

Fuelling a better future

In Galway, a farmer's timber harvest marks the start of a value supply chain, supporting local jobs, producing renewable wood fuel and reducing carbon emissions

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Damien O'Brien and his wife, Carmel, farm sucklers and sheep in Woodlawn, Co Galway. Like most suckler farmers in the west of Ireland, they work hard to make the farm pay its way. Last autumn, a decision taken by



Damien O'Brien in his recently harvested 28 year old Sitka spruce forest.

Damien and his late father – almost three decades earlier – delivered a handsome dividend, giving their farming finances a welcome boost.

In 1991, the O'Briens planted six acres of marginal land with Sitka spruce. "The land was a mixture of rough farming ground and scrub," says Damien. "It was planted by a local contractor, but myself and my father did the fencing – with the grant it cost us nothing to plant."

Last year, concerns about the increasing risk of storm damage combined with strong timber prices prompted Damien to plan the clearfell of the 28-year-old forest.

After getting his felling licence, Damien struck a deal to sell his timber on the basis of a "standing sale" to Ballygar-based Murray Timber and, following their advice, built a small loading bay to facilitate loading timber.

Damien kept a close eye on the harvesting operation and the removal of timber loads. "I erected a timber docket box on the road into the forest – not far from the house," says Damien. "Every lorry going in to take a load of timber put in a docket and so I was able to account for every load that came out. I found Murrays great to deal with and I had a cheque within a few days after each load."

Commercial sawlog and pallet wood went directly into Murrays with stake wood sold to a local fencing mill. The remainder, lower-value pulpwood, was destined for a different and strongly emerging market – the wood energy market. It is the beginning of a local woodchip supply chain supporting farming incomes, local forestry employment and helping to combat climate change.

Damien's clearfell produced over 800 tonnes of timber for which he received €32,000 including an additional 5.4% VAT he was able to claim as a VAT unregistered farmer. "I'm delighted with the return" says Damien. "The forest cost us nothing to plant and I had 20 years of forestry premiums – I'm looking forward now to replanting and hopefully seeing a return from the next crop."

The woodchip producer

Pulpwood from Damien O'Brien's forest didn't have to travel far to



Cyril McNamara, Teagasc, checks a delivery of wood chip for the Athenry boiler with Simon Hyde, Aughrim Sawmills.

market – only a few short miles in fact – to Aughrim Sawmills outside Ballinasloe.

The short haulage distance is a critical factor in the economics of a wood chip supply chain – a point not lost on sawmill manager Anthony Hyde.

"Both pulpwood and wood chip are bulky and expensive to transport," says Anthony. "So the shorter the haulage distance to the sawmill, and then to the customer, the better the economic and environmental savings all round."

Aughrim Sawmills has been commercially run by the Hyde family for over 40 years. Anthony's late father Michael upgraded an old estate sawmill in the 1980s and the business is now operated by himself, his brother David, and son Simon.

Although the main sawmill production caters for a range of niche timber markets using high-end durable Douglas fir and Larch, it also produces and supplies wood chip in response to increasing demand for wood bio-

mass fuelled renewable energy.

With an annual production of 700 tonnes of woodchip, and growing, Aughrim Sawmills is the trusted supplier to several local customers generating renewable heat. It typically uses small- to medium-sized biomass boilers.

Consistent woodchip quality and security of supply are critical to maintaining customer loyalty and trust. Customer confidence in Aughrim Sawmills is reinforced by its accreditation to the Wood Fuel Quality Assurance (WFQA) scheme which certifies suppliers for reliable, high-quality wood fuels. (Further information is available at <https://wfqa.org/>)

The moisture content of delivered wood chip determines heat generation efficiency and customer satisfaction. But it takes time for fresh timber to dry down to a moisture content of 20%, which Anthony believes is ideal for chipping.

Drying can take up to 18 months so,

although harvested six months ago, it will be another while before Damien's timber is ready for chipping and the next stage of the supply chain – delivery to a renewable heat user.

The renewable heat user

One of Aughrim Sawmills' customers is Teagasc and every couple of weeks, less often during summer, Anthony Hyde's son Simon loads seven tonnes of dried wood chip for delivery to the Teagasc Campus in Athenry – the main advisory and research centre for the west of Ireland.

Since 2011, staff and visitors to the campus have been warmed by renewable heat generated by a wood chip biomass boiler. This was installed by Teagasc as a significant initiative in reducing its energy usage and carbon footprint.

A 300kw Herz biomass boiler is at the heart of a mini district heating system. It provides renewable space heating and hot water to a number of

buildings housing 70 permanent staff and many more visiting staff and students. In 2017, heat produced by the biomass boiler was the most important energy source on the campus. It contributed one-third of all energy consumed on the site.

The boiler must stand up to economic and environmental scrutiny – it passes on both counts with flying colours. Based on today's energy costs, renewable heat generation using woodchip is saving Teagasc in the region of €10,000 per annum while displacing over 40,000 litres of oil and reducing CO₂ emissions by 100 tonnes annum.

Forestry in Galway is proving its value to farm forest owners, timber processors and end users. Strong demand and prices for commercial timber are now complemented by a local wood energy supply chain making critical economic and environmental contributions to farming and rural sustainability. Fuelling a better future for all.