



**Fountains
Forestry**
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Timber Prices Remain Strong But Market Faces Challenges Ahead



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It's been an eventful summer, COVID-19 has not gone away and continues to impact our daily lives. Vaccinations seem to give us hope of normality but new variants develop and throw us back into turmoil. Who knew the potential impact it has proven to have on the timber market? I'll

return to this shortly. So what have the timber markets been doing?

Some factors remain consistent and probably always will. For example, the UK continues to be one of the world's highest importers of round and sawn timber, producing only around 20 per cent of our needs at home.

With an increasing focus on timber as a low-carbon construction material plus traditional construction uses being

complemented by the ongoing development of engineered and glue-laminated timber products to supplement the use of steel and concrete, demand for sawlogs has never been higher and continues to grow.

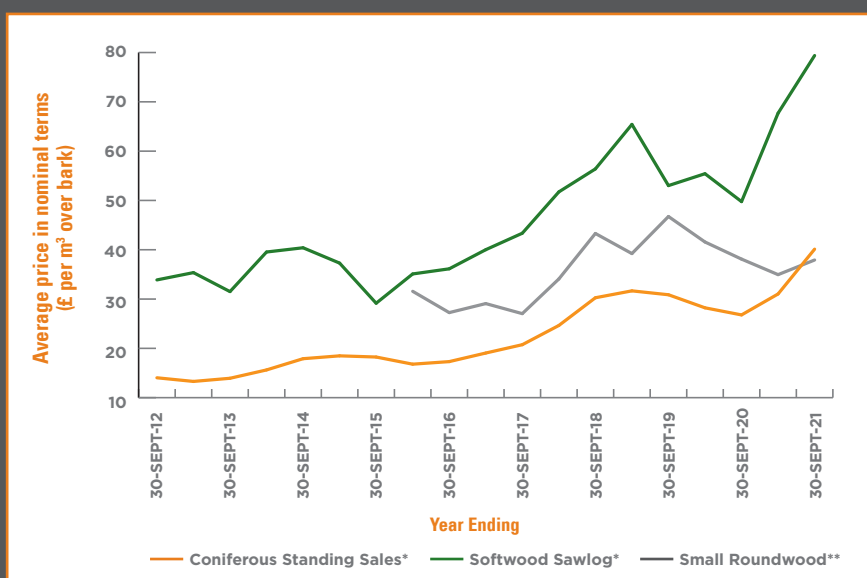
Sawlog values contribute the highest proportion of the sales value from most clearfell operations, typically generating in excess of 75 per cent of the income and up to 90 per cent in exceptional stands. However, the markets for small roundwood products such as biomass and chip are also facing increased competition for their raw materials with fencing products in particular fetching very attractive prices.

Demand therefore remains high but the greatest influence on price will always be determined by the global market, such as how much the US or China are paying for the Scandinavian timber that traditionally makes up the bulk of our imported materials. Sawn timber prices in the US, for example, have never been higher, attracting exports from Europe and Scandinavia for which UK importers have to compete. Consequently, this has a positive impact on home grown prices, if you are a grower, of course.

As a result, timber prices towards the end of 2020 and the early part of 2021 were probably the highest we have ever seen; this was partly driven by low stocks at mills following the reduced production during the initial constraints of COVID-19 lockdown. As stocks recovered, we saw prices fall back slightly but they seem to have stabilised and remain on a higher plateau than before.

The big money question is, will prices remain at these exalted levels? I think that prices at the mill gate are likely to remain high. However, the price paid to growers will be influenced by increasing production costs. Anyone who drives a car, unless it's

UK TIMBER PRICES 2012-2021



This graph is based on Timber Prices Indices data published by the Forestry Commission and shows the average price received per cubic metre for timber sold by Forestry England/Forestry and Land Scotland/Natural Resources Wales. The coniferous standing sales price is the average price received on timber sold standing, where the purchaser is responsible for harvesting. Softwood sawlog prices are the average price received on roundwood with a top diameter of 14 cm or more sold at roadside. Small roundwood is the average price received for roundwood of a smaller diameter, including chipwood, pulpwood, and woodfuel, based on sales at roadside.

Source: <https://www.forestryresearch.gov.uk/tools-and-resources/statistics/statistics-by-topic/timber-statistics/timber-price-indices/>

* Excludes sales by Natural Resources Wales from April 2017

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(continued on page 2)

Ash Dieback Spreads Across UK

Ash dieback was the most reported tree disease in 2020 and is now present across the UK. The disease is caused by a fungus (*Hymenoscyphus fraxineus*) and it is predicted to kill up to 90 per cent of native ash (>100m trees) over the next 20 years. Southern England has been particularly hard hit and we have been involved in ash felling programmes in clients' woods from Sussex down to Cornwall and up to Hereford and Gloucester.

Symptoms include blackening and wilting of leaves, followed by bark lesions with a characteristic diamond shape form as the disease progresses. It spreads via windborne spores and there is currently no cure or clear method for stopping its spread, although removing leaf litter around trees will disrupt the fungus' life cycle and reduce ongoing spore production.

We are seeing variations in resistance to the disease and subsequent attack by other pathogens (commonly honey

fungus). Large, mature trees show greater resilience, perhaps due to better air flow around the crown, or simply a large healthy crown is better able to withstand attack. Pole stage crops are particularly affected, and natural regeneration in infected stands succumbs after around a year. Soil type may also be relevant with stands on heavier clay soils faring better than trees on thin and/or chalky soils.

Unless a Statutory Plant Health Notice is issued, there is no legal requirement to take action. However, selective thinning of diseased trees is advised in lightly infected stands, but where more than 50 per cent are infected, the economic value of the trees will decline and an early harvest may be advisable, which also helps reduce spore production. Public safety must also be a priority and trees should be monitored for unsafe branches and weakened trunks.

This degradation of the tree's structural integrity is a big issue in dealing with ash dieback, making chainsaw felling particularly hazardous with increased likelihood of failure of the felling hinge and branch drop from the crowns. Consequently, most felling is done by mechanical tree shears, harvester, or by tree surgery teams with 'cherry pickers' to dismantle trees piece by piece.

Timber from infected sites is considered low risk and may be moved without restriction, hence we are at least seeing a net return from ash harvesting operations,



Characteristic wilted leaves resulting from ash dieback

with firewood markets holding up well. Unfortunately, the well-established export market for ash sawlogs in Vietnam is currently suffering from a shortage of shipping containers and hauliers as we approach Christmas.

New ash trees cannot currently be planted because of prohibitions on moving ash planting material. Natural regeneration may help, or beech is a logical substitute on chalky soils and oak on heavier soils. We are also introducing alternative species including hornbeam, whitebeam, lime, sycamore, and field maple. Non-native trees, including walnut and Italian alder, may give increased future resilience. We hope that increasing species range will help protect our woodlands in the long term. 🌳



A pole-stage stand hit by the disease with reduced crowns and dead trees

Timber Prices (continued)

electric, will be very aware of the soaring cost of fuel and clearly this has an impact on haulage costs and the costs of operating harvesting machinery.

Returning to my earlier point, one of the consequences of COVID-19 and social distancing rules has been that lorry driver training and testing has been severely curtailed. Add to this the impact of Brexit restricting the freedom of hauliers to employ European drivers and we are

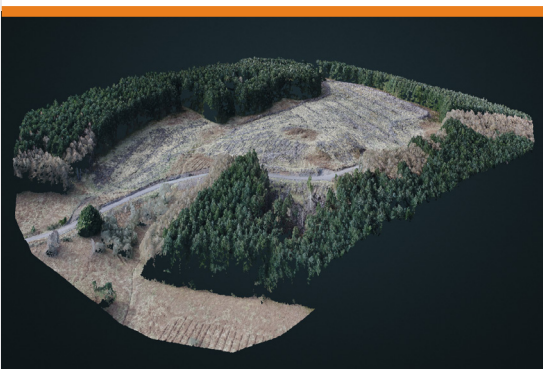
facing a significant shortage of individuals qualified to drive HGV trucks. We are already experiencing the effects of this in a slowdown of products leaving sites and anticipate the financial effects to manifest in the next round of timber sales in the spring.

One final sobering note. As I write this, our managers are busy assessing the extent of damage suffered from Storm Arwen, which smashed through the east

coast of Scotland and north England, and to a lesser extent, other parts of the country, in late November. Apart from a few notable exceptions, our clients have fared relatively well; others, we hear, have been much less fortunate. If losses are severe, it will place a significant demand on harvesting resources during most of next year and potentially create a glut of timber in the market, adversely affecting timber prices in the short term. 🌳

Forestry Meets The Age Of Technology

As Fountains Forestry's new technology and mapping manager, Dr Leila Eadie is helping ensure the company offers the best modern solutions, bringing forestry up to date. While we have been offering aerial imaging using drones for many years, Leila aims to expand what can be done with this technology. With a background in image analysis, technology development, and extensive Geographical Information Systems (GIS) experience, she believes that aerial imaging can benefit the accuracy and efficiency of forest management from planting through harvesting.



A 3D point cloud visualisation constructed from drone photography

Aerial images are quicker to record and less hazardous than GPS mapping on foot. The company's drones fly at 120m high and are able to cover around 30 hectares per flight as they take numerous images, which are later stitched together into high resolution photo-mosaic images. These images can then be used in various ways, but most often with GIS mapping of tree



Aerial photos used with GIS to accurately measure planting preparation operations

species, watercourses, fences, and other features, allowing plans to be made for forest operations and buffer zones. These images can precisely map planting areas, soil surveys, wind damage, and quantify contractors' work for accurate billing (e.g., areas cultivated for planting, length of fences and drainage channels). Virtual sample plots can be created to assess tree density and numbers of trees required to replace those damaged during the first years after planting. Another application is checking for tree disease and, if present, assessing its precise location and extent. The 360-degree panoramas also give a quick, current view of a site.

The latest trend in forestry is generating three-dimensional (3D) images and 'point cloud' surface models to

visualise the terrain, which are invaluable for planning in sensitive or difficult sites. New tools make calculating slopes, terrain and volumes of quarries or wind damage a simple matter. Forestry bodies already require numerous detailed digital maps for most applications and are embracing 3D rendering of future plans to show forests within their wider landscape and visualise how they will change over time.

Beyond imaging, Fountains Forestry uses 'smart' measuring devices for assessing timber volume and has also developed bespoke apps for on-site data recording and reporting. And there is plenty more to come: looking to the future, a next step is to create interactive augmented reality 3D views of woodland creation plans which will allow you to hold up your smartphone and take a walk around a site to see how it will look in 10, 20, and 30 years. 🌲



A drone's eye view of wind damage within a forest

New Manager In South England

Karen Batten has joined Fountains Forestry as an assistant manager working in Wiltshire. Karen studied at Bangor University, including a year with a district council's ranger service focused on conservation, and is the recipient of the Bangor Bursary, a Royal Forestry Society award for best forestry dissertation. She is currently in the midst of a program of ash felling, timber sales, and replacement, and enjoys every aspect

of the forest cycle. "I aspire to become a chartered member of the Institute of Chartered Foresters as I believe it is important as a manager to best serve our clients by remaining up to date with current research in silviculture," Karen said. "I look forward to gaining more experience managing the variety of woodland properties in this area and continuing to learn from knowledgeable colleagues." 🌲



Forest Management And Wild Birds: A Success Story

Raptors soaring through the skies are a magnificent sight, but not one welcomed by every forest manager. Earlier this year, white-tailed eagles were spotted at one of our managed forests where road building and harvesting were just about to begin. The site had undertaken a full bird survey in preparation for the operations, but the nest was only found when contractors noticed the birds flying in and out of a specific copse of trees.

Work was immediately stopped and the Royal Society for the Protection of Birds (RSPB) Scotland, NatureScot, and the Tayside and Fife Raptor Study Group were contacted. They confirmed that the nest contained two chicks, so a 500m exclusion zone was set up and a protection plan devised to enable work to continue once the chicks had grown. This allowed excavators to work from the farthest end of the new road under construction, gradually getting closer and acclimatising the birds to the noise and activity. Harvesters were able to work outside the exclusion zone, and once the birds had fledged, the road could be finished. The RSPB Scotland confirmed

that at least one of the chicks was successfully reared and fledged.

While the birds' presence disrupted the original felling plans, it provided an opportunity to increase the resilience of the forest road network by adding an alternative ring road section and opening up different areas of the site for future operations.

The option to remove the nest under licence and provide an alternative platform for future nesting was considered, but this carried the risk that the birds might choose somewhere less convenient for their eggs, so the nest was left undisturbed. The eagles have already returned to the nest and we hope they use it again because we can now manage work around its location.

Recent research has found that routine use of forest roads by timber trucks and pickups does not adversely disturb nesting white-tailed eagles at distances of 50 to 270m, although 'no-stopping zones' should be created near active nests [Cosgrove, et al., Scottish Birds 2017, vol. 37(1); pp 14-25]. Hopefully

these findings will be incorporated into official forestry guidance, reducing exclusion zones.

The work this year shows what can be achieved when various expert groups work together to get a good outcome for both the birds and the forest. 🌲



Fountains Forestry Manager Matthew Trewin holds a white-tailed eaglelet during tracker fitting

Marathon Follow-Up



David Adam (right), Fountains Forestry's regional manager for Southern England and Wales, shown with his son Jamie, completed his Three Marathon Challenge (he actually ran four!) and has raised more than £10,000 for Cancer Research UK.

In Memoriam: John Adams

It is with great sadness that we report the passing of our friend and colleague John Adams, age 67, after a brave battle with cancer.

John was a forester to the core and part of Fountains Forestry for most of his career. He learnt his trade with the Forestry Commission in his native Dumfries and Galloway before the large afforestation programmes in Northern Scotland's Flow Country saw him join Fountains Forestry, where he was

responsible for delivering planting and maintenance programmes for the next 25 years. In latter years, he returned to Galloway as a field manager and ran the day-to-day operations of the company's managed properties.

John always had great enthusiasm and considered every day an opportunity to learn new knowledge and skills. His knowledge, wit, and humour will be greatly missed by all within Fountains Forestry. 🌲

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