permanent Carbon Forests will be analysed on the stock change accounting approach, which focuses on short-term increases and decreases in carbon storage in a forest. Permanent Carbon Forests should continue to earn NZUs for as long as the forest is in the ground and the carbon stock is increasing. On average, one hectare of established *pinus radiata* sequesters approximately 15 to 26 tonnes of CO₂ per year, equating to 15 to 26 NZUs per year per hectare¹. At the current sale price of \$64.50 (as at 7 October 2021), this would give a return between \$967.50 to \$1,677 per hectare. An average sized forest will absorb approximately 800 tonnes of carbon dioxide per hectare over a 30 year rotation. Accordingly, applying a conservative approach, a newly planted Permanent Carbon Forest will take approximately 10 to 12 years to

¹ According to the Climate Change (Forestry Sector) Regulations 2008 (Forestry Regulations) which contain pre-calculated values for a forest's carbon stock base

Carbon Forests (Continued)

repay its establishment costs from NZU generation (at current prices).

What happens if a Permanent Carbon Forest is harvested?

Selective and small-coup harvesting is allowed

Limited harvesting will be allowed without penalty if at least 30% tree crown cover remains in each hectare of forest. A participant may need to account for the carbon loss from this harvesting, by repaying NZUs. The Forestry Regulations will determine exactly how this will work in due course.

If a participant clear-fell harvests or deforests within the 50-year period it will be liable for a penalty

"Clear-fell harvesting" is defined as harvesting resulting in less than 30% tree crown cover in any given hectare. If a participant clear-fell harvests its Permanent Carbon Forest before the 50-year period ends they will:

- need to surrender NZUs for the emissions from the area which was clear-felled; and
- be liable for a clear-fell penalty based on the value and volume of the timber removed (which will be set out in the Forestry Regulations).

If a participant deforests (change land use) a Permanent Carbon Forest before the 50-year period ends they will:

- need to surrender any NZU balance for the area which was deforested; and
- be liable for a deforestation penalty based on the carbon stock of the area being deforested and the current NZU price (again, this will be set out in the Forestry Regulations).

In both instances these penalties will not apply if:

- the harvesting or deforestation was beyond a participant's control;

- a participant could not have reasonably foreseen the harvesting or deforestation, and
- the participant could not have reasonably taken steps to prevent the harvesting or deforestation.

In all harvesting scenarios, there will also be a number of "low risk" NZUs which can be traded relatively freely without having any obligation to sell back to MPI. This is because there is a residual amount of CO2 remaining in the stumps and roots of a tree after harvesting. The amount of low risk NZUs is the difference between the age of the forest when a participant registers it with the ETS, and the carbon stock in the forest at its lowest point after harvest.

Removing Permanent Carbon Forest from the ETS within the 50-year period

Small areas of Permanent Carbon Forest can be removed from the ETS before the 50-year period ends, provided approval is obtained from the Minister of Climate Change. A participant will need to surrender NZUs for any such areas removed.

Options after the 50-year period expires

When the 50-year non-clear-fell period expires a participant has three options.

- sign up the Permanent Carbon Forest for another 25 years and continue to earn NZUs on the stock change approach (with this right applying every 25 years onwards);
- transition to the averaging accounting approach under the ETS. This would require the surrender of some of a participant's NZUs, but harvesting will subsequently be permitted so long as the participant replants; or
- remove the Permanent Carbon Forest (or parts of it) from the ETS, surrendering the NZU balance for the area so removed.

Carbon Forests (Continued)

Existing participants in the PFSI

Existing participants in the PFSI will need to decide in 2023 whether or not they wish to:

- move into the Permanent Carbon Forest category under the ETS;
- move into the post-1989 forest activity in the ETS under averaging accounting, or
- leave the ETS completely and surrender all NZUs.

If a PFSI participant does not tell MPI what they want to do by 31 December 2023, their forest land will be automatically moved into the Permanent Carbon Forests category in the ETS.

Next steps?

Permanent Carbon Forests may provide an attractive investment opportunity for forestry owners/interest holders wishing to diversify their investment and for landowners seeking to turn marginal land into forestry for economic gains whilst mitigating climate change. Landowners and forestry owners/interest holders may wish to investigate the possibility of setting up a Permanent Carbon Forest now, in advance of their 2023 introduction.

If the ETS appears difficult to navigate alone, there are now an increasing number of specialist providers in this area. Such providers, in exchange for an annual rental, either lease trees off a forestry owner/interest holder for registering in the ETS or lease marginal land off a landowners for establishing and managing new forests for registering in the ETS.

Want to know more?

If you have any questions about Permanent Carbon Forests, or you wish to explore forestry investment options in general or you require assistance with navigating the ETS, please contact our specialist [Carbon Trading, Emissions Trading Scheme and Climate Change team](#).