FORESTRY & TIMBER NEWS

June 2019 Issue 93

TECHNOLOGY
& INNOVATION

FIREWOOD

THE FORESTRY CENTURY

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Promoting forestry and wood

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The crucial need for market intelligence

STUART GOODALL CHIEF EXECUTIVE, CONFOR

It doesn't seem so long ago that the discussion, in the public sector at least, was around the upcoming 'Wall of Wood' and what to do with it. The assumption was that the (softwood) planting of the mid-20th century would produce a mass of mature forests, full of timber that needed a market.

The picture in 2019 is very different, future wood availability has been a Confor priority for many years, and that concern has become more immediate following the spike in log prices last year – in this issue of FTN we feature the key outputs of a recent updated report by Guy Watt into softwood supply and demand.

In hindsight, the public sector in the 1990s probably under-appreciated how successful both it and the private wood processing sector would be in creating new capacity. The public sector provided confidence through long-term commitments to supply from public forests and the processing sector, both indigenous and international, invested wisely.

The rise of biomass plants in recent years has then had a significant impact on the recent demand/supply balance and contributed to last year's spike.

Some years ago I argued for a 50-year forecast because I was concerned that the lack of official data meant politicians only had access to a 25 year graph that showed rising wood availability and then a levelling off. It was generally known that there would be a more serious falling off in supply in later years, but the absence of official statistics undermined efforts to lobby politicians for action.

The production of a 50-year (and a 100-year) forecast and industry reports on future demand and supply considerably strengthened Confor's lobbying efforts, and helped us to explain to those who opposed planting, especially of productive species, why there was a real business need for increased planting and restocking, not simply a desire for forest expansion.

When the market spiked last year, a spotlight was shone again on the lack of up-to-date information, eg on harvested timber and timber awaiting harvest, and more pointed questions arose around the accuracy of the forecasts – were the assumptions made on felling at Maximum Mean Annual Increment and "overstood" timber accurate. In discussion with members, it was highlighted that the regulation of 'adjacent' felling in even-aged forests was being applied inconsistently.

And this lack of data is not just a 'softwood issue'. Speaking with hardwood mills in southern England recently I was told, frustratedly, that the messages they saw coming from the public sector about large, accessible, untapped supplies of hardwoods, including good quality timber, just didn't chime with their experience on the ground.

What is clear to me from these examples, is that we as a sector lack the ongoing statistical information to spot problems early, to inform discussions with politicians and officials on policy, and to inform key business decisions.

Statistical and market information is one of the elements that Confor is looking at providing for members in future, if a suitable funding mechanism can be identified for raising the funds required. This work is still at an early stage and no final decision has been made. The next stage will be to set out a detailed proposition and consult with members to establish whether a workable mechanism can be developed that would secure sufficient 'buy-in' for it to be introduced.

This is an issue I will be leading on and I would welcome any questions or ideas, now and in the coming months

www.confor.org.uk

Do we have the right market data to support a growing sector?

Andrew Heald provides insights from the new Guy Watt Report and asks how we can get a better understanding of long-term timber availability.

A new report from Guy Watt (John Clegg & Co Consulting), commissioned by Confor, has identified some significant challenges in the availability of timber to meet the growing demand from timber processors across Scotland, England and Wales. The report also highlights uncertainties in how we collect information on timber usage, and the assumptions we make in timber forecasts. The implications of the report are still under discussion by the Confor Board, and we are considering how best to resolve some of the key questions.

The acute timber supply shortages over the winter of 2017/18 prompted Confor to organise meetings and discussions between our members, politicians and the Forestry Commission in an attempt to identify and resolve crucial pinch points in timber supply and how to unlock more production.

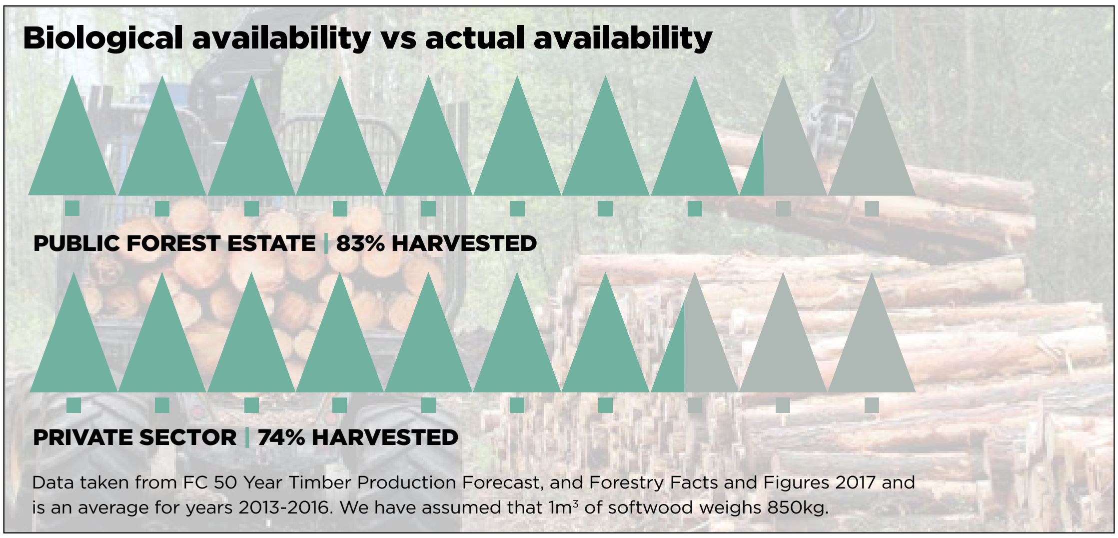
In Guy's report, a key picture emerges of some very tight markets particularly in Wales, southern Scotland and across much of England. It also shows that the demand for small round wood (SRW) is very strong, while at the same time, availability is low. The lack of new planting in the 90s and early 2000s and the rise in demand for biomass and chipwood are the two very evident clear factors. The report suggests that this strong demand could further erode the price differential between biomass and other SRW users and could put further pressure into the bar and pallet wood market.

The new report also suggests that whilst there is some sawlog availability in northern Scotland and the southwest of England, in other parts of the UK markets and supply are remain tight.

Guy Watt report: an industry-led in-depth analysis

UK forestry and domestic timber production is a £2bn industry and yet, our statistics are still heavily reliant on a small core team of very experienced statisticians based in Silvan House. The growth of the private forestry sector as a supplier of wood has increased the challenge of collecting robust and market-relevant timber availability statistics, which are vital to support growth and investment in the processing sector.

In 2015, Guy Watt produced a detailed and region-specific analysis of timber availability and demand across Great Britain, based on the 2012 National Forest Inventory (NFI) and the 25-year Forecast of Timber Availability. Following meetings with Confor members last year, we commissioned an update to the Guy Watt report, and we are grateful to Andy Leitch from Scottish Forestry for his financial support.



Data taken from FC 50 Year Timber Production Forecast, and Forestry Facts and Figures 2017 and is an average for years 2013-2016. We have assumed that 1m³ of softwood weighs 850kg.

THE KNOWN UNKNOWNS

Biomass and wood energy

The current published statistics for biomass suggest that current consumption for energy is about 1.6 million green tonnes. The new report suggest that the actual figure could be one million tonnes higher, because of the growth in smaller RHI boilers particularly used in agricultural enterprises. The official Expert Group on Timber Statistics has convened a Biomass Working Group to clarify this situation and several Confor members are participating to help get a better picture of the biomass markets.

This growing demand means that potentially higher proportions of larger diameter material is being used for biomass.

Biological availability vs actual availability

The statistics of availability are based on ‘biological availability’ which makes several important assumptions. These include that timber crops will be felled at maximum Mean Annual Increment (MAI), and that all wind stable areas will be thinned. We also know that the requirements of long-term design plans and UKWAS mean that a 1000-hectare forest planted over two winters in the 1970s will probably be harvested and replanted over a period of 20-30 years. We also know that the growth models for Sitka spruce are based on older genetic material and don’t reflect the growth rates of improved Sitka spruce.

This means that the volume of ‘harvestable’ timber is different from ‘biologically available’ timber and is likely to be less than the forecasted volume. *See table p6.*

Over-stood timber

Over-stood or overdue timber is timber that is standing at the start of the forecast period but is already passed the age of maximum MAI. The NFI estimates that in Britain this amounts to almost 50 million cubic metres of coniferous timber. This is several times the total annual volume of timber harvested in the UK, and most of this volume is in the forests of the private sector. We need to understand how much of this timber could eventually reach the market, and for example whether any of this volume is Caledonian Pine Woods, amenity planting, or simply inaccessible long-term retentions that may never be harvested.

	FC/NRW	Private	FC/NRW	Private
	Volume ‘000 cu m ob		Area ‘000s ha	
England	1,406	19,738	3.9	35.6
Scotland	887	25,484	2.9	45.1
Wales	1,122	4,419	2.5	6.9
GB	3,415	49,641	9.3	87.6
Overdue timber at 31 March 2015 for FC/NRW, 31 March 2013 for Private Sector				

“

The report highlights uncertainties in how we collect information on timber usage, and the assumptions we make in timber forecasts

Confor members wanted a more detailed understanding of timber availability across Britain, and to better understand how demand had changed since the 2015 report. Guy had responses from over 140 timber processors and sawmills and built up a comprehensive overview of timber usage in 2018. The forecast of the potential availability of coniferous roundwood used in his report is taken from the NFI Forecast of Softwood Availability published in 2016.

The report divides the UK into regions to help better identify geographical differences. What is clear from Guy’s research is that, particularly when the market was at its tightest (in Wales and southern Scotland in particular), more timber was being hauled over longer distances. This is an obvious result of a competitive market place and is a significant supply chain ‘pinch point’ when there is also a shortage of experienced hauliers and of timber wagons. >>

The future and what next

We need to reduce the extent and impact of the three known unknowns, highlighted on page seven. There have been recent developments that should help:

- The recently re-constituted Private Sector Timber Forecasting Group met for the first time on the 13 May. This will help ensure that official timber statistics more closely reflect timber harvesting in the non-state sector.
- Biomass Working Group is already pulling together data from a wider range of sources including RHI and the Biomass Supplier List.
- Forest Research are working on new Growth Models for improved Sitka spruce
- Remote Sensing Data: there is scope to look at how can we use satellite monitoring to better analyse 'live' harvesting data.

We also need to acknowledge that the private sector will probably have to contribute financially towards acquiring and processing timber statistics. Timber production from the private sector will continue to rise in importance, and there is an increasing need to predict future supply and demand to underpin investments.

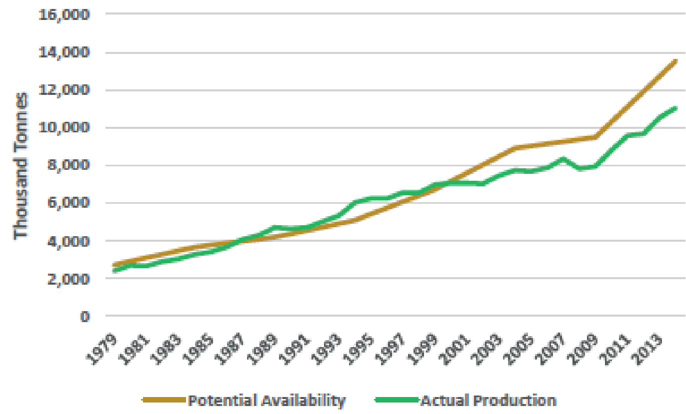
The UK has a thriving and growing forest industry, there are strong aspirations to deliver on planting commitments and to use a lot more timber in construction. If we are to convert these aspirations into delivered targets, then we need better information which will support significant investment in new processing facilities and in new forests.

Is it time to reconsider how we market timber, and is there a need to evolve the relationship between growers and timber processors, with perhaps an increase in long term supply contracts? We can look at other parts of Europe and see the type of futures that we might want, with more sophisticated statistics, with 'live' information on availability and harvesting volumes. In Scandinavia there is also closer connections and greater understanding along the supply chain between woodland owners, managers and timber processors. The future is perhaps already here, it is just unevenly distributed.

Confor is very grateful to everyone who contributed towards the production of this report – to the companies that supplied information, to Andy Leitch of Scottish Forestry for their financial support and to Guy Watt for his excellent work. A copy of the report has been distributed to all the 141 companies and organisations that supplied information.

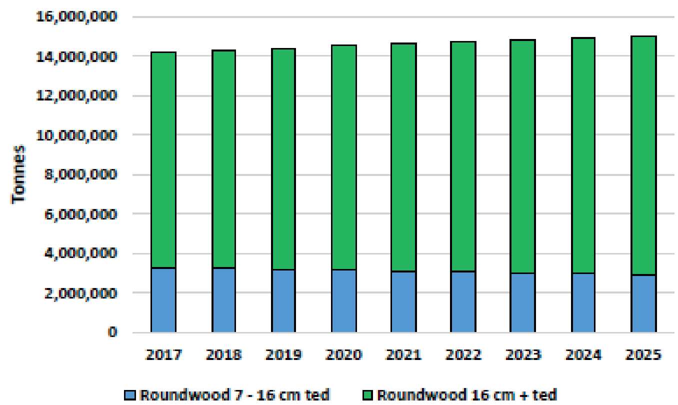
RESULTS OF A FORESTRY COMMISSION ANALYSIS COMPARING FORECAST CONIFEROUS ROUNDWOOD AVAILABILITY WITH ACTUAL PRODUCTION 1979-2013

SOURCE: FORESTRY COMMISSION 2016

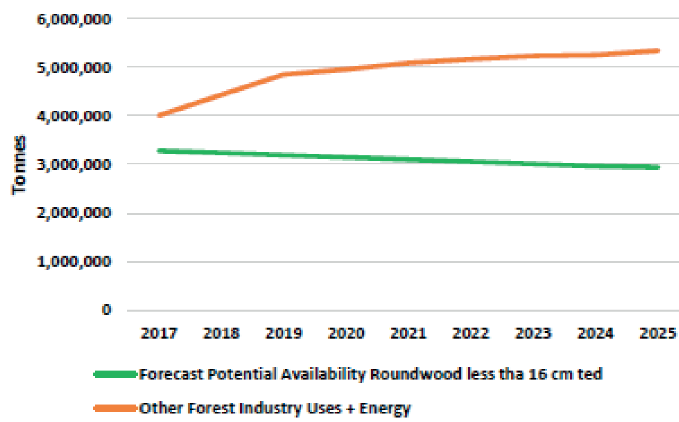


FORECAST OF CONIFEROUS ROUNDWOOD AVAILABILITY IN BRITAIN 2017-2025

SOURCE: NFI DATA CONVERTED TO TONNES



FORECAST AVAILABILITY AND DEMAND FOR CONIFEROUS ROUNDWOOD WITH A T.E.D. OF LESS THAN 16CMS IN BRITAIN 2017-2025



SOURCE: GUY WATT REPORT 2019

FTN WEB RESOURCES

Download infographic at **www.confor.org.uk/ftnweb**

Confor steps up timber supply issue in Wales

L-R: Iwan Williams (Tilhill); Mark Price (Kronospan), Anthony Geddes, Lesley Griffiths, Minister for Energy, Emnvironment and Rural Affairs, Welsh Government; David Edwards (Tilhill), and David Sulman

Confor has stepped up its campaign to tackle timber supply challenges with high-level meetings with both the Welsh Government and Natural Resources Wales (NRW).

Anthony Geddes, Confor's Wales Manager, and Deputy CEO David Sulman led an industry delegation to meet Lesley Griffiths AM, Minister for Environment, Energy and Rural Affairs for the Welsh Government. Earlier, Mr Geddes and Confor CEO Stuart Goodall met Clare Pillman, Chief Executive at NRW.

The Minister and Ms Pillman agreed to meet the industry after acknowledging serious concerns over timber supply in Wales. After strong representations from the industry, Confor issued a vote of no confidence in NRW in early 2019 and has been working hard to tackle the issues which led to the vote of no confidence.

Mr Geddes said: "We had very good meetings with NRW's Chief Executive and then the Minister, concentrating on looking towards a positive future for NRW and our industry."

Talking about the meeting with Lesley Griffiths, he added: "Our conversation included a clear recognition that new woodland creation needs to be kick-started with additional funding and that improving the application process and windows could make a real difference.

"It was also encouraging to hear the Minister recognising the positive link between tree planting and tackling climate change - especially as Wales has just declared a climate emergency, with Lesley Griffiths leading on the issue."

David Sulman, Deputy CEO of Confor, said: "The Minister has undertaken to continue supporting Natural Resources Wales through their current change programme. Confor will continue to engage constructively with NRW and the Welsh Government to deliver a brighter future for our industry, which we must remember is worth £500m annually to the Welsh economy and employs around 10,000 people. In the meantime, it is essential that NRW immediately improves its customer focus and customer service."

At the meeting with both Lesley Griffiths and Clare Pillman, Confor executives were supported by leading industry representatives from Wales.

Stuart Goodall said: "We had a positive meeting with Clare Pillman and believe the industry can work constructively with her to implement the fundamental changes required to ensure that NRW delivers on its commitment to the forestry and wood processing industry in Wales."

Confor sent the no-confidence letter to NRW in January and a summit involving Confor, the processors and NRW was held in late February - when NRW committed to help the industry through the process of change.

A review of NRW timber sales by Grant Thornton has led to a restructure, with harvesting and supervision place-based across six areas. Day-to-day management of contracts will be locally driven, delivered and monitored, with national quality standards. A sales and timber marketing plan will be delivered centrally through a single timber marketing plan.

Confor is also developing a forestry and wood processing industry strategy for Wales, supported by the Welsh Government - including the use of timber in construction, economic benefits, enhancing biodiversity and decarbonisation. Confor hopes to present its initial findings at the Royal Welsh Show in July.

Minister heads north to discuss FIZ

UK Forestry Minister David Rutley (below) is due to visit Northumberland this summer as part of Confor's campaign to bring a Forestry Investment Zone (FIZ) to the county.

Confor has pushed hard for a productive FIZ – to drive up low tree planting rates in England – since the idea was launched in the Government's Clean Growth Strategy 2017.

After Confor published a paper outlining the potential for FIZs in April 2018, the proposal for a Northumberland FIZ gained widespread support at Confor's Superwood conference in Newcastle in December 2018.

Councillor Peter Jackson, Conservative leader of Northumberland County Council, and Paul Brannen, then Labour MEP for North East England, both gave their strong backing for a FIZ to create positive conditions for far more tree planting in the region.

They signed a letter to David Rutley, calling for him to create a large-scale FIZ in Northumberland, in addition to a smaller FIZ already under way in north Cumbria. The letter was also signed by Confor CEO Stuart Goodall, EGGER - a Confor member and the largest private sector employer in Northumberland - as well as the Woodland Trust and Friends of the Earth.

Multi-party

Mr Rutley responded positively, saying he was "keen to explore" options for a Northumberland FIZ.

In his reply to Mr Goodall, who coordinated the multi-party letter on behalf of Confor, Mr Rutley said: "I am pleased to learn of the level of support you have secured across the sector and I understand the level of enthusiasm to launch a FIZ there. We are keen to explore options for a FIZ in Northumberland."

The Minister said he would "welcome Confor starting to work with land managers, landowners, the local community, and others, to develop proposals for a FIZ model in Northumberland". He also said he was keen to visit Northumberland in the near future to "better understand what you think could be developed there".

Mr Goodall said: "We are now in the final planning stages of securing a visit by Minister Rutley to Northumberland in July - which will hopefully include meeting several Confor members as well as local MPS who are supportive of the FIZ idea.

"Confor has worked closely and constructively with Defra at all stages of the process and looks forward to continuing this positive dialogue. We believe a FIZ in the North East is crucial if we are to start making real progress in driving up planting rates in England - and we think it could have a very positive impact on the economy, environment and communities of Northumberland."

Mr Goodall and Caroline Ayre, Confor's Manager for England, have also met Forestry Commission officials as part of their efforts to secure widespread support for a Northumberland FIZ.

In addition, Confor is working closely with a range of partners to ensure forestry and wood processing is included in the Borderlands Inclusive Growth Deal, a £345m cross-border partnership between the UK and Scottish Governments and councils in southern Scotland and northern England.

KEY FEATURES OF A FIZ

IDENTIFIED IN THE CONFOR PAPER IN APRIL 2018

- A simple traffic light system for identifying areas of land suitable (or not) for productive planting;
- Grants for Woodland Creation plan preparation with a higher ceiling than currently for larger schemes;
- An application processing agreement committing all government authorities to reach decisions on applications within 12 weeks;
- A presumption that new productive planting which meets the UK Forestry Standard will be approved.

#TheFutureIsForestry essay and video prize

Forestry schools and businesses have responded enthusiastically to Confor's expanded #TheFutureIsForestry essay and video prize, which launches this month.

Students and staff from the Scottish School of Forestry, Bangor University, National School of Forestry and Harper Adams University are all due to attend the launch event at a summer forestry reception in The Churchill Room, Houses of Parliament, on 11 June.

The forestry and wood processing industry is also well-represented at the event , along with a wide range of other sector stakeholders.

Lorna Johnson, winner of the 2018 essay prize, will read her winning essay at the event, which will also involve David Rutley MP, Minister for Forestry and Stuart Goodall, CEO of Confor – as well as Peter Whitfield of Tilhill Forestry and Sir Harry Studholme, Chair of the Forestry Commission.

Tilhill Forestry, BSW Timber and Forestry Commission are sponsors of the competition.

#THEFUTUREISFORESTRY

The subject for the essay and video prize 2019 is:

How can farmers and landowners be motivated to plant more trees to deliver a wide range of benefits, especially mitigating climate change?

There are prizes of £500, £250 and £100 for the best essays and best videos. Entries will close on Monday 14 October and the presentation of the awards will take place at Westminster on 26 November.

The launch event is in The Churchill Room, Houses of Parliament, 7pm-9pm, Tuesday 11 June 11. Confor members wishing to attend should email **neil@publicaffairs.coop** - details at **www.confor.org.uk**

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EGGER welcomes Tree Champion to Yorkshire

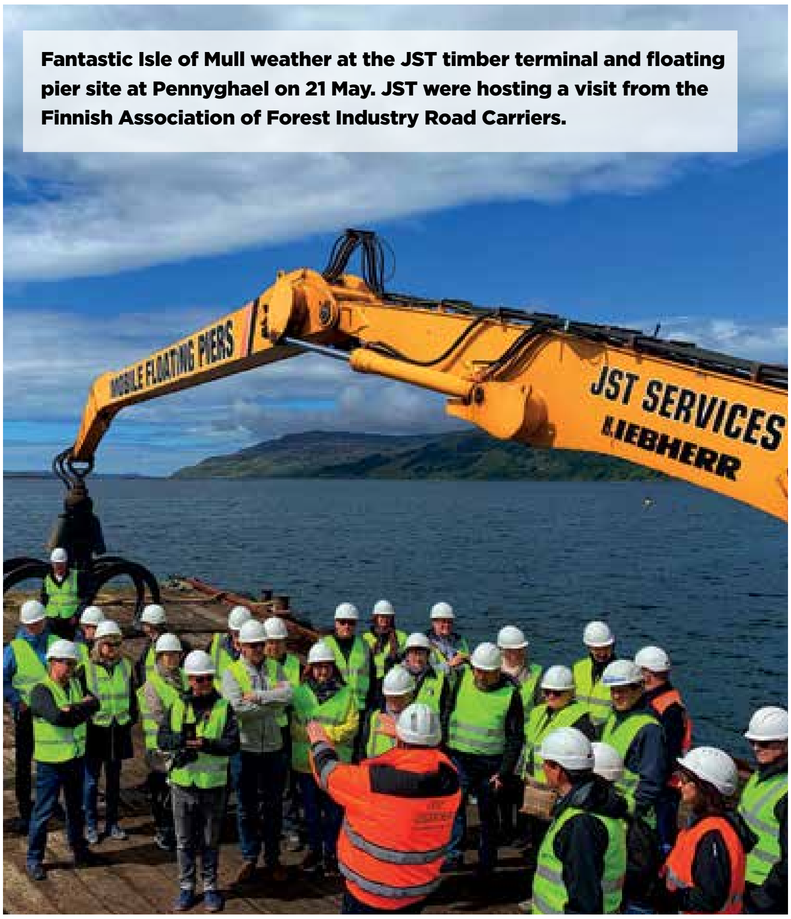
Sir William Worsley, DEFRA appointed Tree Champion, visited the new Mirkpot Wood near Hawes in the Yorkshire Dales National Park on 27 March. Accompanied by Robert Smedley, woodland owner, and David Robson, EGGER forest manager, Sir William planted a tree to mark the completion of the work to create a new 40-hectare productive woodland.

Mirkpot is a productive woodland, planted to the Government's UK Forestry Standard of sustainable forestry. It contains a range of species, including native broadleaves, plus designed open ground, but the spruce component is the economic driver.

David Robson explained: "Gaining planting approval took quite a bit of time and effort. However, with a payment of some £6000 from the Forestry Commission for the Woodland Creation Planning Grant we were able to de-risk this process. Attractive planting grants from the Forestry Commission mean that all planting costs are covered. In addition, there is a 10-year annual maintenance payment, and the owner can continue to claim the Basic Payment Scheme."

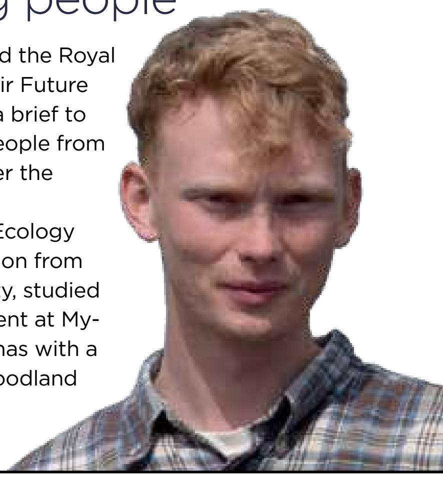
With red squirrels being present in the area, the expansion of conifer woods at Mirkpot will assist them. EGGER Forestry expects to see the first timber income from thinnings in about 20 years. Felling could start in little more than 30 years' time.

Pictured (l-r): Robert Smedley, Sir William Worsley, David Robson and Simon Hart.



Fantastic Isle of Mull weather at the JST timber terminal and floating pier site at Pennyghael on 21 May. JST were hosting a visit from the Finnish Association of Forest Industry Road Carriers.

Adam leads RFS move to woo young people



Adam Pickles has joined the Royal Forestry Society as their Future Foresters Officer with a brief to engage and enthuse people from all backgrounds to enter the forestry sector.

Adam has a BSc in Ecology and Wildlife Conservation from Bournemouth University, studied Countryside Management at Myerscough College and has with a particular interest in woodland management.

WELCOME TO NEW MEMBERS

Chantler Timber LLP, Cheshire
Forestry and Land Scotland, Inverness-shire
Goshawk Forest Mapping Ltd, Stirlingshire
Natural Resource Consultants, Devon
Solange Motnero-Terry, Hampshire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Confor is continually responding to consultations on issues which could affect our members. Here are some of the topics we have covered in the past couple of months.

UK-wide

We argued that **tackling invasive species** is the most pressing issue facing native woodland management alongside bringing them into appropriate thinning/harvesting regimes, with Grey squirrel the greatest threat to native woodlands. There are also risks from invasive pests and diseases which should be tackled through the policies recommended in Confor's *Plant Health and Brexit* paper. We also provided advice on risks from the **Oak lace bug**, urging that information on scale of hardwood imports, economic impact of proposed restrictions, impact on UK woodland management from any loss of processing capacity, and risk and impact analysis of proposed restrictions on preventing spread of lace bug, must all be more fully understood before restrictions are implemented.

England

We commented on two policy proposals. **Conservation covenants** could be a useful tool in engaging landowners in conservation, but must be designed with care. Developing the carbon funding approaches of the Woodland and Peatland codes is likely to be one of few large-scale sources of private finance in the short term. To deliver lasting outcomes, covenants must contribute to a self-sustaining integrated, circular bioeconomy; they must not simply create uneconomic burdens or opportunities for greenwashing. We argued that all the principles of a **Nature Recovery Network** are already delivered in forestry through UKFS. A network of new productive forests should be at the heart of a Network. There seems to be no good reason why all land should not meet standards such as 25% managed for biodiversity, net carbon sink, and long-term management plans.

Scotland

We commented on the **Crown Estates Scotland** rural strategy, arguing that it should aim for net carbon zero across all estate activities, and that new productive woodland creation should be part of this. The managed forestry asset should be used to develop new approaches, for example joint-venture tenancies, integrated land use, public engagement in the rural economy, and metrics for biodiversity net gain.

Wales

In Wales, we argued that the **Climate Change Adaptation Plan** should aim to create 70,000ha of woodland by 2030, bring unmanaged native woodland into good condition, favour nature-based solutions, urgently prioritise the adequate resourcing of NRW, tackle imports of high-risk plants and firewood, and include low-carbon local timber in the 'brand Wales' marketing campaign.

Full responses to all our consultations are on **www.confor.org.uk/resources/consultations/**

ROYAL WELSH SHOW 22-25 JULY

Host of events lined up for forestry zone at Royal Welsh

Following on from the success of last year's show we are pleased to announce an exciting series of events lined up for the forestry zone for the 2019 Royal Welsh Show.

Confor is pleased to be supporting the show through our ongoing sponsorship of the Tree Felling Competition. There will be plenty happening on stand as you'll see from our schedule of events and we encourage members and non-members to come and join us. There is always the opportunity to quiz a forester, learn something new, tell Confor what matters to you or just come and enjoy a little shade!

Confor Wales has been hard at work with members and associate organisations to bring you toolbox talks, Land owner updates, a brilliant forestry education special and last but not least a true insight into the future of farming and forestry.

A packed Confor tent at last year's show.

For questions or if you would like the opportunity to advertise your business on our digital display please get in touch with Anthony Geddes, Confor national manager for Wales **anthony@confor.org.uk**

Our partners at the show

Tilhill

Deer Initiative

The Forestry Pilot Apprenticeship

Say it With Wood

Prior and Rickett (TBC)

Euroforest (TBC)

Treesparks

MONDAY: LANDOWNER DAY

A great opportunity for our long-standing Welsh members to come and catch up with the Confor team.

Programmed events:

- Landowner & Agent Update from FISA
- Deer Initiative – Managing Deer on your land and Cooking with Venison
- Ash Dieback – What a landowner needs to know for practical management

TUESDAY: FORESTER DAY

Programmed events:

- Contractors Breakfast with Toby Allen's Toolbox Talk
- Public event: Come and get a bacon butty and hear Toby talk about surviving as a professional forester.
- Forestry Futures: Routes into forestry and how to get funded
- Lunchtime event with presentations:
  Tilhill talk about their partnership scheme with Coleg Cambria Llysfasi
  Welsh Government intro and update to The Forestry Pilot Apprenticeship
- Say it With Wood
- Treesparks (TBC)
- Forestry Presentation and forestry awards
- Public afternoon event

WEDNESDAY: FARMING DAY

THEME: MAKING FORESTRY WORK ON YOUR FARM

Programmed events:

- Toolbox talk(and breakfast: "How safe is your saw" (TBC)
  Foresters are historically good at looking after their equipment, farmers less so! In an effort to reach out, reduce injuries and get farmers talking about forestry, trees and of course saws Confor is running a free session on pickup points before working with your saw.
- Focus on Farming (lunchtime presentation)
  Andrew Sowerby of Prior & Rickett showing how Forestry can make a real difference on your farm.
- Tree species, selection for climate change resistance
- Managing deer on your farm

More details on the agenda will become available soon. Watch out for updates in your Confor e-newsletter and Welsh newsletter.

Register your attendance and get updates via our events page

Confor
Promoting forestry and wood
WOODLAND SHOW 5th-6th SEPTEMBER 2019
LONGLEAT ESTATE

Forests and climate change is theme for Woodland Show

The Confor Woodland Show returns to Longleat on 05/06 September 2019 and advance tickets are now available online.

Alternating with Confor's APF Exhibition, the Confor Woodland Show is for anyone interested in forestry providing an excellent opportunity for those working in the industry to meet existing and potential customers.

Whether you are a business or an interested individual there will be something for you in the packed programme of events, talks and topical seminars throughout the two-days of the show.

The overall theme for Confor at the show this year is, **Forests, Wood and Climate Change: Think Global, Plant Local**. Confor is planning two breakfast seminars. On Thursday morning we will be discussing mitigation and how we will meet woodland creation targets. On Friday morning we will be discussing adaptation and how we can change our woodlands for a changing climate. Come along and put your questions to our two panels of professionals. The Forestry Minister, David Rutley MP has been invited to attend.

Throughout the two-days there will also be practical demonstrations including horse logging, chainsaw carving from some of the best carvers in the UK, archery, the UK Loggers team selection for the World Logging Championship and much more.

The Forest Workers Zone will run drop-in clinics across the two-days on subjects including health and safety, new technology, business support and efficiency, nutrition and well-being, machinery care and servicing and machine simulation.

Advance tickets available now!

Online tickets
- Thursday: £13
- Friday: £13
- Two Day: £20
- Student: £7
- Confor members free!

Book online at **www.conforwoodlandshow.org.uk**

Gate prices
- Confor members free!
- Full: £15
- Students: £10

First-time exhibitors sign up for show

Over 100 exhibitors have already booked their stand, with an increased number of professional service companies interested in the show this year.

We are excited to welcome first time exhibitors Alantra Limited, Allswage UK Ltd, Artio Geomatics Ltd, Barle Valley Forestry, Bentley Fireshop, Greentech Ltd, Isuzu Truck UK Ltd, Linddana A/S and Westcon Equipment.

Exhibitor bookings are open until the end of June – don't wait to reserve your space and remember to take advantage of discounts available for Confor members.

For exhibitor bookings or sponsorship enquiries please contact our team:

Chloe Francis – 01502 725 844
Chloe.francis@micropress.co.uk or

Laura Munnings - 01502 725 866
Laura.munnings@micropress.co.uk

Social media

Planning on attending or exhibiting at the show? Make sure you check in on the Confor Woodland Show 2019 events page on Facebook. Feel free to post your updates or questions on the page or refer to it in your posts. Please tag Confor **@forestsandwood** and use **#Conforwoodlandshow2019**.

School visits

Local schools have been invited to attend and members are invited to volunteer to take the school groups around the show site. If you are interested, contact Caroline Ayre **caroline@confor.org.uk**

Show embraces the farming community

With many concerned about the uncertainty over future subsidies, farmers are increasingly looking for ways to maximise productivity of their land and diversify incomes. Integrating forestry with farming offers valuable opportunities to do that.

The show has embraced the farming sector and recognises that many farms have small woodlands or even single trees and that these can still make an important contribution to farm budgets.

The rural industry's key manufacturers of working machinery will be present at the event and much of the equipment displayed will be designed for smaller woodlands and adding value to even single trees on the farm. In addition, there will be plenty of opportunities to get advice on how to manage your farm woodlands or how to start planting trees.

"We welcome all farmers to the show who would like advice on what they could be eligible for in terms of grant support, planning, layout, species choice and if they already have woodland, advice on market opportunities and help to bring timber to market," says Caroline Ayre, Confor's England Manager

www.conforwoodlandshow.org.uk

shape
your future

Forest Officer Grade (FOIII)

SALARY: £31,680 - £32,687 (under review) **Ref:** IRC232901

DEPARTMENT: Department of Agriculture, Environment and Rural Affairs (DAERA) Forest Service

LOCATION: Forest Service has its Headquarters in Enniskillen, Co Fermanagh and has forests throughout Northern Ireland.

FOIII is a mobile grade and successful candidates will be expected to work in any of the activities outlined in the Key Responsibilities and to be posted to a number of locations during their employment, in the interest of the Department and to provide a breadth of experience. Consequently, applicants must be prepared to work anywhere in Northern Ireland, as required.

Further appointments may be made from this competition should NICS positions become vacant which have similar duties and responsibilities.

For more detailed information and to apply, please go to **www.nicsrecruitment.org.uk**

Alternatively, an application pack can be requested by contacting:

HRConnect, PO Box 1089, The Metro Building, 6-9 Donegall Square South, Belfast, BT1 9EW. Telephone: 0800 1 300 330.
Email: recruitment@hrconnect.nigov.net

All requests must include your name, address and reference number IRC232301.

Completed application forms must be returned to arrive not later than **12:00 noon (UK time) on Friday 21st June 2019.**

As women are currently known to be under represented in this occupation across Northern Ireland, applications from women would be particularly welcome.

WWW.NICSRECRUITMENT.ORG.UK

The Northern Ireland Civil Service is an Equal Opportunities Employer.

ALL APPLICATIONS FOR EMPLOYMENT ARE CONSIDERED STRICTLY ON THE BASIS OF MERIT

Northern Ireland CIVIL SERVICE

Finding the common ground

by **Andrew Heald**

What does a pink yacht, a David Attenborough documentary and new National Geographic short film about plantations have in common. I think they show that there has been a significant shift in the public attitude towards tackling climate change, and in particular the role of forests and plantations.

The actions of Extinction Rebellion in recent weeks, have moved the urgency and the "why" of tackling climate change up the agenda but that has gone hand-in-hand with an increasing focus on the "how".

The David Attenborough documentary was part of a new series for Netflix and the episode which featured forests also mentioned the importance of 'farming trees' to reduce the harvesting pressure on natural forests and the need to use more timber in construction.

This represents a significant shift in the narrative around plantations, and was the result of work developed by the WWF New Generation Plantations (NGP) team. The NGP approach to sustainable plantations has been developed over the last 10 years by WWF, working closely with large forestry companies such as Mondi, Fibria and UPM plus the Chinese Government and the UK's Forestry Commission.

The short film from Uganda was made last year on an NGP Study Tour with New Forest Company; Uganda is suffering from very high rates of deforestation and has an urgent need to find more sustainable way to support its growing population with timber and fuel.

I've worked closely with NGP for several years and I help to coordinate their study tours and provide plantation management advice in the core team. There are some key lessons from NGP for UK forestry, and which I think would help us communicate better and improve the acceptability of plantation expansion.

The biggest lesson is to identify the problem. Very often we spend time arguing about solutions when we haven't clarified the problem that we are trying to fix. Climate change is THE major issue, driven in part by deforestation and also by our consumption of non-renewable materials and use of fossil fuels.

In NGP we spend a lot of time on thinking about the questions that we are trying to answer. For example:

The UK has an urgent need for more homes, the target is 300,000 new homes every year.

How do we build these new homes with the lowest environmental footprint, with a shrinking skilled labour force and with increasingly unpredictable weather?

One of the answers is more timber frame and more offsite construction. That inevitably means an increased demand for softwood timber, so the next question might be ...

Where should that timber come from and how can we ensure that those forests are being well managed?

We can then have a conversation about local vs imported timber and about sustainability and certification.

By asking questions and really listening to the answers, we can demonstrate that we are trying to better understand the problems and we can also find areas of common understanding.

If *How do we tackle climate change?* is the biggest question of all, the second biggest is *How do we adapt to the likely impacts of climate change?*

Well managed forests and sustainable timber are part of the answers to both these questions. The regular reports from the Committee Climate Change reinforce this message, calling for 30,000ha of afforestation each year and a shift away from concrete in construction. As foresters and timber processors we are part of the solution to these massive challenges.

However, we can't just point out at a new Spruce plantation and expect people to say thank you. We need to work much harder on our empathy skills, and we need to demonstrate that we are really listening to people's questions and concerns. We need to ask those questions, and find the common ground and take people on the journey from Sitka sceptics to conifer converts.

https://newgenerationplantations.org

> On their own, natural forests can't provide all the wood we need
>
> David Attenborough

FTN WEB RESOURCES

Watch: David Attenborough – How to save our forests and rewild our planet
Find more links to:
National Geographic video: Plantations in Uganda
Net Zero report by the Committee on Climate Change
Extinction Rebellion campaign
www.confor.org.uk/ftnweb

Market balances out and correction begins

TIMBER AUCTIONS MARKET REPORT
Oliver Combe
Timber Auctions

The market correction is happening, supplies have increased at the same time as demand has fallen and processors' confidence in the market has faltered. The net result is that processors and merchants see enough wood ahead of them to start to reduce prices.

Domestic market

In the UK the energy market has provided market diversity and price stability during the recent price correction which has softened the impact of regional oversupply and lack of confidence in the traditional processing sector.

Since Christmas there has been an air of uncertainty in the market which appears to be due to lower than expected demand for finished products, a gradual increase in the strength of the pound (at least until this week) and increasing uncertainty over Brexit coupled with expensive wood purchases from Q3 and Q4 2019 now hitting the weighbridges.

This has brought a renewed focus on the need to reduce overall supply costs at the same time as there has been large volumes of timber offered to the market in Scotland and north England on the back of strong prices last year. Once buyers have been able to fill the gaps in their yards then their focus has turned to managing the price.

Increase supply v reduced demand = falling prices

For the last three months we have been in the situation where yards have been filling up and prices have been falling steadily especially in areas like the west of Scotland where supply has been exceptionally strong.

This has led to the situation where some more challenging parcels have not attracted an offer whilst others have been withdrawn as they "have not met expectation" so already we are seeing supply starting to reduce.

This has a double impact as it reduces available volumes but also reduces the supplies of cheap timber required to offset the expensive purchases from the second half of 2018.

The ability to dilute expensive wood is reduced and the pain is prolonged.

Over the last three or four years the supply of timber to the market has been significantly front loaded to the first five months of the year with very little offered to the market from June onwards.

This has meant merchants and processors have had to buy in the spring and then make it last for the rest of the year.

Should this trend occur again in 2019 at the same time as aggressive price cutting by the processors reduces standing timber prices then we may see an interesting situation in Q4 where merchants and processors are struggling for volume and may have to be more aggressive in their purchasing.

Scotland, Northern England and Wales have seen overall price reductions of 10-20% this spring on the back of large volumes offered to the market although there has been a noticeable slowdown in market activity this month. It remains my suspicion that currently supply and demand are very finely balanced, it would only take a small increase in demand or continued decrease in wood offered to the market to put pressure on prices again.

Conditions for harvesting have been good this spring with no really bad winter weather and a drier than normal winter and spring. Roads have held up well and machines have enjoyed good conditions to work in so timber has been coming out of the forest quickly and yards have filled up.

Even the smaller biomass markets which

£ per tonne delivered to customers in Wales, central and south England (May 2019)

Product	*Lower price*	*Upper price*	*Trend*
Log 18	£65.00	£80.00	↓
Bar 14	£60.00	£70.00	↓
SRW	£50.00	£65.00	= ↓
Fencing	£70.00	£80.00	=
H Wood firewood	£60.00	£75.00	=

£ per tonne delivered to customers in north England and Scotland (May 2019)

Product	*Lower price*	*Upper price*	*Trend*
Log 18	£65.00	£75.00	↓
Bar / pallet 14	£45.00	£60.00	↓
SRW	£50.00	£60.00	= ↓
Fencing	£55.00	£65.00	=
H Wood firewood	£55.00	£65.00	=

were 'starved' of wood last year are now gradually rebuilding their stocks with some even putting quotas on deliveries.

The diversity of the energy market has made it difficult to actually quantify the scale of demand but what is noticeable is that there is very little small roundwood at roadside currently in England and Wales.

Outlook

The market will now start to stabilise as volumes offered to the market reduce whilst demand slows down as the holiday season leads to the seasonal slowdown in demand. The big unknowns are the uncertainty over Brexit (this appears to be weakening the pound and should favour domestic producers) and the full impact of "Trumpism" on the US and Chinese economies (will it start to draw imported timber away from the UK). Maybe we are reaching the bottom of the downward cycle and we will start to see signs of improvement later in the year.

GLOBAL TRENDS

The global market was showing signs of coming back into balance after the oversupply situation of Q4 2018 until the latest escalation of the US v China trade war this month.

There are many positive signs that the market has improved in Q1 2019, roundwood prices have increased in Norway, Estonia, and Sweden whilst in Germany and Austria sawn timber prices have increased in April and May on the back of strong demand.

In many areas processors have slowed production down to balance supply with demand which has stabilised prices and, in most areas, lead to modest increases.

So globally, supply now seems to be back in balance with demand albeit at a lower level than previously.

The areas to watch closely are Sweden and Central Europe where storm damage and related beetle damage has seen large volumes of spruce come to the market quickly, this has in turn pushed roundwood prices down. Although there are potentially market disrupting volumes of timber it is difficult to quantify what is recoverable as when storm and beetle damage combine there is significant downgrade of timber from stem snap, beetle damage and the need to log it quickly to reduce the risk of wildfire.

In the past, these incidents have led to short-term price falls followed by longer term shortages, this has been particularly evident in central Sweden where widespread shortages of spruce have followed recent storm damage and lead to mills having to adapt to cut redwood and buy logs out of catchment to maintain viable production volumes.

So, although there is a glut of cheap wood currently the big question is how long will it last and in which markets will it impact.

The US protectionism is already impacting on global trade, already this year we have seen Canadian sawn timber imports to the USA fall by 20.8% in Q1 whilst US hardwood exports to China have fallen by 40% in the same period.

The Canadian sawmilling industry has reduced capacity significantly and is currently running at around 80% utilisation.

Whilst US sawn timber prices are in the doldrums demand levels are OK and there are signs of increasing demand for construction timber, without Canadian timber will this demand suck in timber from Sweden and Central Europe?

So, there are some positive signs emerging in the global market and maybe for the UK we are not too far away from seeing a reduction in supplies of 'cheap' imported timber placed in the UK whilst other markets stutter. Maybe Donald Trump's protectionist policies will help the UK

> "Although there is a glut of cheap wood currently the big question is how long will it last

The Swedish and German mills are already increasing their shipments to the US at current low prices, it would only require a modest increase in prices for these volumes to increase significantly and draw away volume currently coming into the UK.

Global demand for wood products remains good, the Chinese market is showing signs of recovery and the ever-rising demand for wood fuel continues with global trade in wood pellets increasing by 21% last year.

Whilst energy wood is at the bottom of the value chain, additional demand adds to global demand pressures and helps to maintain a floor in price levels during market corrections.

Roadside hardwood prices (£ hft) May 2019

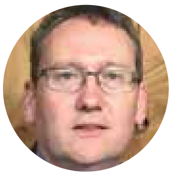
	Oak planking	Oak beam	Oak fencing	Export ash & beech	White ash sawlogs	Export sycamore	Large Douglas fir & Larch
High price	£12.50	£10.00	£7.00	£3.25	£4.50	£5.00	£3.25
Mid price	£11.00	£8.50	£5.50	£2.75	£3.50	£4.00	£2.90
Low price	£9.00	£7.00	£4.00	£2.00	£3.25	£3.00	£2.50

These prices are for guidance purposes only and are based on historic market information

TIMBER AUCTIONS

If you wish to discuss parcels of timber you would like to market, please contact Oliver Combe on 07771 958975, **oliver.combe@timberauctions.co.uk** for free independent marketing advice.

Market rollercoaster



TIMBER MARKET REPORT
by **Harry Stevens**,
timber buying director
Tilhill /BSW

Long term watchers of the market for roundwood both roadside and standing are well used to extreme volatility in the market for all products, even so the rapid inflation of the last 18 months has been unprecedented in recent years. However, as we know, markets cannot go upwards indefinitely, and with the benefit of hindsight, we can see that the market initially levelled off in the last quarter of 2018 and subsequently we have seen a significant weakening of demand in the last quarter leading to lower prices.

What are the drivers behind this?

Storm damage and bark beetle are conspiring to flood mainland European markets with spruce roundwood sawlogs. Storm Eberhardt, which swept through southern Germany, northern Austria and the Czech Republic on the 10th and 11th March has left widespread damage in its wake.

The clear-up operation now underway in the forests is compounding the steep growth in sawlog supply already emanating from felling operations that are underway to contain the swarms of bark beetle which are damaging Czech, German, Swedish, Austrian and Swiss forests.

The total windthrow resulting from Eberhardt is reported to have reached 3.4mn m^3, spread across nine German states, and in the Czech Republic, it was up to 2mn m^3.

The Czech Ministry of Agriculture is announcing extreme measures to contain the widespread damage wrought by the bark beetle across its forests. On 3rd April, it designated those areas that have been most severely impacted, predominantly located in its eastern regions (close to Germany), as 'red zones' where forest owners are permitted to carry out clear cutting.

Beetle damage affected approximately 6mn m^3 standing timber across Germany in 2017. In 2018, that figure more than doubled to 13.5mn m^3. The authorities have monitored trends closely through April when the first swarming phase was expected. Conditions in German forests are reported as not encouraging. Low rainfall through winter 2018/19 means the forest floors are dry. Moreover, 'high population densities from last year' means the Bavarian Forestry Institute believes a 'heavy and condensed swarming period' is likely.

Large volumes of damaged roundwood has led to a significant increase in softwood log exports to Germany's traditional neighbouring markets in Austria, France and Belgium, but there has also been dramatic growth in exports to Asia, especially China.

Sawmills have reacted to this increased volume of cheaper logs by increasing throughput substantially. In some cases, sawmills are reported to have ceased production temporarily because they are overrun with coproducts that they cannot shift.

The high throughput at Austrian and German sawmills is directly contributing to rising stockpiles of imported sawn wood in the UK where port terminals are reported to be currently holding 25-30% more stock than usual for this time of year. Concerns that wood procurement would prove difficult following the UK's departure from the EU on 29th March had encouraged importers to build supplies through February and March.

Quays are now full and the volume is not moving due to oversupply. Rental charges are now impacting and imported prices are reducing at a rate that is putting UK sourced material prices under extreme pressure. Between timber at quayside, and in sawmill stock yards in both Europe and UK, there is a considerable amount of stock that needs to flow through the system before we reach a steady state again.

This trend has been compounded by weak sawn demand in other European export markets, such as China, North Africa, America and Canada, which left Scandinavian shippers redirecting spare cargoes back towards Europe and the UK. Finally, the pound's 10% rise against the Swedish krona between mid-January and early-March reduced the price of imported Scandinavian sawn wood.

Similarly, in central Europe coproduct and industrial roundwood are reported to be oversupplied to all users and prices are falling in reaction to the abundance of material. Prices for all categories of panel products have been held back with MDF reported to be most significantly impacted, with producers in Britain taking time out to balance production against demand.

> “The total windthrow resulting from Eberhardt is reported to have reached 3.4mn m^3

The implications for roundwood demand in Britain

In the short term we have yet to see the full implications of this oversupply in central Europe start to really impact on the market in any substantial way. There certainly has been a weakening of demand from sawmills as overtime

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>> and some core production hours have been reduced in an ad hoc response to falling demand and a rising inventory of sawn stock. What is traditionally the busy period for the sawmill sector, the spring period, has not lived up to exceptions for 2019. Certainly, the very warm Easter bank holiday saw good demand for fencing which is one product area that appears to see reasonable demand. Otherwise, requirement for carcassing timber and palletwood is reported as weak.

In response, recent tenders have seen standing prices fall as roundwood buyers consider the impact of the reduced demand on their forward bought inventory for their processes. In some instances, parcels have not met reserve with small roundwood reported as having the greatest discrepancy between reserve and offered price. In the short term, demand for industrial roundwood is down considerably with bio fuel plants taking maintenance shuts for several weeks, whilst other larger processors are reported to be reducing their use for at least the next few months in response to production 'issues' and weakening demand. Alongside this, several large producers have come through the winter period without having to touch their winter reserves and are anticipating destocking over the next period further reducing demand in the short term.

As ever the crystal ball does not seem to work for more than the next few weeks, however, it is likely that demand for sawlogs is going to be reduced for at least the period up to Christmas and then demand is unlikely to pick up much before next spring. Small roundwood may behave in a slightly different fashion as reduced sawlog consumption will result in a reduction in coproduct production, and users will have to substitute this volume with industrial roundwood.

By comparison with this time last year where we were in the middle of a strong inflationary period for standing timber, we now appear to be in to a period of declining demand and falling prices. It is likely to be a long hot summer for harvesting teams with increased stocks of roundwood sitting at roadside, just like the 'good old days'.

www.bsw.co.uk/www.tilhill.co.uk

Outlook for the timber market

The key to timber prices over the longer term is likely to come from sustained building activity and a buoyant economy, report Savills' **Ian Bailey** and **James Adamson**

Last year saw the third highest percentage rise (46.2%) in UK timber prices recorded during the last 35 years, leading to understandable nervousness over the short term direction the markets will take. But commodity price fluctuations are not new and market volatility will continue – the reality is that the price of timber will be entirely influenced by supply and demand and the efficiencies or otherwise of the production chain. The domestic market is complicated by the degree to which the UK is reliant on imports. In 2018 and early 2019, this was compounded by the uncertainty around future UK trade relationships with most other exporting countries.

In forecasting commodities it is important to look at underlying fundamentals, not past pricing cycles or short term risks. There are a number of factors influencing this, but the latent demand for wood is undoubtedly key. Both global and UK timber supply should be considered relatively finite as replenishing global timber resources is unlikely to keep pace with fellings, and indeed pressure to limit climate change will provide strong >>

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The reality is that the price of timber will be entirely influenced by supply and demand and the efficiencies or otherwise of the production chain

>> friction against expanding the global harvest further into the natural forest resource. Domestic forward supply is shown on the graph on page 5, and the ability to upscale domestic production is limited, so from a supply standpoint timber deliveries are relatively unresponsive to increasing demand and, therefore, open to demand led price inflation.

Latent demand may fluctuate, but we consider that over the medium term it will not diminish. Construction demand is underpinned by house building targets in the UK, and this is replicated in China and the USA, as well as the potential from developing economies. Biomass currently offers strong demand for small diameter timber in the UK and elsewhere. This is not a sustainable use of wood fibre and, although it is clearly impacting on markets, there is the prospect of price or regulatory intervention impacting the further expansion of this sector. The key to timber prices over the longer term is likely to come from construction demand and in a buoyant economy there is no reason for prices to fall. If they do, as seen in past cycles they will recover again, and we do not believe the market has reached a ceiling price.

Ian Bailey is director rural research, Savills, and James Adamson, head of forestry investment UK rural, energy and projects, Savills. **www.savills.co.uk**

TIMBER MARKETS

Price

According to the Coniferous Standing Sales Price Index for Great Britain, the average value of timber increased significantly (46.2%) during the year to September 2018. This follows a 21.4% increase in the previous harvest year. This 2018 price rise is substantial but not unique and the graph on page 4 shows this is the third increase of this magnitude in annual growth in just over a decade; other significant rises occurred in 2010 (48.7%) and 2007 (50.2%). Since 2000 timber prices have increased by 235% compared with -26% in the 15 years preceding 2015.

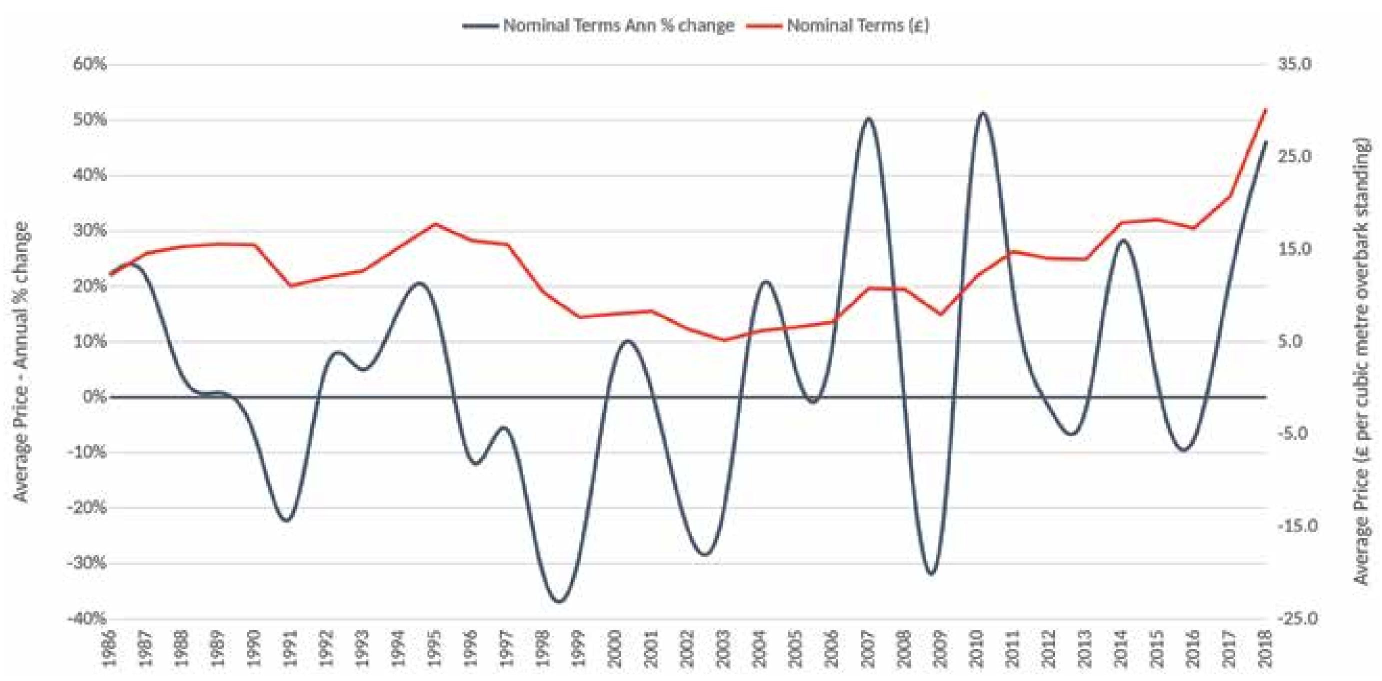
Demand

It is well reported that the UK is very reliant on timber imports, but recent inward investment in the UK wood processing industry and pricing trends highlight the buoyant and world class nature of this sector. Current conditions favour UK producers but our potential harvest is limited by availability of the resource and the practicality of harvesting more timber than we are currently producing. Current felling rates can be considered as sustainable for the next 30 plus years, which means that, subject to external shocks disrupting demand, there is little on the horizon to suggest a change to current pricing structures.

Supply

UK softwood supply is forecast by the Forestry Commission, shown opposite. Based on current projections the data on the chart averages about 15 million m^3 against a current harvest of 11.4 million m^3, meaning we are currently running at just below maximum capacity. This is for a number of reasons, including industry capacity and the ability to work in upland locations in winter. Even if we could capture the extra 3 million m^3 per annum, this only represents 5% of current UK wood usage so it would have limited potential to adversely affect timber prices. Although there is a risk that imports win back market share post Brexit, factors such as tighter bio-security controls on imported wood or increasing demand in the country of origin may limit this.

CONIFEROUS STANDING SALES PRICE INDEX FOR GREAT BRITAIN



Source: Forestry Commission

Technology gives woodland owners the complete picture

Barle Valley Forestry uses the latest woodland surveying technology, software and specialist knowledge to provide owners and managers with reliable information about their timber stocks and woodlands. **Caroline Ayre** reports.

On a beautiful day in early May, I met Steve Fox, managing director of Barle Valley Forestry, at Fingle Woods in Devon. Stood in a P92 Douglas fir stand, managed by the Woodland Trust as part of the future of Fingle Woods, Steve explained the beginnings and on-going fascinating work of the company.

Steve began his career in the early 1980s with the Forestry Commission in the south of England. He moved on to become a harvesting, marketing and forest management practitioner with training through the Forestry Commission's Training and Education Branch. In 1988, he left the Forestry Commission and dedicated the next 20 years to teaching forest management in both further and higher education, becoming a senior lecturer in 1998. After leaving the education sector he joined Tilhill as a forest manager, covering the south west of England. But Steve was finding that he was more and more office-bound and was spending less time in the woods. A conversation with his son Sam in 2011 about their shared passion for native woodlands was the start of what would become Barle Valley Forestry Ltd, with an initial focus on bringing unmanaged woodlands back into management.

Steve explains: "It was a natural progression, bringing together our skill sets and experience in forest management, focusing on small-scale harvesting and primary processing to add value to local markets. My qualifications include a National Diploma in Forestry, and a Cert Ed and PGDip in Forest Product Technology, so you could say I am passionate about trees, inside and out!"

The company is very much a family business with Steve heading up the team as managing director, with his twin sons Sam and Tom.

Sam has been working in the forestry industry for over ten years. During this time, he has been responsible for Barle Forestry's harvesting and marketing operations. For the last two years, he has been responsible for contracts and compliance. He has extensive technical knowledge of silviculture practices, focusing on forest planning.

Tom has been working in the industry for six years, from felling and planting trees to technical surveying. He has spent time in New Zealand, working for a forestry and land management company, primarily focused on capturing data for the National Carbon Emissions Trading Scheme. Tom has also worked on the UK National Forest Inventory (NFI) and he is responsible for the company's field survey teams.

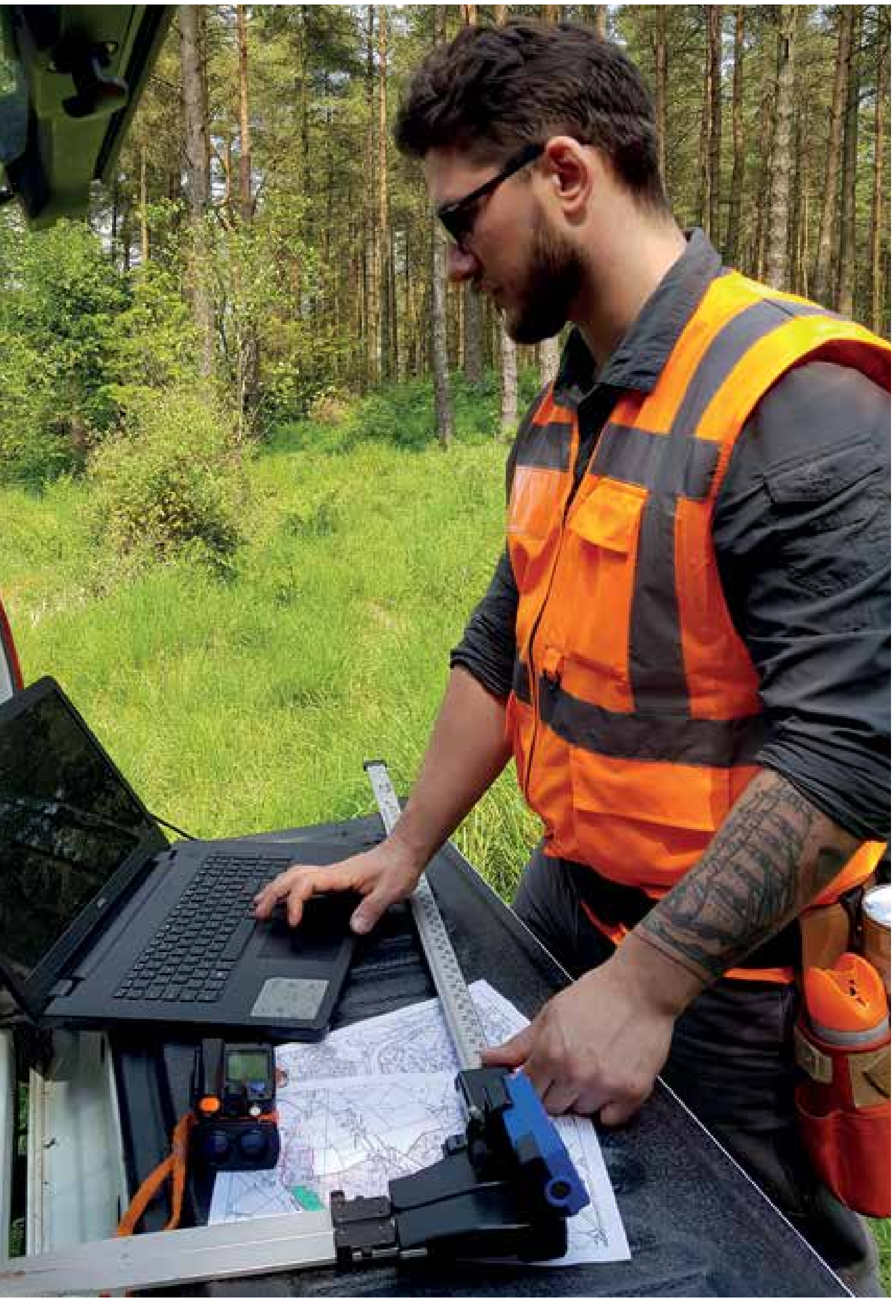
The family soon recognised that their key strengths were in mensuration so they moved away from harvesting and maintenance contracts to focus on forest surveying. The company offers a range of forest surveying services with a core focus on production and inventory surveys for forecasting and timber valuations.

The majority of their work is for the public sector, predominantly in Wales, and north, south and west England. However, as Steve notes, "we are seeing a slow but welcome renaissance in private woodland owners and managers who want to understand the health, resilience and productivity of the resources that they own or manage."

Creating and using accurate data to give confidence when making forest management decisions is the absolute cornerstone of the business. Steve explains: "The most important resource we have are our surveyors, with two teams split geographically to cover the UK. Each team is led by an experienced forestry technician, receiving regular technical support from myself. The work is hard and demanding, both mentally and physically. Our teams need stamina and concentration to ensure the data gathered is of the best quality. It is almost like a military discipline."

The family realised that they needed to move things

> "Creating and using accurate data to give confidence when making forest management decisions is the absolute cornerstone of the business.



forward when it came to gathering and processing data so they began to investigate alternative technologies and decided that Haglöf Sweden could provide them with the equipment and software they needed.

"They were at least five years ahead of the UK but the software was set up for Scandinavian forests," says Steve. "Although the principles were the same we consulted *The Forest Mensuration Handbook*, talked to foresters and went over to Sweden to discuss developing the software for the UK situation.

"We got our first set of calipers in 2015 and the Vertex IV ultrasound system. We have now moved on to the Vertex Geo which gives an extended range measurement and reach with a combination of ultrasound and laser. It also includes additional GPS mapping functions which feeds into our GIS software. We are continually improving our accuracy and being out in the field day-in, day-out we can really challenge the technology and suggest improvements."

Continuous development

What next for Barle Valley Forestry? Sam has been driving the continuous development of the company. He said: "One of the key areas we have identified for growth is remote sensing and monitoring using UAVs (drones). We have developed a suite of forestry specific services we can now deliver in partnership with Artio Geomatics – a specialist UAV mapping and surveying company working throughout the UK. These include topographical mapping, tree health monitoring, wind blow recovery assessments, 3D modelling and volumetrics."

www.barleforestry.co.uk

Barle Valley Forestry will be available to talk about their new technology at the Confor Woodland Show at Longleat, Wiltshire on 5 and 6th September 2019.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FORESTRY INNOVATION FUND PROJECT

Innovation in forest creation

by **Martin Glynn**,
Innovation in Forest Creation

The north of England has a world class processing sector which supports over 9000 jobs and utilises in excess of 1.5m m^3 of timber each year. However, the region is confronted by a significant decrease in available volumes in the coming decades, as highlighted in the National Forest Inventory Borderlands Report which indicated a reduction from 5m m^3 pa in 2027-31 to 2.7m m^3 pa in 2047-51. This threatens confidence in the sector, leading to under-investment, losses in employment and lower woodland management activity in the long term. The Roots to Prosperity Partnership recommended that 20,000ha of productive woodland needs to be created in the region in the next ten years. Whilst mechanisms to facilitate woodland creation have been introduced recently and new schemes approved, there remains a significant challenge if planting is to be increased to these levels.

The focus of innovation in this project was to provide solutions which free up land, link landowners and investors, and support best practice in the creation of woodlands. By creating other options to the standard open market sale, which usually favours non-forestry end users, it provides another route for farmers who are seeking to diversify income and/or exit farming, and land for investors to create woodland on. This also helps to overcome the 'cultural' issues which farmers have to confront when giving up, or reducing, farming, which is believed to be a major deterrent to more land reaching the open market.

By creating other options to the standard open market sale, which usually favours non-forestry end users, we aim to provide another route for farmers who are seeking to diversify income and/or exit farming, and land for investors to create woodland on.

Land Partnership for Forestry model

A primary output from the project was a Land Partnership for Forestry model, which took aspects of the Share Farming agreements which have become popular in recent years and applied it to woodland creation. Through this, the existing landowner and an investor form a new business partnership which shares inputs and outputs. Crucially, it is structured in such a way that both parties maintain the Inheritance and Capital Gains Tax benefits of owning land and growing timber and can exit the partnership at any point through a pre-agreed mechanism. The landowner benefits by receiving an annual income for an agreed period of time plus, if specified, a potential share of the timber income from thinnings and final felling. They can also undertake and be paid for work associated with the establishment and management of the woodland, utilise open areas for grazing and access other land within the holding. The model has the potential to attract a new type of investor who might be a high-income earner but does not have the large capital sums usually associated with buying land and creating woodland. They also benefit from having a business partner who is 'on-site' and has an interest in successful establishment of the woodland. Unlike many of the forestry leases entered into in the 1970s and 80s, the agreement will specify what happens at the end of the rotation, both in terms of sharing the income, and replanting of the woodland. Analysis indicates that this model not only improves cash flows but increases the rate of return for the investor.

> We aim to provide another route for farmers who are seeking to diversify income and/or exit farming

Best practice in ground preparation

Another output has been to highlight new guidance on best practice in ground preparation, a vital issue as planting rates increase across the UK. It is hoped that this work will be the first piece in a jigsaw that adopts the marginal gains approach to timber supply. This has the potential to not only make new woodlands more productive, but also to maximise the existing resource, thus helping to overcome potential shortages in the short term. A short film with Dr Jens-Uwe Haufe, MICFor from Forest Research brings to life a newly published document from Forestry & Land Scotland and will be available to practitioners across the UK.

Innovation in Forest Creation is a partnership based project building on the work undertaken by Roots to Prosperity. The project was implemented by RDI Associates, Cumbria Woodlands, Martin Glynn FICFor and Land Factor (now CKD Galbraith LLP) and was overseen by the Roots to Prosperity Leadership group which includes representatives from FCE, Confor, UKFPA and local authorities across the region.

http://rootstoprosperity.org

FURTHER READING

Further reading: Dr Haufe: *Forest Soils: are they an undervalued resource?* (FTN Feb 2019, p62)

#Forestsforfashion – from forest to wardrobe

An international PR initiative led by PEFC and supported by FAO and United Nations creates a strong link between eco consumer products and sustainable productive forestry.

How can we promote the forestry story to new audiences within the wider public? #Forestsfor-Fashion aims at just this. The initiative links forest-based materials from sustainably managed forests with the world of fashion. Consumers are being increasingly made aware of the environmental damage caused by the fashion industry. In this campaign, forests and timber are seen as a possible solution.

"Forests can provide part of the solution. Using the latest technology to produce wood-based fibres for our clothes. This has to go hand-in-hand with sustainable forest management if we are to use forest products we need to make sure the forests remain healthy and continue to grow." *Paola Deda (UNECE / FAO)*

Forests provide materials and fibres for many of the common consumer products we use today. Yarn from cypress, beech and eucalyptus trees can all be used to make fibres for clothing – the most popular cellulose fibres are Viscose, Modal and Lyocell. In addition, cork and even wood can be used for not only clothing, but accessories too! Even better, these forest materials are softer and more breathable than cotton or silk. Importantly, these materials are also more environmentally friendly, requiring considerably less energy and water to produce compared to cotton and other synthetic fibres.

Not to mention of course, all the other benefits that forests provide. From helping to mitigate climate change, maintaining water quality and stabilizing soil, to providing food and income to millions of people around the world and home to for an extraordinary amount of biodiversity.

At present, the UK forestry sector might not provide raw material for #bioecomomy products sourced from wood fibre. However, our sector will benefit from any initiatives that help get the equation Productive forestry = sustainability into the minds and hearts of the wider public.

"
Our sector will benefit from any initiatives that help get the equation Productive forestry = sustainability into the minds and hearts of the wider public.

Converting to free and open source software

Amy Taylor of Cawdor Forestry talks about the experience of a small company upgrading and future-proofing their key GIS software.

Upgrading key office software is a daunting prospect at the best of times. Cawdor Forestry was faced with this challenge when our forest mapping and spatial data management software, which had been developed over a number of years, needed to be upgraded.

Having adopted Geographic Information System (GIS) software linked to a custom-built forestry database in the early 2000s, GIS, data management and mapping capabilities were key to our day-to-day forest management, and a core component of the business. However, time had moved on and the software at the heart of the bespoke system had become obsolete. Frustratingly, it was apparent that a significant investment was required, not least in scarce staff time, to develop a system that would enable them to do the same tomorrow as we do today. However, it was also a good opportunity to extend GIS tools to all staff, deploying operational mapping and data query capabilities to all forest managers.

We identified that the new system would have to fit two key criteria:

- provide core forest management and budgeting tools for forest managers
- offer complex data analysis, management and cartographic toolboxes for the GIS/data management team.

As a small company, with limited resources, we were keen to avoid the well-publicised high-profile pitfalls of software development.

Adopting QGIS

We reviewed the options available which would fulfil our existing GIS requirements and provide scope for continued innovation. This identified two viable options, upgrade to new commercial GIS software or switch to using Free and Open Source Software (FOSS) - specifically Quantum GIS (QGIS) which had caught our attention. It was apparent that QGIS was rapidly gaining popularity in commercial, local government and private organisations. Further, there was a strong online community of developers and supporters dedicated to maintaining a stable product and combining long term support with regular upgrades. Following trials, we decided that QGIS could provide a relatively seamless transition and be compatible with our existing spatial data and workflows. The cost saving compared to proprietary GIS software was one attraction, but more importantly QGIS was very intuitive for all levels of user.

Four years following the decision to switch to QGIS we can safely say we are QGIS converts. We have been impressed with how QGIS combines ease of use with powerful spatial data analysis and presentation/cartographic tools, which continue to expand with each new release. The adoption of QGIS has been successful, with mapping and spatial data query tools viewed as an essential component of the daily workflow for all staff members.

IMPLEMENTING QGIS

Our adoption of QGIS took place over two phases;

Phase 1 involved deploying QGIS and training forest managers to assist with day-to-day forest management. We ran in-house, weekly training courses over six weeks, allowing forest managers to use the software operationally and follow up with questions in subsequent training sessions. Universally the forest managers picked up the software quickly, with feedback indicating that users found QGIS to be clear and easy to use. We were all amazed at how easy this transition was, and everyone thought QGIS was a massive leap forward.

Phase 2 was significantly more involved, and necessitated porting our database, forest management and budgeting tools to a new QGIS compatible format. This was beyond our in-house capability and we commissioned QGIS plugin developers to re-format our previous system and design a new spatial database interface. This was a complex procedure involving operationally critical data, which afforded us the opportunity to hone and upgrade the system to meet the current needs of the business, building on the benefit of many years' experience using the previous system.

Although QGIS is both free and open source, we voluntarily contribute towards the QGIS project, and are happy to support the geospatial open source community. We feel this contributes towards product continuity and innovation, which ultimately helps us to continue to develop our workflows and services. The ability of QGIS to quickly evolve in response to user requirements, means we have been able to continue to work with proprietary software, and seamlessly integrate with tools like Avenza maps for mobile data collection.

www.cawdorforestry.com

EVENT

We would encourage anyone who is considering a review of their existing GIS capabilities to consider QGIS. This year, on the 19-20 September Edinburgh is hosting the free and open source geospatial software event, FOSS4G UK, an excellent opportunity to find out more about open source technology.

FORESTRY INNOVATION FUND PROJECT

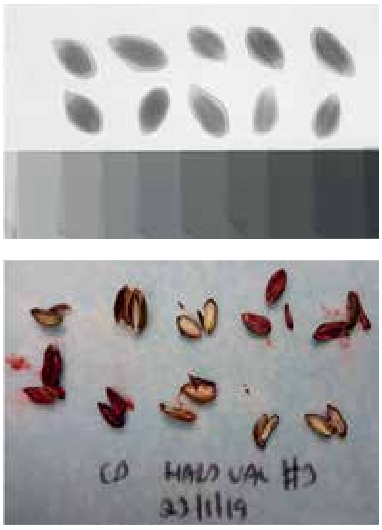
Automated digital image analysis for high quality tree seed lots

by Dr Shelagh McCartan

Tree seeds vary in size and shape, which presents technical issues for seed traders and nursery managers as these traits influence seed processing efficiency. Also viability, ranging from 5-95% depending on species, impacts on the cost-efficiency of container nursery production. This problem is usually overcome by double- or triple-sowing but leads to higher labour costs due to subsequent thinning and/or transplanting seedlings. For some species, labour costs account for a high proportion of operational costs. Seed lots are usually bulked-processed, whereby 'empty' seeds are removed based on density; it is possible to upgrade these seed lots even further with an IDS process (Incubation, Desiccation and Drying) that uses differential drying to separate live and dead seeds. But this is not precise, resulting in a trade-off between seed quality, seed yield and processing time.

Nowadays, single-seed processing is possible with seed phenotyping, which generates seed metrics from images produced across the electromagnetic spectrum. X-ray images are typically used to differentiate between filled, empty, insect or mechanically-damaged seeds; however, it is also possible to separate out live and dead seeds based on x-ray image contrast. These images are suited to automation, which enables real-time assessments of seed lot quality. Nevertheless, use of seed phenotyping is largely constrained to agricultural and horticultural species. Research led by Dr Shelagh McCartan of Forest Research, with funding from the Forestry Commission Research and Development Grant, has investigated the potential for its use with tree seeds.

The aim of the project was to demonstrate that image analysis software could be used to a) predict filled and empty seeds and b) differentiate between live and dead seeds following a process that uses IDX (Incubation, Desiccation and X-ray) to improve x-ray image contrast. This involved image analysis using computer software *(below)* to process raw x-ray images and extract seed attributes to predict seed condition. The model successfully identified all filled seeds but slightly under-estimated a small proportion of empty seeds in the test species (*Abies alba* and *Thuja plicata*). These errors were largely due to seed morphology. Larger sample sizes, however, should improve machine learning, and therefore, reduce error rates.



X-ray of Pinus nigra seeds (top) with the corresponding tetrazolium test (bottom) where red seeds are live while white ones are dead.

The model also successfully identified a high proportion of live and dead seeds correctly with a drying time of 24 hours within the IDX process for the test species (*Pinus nigra* and *Pseudotsuga menziesii*). Further drying, however, resulted in more errors, which highlights the transient window of opportunity to exploit IDX principles. In this case, sample sizes were small as individual seeds were tracked meticulously through IDX and the subsequent confirmation test. Again larger sample sizes are likely to improve model performance even further.

A cost-benefit analysis shows that single-seed processing/seed phenotyping could be used to upgrade poor-quality seed lots, and therefore, improve the cost-efficiency of container nursery production. The scale of these savings though is influenced by seed value, viability, and volume. Critically, the cost-benefit analysis assumes that the commercial solutions can process all species to equally high standards (100%); this requires further research.

The fickle gods of the hearth

Eleanor Harris describes the controversies, and the policy solutions, around firewood.

A log fire: few things are more comforting, more homely. In ancient Rome the household gods lived in the hearth: the lares. The fire is the soul of the home.

But too often recently, the charm of flickering flames has been doused by the cold water of policy controversies. Are wood-burning stoves causing an air pollution crisis? Is too much wood being burned, when it could have had greater environmental and economic benefits by being left in the forest, or made into long-lasting products? Is the demand for firewood creating a pull for imports which might harbour invasive pests and diseases? It can sometimes feel as if the heat generated by debates about firewood creates more renewable energy than the firewood itself.

The reality is more complex than binary arguments. Firewood has an important part to play in a low-carbon UK bioeconomy, but without a careful regulatory framework, the firewood fashion could cause more harm than good. We look at the work Confor is doing on each of these issues, and on how you can help to drive the development of a healthy firewood sector.

Wood use and carbon

Burning is recognised as the least beneficial use for wood fibre from a carbon point of view. While substituting wood for oil or coal saves 495kg of CO_2 for every m^3, this is less than would be saved by the combined benefits of storing the carbon for decades in panels, pallets or fencing, and displacing the masonry, metal, plastic or perhaps unsustainably-harvested imported timber which would have been used instead.

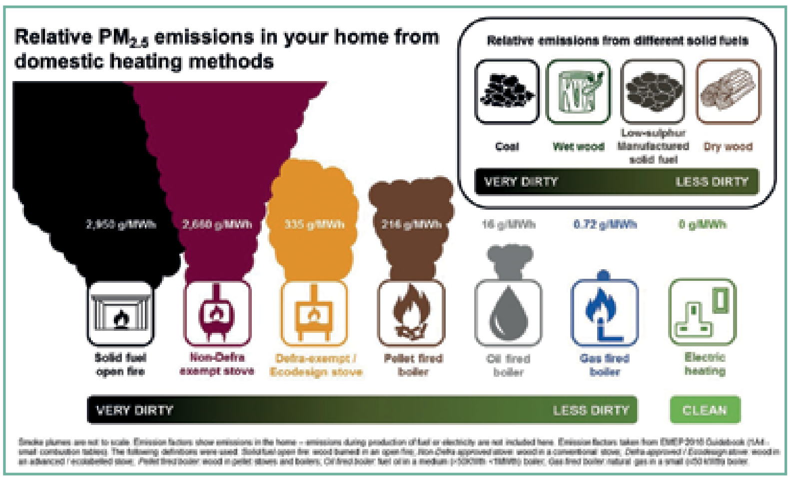
But there is a difference between large-scale biomass and small-scale chip and firewood. More and more farmers and landowners are heating and powering their homes and their neighbours' with wood supplied from their own woodland. This has multiple benefits. Fossil fuel trucked for hundreds of miles is replaced by renewable energy grown on the doorstep; and native woodland which was previously a financial liability is now a vital asset, thinned, managed, and opened for business.

The landowner might reinvest some of the profits in improving the woodland for people or wildlife, encouraging the bluebells which appear in the newly-thinned glades, or tackling the Grey squirrels. Or she might pursue her new interest in silviculture to start thinning for timber, learning to single out and grow on the straightest, finest trees as quality sycamore, beech, chestnut or oak worth far more than firewood. The result is a stronger, taller, richer woodland, holding far more carbon on site and delivering far more carbon-capturing and fossil-displacing products.

Air quality and burning

In January, Confor responded to Defra's consultation on domestic burning. We emphasised that in the important task of cleaning our air, the benefits for woodland management and climate being created through locally-produced firewood must not be lost. As Defra's graphic

Below: Relative air pollution from different types of fuel, from Defra's consultation on domestic burning as part of its Clean Air Strategy.



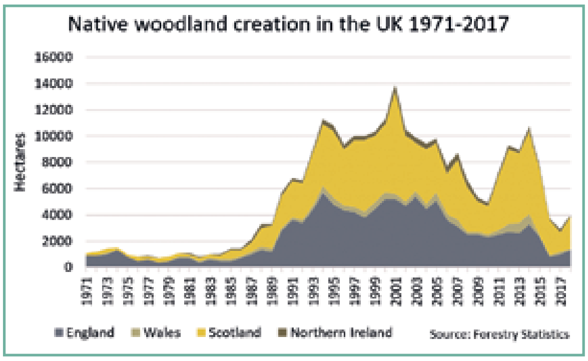
WHAT CAN YOU DO?

Confor will continue to press for these policy changes: to promote dry, clean-burning firewood and ban imports. But your role in developing, demonstrating and leading good practice across the country is also vital to demonstrate appetite for these policy changes.

If you know a landowner who is beginning to harvest firewood from their woodland, why not pass on this magazine and invite them to join Confor to access the advice and expertise of our national managers, technical directors and specialist helplines on developing those other aspects of management?

If you produce firewood, join the firewood certification scheme Woodsure (*see p49*). The Ready to Burn label guarantees that firewood has been grown in the UK, and has been correctly dried to minimise emissions. By helping to create a supply of certified firewood, woodland owners make it easier for the public to choose quality local firewood, and for government to restrict risky imports.

If you buy firewood, now you know how to choose it.



(*below left*) shows, dry wood is the cleanest form of solid fuel, and for the foreseeable future will play a part in delivering a sustainable energy mix, especially in rural areas. Policies can be made immediately to incentivise good practices in drying timber, for example by supplying moisture meters with wood burning stoves and promoting Woodsure's Ready to Burn label *(below left).*

If not de-barked and dried correctly, firewood and wood packaging can harbour threats to the health of UK trees.

32,564

The number of reported tonnes of firewood with packaging from EU and non-EU states into England & Scotland in the first 9 months of 2017, far higher than expected.

28

The percentage of imports that were non-compliant. (13 of 46 inspections).

8,000

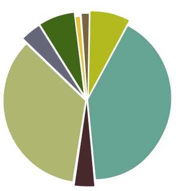
The hectares of managed broadleaf woodland that could supply this firewood.

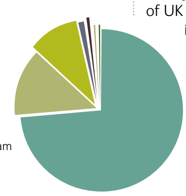
34,000

The hectares of broadleaf woodland created in the last 5 years. Large amounts of UK broadleaf woodland is unmanaged.

Imports – by type and country

Sources: Statutory Notification Scheme for importing solid wood fuel, Forestry Commission GB&NI Tree Health Advisory Group Report 2017, forestry statistics.





Source: Confor's paper, Plant Health and Brexit

Plant health and imports

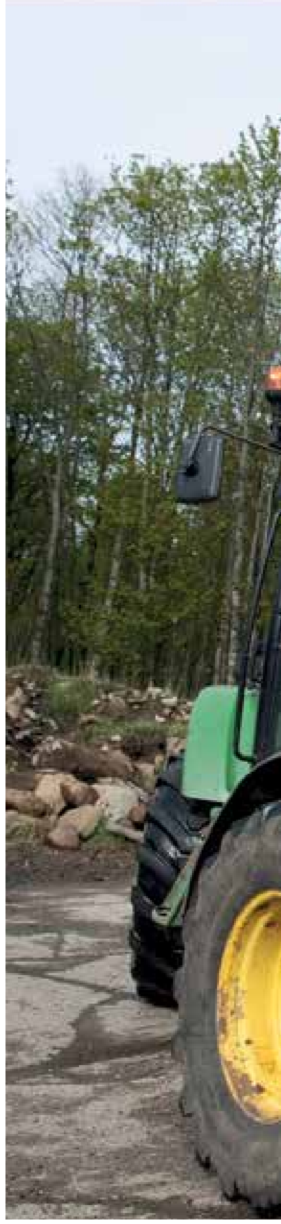
Another challenge for the UK firewood market is high demand has created a thriving import market. Consumers are often unaware that they are buying firewood from Latvia, Lithuania or Poland, which supply tens of thousands of tons each year. There is no guarantee that the source forests are being managed sustainably; and there is a high risk that the wood will be a vector for invasive pests or their eggs, which can lurk in the bark or dunnage. The statutory notification scheme requires logs to be kiln dried, but over a quarter of inspected imports did not comply with regulations *(see graphic)*.

The absurdity is that this firewood could easily be supplied by increasing the management of UK woodlands, meeting customer expectations and delivering all the benefits described above. Around 10,000ha of managed woodland could supply the firewood we import; tens of thousands of hectares of native woodland was created in the UK around the turn of the millennium, woodland which is now often failing to transition into healthy mature woodland due to lack of management.

Ancient gods were notoriously fickle things, so perhaps it shouldn't surprise us that the lares are causing such trouble. But in their 21st century incarnation, they respond not to prayers or offerings, but to joined-up thinking. Through a smart collaboration between the lares of the hearth and the dryads of the woods, we might be able to deliver a miraculous revival in our native woodlands, and make firewood once again a kindly, homely influence in a 21st century bioeconomy.

Scone Palace firewood continues to thrive

by **Ewan Reid** and **Anna Gunn**



Having worked as land agents for Mansfield Estates, home of the historic Scone Palace, for many years, Savills' forestry management team have worked closely with the commercial team at Scone Palace to help develop a new business that has helped optimise the management of the 400ha of hardwood timber resource across the estate.

With the 1600ha of UKWAS-certified woodlands stretching from the River Tay to North Logiealmond, the estate woodlands are a valuable resource and important landscape feature locally.

In 2012, Savills and Mansfield Estates identified that the broadleaved woodland was an undermanaged resource and that an active management programme represented an opportunity to add value to the woodland resource and forestry income via better utilisation of the timber arising from thinning and clear felling. From there, Mansfield Estates' Firewood Enterprise was born.

The process of supplying timber for the Firewood Enterprise is one that is managed by the forestry team. Ewan Reid, a senior forestry manager based in Savills' Perth office, has managed the forestry for Mansfield Estates for three years and he ensures that the timber processed has been sustainably sourced from within the estate, as part of ongoing woodland management.

Systematically

"The estate has a number of previously undermanaged hardwood woodlands approved for Low Impact Sylviculture Systems (LISS) in the approved Long-Term Forest Plan. These are now being systematically thinned to improve stand quality with the birch, sycamore, ash and oak timber produced being processed by the firewood enterprise. As expected, we are already seeing coppice regrowth from past thinning and intend to manage the birch and sycamore areas as a sustainable fuelwood source for the future. In addition, we take every opportunity to retain processable hardwood from conifer clear fells to ensure steady supply of timber for air drying."

Once the forestry team have programmed an area of woodland for thinning, they work with contractors to harvest the wood. The timber is then taken to the estate's processing facility, housed in three converted cow sheds and left to air dry until the moisture content is between 18-25% depending on the species, then converted into split firewood ready for delivery to the customer.

After initially processing timber on contract, the growth in sales led to the estate acquiring its own firewood processor.

"I undertook a detailed review of the firewood enterprise which concluded that among a number of required changes, growth of the business required investment in an estate processor," Ewan added. "After weighing the capital costs versus the rental costs, the better long-term investment was to acquire our own equipment to more cost effectively increase production. This decision has allowed us to better fit firewood processing into wider work programmes for estate staff"

In 2018, the Firewood Enterprise processed about 360 tonnes of material which resulted in 530m^3 of firewood. In terms of sales, the firewood business has grown 35% Y-O-Y in the past two financial years. Business is certainly booming, but what is the secret to the enterprise's success? Ewan believes there's two main reasons; customers looking for more sustainable options and Scone Palace's reputation for exceptional customer service.

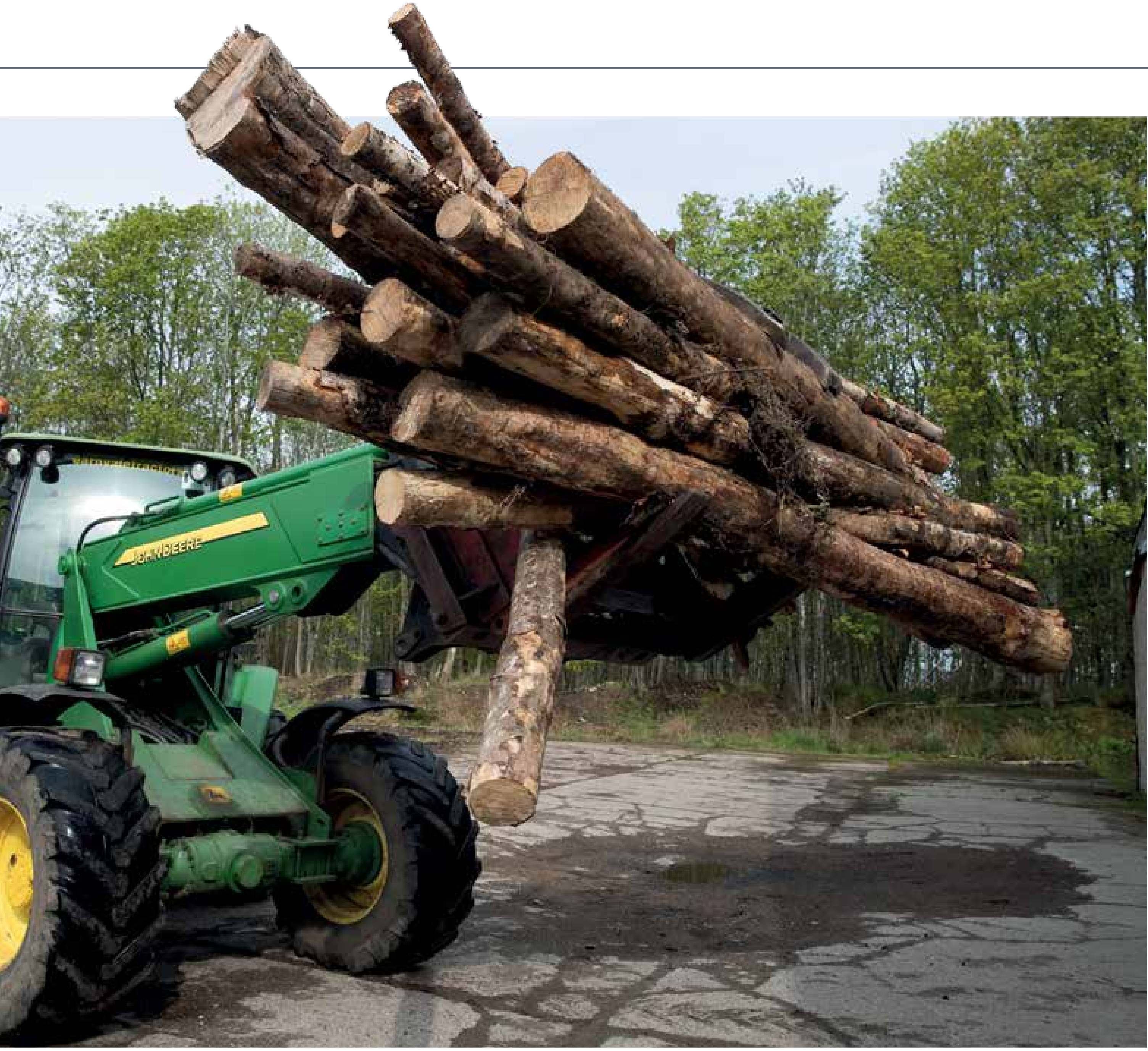
"In my lifetime, using wood for fuel went out of fashion and oil-based products were the preferred option. People weren't aware of 'green living'. Today, people are far more aware of the effect certain fuels have on the environment. The world has moved on and our customers actively seek more sustainable options and are prepared to pay a reasonable premium for a high quality product."

Welcoming 100,000+ visitors to Scone Palace every year, Mansfield Estates can demonstrate their ability to manage the estate sustainably and, as a verified source under the UK Woodland Assurance Scheme, customers know they can rely on the sustainability and quality of the product. Gregor Cameron, retail manager at Scone Palace oversees the commercial end of the enterprise and believes one particular part of the service sets them apart from their competitors.

"As one of Scotland's most popular visitor attractions, we pride ourselves on providing excellent customer service," Gregor said. "The firewood service itself is outstanding in terms of the level of care taken by the forestry team, but I also believe our value-added stacking service has given us a competitive edge with 30% of our repeat customers taking up this particular service."

With the enterprise gathering momentum, what's next for the business? While the systems in place are working very well, Ewan believes there are always areas they would want to develop and further improve. "Cur-

> "The estate woodlands are a valuable resource and important landscape feature locally



rently, when loading logs for delivery, sometimes processing debris is inadvertently mixed into the load. As the demand has grown, there has been the occasional issue caused by this at the quality control stage. As a result, we are now investigating acquiring a firewood cleaner which tumbles material as its being loaded, meaning most of the debris will be excluded, further improving product quality."

While optimising the core business is the team's main priority for 2019, other future value-added options are being considered including bagged firewood and kindling and these options will likely be developed in the next 12 months.

"What has also been exciting is that, while the business has been growing, there has been a lot more proactive management of the hard wood woodland resource on the Estate," said Ewan.

"The enterprise has inspired colleagues to look for further opportunities to add value for customers. This is one of the most rewarding parts of the enterprise and everyone involved is looking forward to seeing what's next for the venture."

Firewood from Mansfield Estates can be ordered at **www.scone-palaceshop.co.uk** *or over the phone on 01738 552300 and is delivered within five working days.*

FIREWOOD

Our firewood sector past and present

Michael Large highlights some challenges and opportunities facing the industry today.

I sold my first bag of logs in 1968, having cut them by hand from an Oak tree which had recently fallen. My customers thought these wet logs were great as they kept their fires burning all night. I have learnt a lot about firewood since then.

Firewood is the oldest form of fuel used by mankind for cooking and providing warmth since the dawn of history and remains one of the most important fuels used throughout the world today. In Europe, as populations grew from the middle ages, there was frequently a shortage of timber available for firewood and some countries, including Ireland, The Netherlands and Scandinavia, relied on peat. In Britain, coal became the major source of fuel and remained so until the introduction of oil in the 20th century. This also led to the reduction of firewood use until recent times.

Choice of tools for firewood processing

Firewood was traditionally cut by hand before being seasoned until about 40 years ago when firewood processors and log splitters began to appear. At first, fairly basic equipment with manual controls was popular and still capable of producing good outputs compared to previous methods. By the late 80ies, more sophisticated equipment became available and today we have a vast range of equipment to suit every size of operation.

In choosing a firewood processor one of the most common questions asked is whether to use a chainsaw cutting system or a circular saw, both of which are in common use.

With a chainsaw system you have a much larger capacity in a relativity compact and low powered machine. Saw chains are cheap, easily sharpened and if severely damaged can be discarded. They are safer, as in operation they store little kinetic energy and can stop instantly.

A circular saw is much better for cutting wood and its speed can outperform most chainsaw systems. This advantage is lost because the processor output is usually determined by the splitter speed which can rarely match that of cutting. Circular saws are mostly tungsten tipped and can cut hundreds of tonnes of clean wood easily before sharpening. This is a specialist job and if the blade is badly damaged they are expensive to replace. Although accidents are very rare they have the potential to cause more harm because of the stored energy in the spinning blade.

Kiln drying

In recent years, kiln drying firewood has become more common due in part to the increasing demand for dry firewood and the time and logistics required for natural seasoning. Even if kiln drying can be economically viable, it is difficult to argue that it is the most environmentally friendly method unless the heat used is a by-product of another process. Kiln drying operations are quite often supported by generous grants and this can distort the economics of the operation.

Much of the kiln dried firewood we burn is imported >>

>> from Eastern Europe where there is still a good supply of suitable logs and a skilled lower paid workforce to produce it. To comply with our plant health regulations in place to protect our forestry, agricultural and horticultural sectors, only properly kiln dried firewood can be imported. Unfortunately, these regulations have been flaunted on a regular basis since importing began. Container-loads of firewood often arrive with moisture content exceeding 30%. We will never know if some of our recent plant diseases arrived this way.

Our firewood industry

For various reasons it is difficult to know the exact size of the firewood industry at present. Many producers operate on a casual cash-based system and are not recorded anywhere. I believe this may account for up to a quarter of all firewood production. Firewood may also be a small part of a larger sawmilling or contracting operation and not show up in any statistics.

In the British Isles there may be as many as 10,000 producers from part-time one-person operations to large-scale producers turning out huge quantities of firewood annually.

This thriving industry now faces a new challenge from a rather unexpected source. Having spent years getting people to use firewood in place of fossil fuels some research has shown that burning firewood may be damaging to our health. Under the Government's Clean-Air-Strategy 2019 new regulations will be introduced to ban the sale of the most polluting household fuels which is mainly coal and the use of the most inefficient open fires.

This is not a ban on burning firewood. On the contrary it offers opportunities for producers of good quality dried firewood to educate the public in the best use of this sustainable fuel well into the future.

More than flag waving

Grown in Britain

UK consumers want to know the origin of the products they buy and by nature they want to buy local. Grown in Britain licensing gives them the assurance they need. Too often we see the use of the British flag slapped onto products and packaging that simply could not be from our own woods and forests and are at best, imported in bulk and re-packaged in the UK. We live in a time when it is more important than ever to challenge the use of the British flag on wood products without independent assurance.

The Grown in Britain bespoke licensing scheme is specific to the UK, reflecting the UK's policies for sustainable and legal forest management and a Grown in Britain licence guarantees to your customers that the timber or fuel is legally grown in the UK and is from a woodland that is managed according to the UK Forestry Standard.

Why use homegrown firewood?

If we look at woodfuel logs, it is one of the products that we import unnecessarily, and yet there are many benefits of using British assured woodfuel logs including:

- Bringing woodlands back into management for water, carbon and wildlife
- Increased job opportunities
- Reducing waste
- Improving air quality
- Reducing woodfuel miles
- Reducing the import of pests and diseases

The Grown in Britain woodfuel licence is also recognised by the Biomass Suppliers List (BSL) and assists with the Renewable Heat Incentive (RHI) evidence (as detailed in the Timber Standard for Heat and Electricity).

One of our newest woodfuel licence holders, All Seasons GM Ltd had this to say:

"We joined Grown in Britain to make our customers aware that we source all sustainable timber from within the UK. We strongly feel that UK sourced timber should be highlighted to the public more as there is no need to be importing the large volumes of overseas timber as the market currently does. With the support of Grown in Britain, DEFRA and Woodsure, the market and quality of firewood can only get better and the license process is straight forward."

For more information on the licensing process and to download an application pack go to **www.growninbritain.org**

WORLD ENVIRONMENT DAY
5 JUNE

Be Woodsure

Do you know where your wood comes from? Quality assurance scheme encourages consumers to consider what they burn

This World Environment Day (5 June), Woodsure, the UK's only wood fuel quality assurance scheme, is encouraging all homeowners to consider what they burn. Using good quality wood fuel from well managed woodlands not only has the potential to reduce particulates in the air, improving air quality but also ensures the continuation of a healthy wood fuel industry.

Today, the Woodsure scheme is a recognised standard within the UK's wood fuel market. It identifies the conscientious, responsible suppliers who produce a trusted product. There are approximately 800 wood fuel suppliers and producers in the UK. Woodsure certifies nearly 200 depots, with Woodsure Ready to Burn fuel available in thousands of retail outlets and online.

By making responsible choices about fuel quality and the woodland it's sourced from, we can all play our part in securing its future and reducing carbon emissions. As stove or boiler manufacturers continue to develop new and enhanced products to improve efficiency, it is vital that the issue of the quality of the fuel burnt that is not overlooked, says Bruce Allen, Chair of Woodsure.

Bruce says, "It is important homeowners and businesses think about what they burn. The Woodsure stamp of approval for fuel suppliers reassures buyers that the fuel they are purchasing is well-sourced and subject to a quality control process. For those who have just spent a few thousand on getting the right stove for their home or business, it is vital to buy good quality fuel to ensure the stove works efficiently and reliably."

He says, "The Woodsure Certification scheme offers a universally recognised mark of quality, that both industry practitioners and consumers can trust. When businesses and consumers use good quality fuel, such as those with the Woodsure stamp of approval, they will also be assured of a better burn. This is because Woodsure Ready to Burn products are dried thoroughly to ensure up to 20% moisture content, which in turn ensures lower levels of PM2.5 particulates released into the atmosphere, more heat efficiency achieved and less appliance maintenance.

"In this way, appliance heat exchangers and chimneys are less likely to block, will remain easier to clean and maintain and will have a longer lifespan. We're asking consumers to look out for the Woodsure logo when purchasing fuel and businesses and installers to recommend only Woodsure certified fuel for optimum performance."

For more information on woodfuel quality, visit **www.woodsure.co.uk**, *or for helpful leaflets on choosing the correct wood fuel visit* **www.hetas.co.uk** *and download from the HETAS Advice section.*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The UK's role in global forestry – past, present and future

by **Andrew Heald**

When I first read the title for this year's conference, I had some misgivings – would it be a mix of colonial forestry types reminiscing us about their exploits or a UK researcher explaining how the Ugandan Government must really get to grips with the drivers of deforestation. I was secretly hoping to hear a lecture about James Howard Williams (better known as Elephant Bill) and timber harvesting in Burma (google him).

The conference was none of that and instead was a great collection of speakers who repeatedly made the connection between global challenges and UK forestry policy and practice. The highlight was the four young foresters who spoke on Tuesday afternoon. They captured and transformed a roomful of sceptical (and slightly hungover) foresters with their enthusiasm, passion and commitment.

ICF should be praised for encouraging these young foresters to present and for getting young professionals to chair most of the sessions. In a conference that could easily have focussed on looking backwards, most eyes were looking to the future.

Tony Juniper (incoming Chair of Natural England) helpfully reminded us of the damage caused to the Flow Country and of conifer planting in England's ancient woodlands. Frances Seymour (Senior Fellow, WRI) compared the harvesting (for biomass) of Loblolly Pine plantations in Southern USA with the clearance of Indonesian rainforest for pulp production. Forest managers and scientists responded with detailed analysis, Robert Matthews forensic research of carbon calculations was a valuable response on a very polarised issue.

Luis Neves Silva from WWF shared the New Generation Plantation vision of how we could and must be managing and expanding our plantations in the future; this presentation was another great example of how to inspire with a vision of a better future. Other speakers repeatedly told us that we needed to break out of our echo chambers and better explain sustainable forestry to wider stakeholders.

Reviewing the attendee list, it is perhaps that latter issue which is our profession and our sector's biggest challenge. There was a noticeable lack of NGO and Government representatives. If communication is mainly about listening, then it is important that we attract more stakeholders to our events so that we can understand their concerns and begin to address them.

> We were reminded that we needed to break out of our echo chambers and better explain sustainable forestry to a wider audience.

From my perspective, the ICF Conference makes our profession feel relevant. The event demonstrates that we have an incredible collective knowledge and experience that can help tackle some of the world's big problems like climate change and sustainable land-use. For a brief 48 hours we are surrounded by people who "get it", who understand the acronyms and abbreviations, and who (largely) acknowledge previous bad practice and are willing to learn, to change and to work more sustainably.

How do we best promote our knowledge and experience as widely as possible, in order that UK forestry is seen as a future solution and not a past problem?

Everyone at the conference seemed to agree that we need more, well designed, multi-species productive plantations, which deliver a wide range of benefits for as many people as possible. However, with the old FC divided into multiple components, it is increasingly the responsibility of the private sector and the ICF to invest in the communication skills and the essential stakeholder engagement to deliver this next generation of plantations.

Left:
Dr Chloe Barnes and William Oxford

Right:
Andrew Fisher MicFor and Alaistair Sandels FicFor

Sharp rise in private forest timber an Irish success story

Seán Lenihan gives an update on the Irish forestry and timber sector

One of the many good news stories associated with the Irish forestry in general, and the private forest estate in particular has been the significant increase in timber mobilisation from private forests in the past 10 years. While many in the industry would argue that it should be at an even higher level, the figures are nonetheless impressive.

In 2008, the output from Irish private forests was 118,000m^3, and by the end of 2017 it had increased to 676,000m^3. In addition, the areas applied for via the Felling Licence process has increased from 10,382ha of thinning in 2010 to 16,697 in 2017, and from 439ha also in 2010 to 2133 in 2017. The expectation is that these volumes will continue to rise, as the crops planted during the afforestation boom in the nineties and noughties which averaged 12,000ha annually, come on stream.

BARRIERS TO FURTHER INCREASING PRIVATE OUTPUT

The lack of active or indeed any management whatsoever by some owners has resulted in some crops (especially on gley soils) reaching excessive top heights, thus rendering the plantation unsafe to thin due to windthrow potential.

Objections from the public to the issuing of Felling Licences have been steadily increasing since the new Felling Act came into law in 2017 and is delaying and/or modifying felling plans.

Access to private forests from public roads has proved to be problematic especially in some remote areas.

If all or some of the above can be addressed in a meaningful way then output levels from Ireland's private forests could be significantly increased.

Timber output from Irish private forests in cubic metres

118,000 (2008)

676,000 (2017)

Clearfelling in a private forest in County Galway.

Continuous Cover Forestry Pilot Scheme

The Forest Service is to be commended for introducing an innovative CCF transformation scheme for forest owners in early 2019. Under the new scheme, forest growers with plantations up to 10ha who wish to transition from conventional clearfell/replanting to CCF over a 12-year period can apply for funding of €2250 per hectare paid in three instalments of €750. The principle objective of the scheme is to increase the area of forests under CCF.

A comprehensive Transformation Management Plan compiled by a qualified CCF forestry consultant will form the basis for the application and subsequent works. Various operations will be eligible including high pruning, pre-thinning tree marking, felling extra trees to release frame trees, deer control and management and re-spacing of natural regeneration.

It is envisaged that no plantations over 300m will be eligible and that only crops growing on free draining mineral soils will be acceptable for grant aid. While only a Pilot Scheme it is envisaged that when the next Forestry Programme is launched in 2020 CCF will be consolidated as part of the five year programme.

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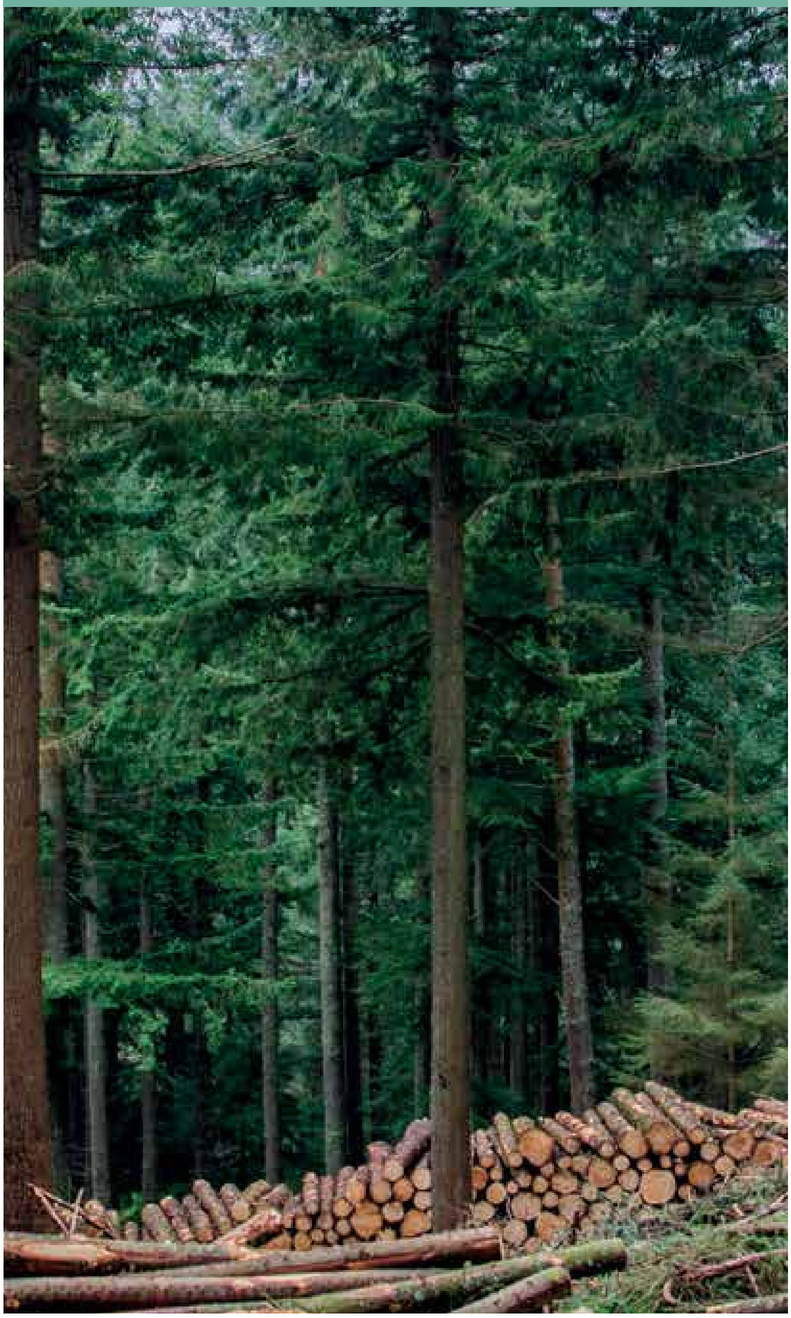
Forestry Promotion Fund

In April 2019, the forestry Minister Andrew Doyle announced that €830,000 in funding would be allocated to 15 projects which were selected o total of 40 submissions on the basis of the following promotional objectives set out by the government:

- Highlight the multifunctional benefits of forestry
- Promote planting of more trees
- Encourage sustainable forest management.

The projects which are to set to be to be rolled out in 2019 and 2020 include the establishment of Demonstration Woodlands, the promotion of forestry in schools using 'Forestry Ambassadors', and a Woodland Festival in the Northwest among others. It is hoped that the campaign will provide a balance to much of the anti-forestry and anti-Sitka spruce rhetoric which has been very prominent in the media here for the past few years.



Study on forestry in County Leitrim

On a related topic, the Minister has just commissioned a study on forestry in County Leitrim, to be completed by August 2019. Leitrim has been the focus of a concentrated and active anti-forestry campaign in the last three years which has achieved national prominence in the mainstream and social media. The Terms of References are:

- To assess the social impacts of forestry in County Leitrim including attitudes to forestry of people living there.
- To assess the economic impact of forestry in the county including total employment supported by the sector.
- To assess the impact of farm incomes relative to other types of farming
- To assess the non-timber outputs of forestry.
- To assess the current state of environmental regulation of forestry in the county.

Irrespective of the results of this study which is being carried out by University College Dublin, it is hard to envisage that the prevailing and ingrained anti-forestry attitude which is prominent in the county will change to any significant degree. Nonetheless, on its own merits the commissioning of the study is timely and the industry will be hoping for positive results especially in relation to the economic impact of forestry on the county.

Timber prices

Timber prices in the first quarter of 2019 more or less remained the same as the final quarter of 2018, with slightly higher prices evident in the second quarter to date.

Whether this will last is open to debate as cheaper sawn imports especially from Germany and Sweden are predicted to have an impact sooner rather than later. It is understood that the cheap imports from Germany are linked to felling in response to the spruce bark beetle.

In another market development, Euroforest Ireland who began exporting pulp to Kronospan in the UK last autumn are set to continue for the rest of 2019 and possibly beyond.

Current roadside prices (m^3)

€31
Pulp

€53
Pallet

€80
Commercial sawlog (up to)

Seán Lenihan is managing director of Kestrel Forestry Consultants in North Wexford

www.kestrelforestry.ie


Ash Die Back is here!
Ash Die Back (Chalara) is now present throughout the UK.
Sadly expectation is for up to 97% loss of ash trees.
Ash is widespread in woodlands and roadside edges.
Are you managing your liability, particulalrly in respect of falling trees around footpaths and highways?
Secondary factors, such as honey fungus, can cause rapid decay.
Decide NOW, before the timber value tumbles, or the removal of increasingly unstable trees becomes more dangerous and costly.
Using specialised, cost-effective machinery and expert teams, supported by professional management, Euroforest will turn your dying woodland into a sustainable asset.
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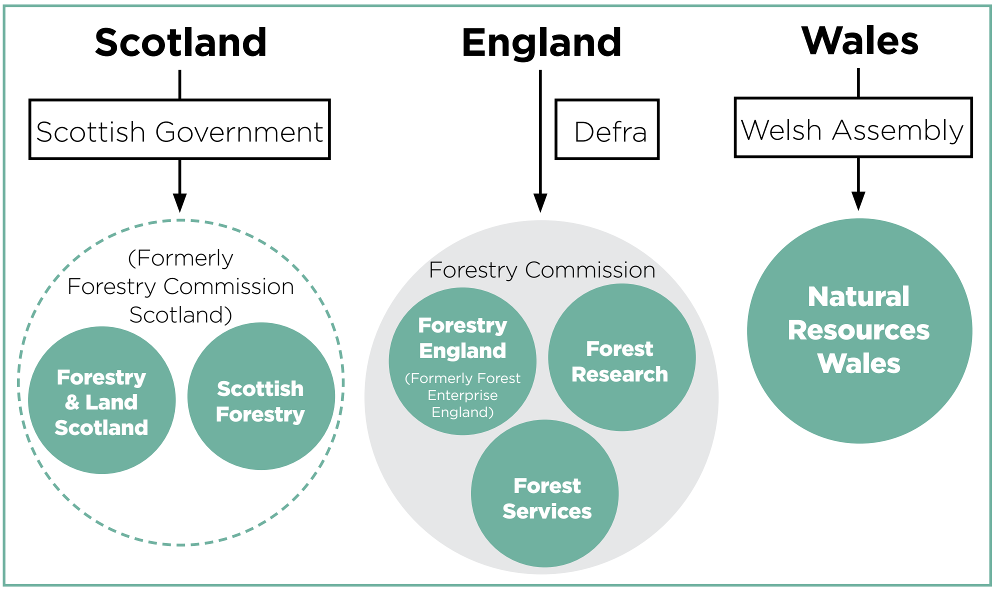
The new structure explained



SCOTLAND

On 1 April 2019, the devolution of forestry to Scottish Ministers was completed, as a result of the Forestry and Land Management (Scotland) Act 2018. With the new arrangements, Forestry Commission Scotland was replaced by a new Scottish Government agency called **Scottish Forestry** (SF).

SF is responsible for delivering Scottish Ministers' forestry policy, regulation, grants incentives, technical forestry advice and new cross border arrangements.

www.forestry.gov.scot
@ScotForestry

Forestry and Land Scotland (FLS) was established as an Executive Agency of the Scottish Government and replaces Forest Enterprise Scotland. The purpose of FLS is to manage forests and land owned by Scottish Minsters in a way that supports and enables economically sustainable forestry; conserves and enhances the environment; and delivers benefits for people and nature. FLS may manage other forested and non-forested land by arrangement, as set out in the Act.

www.forestryandland.gov.scot
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ENGLAND

Forest Enterprise England has been renamed **Forestry England**.

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2019 FISA Safety Health & Awareness Days (SHADS)
Open to the industry

Ash Dieback:
chainsaw operations, operational planning and communication

Ash Dieback disease or Chalara (*Hymenoscyphus fraxineus*) is killing a large number of ash trees, resulting in trees with a very high proportion of deadwood in the crown and also likely to have no significant fibre strength at felling height.

When harvesting/felling these trees, careful planning is essential. The primary consideration must be whether the job can be done using mechanical harvesting equipment where the operator is in a protective cab. Where this is not possible, it is more important than ever that a chainsaw operator is both competent and properly equipped.

Kindly supported by Euroforest Ltd and Forestry England

Location	Date	Time	Availability
Duchy College (PL17 8PB)	8 July	5-8pm	100 delegates
Plumpton College (BN7 3AE)	9 July	5-8pm	70 delegates
Alice Holt (GU10 4LS)	10 July	5-8pm	40 delegates
Westonbirt (GL8 8QS)	15 July	5-8pm	50 delegates
Cannock Chase (WS15 2UQ)	16 July	5-8pm	50 delegates

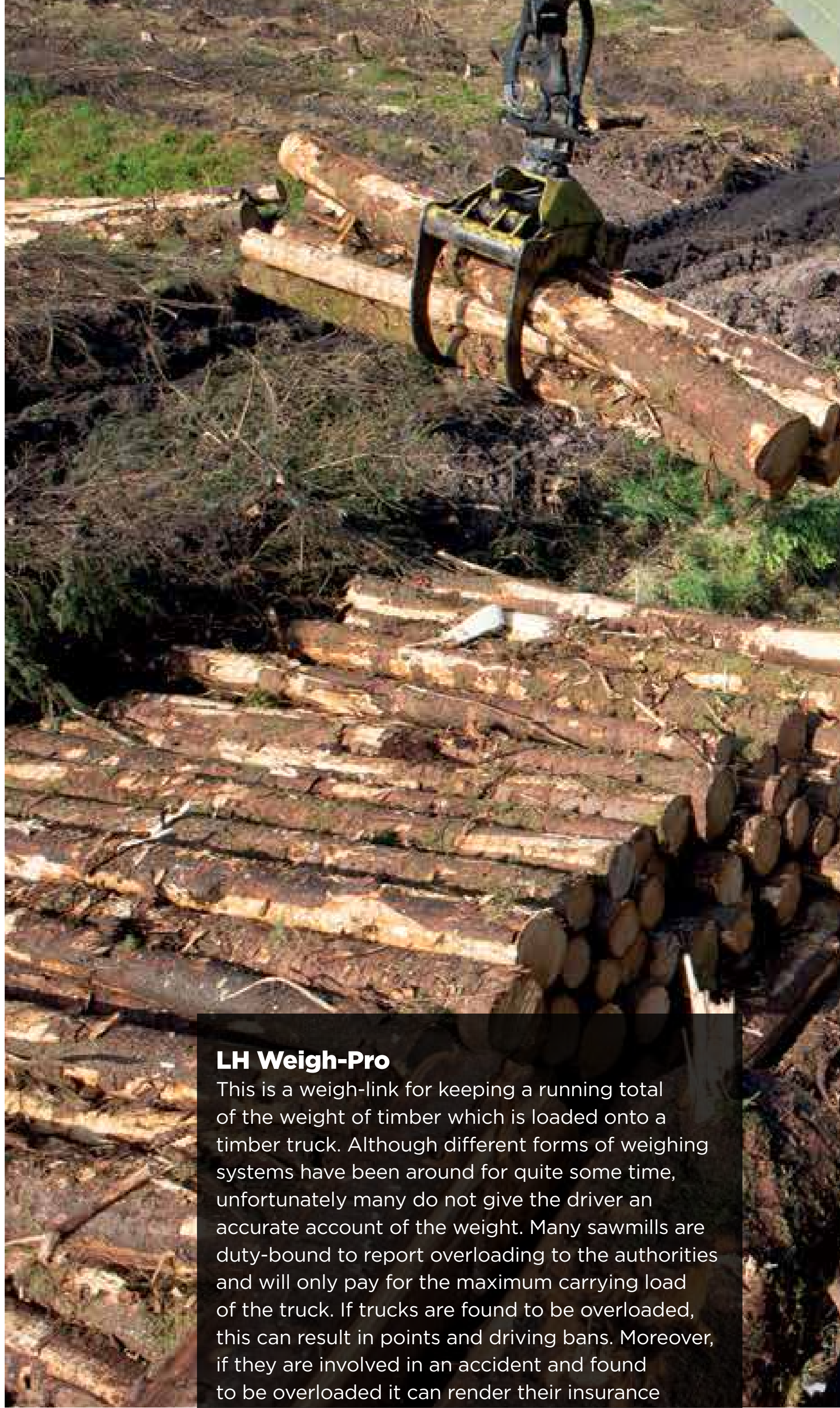
Spaces are limited, please book early to avoid disappointment.

Booking

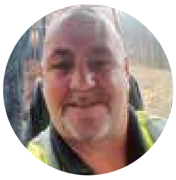
If you wish to attend one of these Ash Dieback SHADS please email **info@ukfisa.com** with your name, company, address, email address and FISA membership number if appropriate and which venue and date you wish to join. Please advise any dietary requirements.
If for Alice Holt please provide your vehicle registration to waiver parking fees.

Early booking is recommended but bookings will close end of June 2019.

All attendees will be sent an attendance certificate after the event by email.



Technology to keep you safe



RAB Easton looks at how technology is helping to make a high risk sector safer

Keeping up with technology in the 21st century certainly has its challenges; most days there is something new that leaves me astonished, and sometimes it is hard to comprehend just how far forestry has moved forward in my lifetime.

When I started out in 1976 as a chainsaw operator with the Forestry Commission, I was felling and de-limbing first thinnings for extraction by a small skidder. This involved large squads (normally eight to ten workers in a harvesting squad in each of the forest districts) working in the forest to achieve decent production. Today, two good operators – one on a harvester and one on a forwarder – will achieve over triple the production. When I started, every man and his dog could buy a chainsaw and head off to the forest; training, PPE and first aid were non-existent for forestry contractors and as you can imagine, accidents and fatalities were not uncommon (those working for the Forestry Commission completed a training course and were issued with PPE prior to using a chainsaw).

Today's forestry is a completely different kettle of fish and operator safety is paramount. Proper training, licensed operators, regular first aid courses and employing people with the correct aptitude is the correct way forward. While working in the forest is still a high risk occupation, proper training ensures operators are aware of the hazards and in the event of an accident they are trained to administer potential life-saving first aid and organise help.

Manufacturers are doing their bit and are constantly improving their products to make them safer, easier to operate and more reliable.

I have chosen to highlight some of the latest technology which I think will help to improve safety even further.

LH Weigh-Pro

This is a weigh-link for keeping a running total of the weight of timber which is loaded onto a timber truck. Although different forms of weighing systems have been around for quite some time, unfortunately many do not give the driver an accurate account of the weight. Many sawmills are duty-bound to report overloading to the authorities and will only pay for the maximum carrying load of the truck. If trucks are found to be overloaded, this can result in points and driving bans. Moreover, if they are involved in an accident and found to be overloaded it can render their insurance invalid. Even the Forestry Commission will punish overloaded drivers by implementing bans for collecting wood from the forest.

Timber is such a difficult cargo to haul; the weather, type of ground it is grown on, species and many other factors can affect the weight. One load from a forest can be to the top of the bolsters and yet, at the next forest, only three-quarters of a load might be needed for the same weight.

This weigh-link has proved to be a reliable and accurate system; it weighs each grab-full of timber as it is loaded. It requires no calibration after fitting and will work with any type of hydraulic grab link. It is also very easy to install and very user-friendly, with no need to set tare weight at the start of every load. There are a few hundred of these in circulation with no failures and drivers are delighted with the level of weight accuracy. It's reassuring to know you have no worries regarding overloading when pulled over for a routine inspection by VOSA.

www.ftmltd.co.uk www.markbeachforestry.co.uk

5G TeleOperation

This year, at Bauma – the world's largest trade fair for construction machinery – Doosan demonstrated their 5G TeleOperation system. They are the first company to adopt this technology and it works by having someone sitting on an operator's booth looking at screens in front of them. Essentially, it looked like a training simulator, but the difference was that the user was actually operating a Doosan DX380LC-5 40 tonne crawler excavator which was located more than 8500km away in Incheon, South Korea. The 5G technology is 5-10 times faster than the current 4G systems with the operator having real-time control of the remote excavator with high accuracy. Real-time diagnostics and full gauge display are also available to the operator.

I can't see all construction and forestry equipment being fully driverless in the near future, but there are clearly advantages with having this system available. Currently, forestry and construction machines can be modified to be driven from outside the cab with a hand-held control panel. This involves walking alongside the machine and, although a safer alternative for difficult, hazardous and steep conditions, it is not always ideal and still doesn't match up to the 5G technology.

I have experienced a hydraulic drive system failure when manoeuvring up a steep incline. The machine lost all drive and took off backwards and it took quite a few

>>

>> seconds (which felt like an eternity) for the braking system to engage; luckily, my steering was still operational and I was able to avoid a catastrophe.

This was a freak accident as all the machines I have operated were serviced regularly and maintained to the highest standards. Unfortunately, some components can always fail through no fault of anyone.

In the construction industry, the 5G technology could be used for dealing with waste disposal, which involves handling hazardous, toxic or radioactive substances. It is a safe alternative for demolition work where large piles are being demolished and for working in areas where there might be buried mines or other munitions. Although remotely operated, it is reassuring to know an experienced operator would still be in control. Perhaps this might even be an ideal position for some of us operators in our twilight years.

This system is a giant leap forward in operator safety; I think in certain rare circumstances this could be a welcome addition.

www.doosanequipment.eu

ExTe Tu System

I recently travelled to mid Wales to visit Kieron M Owen, the third largest timber roundwood haulier in the UK. Kieron has just had the ExTe TU system fitted onto one of his trucks, the first in the UK. This is an automatic load-binding system which is operated by the truck's pneumatic system.

All timber must be strapped in the forest after loading; however, while travelling down an uneven forest road the timber can settle, causing the straps to loosen. This is dangerous at any time of the year, but even more so in the spring and early summer when the sap on softwoods is rising or if you are loading bent and twisted hardwood lengths for biomass or firewood.

The TU System has pre-set load tensions of up to 1000kg and once engaged will continuously tighten the load regardless of how much the timber settles during the journey. This prevents the driver from having to stop, get out and check the straps which can be time-consuming.

The truck's air supply does all the hard work instead of the driver heaving on the ratchet straps.

For the driver, once all straps are attached over the load, a flick of a switch tightens them all simultaneously. The release mechanism is pneumatic and will release them all together.

This is a game changer for the timber haulage industry; the driver can be confident that the load is securely bound, saving valuable travelling time by not having to tighten each strap manually.

www.clark-engineering.com

Remote TR300 Felling Wedge

Stephan Reich is a professional timber faller from the Black Forest who works on steep ground. Using a sledgehammer and wedges to help fell the large trees could be awkward on some of the steeper areas as it is difficult to maintain a secure footing, especially in wet or wintry conditions. He decided to build his own mechanical felling wedge– which could be operated by a ratchet or impact driver –the TR30 AQ.

The mechanism is simple and reliable: the wedge is

inserted into the back cut of the tree to be felled. When the ratchet or impact driver is operated, a plastic wedge is screwed forward, which expands the top and bottom metal plates and lifts the tree past the point of balance.

Stephan decided to improve on this further as the operator would still be standing at the base of the tree to operate the wedge, at risk from branches and debris from the top of the tree which is often unseen. He came up with the idea for the TR300 felling wedge, which is operated by a built-in impact driver and can be operated by remote control from a safe distance.

The trials were hugely successful and after being successfully tested by the KWF (The KWF is the competence centre for forestry work, forestry technology and wood logistics in Germany and Europe and provides advice to all key players in the forestry, wood and bioenergy sectors), this felling aid has been approved which allows Stephan to display their logo. The TR300 is now on general sale and carries the CE stamp of approval.

www.forstreich.de

Rab Easton is the editor of the bi-monthly Forest Machine Magazine. He is a second generation logger with over 40 years of hands on experience in timber harvesting. Rab's magazine is available both in print and online and he is very active on Twitter and Facebook.

www.forestmachinemagazine.com

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Dual certification discussed at PEFC Stakeholder Day

Making the connections between the market place and the forests can be a challenge. There is often a long supply chain and the forest manger often never gets the chance to speak to the end user or the retailer.

Forest certification can therefore be one of the issues that gets lost in translation between wholesalers, merchants, secondary processors, primary processors and the forest manager.

This year's PEFC UK Stakeholder Day, hosted by James Jones and Scottish Woodlands, focussed on connecting certified forest to the market place. Participants at the two-day event discussed some of the raw material challenges for UK sawmills and processors, and the need for greater flexibility in demonstrating sustainable procurement.

Last year's tight timber markets had seen several companies having to import additional materials such as sawmill co-product, to cope with high prices and supply shortages of domestic material.

Alun Watkins from PEFC UK co-ordinated the meeting in Lockerbie for a range of stakeholders, including forest management companies and primary processors, to share experience and solutions.

Single standard

The UK is unique in global forestry in that forest management can be certified to both PEFC and FSC using a single standard UKWAS. This means that timber leaving the forest can carry a PEFC claim, and or an FSC one.

Getting greater value from certification is a recurring theme, and David Leslie from James Jones highlighted how we could use the option of this "dual claim" to provide end users with greater choice in certified material and add value to the certification process.

Peter Kelly of Howarth Timber said that access to UK dual certified material would be "music to our ears ... we just want to sell chain of custody certified timber, and dual certification helps us do that and simplify our processes."

David Leslie of James Jones makes a point at the Stakeholder Day

"This is about offering additional value to our customers and theirs", said Stephen Craig of James Jones. "Dual certification would mean no product segregation or business interruption, and crucially it would simplify certification accounting procedures"

"For us it would mean we need less space to store material, it minimises the risk of making false claims, especially around good inwards and simplifies stock control" added Peter Kelly.

The vast majority of all the UK Group Schemes and harvesting companies now offer dual certification including Tilhill, Scottish Woodlands, Euroforest, UK Forest Certification, Bell Ingram, James Jones and Fountains, with other key suppliers expected to follow shortly.

"From 1 January 2020, we are aiming to offer all of our products with dual certification," said Stephen Craig, this is a big step forward for UK forestry that builds on the unique status of UKWAS and, importantly, adds value for UK forest managers. *Andrew Heald*

Consultation and engagement for timber transport

Roland Stiven, Timber Transport Forum

Last year saw the highest volume of timber harvested in Scotland ever, with over 8m m^3 on the move, or about a 1000 truckloads a day. Most of this moves without issue, a regular part of rural life. Some of it though is problematic and impacts on fragile roads or causes disruption to communities and generally gets people's backs up.

Scotland has also seen the highest level of planting for some time and if the Climate Emergency develops into real action we can expect much more in the years to come. Councils and communities, however, will not differentiate between planting and harvesting; it is all forestry and if timber transport is cause for concern you can expect obstruction and objection to the best laid plans for planting as well.

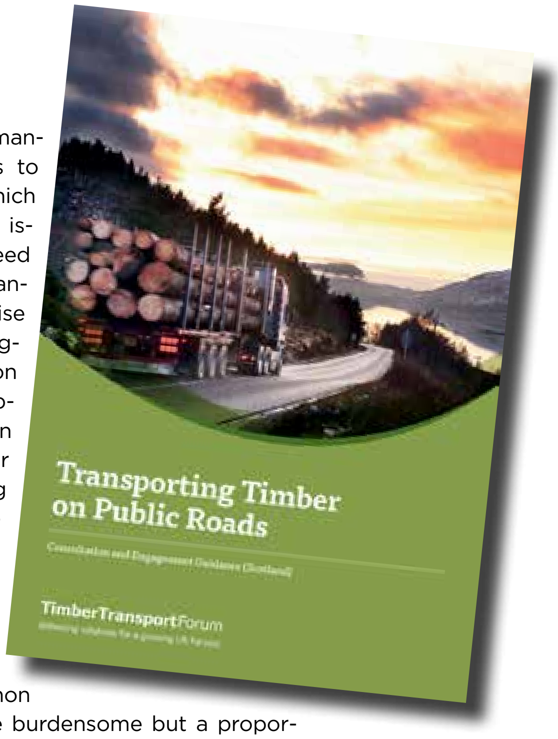
The Timber Transport Forum's Agreed Routes Maps and the partnership with council roads authorities have been in place now for 20 years. We have kept pace with the rising harvest and kept the wagons rolling. But, time moves on; the councils have less money for roads now than in a long time. Road repairs and improvements require lots of cash and lots of carbon, so don't expect widespread improvements soon.

At the same time, communities are becoming more networked and vocal. In Scotland, the Community Empowerment Act requires that communities must be able to engage on issues that impact on their lives and their concerns must be addressed constructively. The Scottish Government has produced 'Guidance on Engaging Communities in Decisions Relating to Land', supported by the Scottish Land Commission's protocol on community engagement.

> The onus will remain on the forestry sector to engage with people and to make sure we keep rural communities on board

In regulatory terms, timber transport falls between the stools of the Forestry and Land Management (Scotland) Act and the Roads (Scotland) Act. Our new regulatory agency Scottish Forestry has no statutory control over the use of the public road and the Council Roads Authorities have no straightforward mechanism to demand infrastructure improvements or traffic management as they might for developments that go through the planning process. The upshot is that the onus will remain on the forestry sector to engage with people and to make sure we keep rural communities on board, supportive of our industry and open to forestry expansion.

The new Guidance sets out who – landowners, agents, regulators, forestry work managers or hauliers – needs to take the initiative at which stage, to assess possible issues, identify who they need to consult with and to manage operations to minimise any impacts. There are trigger points for consultation and engagement at scoping, at forest planning, when permissions are applied for and granted, on tendering timber sales, when purchasing stands, planning operations and during the harvesting and transport of timber.



The process set out needs to become common place. Mostly it will not be burdensome but a proportion of timber transport has the potential to result in outcomes that will be both expensive for the landowner and damaging for the 'social license' that an industry like forestry, that covers a fifth of our land area and a third of our rural roads, needs to sustain.

The Consultation and Engagement Guidance was a long time in gestation. Much of it was developed by the Stirling, Tayside and Grampian timber transport groups several years ago and drafts of this document have been widely circulated for comment and feedback. There is a legitimate view that by setting out a process we will encourage and give ammunition to the grumpy busy body who wants to obstruct any change going on around them. The Scottish Land Commission is clear however that all parties should be respectful and constructive and seek to engage where possible through representative organisations such as Community Councils. With forestry being a dynamic, expanding sector, we need to be on the front foot.

Finally, the guidance was produced in response to demand from within Scotland and is specific to Scotland. UK-wide guidance is becoming increasingly cumbersome to prepare, defining the plethora of differing regulations and agencies. However, if there is demand for similar guidance tailored to England, Wales or Northern Ireland, please let the Forum know.

FTN WEB RESOURCES

Transporting Timber on Public Roads Consultation and Engagement Guidance (Scotland)
www.confor.org.uk/ftnweb

Wood properties and uses of Scots Pine in Britain

A new research report highlighting the qualities of timber from Scots pine and promoting its greater use has been published by Forest Research (FR) and the Forestry Commission.

Authored by FR's Dr Paul McLean, who specialises in functional biomechanics of trees, biometrics and the growth of trees for forest products, the report is aimed at forest scientists, engineers, wood processors and end users of wood products. It covers distribution of Scots pine, wood properties and uses of Scots pine, and suitability for different end products.

The report collates and synthesises research into the silviculture, the mechanical properties and use of Scots pine timber in Great Britain, and intends to promote greater use of the only UK-native conifer species that is grown for timber.

Andy Leitch, Timber Development Policy Advisor with FCS:

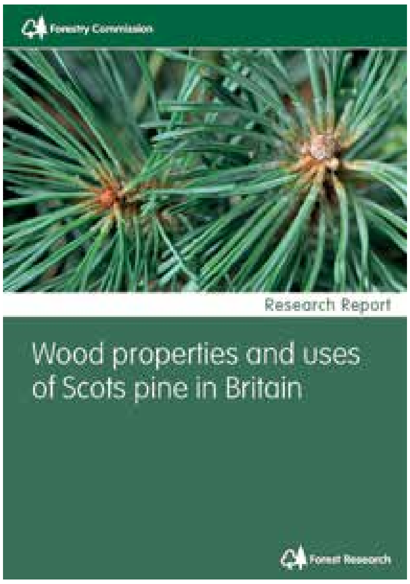
"Scots pine is the second most abundant conifer grown in the UK. Around 600 000 m^3 of Scots pine is harvested annually in Great Britain, approximately two-thirds of which is in Scotland."

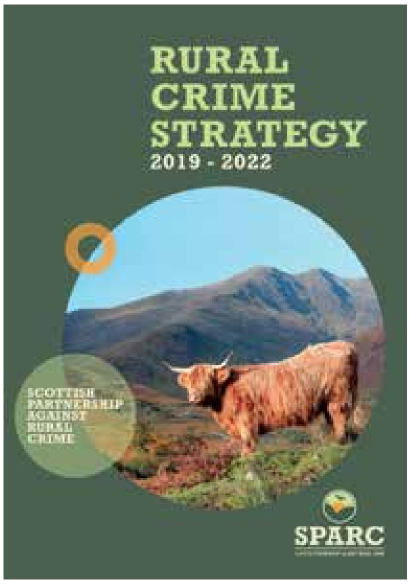
"It can thrive on dry sites, it has more durable heartwood than other conifers and its clearwood mechanical properties are better than those of Sitka and in some cases can match those of Scandinavian grown Scots pine. Its unique properties and qualities make it a highly versatile and adaptable timber that can be used in a wide range of applications.

"As a home-grown timber, it's one of our best and the report details its qualities and strengths - but it also notes the weaknesses and highlights the fact that there is potential for us to both improve and make much more of our Scots pine resource."

Scots pine has more favourable mechanical properties than some other conifers and, because of its durability and dimensional stability can be enhanced through industrial processes. It has the potential to be a utilised effectively to manufacture added value engineered wood products.

Although its relatively higher resin content makes Scots pine less desirable for pulping than spruces, it could potentially make it a desirable feedstock for bio-refining.





"Scots pine is the second most abundant conifer grown in the UK

Printed copies of the report cost £10 each and are available from FC Publications. For order information or to view and download a PDF version of the report (stock code FCRP029), go to **www.forestresearch.gov.uk/publications**

SPARC launches three-year rural crime strategy

The Scottish Partnership Against Rural Crime (SPARC) has launched a new three-year 'strategy' to tackle this type of crime, and to "develop resilient rural communities". Confor has been among the organisations supporting the development of this strategy.

The overarching vision of the strategy, the group says, is that: "Regardless of geographical location, rural communities feel safe."

The SPARC says its aim is "protecting rural communities with a focus on prevention, intelligence, enforcement and reassurances".

THE FORESTRY CENTURY

Grey squirrels damaging UK timber

Kay Haw, UK Squirrel Accord

A century ago, far fewer grey squirrels (*Sciurus carolinensis*) were resident in the UK. Originally native to North America, they were intentionally introduced to a number of sites in England and Ireland between 1876 and 1929 for ornamental purposes, where they managed to successfully establish viable populations. In 1937, the UK Government passed a law prohibiting the importation and keeping of grey squirrels.

Current estimates put their population at over 2.5 million individuals and they are now widely spread in large areas of England, Wales, the Scottish Lowlands, Northern Ireland and Ireland, where they tend to live at higher densities than the native red squirrel. This invasive species causes declines and local extinctions of native red squirrels as it spreads across the UK and Ireland, outcompeting them for food and habitat and spreading squirrel pox, but it also poses serious problems for timber production.

Bark stripping damage

High densities of juveniles can strip bark from the main stem and branches of trees between April and September. Species particularly susceptible to damage include high value trees such as oak, beech, hornbeam and sweet chestnut, whereas species such as lime, horse chestnut and wild cherry are far less or unaffected.

Grey squirrels target young broadleaved trees, mostly 10-40 years of age, and repeat the damage year after year if their densities are high and unmanaged. This creates open wounds that pathogens can infect and may lead to girdling, which can cause irreversible damage and tree fatalities. As grey squirrels cause the loss of leaders, lesions, callus growth and dysfunctional shape, trees are prevented from achieving good timber form.

Evidence suggests most pre-world war woods experienced little to no damage from grey squirrels, as they had surpassed the vulnerable 10-40-year stage of their lives before grey squirrel numbers greatly increased. However, post-world war woods show increasing levels of bark-stripping damage. A situation that worsened from the 1960s onwards with the growing density and spread of grey squirrels in the UK.

Tree damage & fatalities

The 1985 Broadleaves Policy shifted the focus towards planting more tree species that support native biodiversity and provide an important, valuable hardwood timber resource. However, there is a reluctance to plant broadleaves for timber purposes due to grey squirrel bark stripping causing extensive damage to timber crops.

In 2014, a survey of Royal Forestry Society members highlighted grey squirrels as the greatest threat to broadleaf timber production, above those threats posed by tree diseases and deer.

One member stated, "I replanted the major part of my woodlands in 1987 with 80% English oak. The bark stripping by grey squirrels over those 26 years has seriously damaged an estimated 40% to 50% of the crop, in many cases fatally." This negatively impacts the forester and UK timber trade, but also the biodiversity that would benefit from the food and habitat provided by those maturing trees.

Looking forward, Graham Taylor, Pryor & Rickett Silvaculture, recently estimated the long-term cumulative cost of grey squirrel damage to the timber trade, over the next 150 years needed to produce mature, productive hardwoods, to be over £22.5bn. This is made up of £40m per year lost to the rural economy and £110m per year spent on foreign imports by businesses that need the sawn timber UK woodlands are failing to deliver when trees are damaged.

Grey squirrel management

From 1973, the anticoagulant Warfarin delivered via a hopper was a popular choice for grey squirrel control, but could not be used in red squirrels or pine martens areas. However, Warfarin is no longer available as its licence was terminated in 2014. Other management options include lethal traps, which cannot be used in red squirrel areas, and live traps with humane dispatch, which can be used near red squirrels. Shooting is another option. There is now a Lantra accredited air rifle best practice, safety and competency course for shooting grey squirrels for red squirrel conservation.

The UK Squirrel Accord partnership is fundraising for and funding research into a fertility control for grey squirrels, and is in the second of the five-year project being carried out by the Animal and Plant Health Authority (APHA). This would provide another humane tool to reduce grey squirrel densities. As well as research into the immune-contraceptive drug itself, APHA are developing a grey squirrel specific delivery hopper for deployment in woodlands, analysing the efficacy of using fertility control versus trapping and developing a model to predict grey squirrel densities.

http://squirrelaccord.uk

FTN WEB RESOURCES

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www.confor.org.uk/ftnweb

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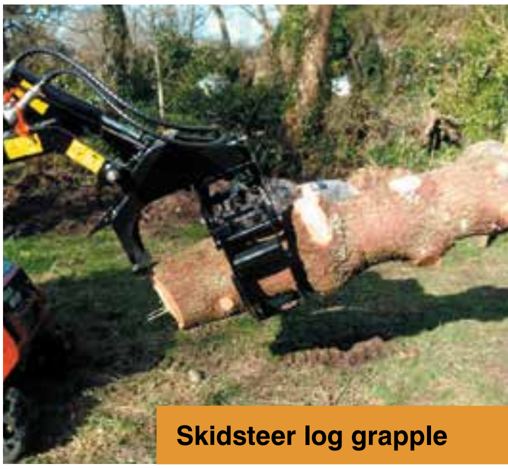

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SMALL WOODLAND OWNER

PROFESSOR JULIAN EVANS OBE FICFor

How research has helped the small woodland owner

The Wessex Silvicultural Group visited the Forestry Commission's Micheldever Forest, Hampshire, for its first meeting of 2019. We looked at sample plots and free growth in 90 year old stands of oak and woody regeneration under beech trees. All the sites are or were Forest Research (FR) experiments. The visit got me thinking of how much we are grateful for these long-term trials and surveys so that the advice we have and the practices we adopt are as soundly based as possible.

We learned many lessons at Micheldever, but three stick out and directly help the smaller woodland owner look after their patch.

- The projections of growth and yield of trees and stands of trees which we have in the tables and models we refer to are based on thorough and rigorous measurements collected over many years. They are not just guesses or crude approximations. This also applies to the tariff system of assessing timber volumes from thinnings and fellings.
- The free growth trial had long been concluded from a research aspect, but the favoured trees could still be distinguished from the normally thinned. This simply teaches that timely interventions to favour good quality trees to build their crowns both works and lasts. It is an extra tool to help us get the best out of every stand and woodland: as we have often repeated, for broadleaves always aim for quality and favour the trees that have it. Free growth – the opening up around the crowns of exceptional trees and keeping them that way for many years – can deliver. You might not maximise crop yield, but you are more likely to have top quality trees.
- Beech is difficult to regenerate naturally. The stand we visited was not aimed at regeneration per se, but how to get native woody growth as part of understanding PAWS restoration. Different degrees of canopy opening was part of the experiment. We saw that colonisers like sallow and birch quickly invade, that supplementary planting didn't do much unless fully protected, and that it could be easily overtopped if not attended to. However, although not part of the experiment as such, we also saw how the small fenced enclosures to keep out deer were replete with promising beech regeneration itself even under a dense canopy. The mast year producing this regeneration had not occurred during the life of the experiment, but was a more recent extra. So, two take home messages for beech: regeneration can't be hurried, good masting years must be awaited; deer exclosure is essential.

The oak tree was part of a western hemlock underplanting initiative in which the oak stands were very heavily thinned before planting the understorey when about 35 years old. They were part of the same compartment as the oak trees in the permanent sample plots and free growth trial. Is this oak tree the fastest ever grown in Britain? At 91 years of age it is 93cm DBH!

We are blessed in Britain with Forest Research as a research organisation that recognises the importance of long-term trials and experiments and all that they offer to help grow our trees and woods in the best possible way. And sometimes there are surprises or amusing sidelines which are often dead-ends! We came across one such at Micheldever.

FORESTRY IN PICTURES

Photo: Rab Easton

During a visit to the Norbord mill in Inverness, organised by the Timber Transport Forum, Forestmachine Magazine editor Rab Easton takes this attention-grabbing shot of fellow editor Stef Kaiser.

Want to see your picture here?

Forestry in Pictures is a regular feature in FTN. For every issue, we select the most impacting photograph sent by a reader. If you have a photo you would like to see published here, please send your file to Stefanie.kaiser@confor.org. Please include your name, brief description of yourself and the picture and a credit.
Photos should relate to forestry and timber and be of high-quality (minimum resolution 300dpi). Exceptional pictures might be considered for the front cover of a future FTN issue.
By submitting a picture to Forestry in Pictures you give Confor permission to use the file for non-commercial purposes in Forestry and Timber News or the Confor website. Photos will always be credited.

COMING UP IN AUGUST – GET INVOLVED

In August, we will run a feature on **Investment and Finance** and you will a teaser of what to expect at the **Confor Woodland Show** in September. Please get in touch by the end of June if you would like to submit an article for the feature or if you have ideas on aspects that should be covered.

Remember that FTN is your magazine – get in touch if you want to suggest editorial or give us feedback on articles we have published in the past.

Confor members, send us your company's news updates! Please get in touch by 15 July if you would like to submit an article on the topic or simply if you have ideas on aspects that should be covered.

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