

# Multiple challenges, long-term reward

**John Casey**  
Forestry Development  
Officer.



**I**n 2019, Ash Dieback disease was discovered in Brendan Keane's 7ha crop of 14 year old ash. At the same time, the Waterford farmer from Dunhill was preparing to put in a forest road and thin his adjacent 8ha Sitka spruce plantation. Brendan sought advice, before mapping a path through these tricky challenges.

Firstly, Brendan had a 430m forest road built under the Forest Roads Scheme. Partly thanks to the presence of a stone supply on his own farm, the net cost to Brendan was just €600 for the completed internal road in March 2021.

The Department of Agriculture, Food and the Marine (DAFM) Forest Road Scheme provides funding for the construction of forest roads and associated infrastructure.

A rate of €40 per linear metre to a maximum of 25m per hectare is available where 50% or more of the area is due for harvesting in the next three years.

This can be extended to five years in the case of joint applications. Extra funding is available if significant additional stone is required to build a bellmouth, where it is at least two metres below the surface of the existing public road. Go to the Teagasc website for further details.

Brendan employed a registered forster when applying, as the total road length was less than 500m.

A qualified civil engineer or engineering surveyor must prepare specifications and carry out appropriate works supervision where the road application contains grant aided special construction works, lengths in excess of 500m, or sections of roads due to site conditions or difficult construction designs.

A standard management plan was drawn up at the time of application, and was incorporated into the November 2018 felling licence application for the thinning of the 8ha of mainly Sitka spruce. Felling approval from DAFM was received in July, 2019.

These conifer trees were harvested



Brendan Keane.

in the summer of 2021, and overall, Brendan says he was satisfied with the thinning operation.

"The contractor carried out a 1-in-7 line and selection thinning of the Sitka spruce and 20% Japanese larch, removing a total of 500t of timber, or approximately 60-65 m<sup>3</sup>/ha. The breakdown in terms of product categories was 70% pulp and 30% pallet," he says.

## Felling the ash crop

The new road was beneficial when it came to clearfelling the ash under the Ash Dieback Reconstitution and Underplanting Scheme (RUSS). This DAFM scheme provides financial sup-

port for the site clearance or partial clearance of ash and the reconstitution or replacement of ash trees with alternative species.

Retaining some of the more resistant ash trees and under-planting is also an option in some cases. Following consultation with his Teagasc forestry advisor, Brendan decided to clearfell, with €6,000 assistance from RUSS.

Almost 260t of ash was clearfelled – 2ha by harvesting machine and 5ha by chainsaw. Having looked at his options, Brendan decided to replace the ash with a crop of Sitka spruce and alder, planted in inverted mounds in March 2022.

Life stages of the large pine weevil.



"There were a couple of learnings from the whole experience," says Brendan.

"Apply for the road scheme and the felling licence in plenty of time. I first contacted the road contractor in 2019.

"Secondly, the Knowledge Transfer Group (KTG) I participated in during 2019 was a real help and enabled me to get my head around timber pricing."

The ash-focused RUSS was applied for in 2020 and approved in April 2021, which allowed the ash to be efficiently felled at the same time as the conifer thinning.

Brendan reckons that the total operation resulted in "about €20,000" in his pocket.

He also retained some of the ash as firewood for his own use.

### Replacing the ash

"Thanks to the group, I'm aware that felling an adjacent coniferous crop, even in a thinning, can leave breeding material for the large pine weevil (*Hylobius abietis*)," says Brendan. "The young replacement Sitka trees can be attacked by adult pine weevils feeding on the stem from the root collar upwards."

While many forest owners are unaware of the threat posed by large pine weevils, on average 50% of the seedlings on untreated reforestation sites in Ireland and the UK are killed by pine weevils during the first few years.

Heavy damage can completely girdle stems and cause plant death.

"Young tree losses could lead to substantially increased re-establishment expenditure through the cost of in-

secticide application, replacing plants and additional weeding," concludes Brendan.

No control of the pest in the stumps is available and young plants must be protected through dipping and/or spraying with the insecticide Cypermethrin.

The use of such pesticides is governed by the European Communities Regulation 2012, Sustainable Use of Pesticides.

Alternative insecticides are emerging in the marketplace, as well as lower impact Integrated Pest Management (IPM) strategies.

The adult *Hylobius* (the large pine weevil) can live for up to four years and may attack at any time of year when it is warm enough for insect activity. There are typically two peaks when damage occurs; one in spring before egg-laying and the other in late summer before the adults hibernate underground.

Note that knapsack application of Cypermethrin is only effective for approximately six weeks, so predicting the optimum time is critical.

### Protecting the young spruce trees

For the forest owner, stump hacking can help predict a weevil outbreak. Clear the soil away from one-quarter of a stump, at least 40cm out and 30cm down from soil level (include at least one major root and two root-stump junctions).

The bark is then removed from the cleared area using a wood chisel or spade. Count the number of weevil larvae and pupae. Weevil larvae are not segmented or ridged and tend to form a C shape.

Sample at least five stumps. If the average stump count on a site felled more than a year ago is five or more per stump, then spraying will be necessary. If the count is one or less, then spraying may not be needed.

If average count is between one and five, then check the site again during weevil feeding periods (April and August). This method should be viewed as an indicator and is not 100% accurate. The young trees will remain vulnerable for the first couple of years.

"Forestry throws up multiple challenges, but the rewards make it worthwhile," concludes Brendan Keane.

Adult pine weevil.

