

Continuous Cover Forestry scheme

Integrating profitable timber production with forest conservation

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Forests are increasingly valued for their timber products but also for their potential to deliver diverse “ecosystem services”, important to our overall well-being as a society. These services include biodiversity, water regulation and recreation. Increasingly important is their ability to offset greenhouse gas emissions by sequestering carbon into their biomass and the soil.

Recent European and national forestry policy is promoting a range of management systems known as Continuous Cover Forestry (CCF), which allow commercial timber harvesting while retaining forest cover.

CCF is not an option for all forest sites as factors such as elevation, exposure and soil quality can pose forest stability issues (eg wind). Sheltered sites with free-draining soils are the most suitable.

The thinning process in CCF requires greater management input than for conventional forestry.

A pilot scheme was launched in 2019 by the Department of Agriculture Food and the Marine (DAFM) to fund transformation of existing plantations to CCF. The new scheme is offering three support payments of €750/ha as part of a 12-year transformation plan for mixed-species plantations up to 10 ha. Thirty forest owners were approved under the scheme in 2019 with work to be carried out from 2020 onwards.

Among these are Liam and Helen Bresnan who own and manage a 22ha mixed farm-forest in Co Limerick comprising Sitka spruce, Norway spruce and mixed broadleaf species. The forest, planted in 1999, complements 37ha of grass.

Since then, Liam has developed forest road access and carried out first thinning, availing of DAFM forest road and woodland improvement grants. “Early thinning is very important as it offers an opportunity to remove inferior trees, allowing

the remaining trees to develop,” says Liam. “It also encourages rooting for long-term stability against wind.”

Wind is a key factor when managing under CCF as trees are retained for longer periods and attain greater size when compared to conventional management.

Liam is very hands-on in the management of his forest and over the years has hosted a number of open days for forest owners in association with the local Teagasc forestry advisor (Jonathan Spazzi) and the Limerick Tipperary Woodland Owners (LTWO) group.

He and his family greatly value their forest resource and spend a good deal of time in it. Liam’s daughter, Aoife and her husband Colm, live next door to the forest and their children use it for play. Liam’s son Lee and son-in law Colm often join forces with him as all enjoy helping tend the forest.

“My goals include a mix of timber production, personal satisfaction and legacy,” says Liam. “That’s why I’ve chosen CCF.” He applied under the new CCF pilot scheme to assist him through the early transformation period for a 10ha spruce/broadleaves mixed section.

Grant approval and felling licence were secured in 2019. A plan of action was put in place for 2020 by “the management team” (pictured) Liam Bresnan, Sean Ryan, local forestry contractor and Pdraig O’Tuama, forester and CCF specialist.

Initial works took place early this year. These included: selecting, marking and pruning of quality “crop” trees for retention, selecting and marking trees for removal, thinning of spruce and broadleaves and under-planting of small groups of trees (beech and Douglas fir).

The final operation was the completion of a forest survey to provide baseline information to inform future management.

Unlike conventional spruce thinning, where removal focuses on smaller, poorer-quality trees, under CCF, thinning focuses on the removal of large, lower quality, trees.

This helps with short-term thinning economics while in the long



run facilitating the development of commercial sawlog by retaining the best quality trees. This will ensure high-value and a high proportion of sawlog from later selective harvesting operations.

Liam actively participates in management operations and this year carried out chainsaw thinning of the broadleaves and, with Colm’s help, all pruning and under-planting.

Pdraig and Liam, selected and marked trees for retention and removal, while Pdraig facilitated the forest inventory.

As Pdraig puts it: “If you can’t measure it, you can’t manage it. The success of the system relies on regular monitoring and review.”

TIMBER PRODUCTION

Timber production from private forests reached one million cubic metres (m³) in 2018, and has the potential to increase to 3.35 million m³ by 2027. Timber prices have shown fluctuations in recent times, given EU and UK related developments.

However, returns from farm-for-estry remain attractive with a typical annual equivalent value (AEV) of between €400 and €500 per hectare (ha) for productive conifer forests including 15% broadleaf and 15% biodiversity components.

While our well-established sawmilling sector will continue to compete in a challenging market environment, it is also well placed to have continued access to ready markets for our homegrown forest produce given our proximity to the UK, the second largest net importer of timber at global level.

CCF application

CCF is not an option for all forest sites as issues with elevation, exposure and soil quality may pose forest stability issues (e.g. wind) during development.

Sheltered sites with free draining soils are the most suitable. Also, the thinning process requires greater management input than conventional forestry.

Currently the TranSSFor project, led by the Teagasc Forestry Development Department in collaboration with University College Dublin (UCD), with support from Coillte and a private forest owner, is testing a range of methodologies for CCF application to spruce plantations.

CCF ultimately enables commercial timber harvesting while retaining a forest cover in the long term.

This is achieved through regular selective thinning and felling combined with progressive under-planting or natural regeneration from seed. This can deliver a steady flow of quality timber without interrupting forest ecosystem services.

- See <https://www.teagasc.ie/crops/forestry/advice/management/continuous-cover-forestry/>



Liam Bresnan (centre), Sean Ryan, local forestry contractor (left) and Padraig O'Tuama, forester and CCF specialist.

Sean carried out the first thinning of the spruce section four years ago and was contracted again this year, by Liam, for the second thinning using conventional purpose-built forestry machinery.

Sean was unfamiliar with this management approach: "CCF is new to me but the fact that trees are marked with paint makes it easier for the operator. "Larger trees come out first. This helps as it results in a good proportion of higher-value logs (e.g. palletwood material) which gives better harvesting efficiency. For us, it was straightforward and I look forward to coming back for the next thinning and seeing the whole process develop."

Liam says he is happy with the progress to date: "The work is progressing well and the forest is being thinned carefully. I am happy with thinning returns and I can see the value of the forest increasing with every thinning while it also gets brighter and more diverse."

The next round of thinning will be needed in three to four years with some natural regeneration expected to emerge with possible additional under-planting also carried out then.

"The last job for this year will be to remove the brush from the footpath and cycle path for the grandchildren to return to play in the forest," concludes Liam.