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# The UK Forest Market Report

## 2021

# Contents

# What's Next for Woodlands?

# The buyer's perspective

**Gavin Adkins**
Managing Director, Tilhill

In 2020 we reported on unprecedented growth in value and market size in the commercial forestry marketplace. Now, in 2021, I am pleased to see that the value of the market has been maintained with another record-breaking year of over **£200.4m** of commercial forests traded in the period.

What is fantastic to see is that value growth per average stocked hectare has continued unabated.

The growth of the value of an average stocked hectare in recent years has been astonishing, more than doubling between 2018 and 2021. From the buyer's perspective these are invigorating numbers, but should we be concerned as to whether this value growth is sustainable? We can see three macro trends that seem to be behind these step changes in value.

Firstly, there are simple supply and demand dynamics. 2021 has seen a reduction in supply of stocked hectares traded compared to 2020, and yet, at the same time, demand has increased from buyers, especially financial institutions, both old hands and new market entrants, who are increasing their scale of commercial forest buying activity.

Secondly, we have, for a sustained period of several years, enjoyed higher timber prices than the past, which has brought further confidence to forest buyers, and buoyed their assumptions of how commercial forests can perform as financial investments. Moreover, the long-term outlook for timber prices looks enormously positive, especially as the long-awaited growth in using timber as a low-carbon building material does now appear to be almost upon us.

Finally, and perhaps most crucially, the actual underlying worth of commercial forests is increasing. The trend of younger forests garnering higher values than older forests, first highlighted in 2020, continues this year. This shines a light on the increasingly recognised differences in worth between the diminishing number of 'first rotation' type forests, and the gradually more prevalent second rotation forests, now stocked with genetically improved Sitka spruce to increase productivity coupled with good access to the timber.

So, where does that leave the sustainability question of value growth? Well, the picture is not completely clear but certainly the growing value of timber, growing productivity levels, and the increasing prevalence of tested infrastructure within second rotation properties do point to real increases in the underlying worth of commercial forests, rather than straightforward price inflation as a consequence of expanding demand.

> **"The trend of younger forests garnering higher values than older forests continues"**

The other area that is also attracting high levels of interest from investors is planting land with £53m worth traded over the period. The market for planting land is developing and expanding and this year we are delighted to report on it as a distinct market segment. The buyers of planting land are a broad church with multiple objectives. How those objectives are weighted on aggregate in the market is starting to make real changes to land values and is discussed later in the report.

It is an exciting time to be in the forestry sector, where the wider externalities and benefits of trees and woodlands to society and the environment are increasingly recognised. The mechanisms to see these benefits monetised to drive positive change are developing, and the role of timber alongside this is heartening.

# The seller's perspective

**Edward Daniels**
Head of Forestry, John Clegg & Co

There has never been a better time to sell your woodland, one could argue.

Last year was an extraordinary 12 months in the forestry sector, but 2021 has certainly not disappointed.

Timber prices have remained high, plantation values are breaking records in terms of £s per stocked hectare achieved and financial capital is in abundance as investors pour cash into collective investment funds. Meanwhile, institutional investors such as pension funds and other new entrants are allocating more equity to sustainable investments than ever before.

The high unit values achieved in 2020 certainly encouraged plenty of properties to come to market in the spring, indicating that sellers were convinced that strong prices would continue to be paid. And they were right.

This year's report reveals that the average value per stocked hectare of commercial forestry presented to the open market in 2021 has risen strongly.

For 2021, the average price recorded was £19,300 per hectare – a 21% increase on the 2020 average of just under £16,000 per hectare. Of course, values are determined by a number of factors including location, access, species and the age of the trees, so the range in prices being achieved is wide, with significant geographic and/or quality variations. However, we have seen a number of multi-million pound transactions, featuring high-quality crops, ending up trading for significantly more than the asking price, with the published guide price already equivalent to over £30,000 per stocked hectare.

There have been fewer off-market transactions this year than last. In a seller's market this is not surprising, as clearly better value is achieved on market than off. There was only one significant commercial forestry sale that was circulated on a limited basis, although owing to its quality it did achieve an outstanding result.

We estimate that as many as two-thirds of those choosing to sell in recent times have been private individuals looking to take advantage of the strong rise in capital values. In contrast, many of those in the market to buy – both woods and planting land – are institutional investors, signalling a shift in terms of land ownership within the sector.

A consideration moving forward will be the potential impact of any rise in interest rates on forestry returns. When bank base rates are low, tangible assets like forestry tend to look very attractive compared with asset classes with more uncertain prospects.

With interest rates generally expected to rise in response to rising inflation, there is the question as to whether it could drive investors towards other investment opportunities.

However, global trends point to increasing demand for wood products (from the construction industry specifically), leading to a strengthening of timber prices, which suggests forestry will continue to be appealing to a wide range of investors. Investment managers will also still need to be able to demonstrate they are meeting their Environmental, Social, and Governance (ESG) obligations, and forestry certainly can assist in ESG matters.

Overall, the signs remain extremely positive for the woodland and forestry sector, opening up opportunities for potential sellers of either existing woods or land suitable for afforestation.

**"The high unit values achieved in 2020 certainly encouraged plenty of properties to come to market"**

# The Market

# Introduction

**The main section of The UK Forest Market Report focuses on completed sales of commercial forestry properties which are over 20 hectares in size and predominantly planted with conifer. Other woodlands over 10 hectares in size are covered in the Mixed Woodlands section of the report.**

For 2021, for the first time, we are delighted to introduce transaction data on the planting land market, reflecting growing interest in land suitable for afforestation.

Where the report refers to individual years (2021 etc.) the actual period covered is the 1st October to 30th September. The UK Forest Market Report has been produced since 1988 and our data series now covers 23 years, incorporating 1,909 transactions which total some £1,664m and 299,000 stocked hectares (ha).

As such we believe that it is the most comprehensive publicly available record of forestry transactions in the UK.

It should be noted that since the commercial forestry data comprises of 67 completed sales, the results can be influenced by individual transactions, particularly when considering subsets of the data. Similarly, as the type of properties sold in any one year will vary, care should be taken in comparisons of year-on-year results.

*More detail on the data analysis is available on request from Tilhill or John Clegg & Co. See contact details at the back.*

# Overview

Peter Chappell

By Peter Chappell
Head of Forestry Investment, Tilhill

## In the 2021 period we recorded:

- **£200.40m** of commercial forestry properties transactions, just over the 2020 total of **£200.18m**.
- **£53.06m** of planting land transactions. **£26.36m** of natural capital transactions.
- **£10.70m** of mixed woodland transactions, up from **£6.6m** in 2020.

The total market for commercial forestry properties was £200.4m in 2021, which, while only very slightly up on 2020 levels, is still the largest ever recorded within our dataset. In the 2020 Report it was unclear if the increase in market size growth seen from 2019 to 2020 would be sustained due the presence of a very large transaction in that period. However, with two back-to-back years of over £200 million of commercial forestry traded, a market size of this level can now probably be described as characteristic, rather than remarkable.

As per the long-term trend, **Scotland** provided around three quarters of the commercial forestry market at **76%**. **Wales** has continued to be the second largest contributor to the market value at **22%**, and **England's** share this year diminished to only **2%**.

Although the total value of commercial forestry has remained firm, and the **number of transactions** at **67** is slightly more than the 61 in 2020, the **volume of stocked hectares** has decreased **17%** from 2020 at around **10,400 hectares**. The **average size of commercial forestry** sold this year was **155 stocked hectares**, which is something of a return to normal after the average size in 2020 increased to over 200 stocked hectares. This means that the 'basket' of properties traded in 2021 on average has been smaller.

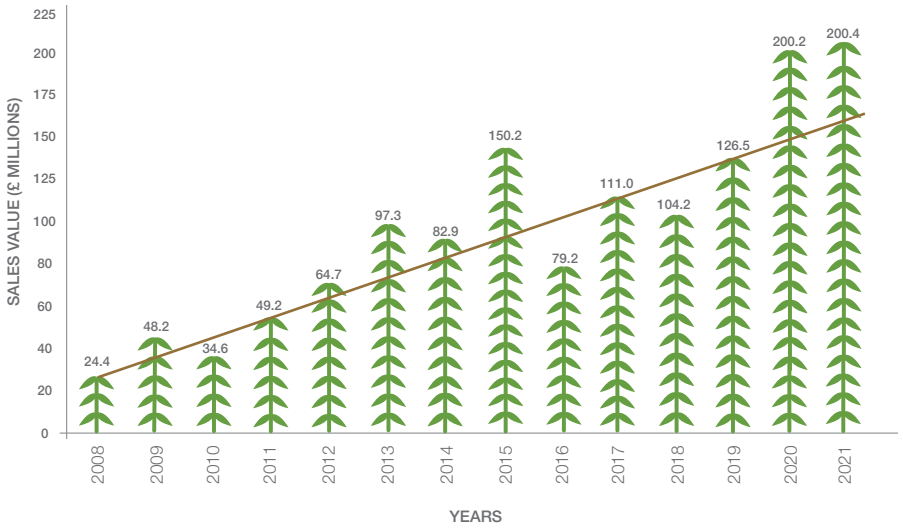
With smaller forests being traded in 2021, as would be expected, the **average cost** of a commercial forest has diminished, but only from £3.3 million to **£3.0 million**. Clearly, with smaller forests being traded and less hectares overall, the fact that the market value size has not reduced substantially means unit prices per stocked hectare have continued to increase, and this increase in 2021 has been material.

From 2020 to 2021 the **average cost of a stocked hectare** has **increased** by **21%** from just under £16,000 to over **£19,300**. This follows increases of 39% in 2020, and 23% in 2019, meaning that since 2018 the average cost of a stocked hectare has more than doubled.

## Recorded sales

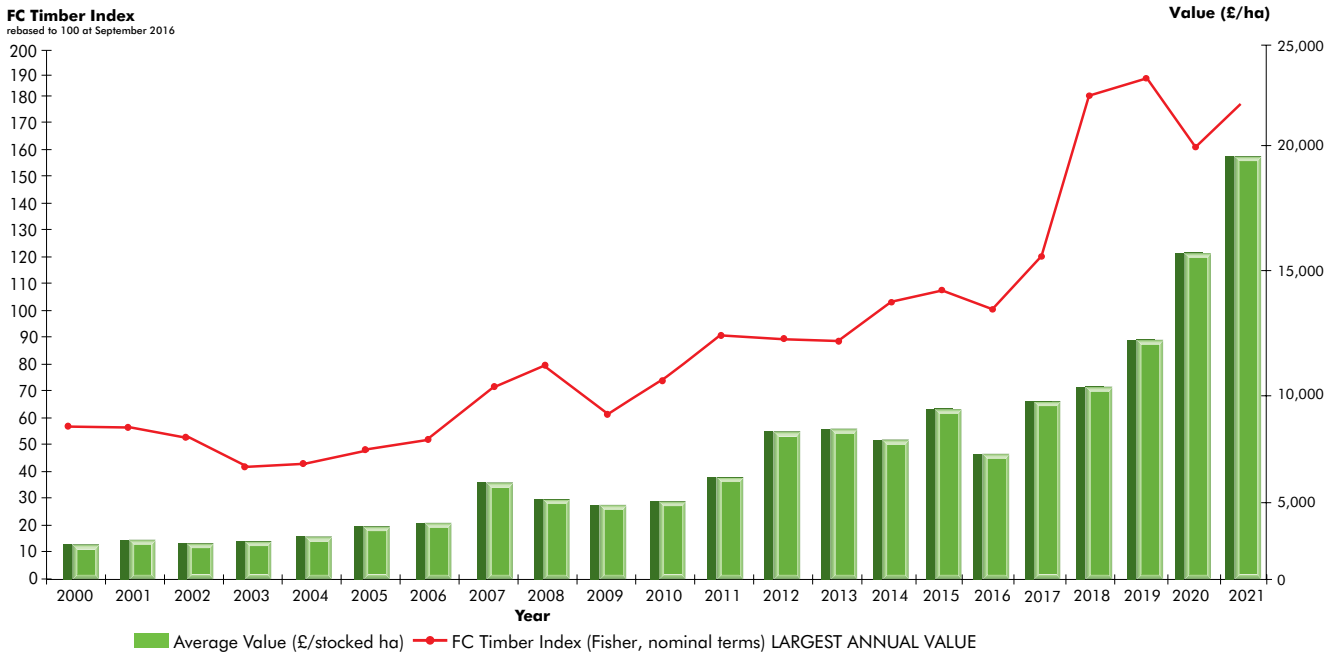
**76%** Scotland
**22%** Wales
**2%** England

**Total Annual Value of Forestry Properties Sold**



# Overview

**Average Sale Price per Hectare and the FC Coniferous Standing Sales Index**




The drive of commercial forestry values seems to be resultant from constrained market supply against a background of increasing demand from institutional investors. There is some evidence that larger forests over 100 hectares are now attracting the largest per hectare values as an increasingly competitive market environment develops for high deal values in the forestry market, whilst smaller forests (<50 hectares) attract less fierce interest.

The growth of institutional investor demand seems to be fuelled by societal attitudes demanding that investments feature high environmental, social and carbon credentials. In response, institutional or fund type buyers are increasingly developing their Environmental, Social, and Governance (ESG) policies and in turn seeking assets which can deliver on these goals, such as commercial forestry, or land for afforestation.

At one end of the spectrum are the commercial forestry buyers who are focused on land with the greatest potential for conifer plantations. We then have at the other end of the spectrum, the natural capital investment buyers, who may have objectives related to positive outcomes, such as increasing biodiversity. The growth of natural capital driven buyers has created new energy in the part of the land market where commercial forestry may be unlikely to be permitted but where there are natural capital opportunities.

Interestingly, some new market entrants have multiple objectives, part financial and part related to ESG or natural capital outcomes. This trend seems to point to a situation where carbon unit prices, alongside other possible payments for ecosystem services, may have an increasing influence on land values.

So, what's next for woodland and the values within the commercial forestry market?

There are no signs of abatement in the growth of demand for commercial forestry assets, with major fund announcements made in recent months that suggest ongoing asset purchasing demand is 'built in' to the market for some time ahead. At the same time, historically, the quantity of supply of forestry assets to the market has not altered markedly. Within these tight constraints the trend of value growth in the forest market beckons for 2022.

*Additional analysis of the market is available on request from Tilhill or John Clegg & Co. Please see contact details in the back of this report.*

**Average cost of a stocked hectare**

**2020: £16,000**

**2021: £19,300**

# Commercial forest values 2021

By Simon Hart
Head of Forestry (Scotland), John Clegg & Co

**Simon Hart**

## The story behind rising forestry values

Forestry values have surged ahead again in 2021 continuing the upward trajectory we have seen over recent years.

As we have seen from this year's report findings, average values have risen 21% in the past year and this follows a 39% increase in 2020. Our data also shows that **sales prices** in 2021 have **exceeded guide prices** by about **50%**. This is a remarkable situation and characteristic of a rapidly rising market.

So how do we explain such dramatic rises and what do we think might happen in the future?

If we look at timber prices over the same 2020-2021 period, they are relatively flat, so on the face of it, this is not the answer as to what is driving up values. Yet if we expand our view and examine the period 2016-2021 then timber values have risen by some 70%.

Timber prices must be one of the drivers, but perhaps there is a lag between high timber prices and plantation values? In the initial years, investors will be nervous about using suddenly higher timber prices in their long-term forecasts but, as the high prices settle and become the new norm, they are used for forecasting with more confidence.

Some of the factors that have been influencing the timber market in recent times include:

- A UK government striving to achieve a housebuilding target of 300,000 homes per annum fuelling an increased demand for timber.
- A continued weakened Sterling meaning imported timber remains costly.
- A building industry keen to design more timber into buildings; and
- A manufacturing industry ready to embrace the inclusion of more wood fibre in designed products.

It is also impossible to talk about what is driving commercial forestry values without mentioning the importance of Environmental, Social, and Governance (ESG) factors and the move to decarbonise the economy – both of which are reasons why companies and funds want to invest in forestry. Alongside this, we have also seen an increased appetite from individual investors looking for amenity woodland for recreational and/or family purposes. This is supported by a tax system that continues to provide significant benefits to the individual investor of commercially managed woodlands.

Underlying land values are also important and explain an element of the rises we have seen. As final clearfell values rise, so the price someone is prepared to pay for the land - be it for afforestation or restocking - logically rises too. There is also a gearing effect whereby a small increase in clearfell value results in a much higher percentage increase in land value (at the same discount rate), particularly where land values have historically been relatively low.

In 2020, we commented on the high prices paid for teenage woods (relative to older woods) but were cautious about jumping to conclusions as the sample size was small. However, during the past year we have seen further evidence of this phenomenon, with two particularly large sales of teenage woods at over £40,000/stocked hectare.

These apparently high prices are not restricted to teenage woods; they are evident for all young woods and include planting ground. We think these high prices are driven by a few things including:

- Many younger woods are second rotation and so will have infrastructure in place. The public road network will be tried and tested for timber haulage and the site will have a track record of growing conifers.
- Recent advances in tree breeding mean these younger woods are growing more productive and better-quality trees than older woods; and
- Investors are assuming that timber prices will beat inflation and provide long-term real growth. The longer the time period to felling, the greater the impact of this gearing.

As we look forward, for the first time in a long time, markets are now talking about inflation and possible rising interest rates. So how might this impact on forest investor sentiment? Rising interest rates will increase returns on cash and should logically increase the returns demanded from investments. This reduces capital value. However, most investors seem to expect timber prices to beat inflation and see woodland investment as a hedge against inflation. So, it is possible forestry investments will not see values eroded by inflation.

Given the significant wall of cash seeking to invest in UK forestry and a positive outlook for timber prices, we don't see a dip in prices coming anytime soon.

# Planting land insights

By William Johnson
Forestry Investment Advisor, Tilhill

William Johnson

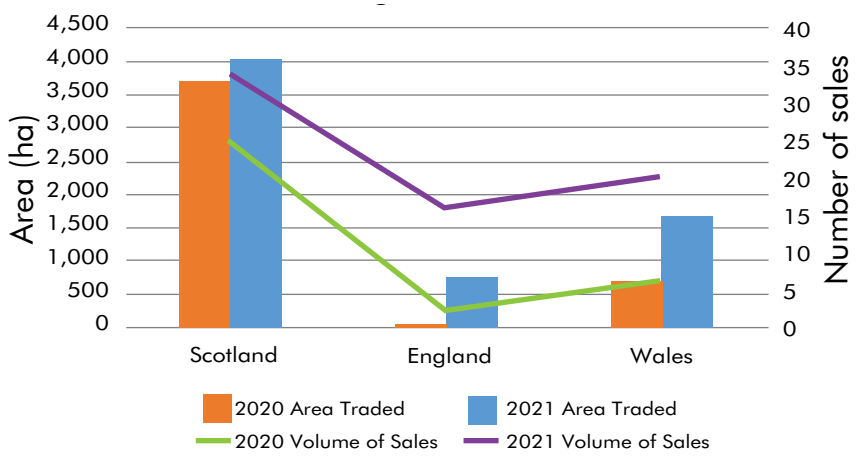
**According to the 70 transactions of land we have recorded this year, the total value of the planting land market in 2021 was £53.06m. Another £26.36m of natural capital land, which we have not included in the planting land data, was also traded.**

This is the first year where we have attempted to describe the dynamics of the market for planting land. Interpreting trends in this market is not without its challenges. Planting land represents a subset of the wider agricultural land market; we only track land that we think is, on the whole, suitable for afforestation, and due to its price point and inherent characteristics would be of interest to buyers motivated by woodland creation.

However, where the ultimate purchaser is not our client we do not always know if woodland creation will be the final land use, or if other motivators were at play. This makes comparisons with average land prices difficult, as we are capturing not only the preferences of woodland investors but also amenity buyers, natural capital investors and, of course, farmers. Consequently, investors and sellers should treat average values with caution and be guided by the specific features of a property that may influence its value for afforestation.

In 2020, areas of agricultural land coming to the public market were at an all-time low. According to data from Strutt & Parker, only 21,850 hectare (54,000 acres) of agricultural land were marketed in England, and 5,300 hectares (13,100 acres) in Scotland, against 5-year averages of 32,150 hectares and 13,300 hectares respectively. So, as the country emerged from the restrictions put in place during the depths of the pandemic, expectations were high that we would see a reversion to a more active market.

**Planting Land Traded**




During 2021, we saw a significant increase in the **total area of planting land sold,** increasing **45%** from 4,460 hectares to **6,480 hectares**. While sales in **Scotland** still dominated, at **62%** of the market, we saw a large shift in transactions towards **Wales**, up to **26%** of the total from 16% in 2020. **England** also increased its share at **12%** up from 1% the year before. The shifts in market share towards Wales and England may represent investors capitalising on more attractive subsidies – grant rates in Wales and England have become increasingly generous compared to those in Scotland, to the extent that they may offset the financial drag of higher average land prices or less commercial planting mixtures mandated by grant schemes.

The rise in market activity across the UK was characterised by more numerous, smaller transactions compared to 2020. We tracked **70 planting land deals** across Scotland, England and Wales in 2021 compared to 33 in 2020, with an average property size of 93 hectares compared to 139 hectares. With the exception of England, which saw an increase, average size was around 25% smaller in Scotland and Wales compared to last year. Again, this may be partly due to more favourable grant rates making smaller schemes financially viable, especially in combination with carbon finance, but it may also reflect hesitancy to sell from owners of larger properties, given the continued uncertainty over the future of agricultural subsidies, the impacts of COVID-19, and labour shortages in the agricultural sector.

Of course, what is of most interest to investors is how prices have moved over the period. Our analysis indicates that the **average price per gross hectare** increased **37%** in 2021, **up to £8,500 per hectare** from £6,200 in 2020. However,

*continued*

# Planting land insights

the metric that is critically important is the price per plantable hectare, akin to a stocked hectare in commercial woodlands. Again, we saw a steep rise year on year to **£11,000 per plantable hectare** from £8,500, up **48%**. Within the UK, **Scotland** saw the sharpest rises, up **over 54%** with prices in **Wales** rising **over 30%**. Average prices in **England fell 20%** to **£14,700 per plantable hectare** but this may be an artefact of a very small sample size in 2020.

Attempting to interpret these price rises is complicated by the specific nature of each property – some contain residential or farm buildings that boost the property value, while others are simple land parcels, or may have extensive areas of ground unsuitable for planting. However, these prices do chime with what we have observed has been necessary to secure properties in the market in 2021.

So why have we seen such a steep increase over the year? Part of the answer lies in the simple market forces of supply and demand. We have observed a surge in investors looking to acquire land for afforestation, either for commercial forestry, woodland carbon or both. Similarly, large asset managers have been active in raising hundreds of millions of pounds of capital for investment in woodland creation and forestry. Demand is therefore sky-high for suitable land and, despite a modest recovery in land availability, supply has been tighter than we might think.

Our analysis of intra-year trends indicates a significant slowdown in property completions in the second half of the 2021 period – only 10% of the sales we tracked completed in this period. This is most probably due to slowdowns in marketing under the COVID-19 lockdowns late in 2020 and early 2021. Consequently, we saw the average selling price reach £14,300 per plantable hectare in late 2021 albeit from a very small sample size.

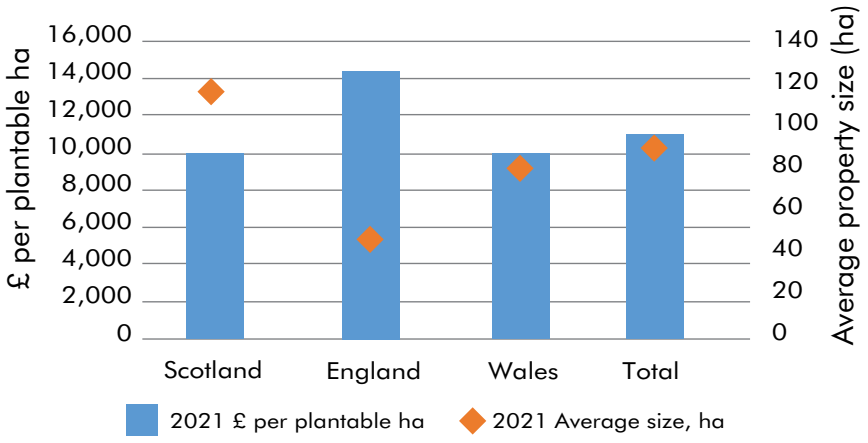
The questions everyone will now be asking are, can such price moves be sustainable, and where can they go from here? It is an adage of the investment industry that 'the return you make depends on the price you pay', which is to say that if you get the entry price wrong your investment performance may suffer. Understanding what the 'right' price is for forestry and woodland creation means taking a long-term view on where the key value drivers are heading – in this case, timber and carbon prices. In our view, current planting land prices can still be justified with reasonably modest expectations for the future of timber and carbon markets. The extrapolation of current trends into 2022, however, will likely require a continuation of optimistic expectations for the direction of timber and carbon prices if we are to avoid seeing significant yield compression in the afforestation investment market.

Finally, how much newly planted woodland is being created? The latest data from Forest Research shows a slight year-on-year fall in the **total planted area** across the mainland UK, down 4% to 13,000 hectares from approximately 13,500 hectares in 2020. **Scotland** remains the centre of gravity for woodland creation, delivering **82%** of the UK total at **10,700 hectares** although down 3% from last year.

**England** was also lower year on year at **2,100 hectares** from 2,300 hectares in 2020, while **Wales** saw an impressive increase of over **250%** to **290 hectares** from a disappointing 80 hectares last year. This impressive turn-around indicates that the Glastir Woodland Creation scheme is starting to bear fruit, despite the impacts of the pandemic.

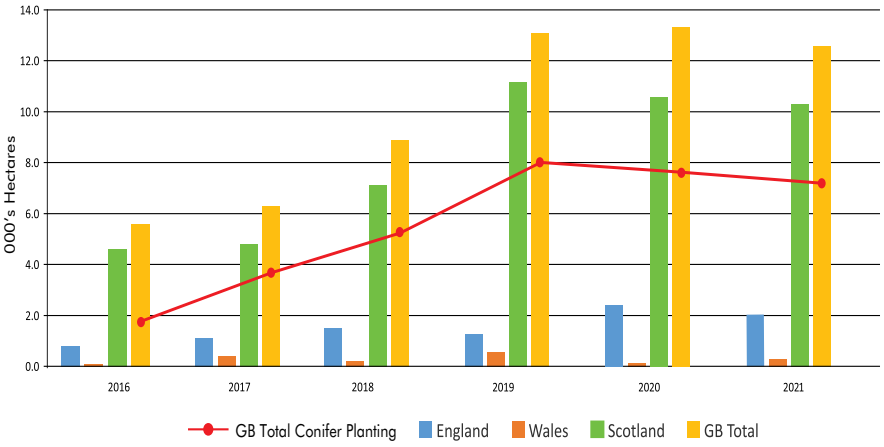
Despite widespread calls across the industry for the UK to reduce its reliance upon imported softwood timber, the proportion of **conifers** in newly planted land fell to **55%**, or **7,200 hectares** on the mainland UK. This trend was consistent across **Scotland** (-500 hectares to 6,940 hectares or 65%), Wales (28% from 50%, at 80 hectares) and England (-60 hectares to 180 hectares or 9%).

**Planting Land Prices**




**Total new planting in UK (including conifer planting)**

*(Source: Forest Statistics 2021, Forest Research)*



Olly Thompson

# Mixed woodlands

By Olly Thompson
Associate Director, John Clegg & Co

## Values continue to rise for mixed broadleaved properties and we have also seen a small rise in the number of transactions in 2021.

It is a strong market, where demand is outstripping supply, meaning properties which may have been on the market for some time, (sometimes years), are now finding new owners.

This year's report shows that transactions across Great Britain totalled in excess of **£10.7m**. This is up from the £6.6m total in 2020, when we saw COVID-19 restrictions supress the number of properties which came to the market, particularly during the first half of the year.

Broadleaved woodlands can vary greatly in their value per acre with factors like location, look and feel being crucial – it is a much more subjective market than commercial forestry. Predominantly centred around west and southern England, woodlands can be difficult to value due to their complex make-up and very localised/nuanced appeal. However, when they do come to the market they are frequently strongly contested with either an early offer in excess of guide price being accepted, or a round of competitive bidding after the rapid setting of a closing date.

Buyers can have a wide range of motivations. For some, the priority is making the most of the different recreational and amenity opportunities it offers, but others are more driven by conservation objectives, seeing maintaining and improving a woodland as a chance to 'do their bit' in the battle against climate change. Timber and firewood are only a minor consideration, if any, in many situations.

In this year's report we have a sample of **36** properties from across Great Britain, covering a **total area of 2,528 acres**, with an **average property size of 70.2 acres**. It is important to note our dataset only includes sales over 10 hectares. This is so the figures are not overly skewed by the sale of very small blocks of woodland, which in the right locations, command a significant price premium.

**England** dominates the mixed woodland market, accounting for almost **£7m** of the 2021 sales total. There was a mix of smaller and large properties marketed in England, with an **average price** paid of **£6,170 per acre**. This is up from £5,330 per acre in 2020. However, average prices do mask a huge variation in values – the range in prices being paid in England during 2021 was £2,000 to £11,400 per acre.

Examples of notable sales in 2021 include Heath End and Rumerhedge Woods in Oxfordshire – a 200-acre mixture of mature beech and oak with pockets of Norway spruce and Douglas fir – which completed for in excess of **£10,000 per acre**. This was an interesting sale given it was larger in scale than the bulk of transactions and the high value achieved also challenges received wisdom that properties with high public access will have a reduced selling price.

At the smaller end of the scale, Priors Wood in Herefordshire (34 acres) and Sutton Wood in Hampshire (52 acres) completed for £8,150 per acre and £6,125 per acre respectively.

Transactions across **Scotland** have been dwarfed both in size, area and value by commercial sales. However, **10 properties** have sold for **a combined figure of £2.19m**, with an **average sale price of £2,510 per acre**. This price has been unusually reduced by two very thrifty sales at only £500-600 per acre. However, two others sold for over double the average, while a third completed for £8,370 per acre.

**Wales** saw the fewest number of transactions (10 in total), with a **total sale value of £1.4m** and an **average sale price of £2,490 per acre**, significantly down on the 2020 figure of £3,910 per acre. With such a small sample the average does need to be treated with caution. This was compounded by one property which was heavily impaired with a restock obligation selling for sub-£1,300 per acre and equating to one third of the total sale area. As well as sporting rights, mineral rights appear to be equally important for buyers in Wales, especially where mixed woodlands have a small but significant proportion of conifers, or where access is poor and infrastructure improvement is required.

It is almost certain that the lack of hectares coming to the amenity market is driving prices upwards. There also appears to be a surge in demand for woodland/green space with a number of first time purchasers now entering the market as a lifestyle choice. Others, recognising the potential for capital growth, are looking to either draw

money from their pensions to own land/ woodland or purchase through their Self-Invested Personal Pension (SIPP).

But while demand remains very strong, sellers are often reluctant to market their woodlands. The emotional attachment people can have to this kind of woodland is high (arguably higher than with many commercial properties), so sales are often seen as a last resort, tending to only be triggered by financial constraints, probate and where an owner becomes unable to self-manage the woodland.

## Price average per acre

England: **£6,170**
Wales: **£2,490**
Scotland: **£2,510**

# Standing timber values

By Harry Stevens
Timber Buying Director, Tilhill

**Harry Stevens**

**So, the question is: How does your standing timber, when it is cut down, turn into money in your bank and therefore increase the value of forest properties?**

If we work back from the finished product at the point of it leaving the sawmill, the highest value product produced from standing timber is construction timber.

Construction timber has, over the past few years, seen very strong price inflation, almost doubling in value. This has been driven both by internal UK factors and, more significantly, external issues. The differential between kiln dried graded and treated timber, for a long time similar in value, is now worth 20% to 25% more than fencing (posts, rails, feather-edge boarding) which in turn is worth 20% to 25% more than palletwood.

The market for construction timber in the UK is largely driven by imported timber which accounts for two thirds of the market, with Sweden being the principal operator. Historically, Swedish construction timber has been the benchmark product in the market, which all other sellers reference, and home grown tends to sit slightly lower with a differential that can be anywhere between -£10 to -£50 per cube $m^3$ and can be even greater.

## So, what has been happening with the Swedish market over the past 18 months or so?

As economies open up around the world demand for fencing (at home in GB) and then construction (both home and worldwide) went off the scale with prices rapidly following. Notably, in the US a shortage sent the future price of sawn timber up threefold, drawing in boats from Sweden which in turn demanded a similar price within Europe.

In better quality clearfells, sawlogs can make up as much as 85% of the parcel though this is unusual with two thirds being the mark of a good quality parcel. Additionally, the buyer is looking for a parcel with a high proportion of longer length logs with a decent top diameter. Ideally, the parcel would be capable of making all 4.9m logs with a top diameter of 24 to 30cm. I can but dream!

In our mythical parcel, probably somewhere in south Scotland, the revenue from the sawlog is going to return over 90% of the value to the grower. Even in a poorer quality parcel which is 50% log, 75% of the value comes from the sawlog element.

This differential between sawlog and small roundwood values has become much more apparent over the past five years. Small roundwood prices have been driven up strongly over the past decade or even longer by government subsidy of biofuel, to the point where, in some extreme cases, small roundwood users were able to pay more than sawmills. The past few years have seen the biofuel market reach its high-water mark as almost all biofuel projects have now been fully commissioned and indeed some have failed and disappeared or been refinanced. Consequently, we see a market that has returned to the historical norm where sawlog values drive standing timber prices, and this is very likely to continue.

Having established that a parcel chock full of lots of lovely sawlogs is what we want, and that the value is closely correlated with the construction market, how do we see the construction market moving in the medium term and therefore the standing timber price?

The recent period has seen several commentaries on the market that predict a strong construction market for 2022 and 2023 with buoyant demand within the UK whilst, at the same time, the wider indicators in the advanced economies of the world suggest a similar position. Therefore, it is likely that we will continue to see a strong market for standing timber.

The question of will we continue to see the current high prices paid for sawn timber or will the market settle is unclear. My own view is that we will see the market settle, but that some of the higher prices are now baked in. Therefore, we will continue to see historically high standing prices paid, though perhaps not quite the very top of the market seen over the past six months.

**“It is likely that we will continue to see a strong market for standing timber”**

# Exploring the factors influencing prices for woodland carbon

**David McCulloch**

By David McCulloch
Head of CarbonStore

"I sold my carbon for £8 a unit," announced the woodland owner. "Surely that means carbon prices are £8 each?" you ask, very sensibly. Unfortunately, the most honest response would be "Well, it depends..." "On what?" is the inevitable follow up.

A woodland's location is a central influence on price. Rory Stewart, the politician, has argued very convincingly that the value of natural capital, including woodland carbon, should be determined by the number of people able to appreciate its benefits.

That logic is evident in recent transactions in the woodland carbon market. A broadleaf woodland in Argyllshire has achieved £13.50 per Pending Issuance Unit (PIU), while a similar project in Northumberland, close to Newcastle and easily accessible from the Midlands, is asking £17 per PIU.

The species mix of a woodland is also important. By purchasing PIUs from a woodland, companies identify themselves closely with the characteristics of the project. While many companies are keen to buy PIUs from a conifer woodland growing the raw materials to build our houses and homes, many more want to align themselves with the quintessential broadleaf woodland. The impact of this dynamic means PIU prices from productive woodlands range between £12 per PIU in northern Scotland, to £13 in the Scottish Borders and £14 in mid Wales. In contrast, broadleaf projects, within an hour's drive of London command over £20 per PIU while a similar project in Dorset has secured £19 per PIU.

Careful thought should also be given over which company you use to sell your PIUs as the business models of certain companies disguise the true price. There are some who will match woodland owners wishing to sell PIUs directly with companies seeking to buy them. The two parties, supported by the intermediary, will agree a price which represents a fair and transparent transaction price.

There are others who operate very differently, purchasing PIUs from a woodland owner at one price before selling them onto a company at a higher price. In this case, neither party understands the true value of a PIU and the price is hidden. We recently heard of one such transaction where the woodland owner was paid £10 per PIU by the broker who then charged a company £20 for the same PIUs.

Finally, for most companies, some level of access, signage, and photography rights are a prerequisite for the purchase of PIUs from a woodland. Buying woodland carbon credits remains a voluntary undertaking so companies are understandably keen to maximise the credibility they can generate from their efforts. This is an important consideration for woodland owners to bear in mind.

The true price of PIUs in the UK's woodland carbon market has been further disguised by the dramatic shifts that have occurred over the past two years. In mid-2019, woodland owners were being offered less than £2 per PIU. By August 2020, that figure ranged between £2.50 per PIU and £5, though the price paid by companies was likely much higher.

As the examples above illustrate, prices have continued to increase over the past 12 months reaching £13 to £15 per PIU across Scotland and £18 or higher in southern England. In just two years, PIU prices have more than trebled. Various factors underpin this trend.

The launch of the Woodland Carbon Auction Guarantee (WCaG) across England, whereby woodland owners submit the lowest possible bids for carbon units which would render their planting projects viable, has helped shed useful light on the price level at which carbon funding incentivises woodland creation.

The first auction in January 2020 achieved prices of £24.11 per unit. That dropped to £19.71 in the second auction (June 2020) and again, to £17.31, in the third auction (October 2020). This may be explained by the higher weighting of conifer schemes, offering supplementary timber income, in the second and third auctions.

Since then, the price has rebounded to £20.32 in the fourth auction (August 2021) which allocated 75% of the £10m available towards native broadleaf projects. Although the WCaG is restricted to England, where higher incomes from land necessitate higher carbon prices to incentivise planting, average prices around £20 have alerted Scottish and Welsh woodland owners to carbon's true potential value.

Woodland owners also have more options available when selling their PIUs. Before mid-2020, the market was an effective duopoly, comprising one private sector profit-driven company and one third sector organisation. Over the past 12 months, new companies have arrived offering woodland owners alternative options and greater choice.

Global dynamics are also an important driver. According to *Natural Capital Partners*, the percentage of Fortune Global 500

# Exploring the factors influencing prices for woodland carbon

companies announcing net zero targets has doubled over the past two years. This reflects wider trends across the private sector and its consequences are evident in the data which *Ecosystems Marketplace* draw from their research on global voluntary carbon markets.

In 2019, the total value of voluntary carbon offsets traded globally was U$320m. That figure rose 48% year on year in 2020 to U$473m and growth rates have accelerated since then. By end-August 2021, the traded value had already increased 58% to U$748m and is now expected to exceed U$1bn. Rising corporate awareness of environmental concerns means more funds are being allocated to alleviate them.

Growing environmental awareness and greater scrutiny of the varying offsetting standards has, according to *Ecosystems Marketplace*, elicited two further disparities in global offsetting markets, both of which are relevant to operators in the UK's woodland carbon market.

UK-based carbon-oriented woodland projects are termed 'removals-based projects' because they remove greenhouse gases directly from the atmosphere. According to internationally respected offsetting guidance, such as *The Oxford Offset Principles*, removals projects are superior to those, such as peatland restoration or solar energy projects, which simply avoid or reduce GHG emissions.

This thinking is evident in *Ecosystems Marketplace's* pricing data. The average price for a 'reductions-based' offsets was just U$1.71. In contrast, the average global price for a 'removals-based' offset was almost 5x higher at U$7.98.

Buyers of carbon offsets will also pay more for offsets issued by standards who adhere most strongly to the six fundamental principles of carbon offsetting i.e. the offsets must be real, measurable, permanent, additional, independently verified, and unique.

Accordingly, the average price of those issued by the American Carbon Registry was U$11.37 and U$11.57 under Plan Vivo, 3.7x the average price of an offset on international markets. The Woodland Carbon Code, partly due to the arduous bureaucracy required for validation and verification, is highly regarded as an international offsetting standard so its authorised projects benefit from that credibility.

The woodland carbon market is a nascent but promising sector. It is overseen by a respected and trusted body, the Woodland Carbon Code. It has witnessed steep growth in both the total value of woodland carbon transactions and the value of its individual units. Growth in demand for woodland-generated carbon credits is widely expected to increase further.

Inevitably, both prospective and existing landowners are keenly debating a realistic long-term price level for the PIUs and WCUs (Woodland Carbon Units) issued by the Woodland Carbon Code. The Woodland Carbon Auction Guarantee (WCaG) offers some helpful guidance on this point.

The government is committed to planting 30,000 hectares per year across the UK between 2025 to 2050. In 2020, the UK planted 13,410 hectares of new woodland. Over the next 5 years we must therefore increase our annual woodland creation hectarage by 223%. That means offering incentives to landowners which are sufficient to render tree planting a viable alternative to existing land uses.

Tree planting subsidies are already available to landowners in all four countries of the UK. Indeed, the total value of grants available from the recently launched English Woodland Creation Offer (EWCO) is estimated at over £10,000 per hectare.

This level of grant funding implies that government expenditure of at least £300m per year (or £7.5bn over the next 25 years) will be necessary to meet the UK's tree planting targets. Indeed, these estimates are likely to be highly conservative.

The land which was submitted to the WCaG for carbon funding in the recent auctions is likely to have included the least productive parts of the farm which, in generating a low income, had an equally low hurdle rate needed to incentivise tree planting. As the results of the WCaG have shown, that hurdle rate ranged between £17 and £24 per PIU.

According to the Climate Change Committee, our net zero targets require woodland cover in the UK to rise from 12.8% currently to 17.5% by 2050. As we gradually realise this goal (by planting 30,000 hectares per year), woodland creation will need to move 'down the valley' to compete with pasture and arable land as a land use. Planting incentives will therefore need to rise further.

The nature of carbon offsetting, whereby carbon income provides the vital stimulant to a project's development, means that higher carbon prices will be necessary to encourage woodland creation. Recent calculations suggest that level will lie somewhere between £30 to £40 per PIU and, if the government intends to reduce its generous planting subsidies, that estimate would rise further.

The path towards this long-term level is unlikely to be smooth. The widespread optimism towards carbon pricing is as symptomatic of an immature market as the sharp dips and troughs which often follow. Woodland owners with PIUs to sell would therefore be well advised to heed the well-known adage and "hope for the best but prepare for the worst."

# Net zero transitioning and the role of nature-based solutions

**Stuart Dobrijevic**

By Stuart Dobrijevic
Asset Manager, Abrdn

There is a strengthening and explicit recognition of the need for a multifaceted approach to tackling climate change, with direct carbon removal from the atmosphere via nature now regarded as a vital component in achieving net zero alongside continued emissions reduction strategies. Encouragingly, Boris Johnson has announced that further funding will be committed to the Nature Climate Fund and Woodland Creation to deliver the 280,000 hectare target of peatland restoration by 2050 and 30,000 hectares of afforestation per year by the end of this Parliament. Such targets align with what many leading minds on climate change have been advising for a number of years; that carbon removal via nature is the other side of the coin in achieving net zero and helping to revert some of the damage done since the industrial revolution. Biodiversity loss is another crisis and topic requiring real tangible solutions and action on a large scale, with Sir David Attenborough speaking passionately on this issue on the opening day of the COP26 Summit in Glasgow recently. In this respect, nature-based solutions such as afforestation and peatland restoration arguably offer unrivalled impact given the myriad of co-benefits including biodiversity net gain, improved air quality, flood prevention and social benefits for local communities, in addition to large scale and measurable carbon removal.

The UK Government and the private sector must continue efforts to lead in emissions reduction strategies and removing carbon directly from the atmosphere, to tackle climate change holistically and realistically. The UK forestry and land management industry clearly has an integral part to play.

After the COP26 Summit in Glasgow, we can expect leading commentators to stress the necessity for institutional investors particularly to commit substantial capital allocations to nature-based solutions on a global scale to meet the goals of the Paris Agreement and perhaps any fresh goals arising from the Summit in Glasgow. Institutional investors and corporate organisations on behalf of clients and shareholders will be expected to explore and assess the impact of potential capital allocations to nature-based solutions (effectively a new asset class for many) and the expected improvement potential investment may have on the transition to net zero. Such assessment and investment decisions will require close collaboration with Government bodies, stakeholders, communities and the forestry and land management industry if investment at scale is to be delivered.

At Abrdn, we have been exploring nature-based solutions and have taken action in acquiring land principally for the purpose of carbon removal, habitat restoration and biodiversity net gain. Since becoming aware of the UK Government Woodland Carbon Code (WCC) and with the help of the WCC and leading forestry consultants, we recognise that nature-based solutions can play an important and impactful role in optimising the transition to net zero in the case of investment portfolios, especially in the context of mitigating residual carbon emissions. Residual emissions are those that cannot be managed away purely by emissions reduction strategies across a commercial real estate portfolio, for example. Continued emissions reduction however remains of paramount importance. Taking guidance from the Oxford Principles, where offsetting/insetting is required to tackle unavoidable residual emissions, the projects generating carbon units should be local, additional, transparent and seek to optimise wider co-benefits such as biodiversity net gain. We are therefore encouraged by the strong reputation of the Woodland Carbon Code and Peatland Code as leading standards when considering such principles – afforestation and peatland restoration as an activity must transparently deliver measurable rates of carbon removal and units in the years ahead. The wide range of co-benefits can also be monitored, recorded and reported.

In sourcing projects, there are challenges around land scarcity and nature, of course, takes time to recover with the biological growth and carbon sequestration rates of new woodlands and restored peatland being a key consideration. Nature-based solutions must be implemented quickly in effective partnerships with stakeholders in order to benefit from as much verified carbon and co-benefits as possible within the respective net zero target timeframe. This is as true for the Government's own 2050 net zero target and delivering afforestation and habitat restoration, as it is for a private organisation's respective target and any ambition to deliver a positive and impactful mark on climate change.

On behalf of an Abrdn managed fund with an innovative net zero transitioning and ESG strategy, an area of approximately 1,400

hectares has been acquired within the Cairngorms National Park which shall see large scale biodiverse native woodland creation and degraded peatland restoration taking place. Biodiversity net gain shall be independently monitored over time and social benefits promoted for the local community where possible. We look forward to working closely with stakeholders, local communities and our advisory teams in the months and years ahead on this project. We see value in investing locally into UK landscapes to deliver tangible outcomes which can be closely monitored and reported. This activity allows the fund to remove carbon directly from the atmosphere and retire units against projected future residual carbon emissions at the same time as owning a valuable land-backed asset delivering wider co-benefits. With the price of third-party carbon units set to increase with unknown downside risk, a more direct investment solution and direct link to the land and nature-based projects reduces risk for the fund at the same time as delivering a more measurable and impactful transition to net zero.

Exciting times are ahead for real natural assets. We look forward to further exploring the potential that woodland creation and peatland restoration have to offer. In future years we also hope to see the development of similar carbon standards and solutions for the marine environment and a recognised valuation system for biodiversity and ecosystem services. The continued development of industrial carbon capture technology will no doubt have a role to play alongside nature-based solutions in future years and we will take interest in monitoring that technology as it advances.

Given the deliverability and manageable risk profile of nature-based solutions and the impactful co-benefits they offer on the journey to net zero, nature-based solutions look set to play an increasingly important role for institutional investors and clients. By offering a range of solutions to reduce emissions and address residual emissions in a holistic way, we are hugely optimistic for the future and in our ability to innovate and successfully transition portfolios to net zero on behalf of our clients.

# What future is the forest growing?

## – The outlook for forests being planted now

Dan Ridley-Ellis

By Dan Ridley-Ellis
Head of the Centre for Wood Science and Technology, Edinburgh Napier University

Our future is in growing forests. The timber supply for the next few decades is already in the ground. When the new trees we are planting now come to harvest age, we will be in 2050 and beyond – a time for which important promises have been made about net zero carbon and use of renewable resources in place of carbon intensive and fossil-based materials. Forest management and planting decisions made today have consequences for decades to come – so at least some of our future has already been written.

In looking forward we can consider, therefore, two horizons: the horizon of our current growing stock and the horizon of trees yet to be. For the first, we can expect that spruce will remain the major part of our useful wood resource, but with a gradually increasing proportion of other softwoods. Most of these are probably similar enough they can fill the same markets as the spruce, as part of a mixture (if we plan ahead). That said, we cannot be confident the resource is not changing in some way. Even familiar species are changing as a consequence of forest practices, tree selection and breeding, climate change, and the use of more effective methods of tree and log segregation.

The changes are incremental, but there are still tipping points – most crucially maintaining the required mean stiffness for C16 construction timber without large reject rates. It will be increasingly necessary to pay attention to the real indicators of timber quality and overcome misconceptions about growth rates, density and knots. Indeed, the current 'quality' perception of certain types of wood product can be very counterproductive, socially and economically – not everyone can afford solid wood home-grown native hardwood furniture, or low density housing. Marketing can develop more affection for 'hero' products, that use high amounts of recycled wood, and material from the kind of forests that the public like to see.

Relative to softwood, the amount of available useful hardwood will remain small, but it will grow significantly from current levels. There are opportunities here to make better use of species such as sycamore, beech and birch – although the amount considered suitable for traditional products will be severely limited. Perhaps this use can be in the form of engineered and modified wood products, and manufacturing streams that can deal with a wider range of wood – including the increasingly important resource of recycled and recovered wood. Wood fuel has an uncertain future, thanks to concerns over air quality and the rise of ever more effective renewable alternatives. There is perhaps more of a future in the form of wood-based liquid fuels in the longer term.

Climate change impacts are also coming quickly. In the UK, we can expect more summer drought and periods of more intense rainfall. Trees will have to cope with feast-famine cycles for water, with risks to wood quality as well as tree health. In this horizon, we can also expect more market disturbances. We can try to reduce the risk of forest fire, storm damage, pest and diseases in our own country, but since the timber trade is global, there will be more feast-famine cycles for the wood supply – large volumes reaching markets as a result of disasters, and shortages and demand pull from other parts of the world. We also know the enormous effect politics can have and should not forget how much of the global forest resource is controlled by single countries. Trying to move our value chains to a more diverse diet of wood will help mitigate the risk.

During this period, we will see a growing wood hunger. Efforts to use wood in the place of more carbon intensive materials will continue. There are also some basic, high volume, trends – such as the increasing demand for tissue as global living quality increases, and the growing need for textiles (never mind the need to produce a higher proportion from wood-based fibre instead of fossil-based synthetics and water hungry cotton). There is also hunger in the literal sense, with the use of wood derivatives in food.

Despite restrictions on combustible building materials, the use of sawn timber and board products in construction will grow, but there will be gradual changes in the type of construction work, with more emphasis on renovation and retrofit of existing buildings, and design for disassembly and reuse in new ones. Perhaps technology will allow an economically viable shift back

towards local supply chains and customisation, providing a niche for homegrown material against the backdrop of imports that we have no option but to rely on to satisfy the majority of the demand.

For the second horizon, resilience has been the watchword, encouraging us to plan ahead for forests that are diverse enough in species, genetics, age and structure, to be able to recover from disturbances. But we should not talk just about resilient forests, but also of resilient value chains – also robust enough to cope with disturbances, and adapt to changes in the natural, social, and economic environment. Value chains that rely on a consistent supply of a small number of species and narrow quality requirements will be exposed to ever-increasing risk. Fortunately, scientific developments ongoing now, such as new materials from cellulose, lignin hemicellulose and extractives, will come to the industrial stage in this horizon.

We are likely to see more forests being reserved for protection areas, perhaps offering income from recreation and tourism, but not able to provide much to satisfy the ever-growing wood demand. This means we will be expecting more from production forests, managed in intensive but resilient ways we have yet to figure out, but benefiting from new sciences such as genomics to accelerate tree improvement.

It is impossible to say exactly what uses forest products will be put to several decades from now, in a world that will surely be very different. But experience has shown that trees, grown with no purpose in mind, do not lend themselves to high value products.

**"The timber supply for the next few decades is already in the ground."**

# Market background

This research is a snapshot of the commercial forestry market in the year to September 2021. Woods sold in previous years are therefore different from those analysed here, therefore this is not a like-for-like comparison. While these results show useful trends, readers should not base investment decisions on these comparisons alone and should always seek professional advice before committing to an investment.

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