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The forestry
division of
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 **Tilhill**
FORESTRY

The UK Forest Market Report

Issue 21 2019





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The Buyer's Perspective



Peter Whitfield
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Business Development Director
Tilhill Forestry is the leading forest management and timber harvesting company in the UK.

Average prices have risen by 23% over the year. This is a highly volatile statistic which is heavily influenced by the quality of properties offered to market in the year but also indicates a genuine strong uplift in the market. We would normally expect property prices to have cooled in the second half of the year in line with timber price movements that have shown a marked downwards trend during 2019. Of course, as this Report is a record of completed sales, then the deals will have been struck earlier in the year, but even so, prices for forest properties have remained stronger. It will be interesting to see what we are reporting next year.

I am very encouraged to see continuing strength in the mixed woodlands market as well, as these offer exciting ownership opportunities to a range of investors. As we start to recognise the wider societal and environmental values that should be assigned to woodland through carbon, water quality, flood mitigation and biodiversity we expect this market sector to attract a new class of environmentally-minded investor. Although prices have not risen as quickly as the productive conifer market, they still compare favourably, and many remain more affordable for the smaller investor.

Many investors are keen to get involved in new woodland creation projects. Unfortunately, it remains difficult to find suitable land that meets the tough criteria required before planting permission is granted, despite strong political support to encourage further planting. The woodland creation grant systems are generally good and we hope and expect to see them sustained after Brexit.

When going through some files earlier this year I came across this comment in what was the 7th edition of the Forest Market Report dated 2006: "2005 has been an exceptional year for the forest market, with significant price rises across all ages of crops. Forests aged 11-30 years showed the greatest increase in value. Average prices have increased by 50% over the last three years". Thirteen years on and it feels like little has changed!

In 2019 we have seen over £126m of commercial property transactions completed, the second highest figure in the 22-year history of our market report. This is made up of 81 forests which have kept our acquisition team very busy helping our clients assess and bid on these properties.

“The woodland creation grant systems are generally good and we hope and expect to see them sustained after Brexit.”

Our investor base and their objectives remain like previous years: active investment funds; private investors looking for alternative 'real assets' in volatile markets; those seeking long term capital gains; and of course, those who are genuinely interested in forestry and woodlands. Our most significant challenge has been trying to advise clients on where to pitch their bids for property against a dynamic and rapidly rising market.

As I write we still have no clarity on the direction of Brexit but, whatever happens, we can expect an unsettled few years both politically and economically. In this environment we can see the value and security of real assets that continue growing regardless of political uncertainty. This, along with continued political support for forestry, aligned with a new impetus for woodland creation driven by growing climate change concerns, will give us a busy year ahead assisting our clients in making their forestry investments.

The Seller's Perspective



Fenning Welstead
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Director, John Clegg & Co
John Clegg & Co is the leading forestry agent, particularly active in forestry sales.

that is needed if we are to materially increase forest cover in the UK, but the momentum needs to spread to England and Wales to achieve real success.

Equally, the interest in securing established forestry assets continues to show strength and widening appeal. There is now a robust market for plantations that have been substantially felled and replanted. These have the benefit of a developed and proven roading network yet will not generate significant timber income until the next generation of timber is mature. This could be ten to twenty years ahead and the investment is a statement of confidence in the future value of that timber and of having a stake in the green economy.

Our report for 2019 shows that forests have continued to rise in value. With the softening of timber prices this year it might be thought that forest property values should follow suit. This is not happening, and we believe that this is a direct reflection of the trend towards renewable resources and a move to a low carbon economy. Short term fluctuations in spot prices should not detract from the longer-term fundamental value growth. Demand for timber is increasing both for traditional uses in sawmilling and panel industries and also as a raw material for new processes at cellular and molecular levels.

We believe that land values have also risen reflecting a desire to have such a fundamental asset as part of an investment portfolio. Ownership offers the opportunity for alternative land uses, with renewable energy a popular blend with commercial forestry crops. With a potential carbon tax in development there

is the possibility of an annual income for sequestering carbon.

As a forest owner how might this affect your decision making? One answer is to conclude that selling your forest would be the wrong move as future values look to be moving ahead well. But for those who have reached a point where selling is the right solution then we must stress that proper presentation of this opportunity to the market is essential. With new investors looking at forestry as an asset class it is impossible to predict just what the 'right price' is. Let the market work for you using the competition to your advantage.

“It is sufficiently confidence-inspiring that strong, competitive bidding for suitable land is lifting prices to new levels.”

We write this report at the end of September and, as is often the case, there is some activity that one feels is important but is incomplete by that date – or perhaps something significant that happens just after the end of the month.

This year is no exception. There are active open market sales of farmland and commercial plantations that are indicative of further upward pressure on market prices. Interest in establishing new forests is high, yet despite government statements, it is really only active in Scotland. Here there is a well-established grant structure and approval process that is attractive to investors. It is sufficiently confidence-inspiring that strong, competitive bidding for suitable land is lifting prices to new levels. This seems like the major change in land use

Introduction

The main section of The UK Forest Market Report focuses on completed sales of commercial forest properties over 20 hectares in size which are predominantly conifer.

We refer to individual years (2019 etc.) but the actual period each year covers is the 1st October to the 30th September of the following year. Other woodlands are covered in the Mixed Woodlands section.

The UK Forest Market Report has been produced since 1998 and the data series

now covers 22 years, incorporating some 1,781 transactions totalling some £1,263m and 277,000 stocked hectares.

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

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

Below: Sitka Spruce growing at a UK commercial forest nursery.



Market Overview



Bruce Richardson
Lead Analyst

With a total of £126.5 million of forest properties traded made up of 81 separate transactions, 2019 has been a busy year in the commercial forestry market and is a welcome return to our normal transaction levels.

We have seen a substantial £22.3m or 21% increase in the total value of the market, driven in the main by an uplift in the unit values of those properties and a gain of an extra 24 properties traded.

As always, **Scotland** provided the lion's share of the commercial forestry market with around 78% of recorded sales. **England** slipped back to 11% of recorded sales, well below its long term average of 20%. **Wales** produced a larger than normal share of the market with 11% of recorded sales, made up of 16 individual sales.

In total, some 14,235 gross hectares (ha) (35,176 acres) of forestry was traded, of which 11,024 ha were stocked or plantable. We focus our analysis on the stocked area in the forest (the productive commercial element) in line with the overall intention of the report. This is therefore slightly lower than last year (2018: 11,166 ha) despite being made up of a larger number of properties.

We have seen an interesting selection of properties come to market, attracting a wide variety of investors. Scotland saw 5 properties selling above the £5m mark, but also 15 properties selling below £500,000. In addition, there were a number of fully commercial properties which were below our 20 ha threshold for including in this main report – these

are discussed under the mixed woodlands section. England has had a quiet year relative to last year, with only 15 properties sold and nothing above £2m. Wales has seen a busy year with 13 properties completing in the period, of which 6 sold above £1m.

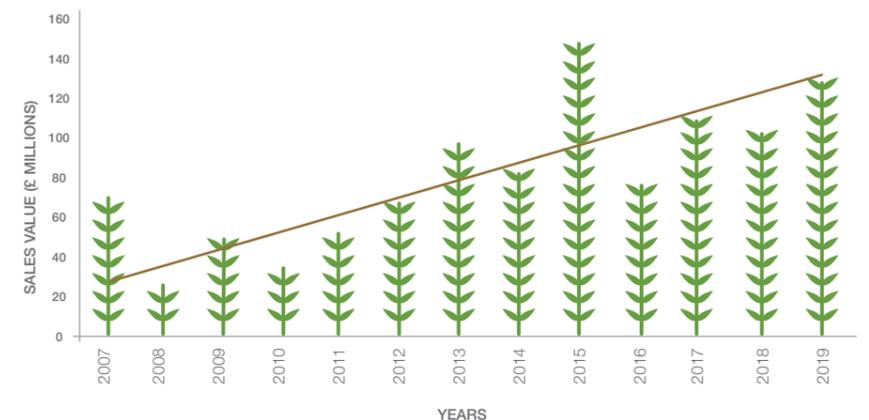
The average size of a sold property this year has decreased to 136 ha (from 196 ha in 2018) and the average cost of a property is now £1.56 million. With a larger number of smaller properties reaching the market, the average sale price is buoyed by an increase in average value. The averages hide much variety within the individual properties.



Recorded sales

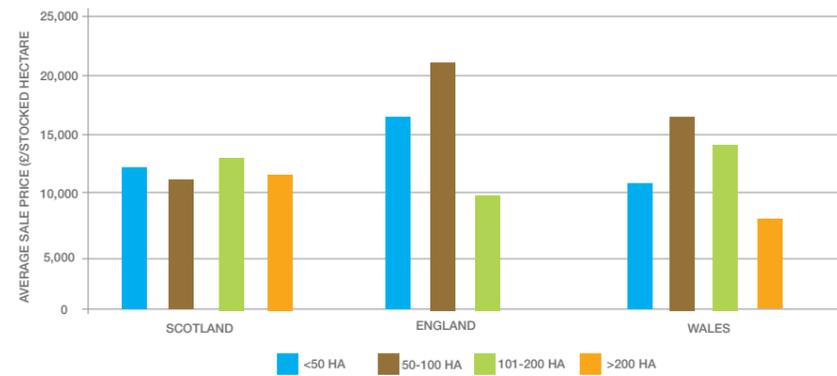
78% Scotland,
11% England,
11% Wales

Fig. 1: Total Annual Value of Forest Sold



Market Overview

Fig. 2. Average Sale Price per Stocked Hectare by Country and Size Class



Average cost of a forest property

2018: £1.83m

2019: £1.56m

Average prices in Scotland show consistency in the average unit price per hectare paid across all forest size ranges, with no obvious variance by size.

Overall prices in England are consistently higher, with higher prices clustered in the more expensive areas in the south. However, both Cumbria and North Yorkshire have produced properties selling in excess of £15,000/stocked ha demonstrating widespread interest for the right property.

Average prices in Wales remain steady at around £12,000/stocked ha with particular interest being shown in the popular 50-100 ha size bracket. The low figure in the >200 ha category is a single younger property but overall, Wales remains more expensive than Scotland.

Land with the potential for woodland creation remains very popular across the range of property sizes and is discussed below.

Once again, it has been very difficult for potential buyers to know where to pitch their bid price. **69%** of properties sold **above** their guide price, with **14%** of properties selling at above **150%** of the guide price. This partly reflects different marketing strategies in Scotland compared to England and Wales, a cultural difference which can baffle new entrants to the Scottish market. Prices are driven to a large extent by timber prices (or expectation of future timber prices) and we discuss the movements in the UK timber market in more detail later in this report.

Currently, despite wider economic and political uncertainty, the UK forestry market continues to perform robustly. Of course, markets can't go up indefinitely and some commentators are noting the easing of timber prices in the second half of our reporting period and that this may ripple through to forestry prices in due course. However, investors remain confident in the price of timber over the longer term and seem to be anticipating potential new sources of income from the public goods, especially carbon benefits, that forestry provides.

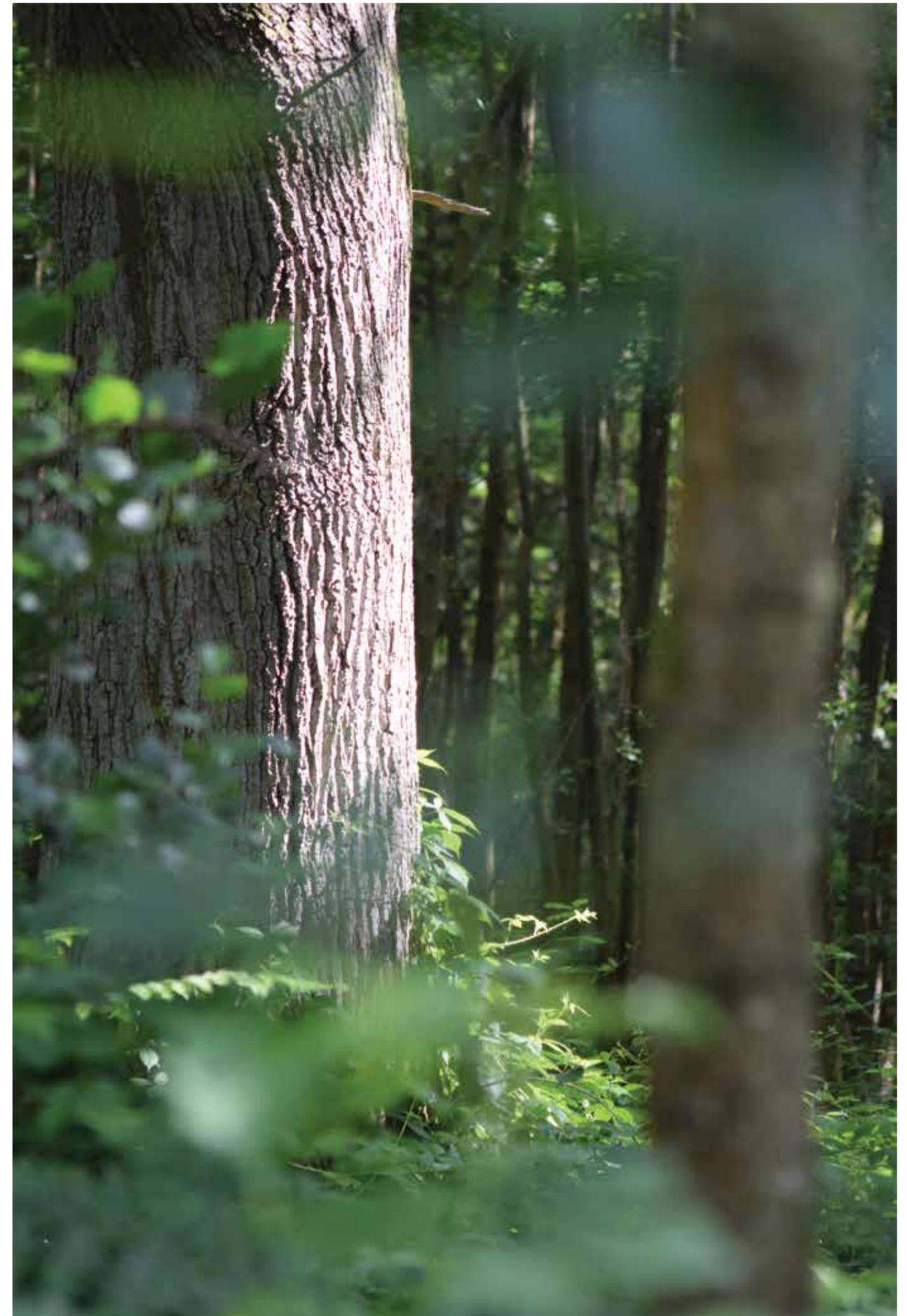
Further details of our market analysis are available on request from Tilhill Forestry or John Clegg & Co. See contact details at the back of this report.

Recorded sales against guide price



69% over guide

14% above 150% of guide



Woodland Creation



13,160 ha planted of which 60% were conifers.

During the year we recorded the sale of nearly 8,500 ha of land where we believe the new owners' objectives include woodland creation. This is a welcome increase over previous years.

It is impossible to draw any conclusions on the 'value of planting land' as each opportunity is totally dependent on local factors – the new owner's objectives, the proportion of land suitable for planting, the quality of trees that could be grown on the site, and the value of buildings and other enterprises on site. Expert advice is required to give an accurate assessment of the potential and hence the value of any site.



What is clear is that investors are keen to support government policy and plant, and suitable sites attract strong market interest, robust competition and usually bids well above guide.

Gross planting figures published by Forest Research paint an encouraging picture for 2018/19 with 13,160 ha planted of which 60% were conifers. **85%** of the new planting was in **Scotland**, with **England** contributing **11%** and **Wales** **4%**. In **Scotland** **65%** of the planting consisted of conifers, with **England** **30%** and **Wales** **48%** respectively.

It is encouraging to see a substantial increase in the levels of planting since 2016. In fact, these are the best figures seen since 2002.

Scotland, with 11,210 ha of new woodland created has exceeded its own target of 10,000 ha this year and appears to be on course to do so again

Fig. 3: Total new planting in UK 2015-2019 (including conifer planting) (Source: Forest Statistics 2019, Forest Research)

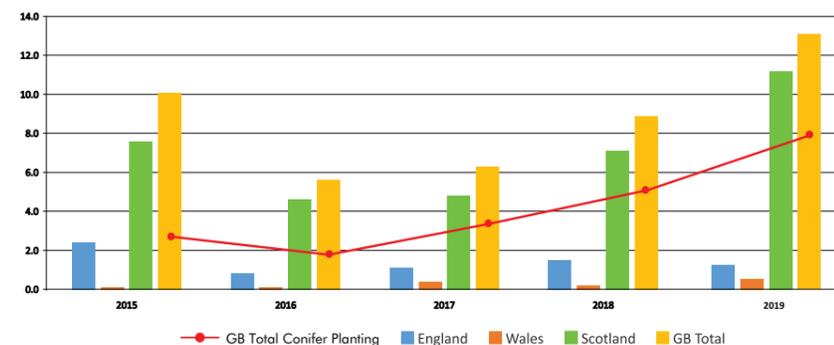
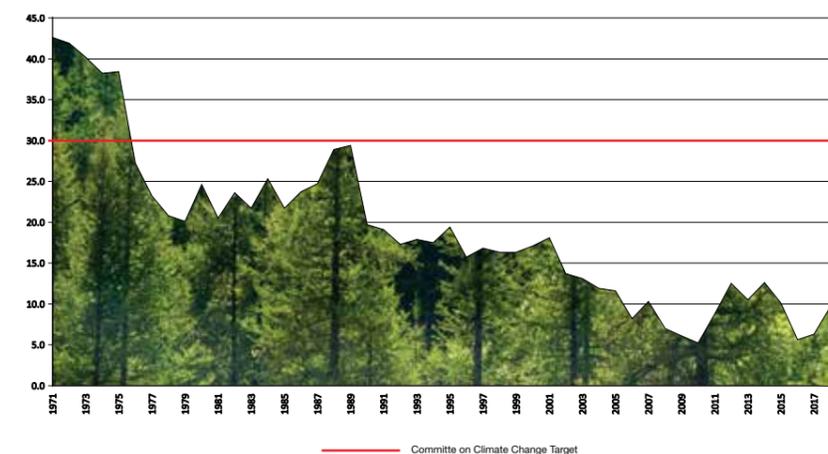


Fig. 4: Total UK Planting 1971-2019



in the 2019/20 planting year. The target this coming year is 12,000 ha which will be increased to 15,000 ha by 2024/25, indicating the importance the Scottish Government places on forestry to support wider policies for climate change and rural economies.

Significant delays remain in gaining approval to plant given the complexity of meeting the needs of all interested parties, and that the availability of appropriate land at a price that attracts investors is limited. Have we now picked the 'low hanging fruit' in terms of finding planting sites, and will meeting the planting target in future be considerably tougher?

The sale of the Evertown Portfolio of forestry and farming land in South Scotland was readily taken up by investors but raised issues of land ownership, agricultural tenancies and woodland creation and indicates some of the issues we will have to address in the future. Coulshill, a 1,270.76 ha property in Perth and Kinross, came to the market

in the middle of the year and is said to have attracted very strong competition and price.

England saw a small jump in the amount of commercial planting last year due to two schemes in the north of England but fell back overall. Wales saw a low level of planting, due perhaps to the lack of a consistent funding scheme to encourage planting.

There has been a great deal of publicity this year on the ability of tree planting to help mitigate climate change and this will no doubt be a driver of future policy. Various targets have been quoted for new woodland creation which vary wildly by report, but of note is the recent report from the Committee on Climate Change which suggests we need to plant 30,000 ha per year. This is a figure we haven't seen since 1975 (although we came close in 1989) and will require some attention to land use policy if we are to achieve.

There has been a great deal of publicity this year on the ability of tree planting to help mitigate climate change.



Case Study

Creating a new commercial plantation in south Scotland

Woodland creation can be a satisfying project for an owner as well as offering outstanding returns.

In 2009 our client purchased some 640 ha of unimproved upland grazing land in the Scottish Borders. With a mixture of soils suitable for conifers, direct access to an 'agreed route' for timber transport and being in the prime area for productive forestry, it had huge potential for creating a significant new commercial forest.

The owner's objectives were to establish a productive woodland on the site, whilst meeting all appropriate environmental legislation. They anticipated that they would hold the property for ten years before selling on to realise capital gains.

Of the 640 ha gross area of the site, around 450 ha were suitable for planting. The remainder was mostly deep peat which was retained for its high environmental value. After a thorough assessment of the environmental impact of the scheme, planting permission was given, and a new forest created over the next two years. Improved Sitka spruce being the main component with an interesting mixture of conifers and broadleaves making up the rest.

Substantial investment was needed on the site including around 13km of forest road. A house was restored and successfully let. Renewable energy opportunities were explored, with interest for wind farm development and potential for micro hydro in the future.

The owner was deeply involved in all aspects of the scheme, including going back to college to study forestry. They retained several small areas to plant a selection of specimen trees. These will provide 'stand out' appeal in years to come. Atlas cedar, redwoods and cypresses are among their successes.

As planned, after ten years of ownership the property was sold in 2019. Given the quality of the new forest, and aided by the increase in forestry values, particularly of young forestry seen in recent years, the 8% IRR forecast at purchase was comfortably exceeded.

The satisfied owner said: "It is difficult to think of any other investment that brings so much personal enjoyment with it, that you can visit and spend some of your happiest times with".

"It is difficult to think of any other investment that brings so much personal enjoyment with it, that you can visit and spend some of your happiest times with."



Images show the property and its scale.



Timber Market Update



David McCulloch
Corporate Strategy Advisor

Roundwood and Sawn Wood Price Trends

Downstream demand in roundwood's core market, the housing industry, has experienced three distinct episodes over the past year. Late 2018 saw UK house prices and investment in both new housebuilding and repairs, maintenance and improvements (RMI) spending all rising. This raised expectations for the upcoming season in early 2019 which were then disappointed as house prices stagnated and RMI spending fell through the spring and summer.

As our discussion of overseas markets explains, import volumes have also been subjected to three powerful influences through 2018/19. Beetle infestations in Europe lifted sawn wood supplies substantially. Widespread fears of customs delays and material shortages prior to the UK's (intended) departure from the EU on 31st March encouraged importers to stockpile large volumes of product. Finally, sterling's marked weakness, itself the result of Brexit-related concerns, helped insulate UK prices from the worst effects of European discounting.

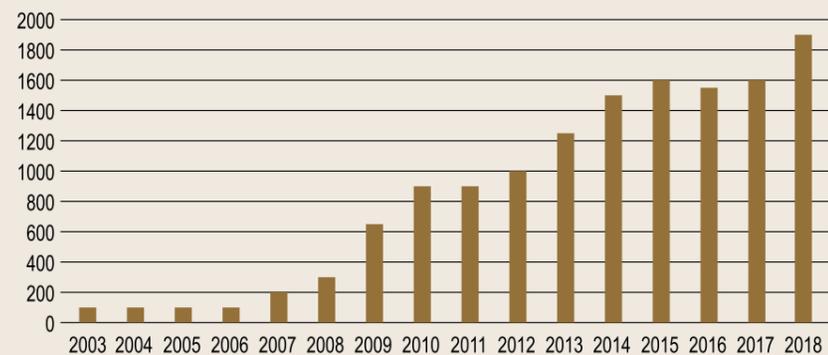
The strength and volatility of these conflicting forces has generated 12 months of sharp contrasts in fortune for the sawn wood, roundwood and standing sales markets across the UK. The second half of 2018 witnessed vigorous and highly positive trends across all segments of the industry, with rising house prices and robust RMI spending stimulating sawn wood demand and "insatiable demand from UK mills for supplies" (i.e. roundwood).

In the meantime, the rapid evolution of the biomass market was compounding the upward pressure on roundwood prices. Between 2009 and 2018, the volume of UK-grown wood fuel had tripled from 650,000 tons to 1.9mn tons (see *chart 1*). The start-up of Estover's 27.7MWe CHP plant in Cramlington, Northumberland through August 2018, guaranteeing 240,000 tons of additional annual roundwood demand, amplified this growth substantially.

With the fencing mills and the pallet manufacturers also enjoying buoyant order levels, the prices of both saw logs and standing sales surged. By July 2018, 18" diameter log prices ranged between £80-£90 per ton (delivered to customers in Wales and southern England), against £60-£65 per ton in May 2017. According to the Forestry Commission, prices for standing timber and saw logs (sold at roadside) rose 49% and 61% respectively in the two years to September 2018 (see *chart 2*). This was a lucrative period to own forestry.



Chart 1: Annual Deliveries of UK Grown Softwood to Wood Fuel Users, 2003-2018 ('000 green tons)
(Source: Forestry Commission)



This was a lucrative period to own forestry.

Despite their escalating input costs, buoyant economic activity and strong downstream demand was enabling the sawmills, the pallet makers, the fencing mills and the board mills to lift their end-product prices and expand their profit margins. Large profits and high expectations meant the sawmills, which consumed 60% of UK-grown softwood in 2018 (see *chart 3*), were operating at or near full capacity in late 2018 and actively procuring timber.

Prosperous trends through 2018 inevitably fuelled expectations for the upcoming construction season in early 2019. As a result, cutting volumes remained high so, as April dawned and building activity resumed, sawmills' stockyards were full. Indeed, some mills were reportedly running short of storage space.

Unfortunately, these large stockpiles combined with lacklustre housing activity to quickly reverse this lucrative scenario. As

the sawmills competed to unload their excessive stockpiles onto an amply-supplied customer base, prices for sawn wood fell and cutting volumes declined. The consequences of the ensuing cutback in the mills' procurement volumes soon rippled back up the supply chain.

Having taken their cue from the sawmills' prior optimism, felling volumes by harvesting managers and machinery contractors had risen through Q1 2019. However, as roundwood deliveries to the mills slowed, stockpiles of roadside timber mounted and prices corrected. By July 2019, top diameter roundwood had fallen back to £65-£75/ton (delivered to mills) across north England, Wales and Scotland "on the back of large volumes offered to the market".

Chart 2: Price Index for Standing Sales and Saw Logs in the UK, 2012-2019 (2012 = 100)
(Source: Forestry Commission)



As we have seen, biomass-related demand was also rising powerfully. Finally, the housing market's buoyancy, which had ensured strong demand and high prices for MDF and OSB panels through 2018, meant that the particleboard manufacturers, who consumed 11% of UK softwood last year, were competing equally vigorously for raw material. Large diameter roundwood prices were therefore broaching £90 per ton (delivered) in December 2018 in parts of Wales and southern England.

Fortunately, in early autumn 2019, a new equilibrium is emerging across these various markets. The harvesting contractors have responded to lower roundwood purchases by pairing back their equipment fleets, roadside stocks have corrected and reduced cutting volumes at the sawmills has normalised their inventory levels.

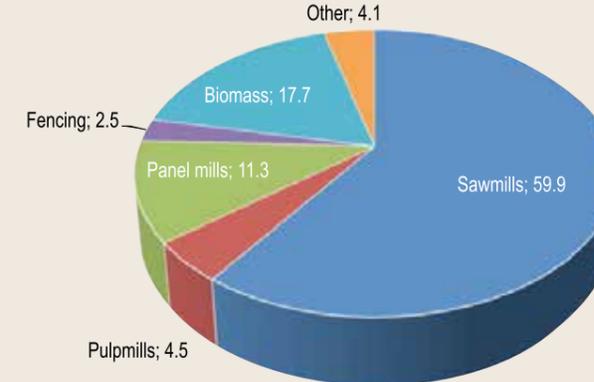
Within the saw log market, some of the earlier heat has inevitably cooled so saw log prices have pulled back to their levels of June 2018 and stabilised around £65-£75/ton (delivered) for large diameter logs.

In the meantime, demand for small diameter roundwood remains robust. Firewood demand has climbed as temperatures have fallen whilst biomass demand also remains stable.

Moreover, the inter-connected nature of the wood processing sector, whereby particleboard mills rely on sawmills for their residue supplies, means that lower cutting volumes at the mills' is forcing Norbord and its peers to buy small roundwood to supplement the dwindling availability of sawdust and wood chips. Thus, as the dust settles, the seeds of future pricing strength might already be germinating.

(For a more in-depth report on the housing market visit the forestry investment section on www.tilhill.com).

Chart 3: Breakdown of UK Softwood Consumption by End-User in 2018 (%)
(Source: Forestry Commission)

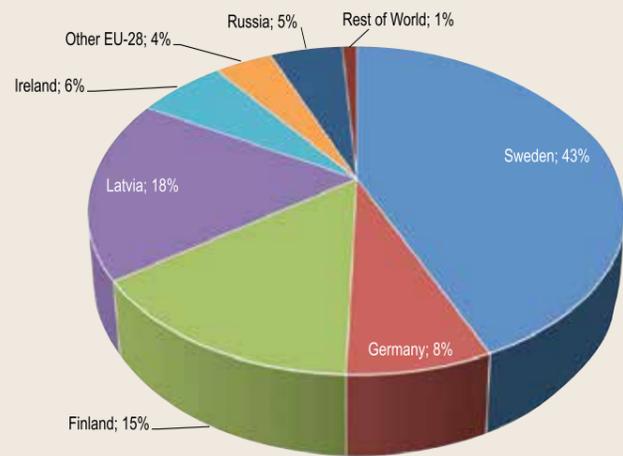


Timber Market Update

Imports and Exchange Rates: A Bumpy Ride

While the UK hosts a thriving timber industry, generating almost £5bn of GDP per annum, and its sawmills boast world-beating technology, producing over 11mn m³ of sawn wood each year, domestic production accounted for just 20% of the UK's annual consumption in 2018, which the Forestry Commission estimated at 56.4mn m³. This large gap between domestic demand and supply is filled by imported material.

Chart 4: Country of Origin of Sawn Softwood Imports to the UK in 2018 (%)
(Source: Forestry Commission)



In 2018, the UK imported 49mn m³ of sawn wood, much of which originated in Europe. As *chart 4* illustrates, 72% of this material was sourced in the Baltic States and Scandinavia while the

Chart 5: Standing Sales Price Index (YoY % Change) vs £/€ Exchange Rates (YoY % Change), 1999-2018
(Source: Forestry Commission and Bank of England)



remaining 28% originated mainly in Germany, Russia and Ireland. This heavy reliance on imported product renders UK prices for both homegrown sawn wood and its upstream relative, UK-grown roundwood, susceptible to two important dynamics.

The price and volume of sawn wood available from European producers is determined by the balance of supply and demand across central and northern Europe. Large supplies and sluggish demand lift availability and undermine prices while the obverse means less spare material and higher prices for what remains.

The pound's exchange rate then determines the price at which UK buyers will substitute domestically-sourced material for imported product. Thus, with most imports arriving from continental Europe, the £/€ exchange rate has a powerful influence on both sawn wood prices and their upstream relatives' standing sales prices across the UK (see *chart 5*).

The influence of these various trends on the UK market was especially significant through late-2018 and 2019 due to three unique developments: Widespread infestations of bark beetle across swathes of forestry in Germany, the Czech Republic and Sweden have lifted European supplies of roundwood substantially.

Brexit-related concerns also raised UK import volumes prior to the UK's intended departure on 31st March. Finally, the increasingly combative nature of the UK's departure from the EU through spring and summer pushed the pound down to its lowest levels in over 30 years against the US\$ (see *chart 6*). As we shall see, the confluence of these three trends has generated powerful currents across the UK's sawn wood markets.

In 2018, Germany suffered over 31.9mn m³ in damaged wood volumes, 11.3mn of which stemmed from bark beetles while 18.4mn resulted from wind-blow. In Austria. Damaged wood volumes have doubled over the past two years to 9.5mn m³ in 2018. Meantime, in Sweden, logging volumes were 17% higher YoY in Q1 2019 as harvesting teams cleared beetle and storm damaged trees.

With stockpiles of saw logs accruing at the roadside, the ensuing drop in roundwood prices encouraged sawmills to lift their processing volumes. High cutting volumes

“British sawmills improved their ability to compete.”

at German, Austrian and Swedish sawmills then coincided with lacklustre downstream demand in central Europe's end-markets through February and March.

Meantime, the UK's departure from the EU was fast-approaching. The growing fears of customs delays, product shortages and rising prices were encouraging the UK's timber importers to load up their warehouses and ensure they were amply stocked for the resumption of construction activity in late-spring which, it was widely anticipated, would continue 2018's robust trends.

prices as spring turned to summer. Indeed, even in late August, EUWID was still noting the “above-average supply of softwood sawn timber in Europe and overseas markets” which was placing “undiminished pressure on prices observed in imported sawn softwood” across the UK.

Fortunately, the corresponding weakness of the pound, which had fallen 8.5% from its peak in late March to its early September lows (see *chart 6*), was insulating domestic prices from the most severe consequences of the bark beetle infestations. Sterling's decline was therefore lifting British sawmills' ability to compete against their European rivals.

In early autumn 2019, landed stocks in UK warehouses remain high. Moreover, with bark beetle damage across northern European and Scandinavian forests intensifying through the summer, harvesting volumes are still above average, and Swedish and German sawmills continue to offer discounted (and lower quality) specifications in the UK market. Fortunately, the pound's protracted weakness continues to insulate domestic sawn wood prices from any further deterioration.

Chart 6: US Dollar to Pound Sterling, 1988-2019
(Source: Bank of England)



Accordingly, in early March, there were reports of “stocks of Swedish sawn wood stacking up on the portside looking for buyers.” Large numbers of additional cargo vessels had been chartered to cope with the rising shipment volumes. Reports also emerged that certain importers were running short of warehousing space.

As April and May unfolded and demand trends materialised, the UK's importers suffered the consequences of two misconceptions: With the UK's departure from the EU postponed, customs delays were averted. Moreover, as the article on the timber market discusses, optimistic forecasts for housebuilding activity through 2019 proved unfounded.

Keen to unload their excessive stockpiles, the importers were forced to discount



Forestry vs Other Asset Classes

As discussed elsewhere in this report, Tilhill's and John Clegg & Co's analysis indicates that prices of commercial forestry have risen 23% year-on-year in 2019 to £11,478 per stocked hectare. While deviations in the quality of properties sold might slightly distort this comparison (see the separate Appendices for further discussion), 2019 represents the fourth consecutive year of growth in forestry values and suggests they have increased almost 90% since 2016. Moreover, when compared to the more prosaic performance of other asset classes, our analysis neatly illustrates forestry's powerful attraction as an investment asset.

In the twelve months to October 2019, the FTSE 100 has climbed 1.7% while the FTSE 250, its UK-centric counterpart, has increased 7.8%. Meanwhile, their American cousin, the S&P 500, has risen 7.6%. Investments in UK property have also under-performed commercial forestry. According to Nationwide's monthly index, average house prices in the UK rose by just 0.2% year-on-year to £215,352 in September 2019, while the Land Registry reported that London's house prices fell 1.4% year-on-year in August to £472,753.

The value of commercial forestry is determined by three basic factors: interest rates, timber prices and agricultural land values, each of which have remained highly supportive. As we noted earlier, the price of overbark standing timber rose 28.4% year-on-year in March 2019 to £31.66 per cubic metre.

This reflects the ongoing hunger for fibre from sawmills, particleboard mills, biomass plants and fencing mills. Rising timber prices ensure that the assorted costs of timber production, such as

planting, management and harvesting, are amply covered by the income generated from the sale of the end-product. By determining the discount rate applicable to future cash flows, interest rates are the other pivotal influence on forestry prices. Indeed, the long-term nature of forest-related investments and the increasingly powerful impact which low discount rates have on the present value of ever more distant cashflows renders forestry values particularly susceptible to changes in interest rates.

Recent commentary from the Bank of England suggests that interest rates are not only likely to remain low for a long time yet but could also decline further in coming months. On October 14th 2019, Sir Jon Cunliffe, the deputy governor of the Bank, devoted an entire speech to explaining "Why we are in a period of low interest rates and why we might expect it to persist". In late September, Michael Saunders, a member of the Bank's rate setting committee, acknowledged that "It is quite plausible that the next move in the bank rate would be down".

Two other factors also provide encouragement for forestry investors' future returns. Governments remain highly supportive of this 'hugely productive use of land,' as Fergus Ewing described the sector in February 2019. This encouraging attitude, pursued by both the UK and Scottish governments, and apparent in both their favourable tax treatment of forestry and the large subsidies available for tree planting, helps reduce investors' input costs and raise their eventual returns.

The pound is also close to its lowest levels against the US\$ in almost 25 years

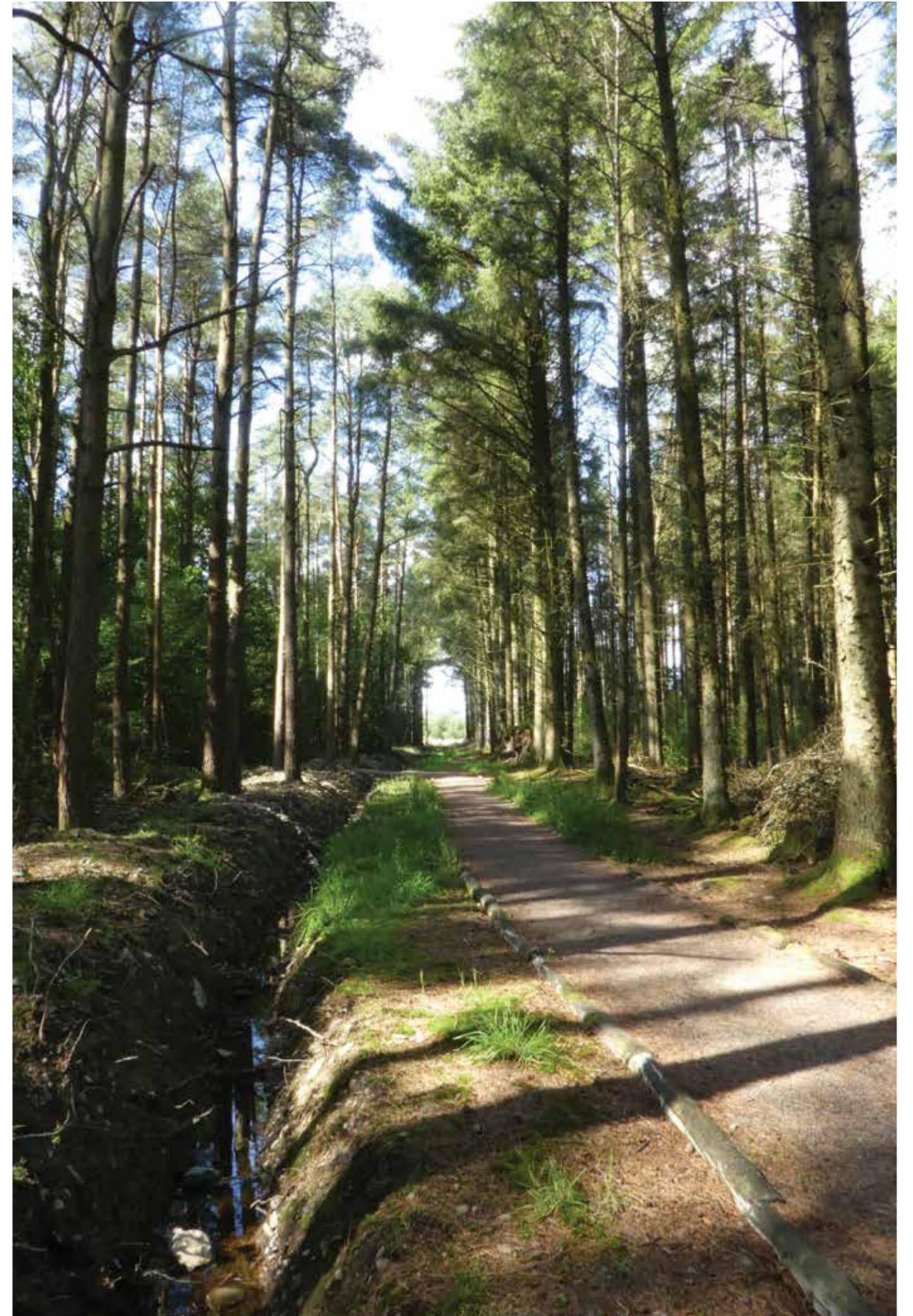
and the € in almost 20 years. By raising the cost of imported sawn wood, this protects UK sawmills' selling prices in their home market which enables them to afford higher input prices. Sterling's weakness is therefore highly supportive of UK forest prices.

Investors should also monitor fluctuations in agricultural land values. Although it can be difficult to determine exactly their contribution to a forest's overall value, prices of farmland are likely to fluctuate depending on the date and nature of any Brexit agreement. Any reductions in the scale of agricultural grants would undermine the value of the land on which the trees are planted which might also erode the value of the forestry.

There is no doubt that commercial forestry prices have already climbed substantially, so valuations are relatively high and the yields available to potential investors have declined. However, as noted above, the dynamics surrounding the principal influences on these valuations remain reassuring. Looking ahead, forestry investors should closely monitor these various elements in order to understand fully the potential future upside to their investment.



Forestry values have increased almost 90% since 2016.



Mixed Woodlands



Price Average per Acre

England: **£5,191**
 Wales: **£3,587**
 Scotland: **£2,000**

The mixed woodlands category covers those woodlands that do not meet the criteria of the main report.

These are smaller woodlands characterised by holding a variety of species, often primarily broadleaf in nature, and managed with mixed objectives. Most are over 25 acres although some are smaller where they form part of a larger sale. We refer to gross woodland area and measure in acres as these are the units in which this type of property is usually marketed.

There is no reason why woodlands of this nature cannot be managed commercially and be eligible for the tax advantages more often associated with larger and more obviously commercial forestry.

Given the localised nature of this marketplace our sample can only give an overview of the entire market. However, we feel it is substantive enough to be able to draw from it some indications of the state of the market.

Our sample for 2019 consists of 44 properties, representing around 2,250 acres which were offered with a total guide price of £9.252m. The total selling price was £9.603m, around 4% over guide. The Scottish properties in the sample sold at 18% over guide, again largely due to the marketing approach in Scotland.

At around 50 acres, the average property size in the sample is slightly smaller than 2018 (56 acres) although the average sale price has increased to £4,286/acre (2018: £4,025/acre), an increase of 6.5%.

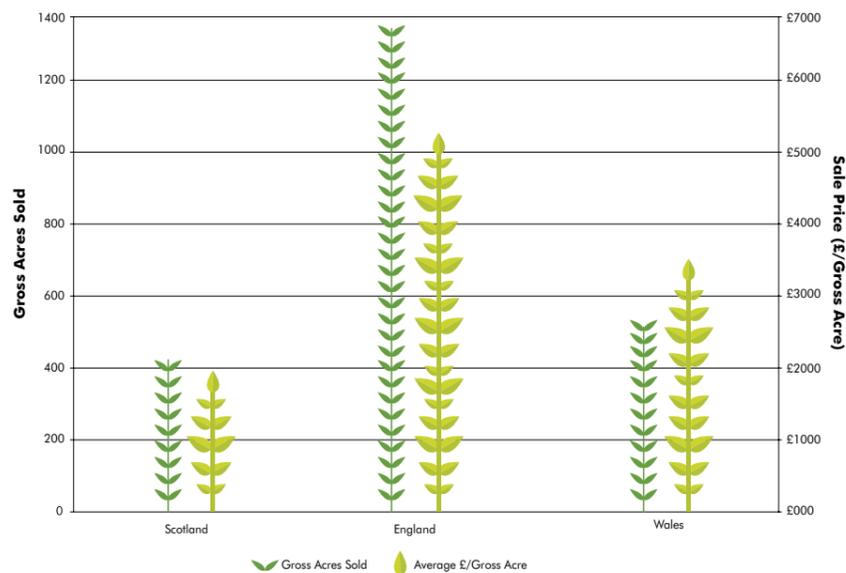
Average prices and the gross acres sold by country are shown in Fig. 5 below. **England** achieved the highest average price at **£5,191/acre** (2018: £4,667/acre), with **Wales** at **£3,587/acre** (2018: £2,700/acre) and **Scotland** **£2,000/acre** (2018: £2,900 acre).

Of the top ten highest unit prices paid, seven are in south England, with one each for north England, Wales and Scotland. Location matters, and it matters more with this type of property which has mixed management objectives and a high amenity component of value than the purely commercial conifer blocks.

There is still a wide variation in price within a region and the traditional 'added value' factors such as accessibility to centres of population, internal features such as ponds, cabins, pathways, seclusion and landscape views remain important to buyers.

One interesting feature this year is the number of small conifer woodlands which are managed for purely commercial objectives, but which are too small to be included in the main report. These have proven popular with buyers and are selling at unit prices which match the larger properties – with local factors balancing out the lack of economies of scale maybe?

Fig. 5: Mixed woodlands by country 2019



Case Study

Below: *Phytophthora ramorum* in Larch.



Mixed woodlands can offer more flexibility in the timing of the harvesting but this has to be managed.

Of interest during the year was the sale of a small 60 acre wood in Devon, which was sold at a price of around £3,000 per gross acre. This was surprisingly low given that in England, the 2019 average price recorded was £5,200/gross acre.

Other properties in the mixed category in the south west of England had otherwise attracted values reasonably close to the English average, so what was the concern here?

The issue was that the main timber crop, Japanese larch, had become infected with the pathogenic fungus *Phytophthora ramorum*. To avoid further spread of the disease, the regulator had imposed a Statutory Plant Health Notice (SPHN), compelling the owner to fell the affected trees within a few short months. Instead, the owner brought the wood to the market, with the SPHN's felling requirement hanging over the property.

This example perhaps neatly quantifies the value of 'harvesting flexibility' relating to the timing of felling. This characteristic has been highlighted as an important ingredient in the value of commercial lowland and mixed woodlands. This flexibility may in part explain why mixed (lowland) woodland values hold up so well relative to the uplands, where felling is sometimes hastened due to the fear of wind damage.

Broadleaved species and alternative conifers to Sitka spruce such as Douglas fir may have very long potential timeframes when owners may consider felling, which evidently is a prized facet. Therefore, ensuring that potential harvesting flexibility in felling timing is not obstructed, is an important consideration in these kinds of mixed properties.



Woodland Carbon



Woodland carbon is now rapidly taking off as a potential new source of income for forest and woodland owners

Last year we introduced the concept of Natural Capital, an idea which is beginning to gain traction. Utility companies for example, are looking at tree planting on their estates as a way to improve water quality. Some investors are also commissioning natural capital asset valuations as part of large planting schemes as a way of demonstrating the public goods which the schemes are delivering.

Sadly, there has not been much progress on finding ways to compensate forest owners for the public goods which they are providing for free – remember the asset valuation of England’s state owned forestry identified that the natural capital value was nearly ten times the actual value of the land and standing timber?

The one exception to this is woodland carbon which, after a slow start, is now rapidly taking off as a potential new source of income for forest and woodland owners.

The Woodland Carbon Code was introduced in 2011 and provides a formal framework for forecasting, validating and verifying carbon sequestered in growing trees. By following the Code, new woodlands can forecast the amount of carbon they will sequester, and either sell this ‘pending’ carbon in advance to help fund planting, or simply register it and sell it as and when it can be verified once the trees have grown. The Code is very conservative in its method and is particularly so with respect to clear fell silvicultural systems most frequently used in commercial conifer forestry.

However, since 2011, there are now over 70 verified schemes covering 2,400 ha, which have already delivered 1.1 mn

tonnes CO₂e (equivalent), for which the owners have been paid.

On the back of this a market has developed in trading woodland carbon. This is good news for investors who create new forestry because it can provide additional funding at planting or be held over and sold once the trees have grown, bringing welcome finance through the growing cycle.

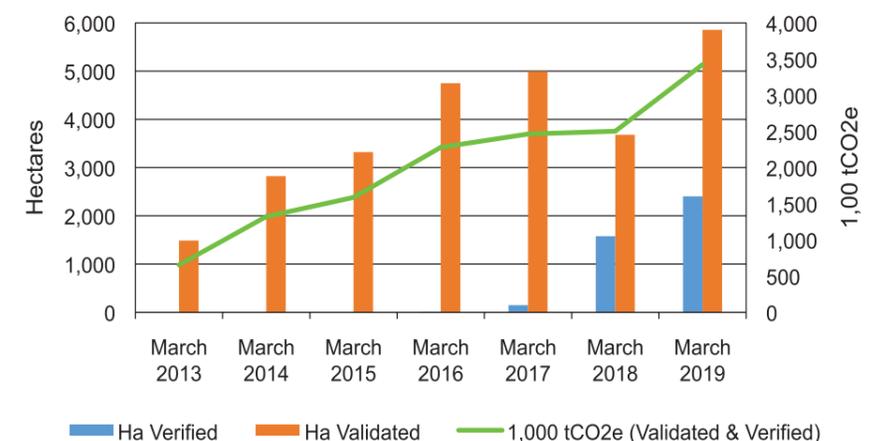
Woodland carbon is the one proven technology we have for sequestering carbon from the air and has therefore received much attention, especially since our governments have set net carbon zero targets to be reached by 2045/2050. In England, the government has launched a woodland carbon guarantee in November 2019 which will provide a floor to woodland carbon prices and possibly push the whole market upwards.

We suggest that investors should always register new planting under the Code. It is more difficult to see whether they

should sell their carbon in advance or as it grows and is verified. If an effective alternative carbon capture process is developed, then woodland carbon will become less important. If not, then we could anticipate increased demand as we get closer to these target dates.

From a broader perspective, carbon in soils is now attracting attention (as indeed it should), and research is being undertaken to understand the impact of cultivation and planting on different types of soil. Peaty gleys/podzols and deep peats hold high levels of carbon and thus will need to be avoided for woodland creation. In the UK, emissions, from the agricultural and land use sector amount to 53 MtCO₂e, over 11 per cent of the UK’s total emissions with agriculture contributing 74% of this total (source: *Committee on Climate Change*). The Woodland Carbon Code and the UK Forestry Standard already include these considerations but we can expect to hear more on this in 2020.

Fig. 6: Woodland Carbon Projects (Source: Forestry Statistics 2019)



Resilience in Forestry

With all the publicity on climate change and the increased risk to our forests from invasive pests and diseases, forestry owners are rightly concerned about the resilience of their forest investments. This is a live issue for those owners who have been considering alternatives to larch when restocking their forestry for the next rotation, but a concern to everybody.

Resilience in the context of forestry is a difficult concept to pin down, but a generally accepted definition relates to the ability of a forest to withstand external pressures and return to a pre-disturbance state.

The starting point with resilience is to ensure that we are growing strong healthy trees in the first place. These will always be better positioned to resist new threats.

Initially this is down to appropriate species selection for the site – ‘the right tree in the right place’ and not putting the wrong tree in the wrong place as some are tempted to do. Many of the sites which are available to commercial forestry investors are exposed upland sites with relatively poor soils and won’t support a wide range of species. On many of these sites Sitka spruce is undoubtedly the best suited species. The Forestry Commission’s ‘Ecological Site Classification’ model can be helpful with species selection, but as with all models it depends on good site assessment in the first place to give accurate results. Always temper the model with the help of an experienced local forester!

The conventional advice on this is to plant a variety of species suitable for the site. In a recent article in *The Leader*, Tihill’s annual magazine, Andrew MacQueen the alternative species champion outlined some of the species and species mixtures which are showing good results, such as aspen, birch and Douglas fir.

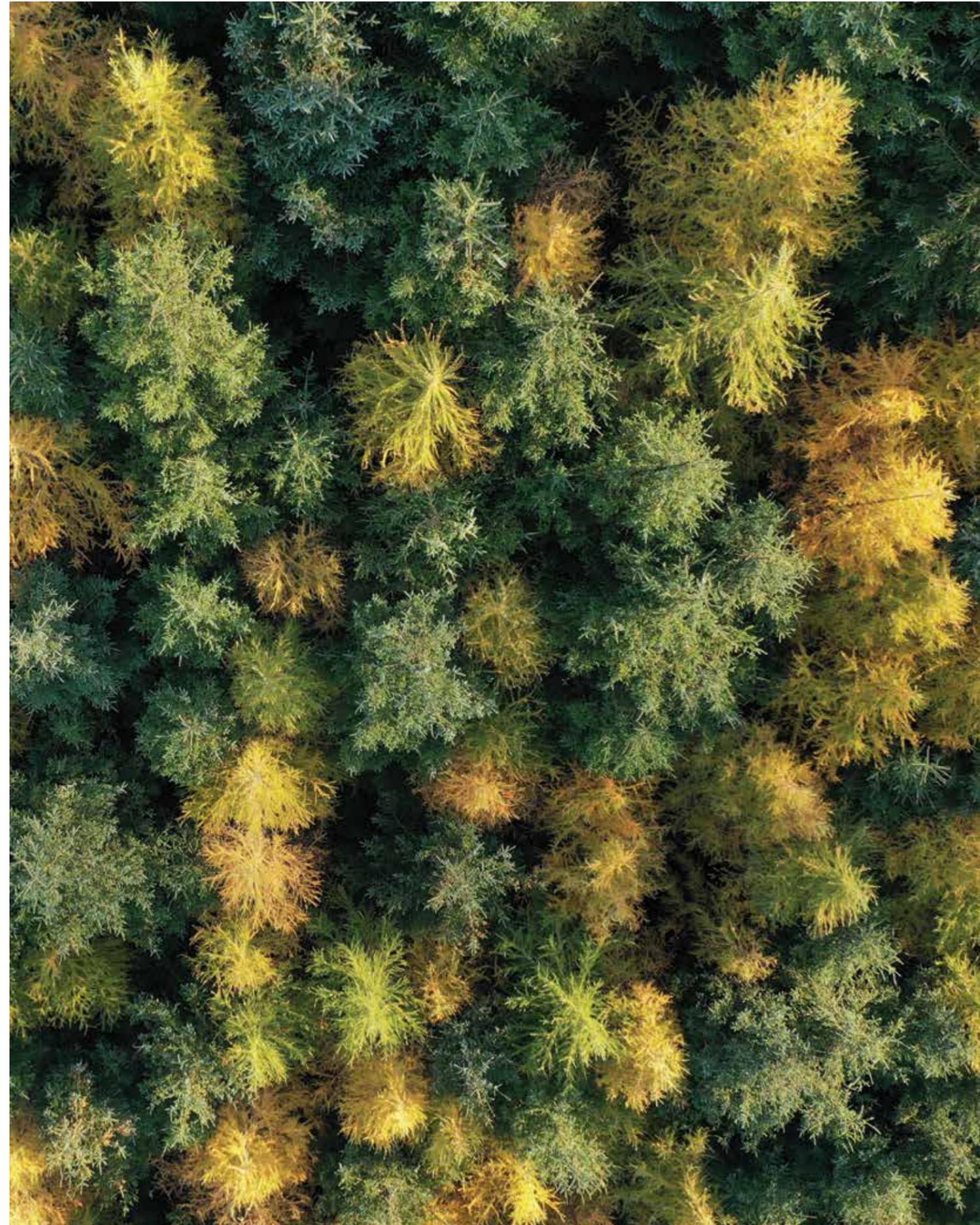
Our greatest challenge in the upland plantations is to enhance resilience wisely. Tree breeding in Sitka has now moved onto studying the detail of the genomics of Sitka spruce. In 2017 the Sitka Spruced project was launched by researchers from Forest Research and the Universities of Oxford and Edinburgh. This research project has received significant funding from BBSRC (Biotechnology and Biological Sciences Research Council). It has also received backing from the UK forest industry with significant financial support from the BSW Group.

The overall goal is to develop Genomic Prediction (GP) methods for Sitka spruce and transfer these lessons to the forestry industry as a whole. GP can be used to predict important traits such as productivity, resistance to insect pests and tolerance to climate change. It could also shorten the process of effective selection of new Sitka strains with new characteristics (stiffness of timber or resistance to weevils, for example) down to just 11 years.

Proactive management to establish and maintain the trees once planted is crucial to long term plant health. Increased growth rates of the improved Sitka spruce will enable shorter rotations, in turn leading to a decrease in length of exposure, for any one crop, to pests, diseases and an adverse climate.

This remains a complex and fast-moving area with no right or wrong answers. So it is always worth discussing with your forest manager to ensure you have the current information and understand the risks and opportunities before acting.

“Much research is ongoing in improving the characteristics of Sitka spruce.”





Market Background

Many of the forests being traded today were originally planted between the 1960s and the late 1980s and contain predominantly Sitka spruce.

Individual properties were typically planted in one operation to create an even aged forest which, as discussed earlier, are now becoming much more age diverse as the original crops are harvested and replaced. Current forest regulations restrict extensive harvesting within a single property so harvesting must be undertaken in stages. Around 30% of our commercial sample is of 'mid rotation properties' with no easily identifiable mean planting year.

This research is a snapshot of the commercial forestry market in the year to September 2019. Woods sold in previous years are therefore different from those analysed here. 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.

“Around 30% of our commercial sample is of ‘mid rotation properties’ with no easily identifiable mean planting year.”

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