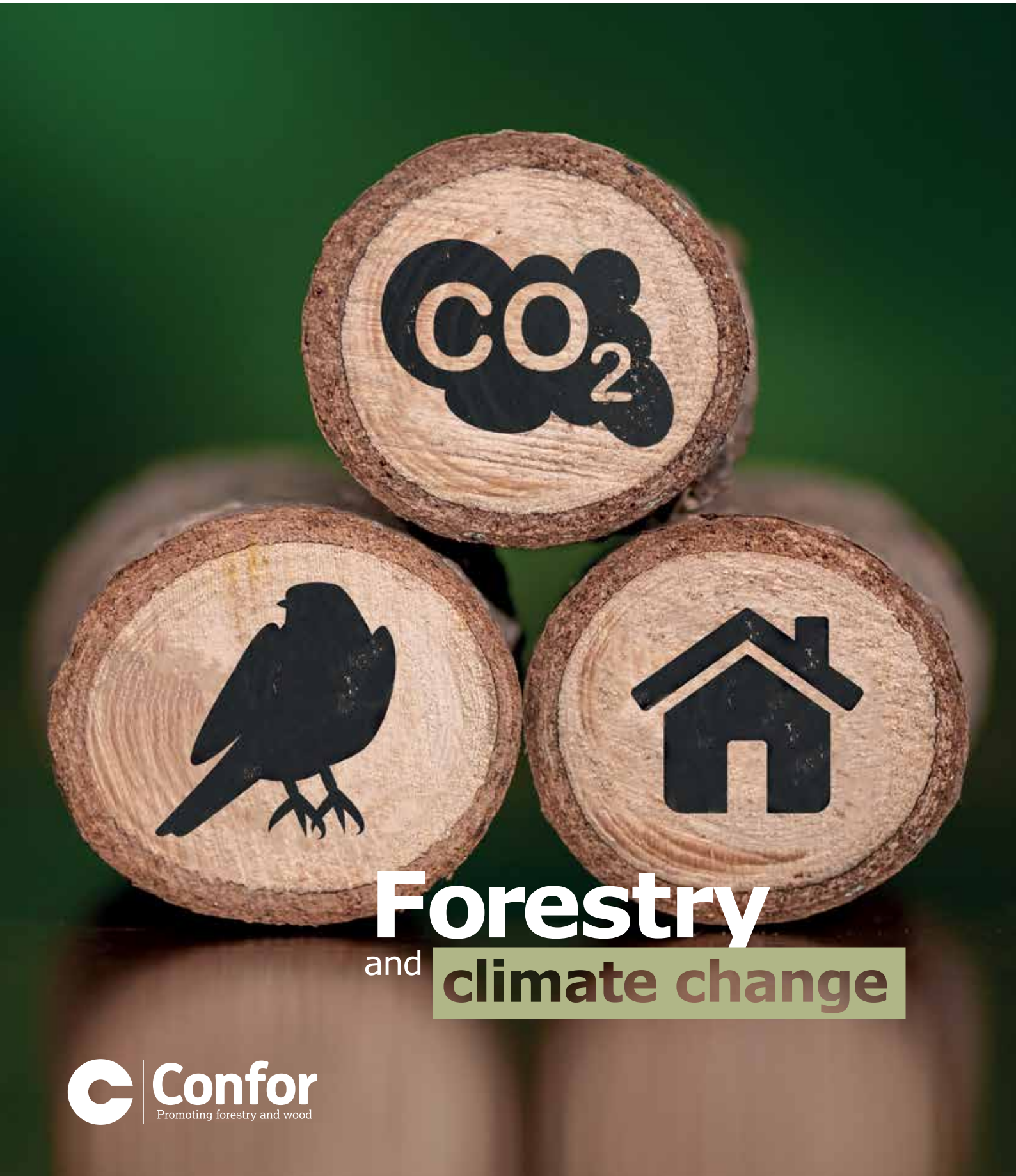
FORESTRY & TIMBER NEWS

October 2021 Issue 107



Forestry and climate change

Confor
Promoting forestry and wood

550 XP® 13", 15" & 18" Chainsaws

SAVE £90

NOW ONLY £649, £659 & £669 Inc VAT

Latest generation high performance compact XP® saw offering excellent ergonomics.

560 XP® 15" & 18" Chainsaws

SAVE £110

NOW ONLY £739 & £749 Inc VAT

High performance mid range XP® saw offering innovative features for maximising output.

572 XP® 18", 20", 24" & 28" Chainsaws

SAVE £120

NOW ONLY £979, £979 £1,009 & £1,029 Inc VAT

Latest generation chainsaw, combining durability & reliability with high power output.

HUSQVARNA AUTUMN XP® CHAINSAW OFFERS

Husqvarna's Autumn offers are available from **1st September to 30th November**. Save up to **£120** on some of our XP® Chainsaw range, expertly designed for professional use. We also have a range of big savings on our **Leaf Blowers**, with the opportunity to save up to **£100**. Visit your nearest Authorised Husqvarna Dealer or **husqvarna.com** for more information.

Offers available: 1st September - 30th November 2021

Husqvarna

CONTENTS

Looking for a high performance wood preservative? Wolmanit® CX.

In the vessel or in the field, you can rely on Wolman.

Using unique German engineering, Nordic quality and technical experts we can give you peace of mind and consistently high performing treated products.

Wolman Wood and Fire Protection GmbH, Dr.-Wolman-Str. 31–33, 76547 Sinzheim, Germany; www.wolman.de, Contact: jessica.ahlback@wolman.de

A brand of MBCC GROUP

EDITORIAL

Countdown to COP26

STUART GOODALL
CHIEF EXECUTIVE, CONFOR

By the time you receive this issue of FTN, COP26 will be less than four weeks away and as I write, it is still 'on' and expected to be a face-to-face meeting of world leaders.

Boris has spoken to the UN about his hopes for COP26 and achieving substantial emissions reductions by 2030 by making commitments in four areas – coal, cars, cash and trees. At Confor's AGM we heard a presentation from a senior Defra official who suggested that the UK government could increase its tree planting target substantially beyond 30,000 hectares a year after 2025. I wouldn't be surprised if a further commitment to that effect is made around COP.

At Westminster, we secured an inquiry into forestry by the Environment, Food and Rural Affairs Committee and last week, the chair of Natural England stated that broadleaves store more carbon than conifers. The evidence shows that this only happens – on site – when the broadleaves aren't harvested and the conifers are, thus ignoring storage in wood products and substitution benefits, as well as the employment benefits of managed woodland and wood processing.

This misinformation is widely repeated by objectors to productive planting and restocking across the UK and can be accepted by politicians and media if we aren't able to counter it.

Alongside misinformation on carbon, I regularly hear statements that native woodland has considerably more biodiversity than productive, even if the former is unmanaged and the latter is diverse. This is a deliberate tactic, as Defra as a department appears now to be giving equal balance to tackling carbon and biodiversity loss in its policies. Unfortunately, Defra doesn't appear to give any weight to a green economic recovery from Covid or 'levelling-up' – two significant policies of the UK government which would direct them more towards managed broadleaved woodland and productive planting.

Clearly, we need to increase our political lobbying and get stuck more into the carbon debate, and I'm pleased to say we recently welcomed Maria Bellissimo as our new full-time policy officer and we're beginning work with a highly regarded carbon professional. More on that in the next issue of FTN!

On a final note, many of you will be receiving your subscription renewal. I would like to thank you for your continued support – without it we can't help you.

Confor is a membership organisation that promotes sustainable forestry and wood-using businesses. Confor members receive *Forestry and Timber News* for free as part of their membership. For more information on membership, visit **www.confor.org.uk/join-us**

Past issues and articles can be accessed online at **www.confor.org.uk/news/ftn-magazine**

Non-member subscriptions: £65/(£70 overseas)
Contact stefanie.kaiser@confor.org.uk

Forestry and Timber News is published by Countrywide Publications on behalf of Confor.

For advertising, contact Laura Munnings 01502 725866 laura.munnings@micropress.co.uk
Printed by Micropress Printers Ltd

Stuart Goodall
Chief Executive
T: 0131 240 1416
E: stuartg@confor.org.uk

Andy Leitch
Deputy Chief Executive
M: 07881 510171
E: Andy.leitch@confor.org.uk

Stefanie Kaiser
Communications and editor FTN
M: 07538 918834
E: stefanie.kaiser@confor.org.uk

Caroline Ayre
National manager for England
M: 07500 927482
E: caroline@confor.org.uk

Jamie Farquhar
National manager for Scotland
M: 07817 374906
E: jamie.farquhar@confor.org.uk

Anthony Geddes
National manager for Wales
T: 074 94079305
E: anthony@confor.org.uk

Confor head office and editorial office
59 George Street, Edinburgh EH2 2JG

0131 240 1410

info@confor.org.uk

www.confor.org.uk

For the latest news of forestry and wood sign up to #forestandwood on Twitter

THE FUTURE OF THE FORESTRY WORKFORCE

Jez Ralph talks about the key messages and implications of a recently launched report on Forestry Workforce in England and Wales, commissioned by the Forestry Skills Forum.

Education, education and education. But where has forestry's education gone? In the past few years the number of colleges and universities offering forestry-specific courses has plummeted. At the same time, the competition for workers appears to be growing, with shortages in many sectors. In a time of interest and resurgence in our sector, how do we look towards the future, ensure we have enough of the right people with the right skills?

As a sector, we sometimes have a predilection for navel-gazing, but at critical moments this can be useful. This is one of those moments. Lantra, Confor, The Forestry Commission, NRW & the Welsh Government have been looking closely at how many people forestry needs to sustain itself and what skills they need to have. The resulting report for England and Wales, titled *Forestry Workforce Research*, fits into similar work completed in Scotland in 2019 and encompasses the supply chain: establishment, growing, harvesting, leisure, ecology, agroforestry and everything in between.

SKILL IN HIGH DEMAND

We asked what skills would be needed in the future that aren't adequately represented now. The responses could be grouped in the following order from most needed:

- General silvicultural and forest management knowledge
- Machine operator skills
- Technical skills in IT/GIS and new technology
- Social forestry
- Carbon and climate resilience
- Pests 7 disease
- Ecology
- Multidisciplinary forestry

Just finding out how many people work in forestry, what skills they have and forecasting into the future is no easy task. We have no definitive database and a sector so variable it is not easily measured. We can use web-based surveys and available statistics to provide a baseline. This baseline is put against new-planting and timber production forecasts to predict growth in the sector and future employment needs.

To fulfil the government planting targets of 30,000ha would require at least 150 new entrants (excluding replacement through retirement etc) in the next eight years. A number seemingly easily manageable but not in a situation of an ageing workforce and difficulty recruiting into new roles. In the longer-term, the surge in demand for timber is likely to see many multiples of this number needed through the supply chain.

What education and skills are needed?
Similar work on the state of the forestry workforce conducted in 2017 and the Scottish study in 2019 allows a trajectory to be calculated for the direction of skills provision. Coupled with surveys and interviews

WHAT IS HAPPENING ACROSS THE SUPPLY CHAIN?

The work force survey and report highlighted a very real need for more people in England and Wales to join the forest industry. Scotland published their report in 2019, which highlighted the same challenge. The report calls for radical action; however, that takes time so for now these are the current improvements being made to education across the supply chain. Some are England only or Scotland only and others GB wide.

FOREST NURSERIES

The Horticulture apprenticeship is currently under review but it is a quality course that matches the needs of forest nurseries, too. The Royal Horticultural Society is working on raising awareness of horticulture with schools, which may in turn consequently lead to greater numbers of young people looking to enter forest nurseries.

ESTABLISHMENT

The majority of Forest Operative apprentices in England currently follow the establishment pathway, but the total number of students on the course was still below 20 for 2020/21. The apprenticeship is under review with changes being made to better suit the industries requirements and hopefully overcome some of the barriers listed in the report.

CHAINSAW OPERATIONS

City and Guilds are reviewing their suite of certificates of competence for chainsaw related operations, and the final release will be 1 Dec 2021. The survey reported that an extra 1,116 operators will be needed by 2030 (from a 2019 baseline) in England and Wales.

MANAGEMENT

The Professional Forester

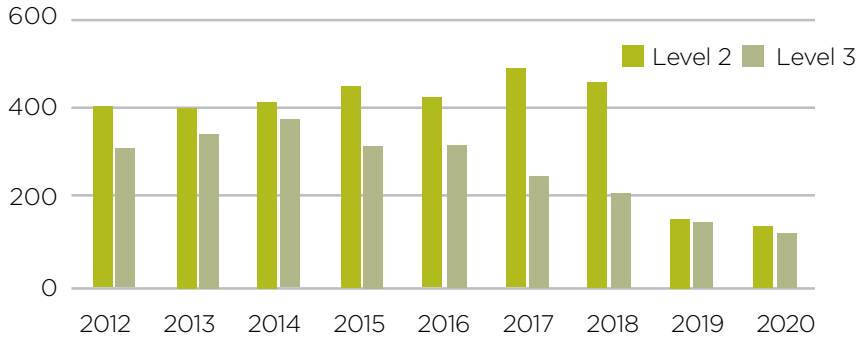
Photo credit: Scottish School of Forestry

it allows predictions to be made on what skills and what education will be needed for new workers to fit into the sector. More importantly, it tells us what we should be offering to attract new entrants, whether this is at the level of ground-based workers or management positions.

The results of this year's report show an optimistic outlook in the growth of the sector and individual businesses but a lack of confidence in training & skills provision. As a consequence, many larger employers have set up their own internal, bespoke training programmes, whilst many smaller

continued on p8

Level 2 & 3 Forestry Qualifications: England



apprenticeship has now been approved by the Department of Education. The first intake is planned for next year by the University of Cumbria. In England and Wales it is expected that an extra 148 professional foresters will be needed by 2030. Higher level education in Scotland has seen a strong start to the academic year with good numbers of students enrolling on courses.

The National School of Forestry reported that student numbers have increased over the last 3 years and September 2021 is no exception.

FOREST MACHINERY

The report mentions that machinery operators with high skill levels are needed, but recently advertised posts did not typically recruit the best candidates. As part of

the Scottish ILG Skills Group, Confor and Scottish Forestry are exploring how best to utilise £150k offered from the National Training Transition Fund to attract new machine operators from other industries. One option being considered is a taster event/course which may test the aptitude of candidates and provide them with a clearer understanding of forest machinery and operations, and possibly introduce them to potential employers.

HAULAGE

The entire haulage industry is experiencing driver shortages. To help combat this, a new five-day pilot course, including CPC (Certificate of Professional Competence) training, is due to commence shortly. The course will give drivers experience of forest roads

and introduce them to potential employers. This course, which has been created by Neil Stoddart, is also being funded by the Scottish Government National Training Transition Fund.

PROCESSING

With the success of BSW's saw doctor course, discussions are ongoing about how to roll it out further across industry.

continued from p7

businesses offer only *ad hoc* training as and when needed. Neither of these solutions address the wider structural training and educational needs of the sector and show a lack of cohesiveness amongst us.

In fact, the number of people completing level 2&3 (the more practical end of the spectrum) forestry courses has been dropping dramatically in the past five years *(see graph on p7)*.

This picture is mirrored in apprenticeships, but at least there are still 14 Further Education courses offering courses with forestry elements. Within Higher Education, England & Wales is now left with only three institutions offering degree level forestry. Despite the importance now being placed on forestry to deliver in so many ways are we failing to attract both FE and HE institutions to invest in training future generations. This is possibly because we are failing to attract people at a young enough age to act as a substantial enough market segment to make education institutions act.

Opinions regarding future provision pointed to a need to return to more robust training of focussed forestry skills, whether that be practical or managerial, producing better operators, better silviculturists and more business focussed new entrants and employees. It was felt that the skills required of a career in forestry are undersold rather than focussing on the highly skilled person a new entrant can become; whether that is a chainsaw operator handling difficult sites a harvester can't get to or a specialist silvicultural expert. Forestry is becoming more complex and we need the operators and silviculturists to harness that complexity.

SCAN ME

Read the full report

This work was supported by Lantra, Confor, The Forestry Commission, NRW and the Welsh Government. The recommendations have been taken from the report, the views expressed those of the author.

KEY RECOMMENDATIONS

- Given the increasing interest in forestry and trees for carbon, for ecology and for timber, the amount of tree-related teaching within the National Curriculum needs to be increased.
- We need a larger number of silviculture and other core, focussed, forestry skills available at Further & Higher Education.
- New entrants need better commercial and business acumen. We need to harness modern marketing & promotion and social media in a way only younger digital-natives can.
- A clear, believable, commitment on planting targets from government is needed, giving confidence to businesses to upskill and take on new entrants.
- We want a nationally accredited scheme that allows a variety of courses, whether internal training, FE, HE or other to be counted towards qualifications.
- Industry should work more closely with Further and Higher Education to increase the number, robustness and take-up of forestry specific courses.
- A National Forestry Training College or a site for national centralised training in forestry specific skills is needed.
- We should consider the development of an umbrella employing body that could act as a surrogate employer for the large number of micro businesses to enable them to reduce the risk associated with growing a business.
- Conscious of the number of surveys & reports businesses are asked to contribute to we recommend pooling resources in an ongoing five-yearly thorough and substantial census of the entire sector.

What came out most strongly from this work was the need for radical action now. If we are to fulfil forestry's huge potential we need more people wanting to join us, more people wanting more focused skills and a strong coordinated framework for training them.

Forestry Work Force Report 2021 Webinar

12 October, 4pm

This webinar provides an overview of the recent report which investigated the status of employment, education and skills in forestry in England and Wales. **To sign up**, *visit our events page on www.confor.org.uk/resources/events*

Photo © The Crown Estate

Choose PEFC Forest Certification

Your customers' assurance of responsible sourcing

Discover more at:
www.pefc.co.uk

Choose PEFC

Caring for our forests
globally and locally

PEFC
PEFC/16-01-01

PEFC – Programme for the Endorsement of Forest Certification

CONFOR DINNER AND AWARDS ARE BACK IN 2022

After a pandemic-related break in 2020, Confor is delighted to announce that our annual dinner event will once more take place on 1 March 2022.

In 2019, we perfectly timed our annual industry event to take place just before a National lockdown would put a stop to all socialising for months on end. Since then, there as been very little opportunity for people of the forestry and timber sector to get together, enjoy a meal and celebrate the achievements of inspiring people in our industry.

In Spring 2022, the Confor awards and dinner are back at last at the Sheraton Hotel in Edinburgh. In addition to our long-standing Award for Dedicated Service to Forestry, we will run the three awards launched in 2019: Future Forestry Leader Award, Changing Attitudes Award and Innovation and Research Award. The call for nominations will open soon – check the panel for more information on how to nominate your preferred candidate.

SAVE THE DATE

Confor dinner and Awards event
When: 1 March 2022
Where: Sheraton Grand Hotel and Spa (1 Festival Square, Edinburgh EH3 9SR)
Award nominations: 25 Oct–15 Jan 2022
Ticket bookings: from 1 Nov

NOMINATE FOR THE AWARD

To nominate someone, you will need to send us the following information:

1. Name, role title and organisation of the person you want to nominate
2. Award you want to nominate for
3. Reason for nomination (150–200 words, links are allowed).
4. Your name and contact details

Nominations can be submitted to *Stefanie.kaiser@confor.org.uk* from 25 Oct 2021 to 15 Jan 2022.

How do we shortlist and choose a winner?
For each award, relevant representatives of Confor and the sponsor will independently shortlist three candidates and eventually agree on one winner.

For selecting a winner, we value nominations that show that a person has shown exceptional engagement beyond what is their key professional role and whose work or initiative has had an impact not only on their organisation but the wider industry.

Sponsorship opportunities

Limited additional sponsorship opportunities might be available. Interested businesses may contact *stefanie.kaiser@confor.org.uk to discuss.*

THE AWARDS

CHANGING ATTITUDES AWARD

To be presented to an individual or business promoting the forestry and wood sector in a positive and impactful way through personal engagement, campaigning or communication, social media or other ways.
Sponsored by: Scottish Woodlands Ltd
Winner in 2020: Mima Letts, Tree Sparks

Scottish Woodlands
Growing a Sustainable Career

INNOVATION & RESEARCH AWARD

To be presented to a business or individual delivering successful innovation and/or research which has clearly demonstrated greater productivity or efficiency in the forestry and wood industry.
Sponsored by: Forestry Commission & Forestry and Land Scotland
Winner in 2020: Jon Ritchie, James Jones and Sons Ltd

FUTURE FORESTRY LEADER AWARD

To be presented to an individual with outstanding skills who has the potential to be a leader in the forestry and timber sector – someone showing initiative, passion and making a real difference.
Winner in 2020: Andrew MacQueen, Tilhill

Timeline

1. **25 Oct 21** – Award nominations open
2. **15 Jan 22** – Award nominations close
3. **25 Jan 22** – Shortlisted announced in FTN
4. **1 Mar 22** – Confor dinner and awards ceremony

MARIA BELLISIMO JOINS CONFOR AS POLICY OFFICER

Experienced communications and engagement professional Maria Bellisimo has joined Confor as its new Policy Officer.

Maria, who joined the Confor team on 6 September, has a strong understanding of the UK's political and policy-making process – and detailed industry knowledge through her recent work with both BSW Timber and, previously, the Wood Panel Industries Federation.

She has held a number of roles across Westminster and the private sector, and understands forestry

and wood's vital role in contributing to the sustainability agenda.

Confor Chief Executive, Stuart Goodall, said: "Maria is a fantastic addition to the Confor team. Her strong background in public affairs and her specific experience working with businesses in the sector mean she can hit the ground running and add real value to our work at a time when forestry and timber have never been more important to society."

Maria, who has vast experience of designing and running political and single-issue campaigns, is well-known to a number of the Confor team.

She said: "When I first started supporting businesses in the sector as a public affairs consultant four years ago, my knowledge of the forestry and timber sector was limited. What I have discovered since then is a highly specialised, technologically advanced sector that is key to revitalising a lagging rural economy and an essential component of the systemic change that we as a society need to make to address the climate change crisis.

"I'm excited to be joining Confor, and to have the opportunity to build on my experience. I am very passionate about communicating all the benefits of forestry and wood to key decision-makers and help promote this vital industry."

THE FUTURE IS HAMPTON STEEL

BRITISH WIRE FENCING & METAL POST MANUFACTURER

ALL POSTS GUARANTEED FOR 30 YEARS

ONE OF THE MOST COMPREHENSIVE WIRE FENCING RANGES AVAILABLE

For a superior integrated solution to your fencing needs, combine the award-winning **Versalok**® intermediate metal post and clip system and Hampton's **Strainerlok**™ Metal Box and Angle Strainer Systems, all **guaranteed for 30 years**, with any woven wire fencing pattern.

Choose from Class A galvanised **Hampton Net**™ fixed knot fencing or **Sentinel**® hinge joint supplied in rolls of up to 500 metres. Alternatively opt for our longer life green passivated **Hampton Net**™ **Green**, **Rylock**® **Green** or **Rylock**® **One** products. All these can be supplied with barbed wire, line wire and fencing staples in complementary coating options. Also available, **chainlink** fencing either class A galvanised or PVC coated with barbed or knuckled ends, fully galvanised **hexagonal wire netting** and **Gripple**® wire joining products.

The future of wire fencing is Hampton Steel.

HAMPTON®

+44 (0) 1933 234070 | sales@hamptonsteel.co.uk | www.hamptonsteel.co.uk

CONTINUED MOMENTUM FOR WOODLAND CREATION?

Can the 'Great Northumberland Forest' deliver new woodland creation at scale in the far north of England? **David Lee** reports.

The Great Northumberland Forest was announced with fanfare by the Conservative Party as part of its election manifesto in late 2019.

Two years on, what is happening on the ground to plant more trees in the county which has both England's largest forest, Kielder, and its biggest modern forest, Doddington North?

It's a complex picture, and Confor and its members are working to ensure woodland creation remains a high priority in an area with strong potential for planting.

The three key areas are:

- The Northumberland Woodland Creation Partnership (NWCP)
- The Borderlands Inclusive Growth Deal
- The Cumbrian and North England Timber Transport Groups

Northumberland Woodland Creation Partnership

The NWCP is the body set up to make The Great Northumberland Forest (GNF) happen.

The GNF isn't a big forest, like Kielder, but an attempt to create more woodland across the county to help tackle big challenges including climate change and biodiversity decline and to support a thriving economy.

The initial 'headline', 500 hectares of new woodland, or around 1 million trees, by 2024, aims to generate momentum for more longer-term planting.

Rushy Knowe, close to Kielder Water, has seen 200,000 trees planted, a mixture of 12 broadleaf and niner conifer species, on a 145-hectare Forestry England site. At Monkridge, near West Woodburn, Forestry England plans a similarly diverse new woodland over 100 hectares. Planting is expected to take place over the next two seasons

The NWCP is also exploring opportunities for woodland creation with the Ministry of Defence, which has significant land around Otterburn.

The 'balance' of planting to make up the initial 500ha is expected to come from the private sector, with positive signs of an uplift in applications.

NWCP Programme Manager Mark Child is a former Beat Forester at Kielder, and recently, Forestry England's Head of Integrated Planning and Environment (North).

First tree being planted at Rushy Knowe

He started work with the NWCP, a five-year programme, in June.

Mr Child said: "There is good working collaboration between partners and wider stakeholders, and a willingness to discuss and find solutions where there are sensitivities.

"The 500-hecatre target is a starting-point and I'm confident we'll go beyond that and deliver more woodland creation in the county to benefit the environment, economy and people."

Mapping expert Abi Mansley is working with Mr Child, while there are plans to recruit more staff to lead on communication and landowner/manager engagement.

Confor is in the Partnership, alongside the local authority, forestry agencies, MoD, Defra, Natural England, Environment Agency, Northumberland National Park, Northumberland Wildlife Trust, Woodland Trust, National Farmers' Union and CLA.

Stuart Goodall, Confor CEO, said: "It's positive to see the Partnership employing people who understand forestry and bringing all interest groups together to identify places to plant in Northumberland. Confor has large wood processor members like EGGER and A&J Scott in the county who need assured future supplies of locally-sourced, quality timber."

EGGER hosted a July meeting of forestry stakeholders, including Hexham MP

continued on p14

CONFOR TASK AND FINISH GROUPS

Confor has initiated several groups in order to reach a conclusion on various topics.

Forestry statistics

This group was created to address the ongoing concerns about statistics relating to forestry and timber. The main elements the group has so far considered are:

- Consider a proposal from Forest Research for a pilot to provide regular and frequent supply and consumption data
- Agree whether to commission an updated wood supply and demand forecast report from Guy Watt.

The group has met twice, the second time with Forest Research regarding their pilot to extend the type and amount of data available.

Changing attitudes

This group was set up in September 2021 to develop a PR strategy for 2022, focusing on the need to grow more wood. This group is needed to help counter the misleading press stories that emerge regularly from a variety of sources.

Certification

During initial discussions about reforming this group, it was decided that a task and finish group was not the best way at this time to continue the work done by the first certification group. Certification is still a constant theme in discussions with individual members. To ensure that the industry is best placed to react to external pressures. This include reduced availability of certain chemicals or prices rises for certification or audits.

Fibre recovery

This initiative is still in the early stages and the group has not yet met. Its role is to determine how to ensure that the maximum amount of fibre can be recovered from harvesting site. The amount of fibre left on site has a knock-on effect on the whole supply chain as it can affect timber prices and restock costs. Work on this topic has been going on for several years and the group aims to bring it together along with new research to ensure we make the best use of the fibre grown.

THANK YOU FOR YOUR RENEWAL


Sarah Virgo

A huge thank you to those who have already paid their membership subscriptions for this year already. It has been a busy period for Confor's membership team, and we are working hard to ensure that we answer any and all queries.

We sent out our annual update with invoices in September, and you'll find a copy enclosed in this FTN as well – this snapshot provides you with a brief overview of the services, support and representation that your membership fees go towards.

This year it is easier than ever to pay your membership subscription, with the option to log in to your own members area on Confor's website and pay your outstanding subscription there. Alternatively, for peace of mind, you can sign up to an annual direct debit by filling in a mandate form.

If you have not yet received your annual renewals invoice, please get in touch with me ASAP.

A note on subscription fees...

Please note that, as in previous years, fees have increased at a rate in-line with annual inflation with a minimal further uplift so we can do more for you. This translates to a small increase in fees for this year and you can see the new rates on our website.

Political and media interest in our sector has never been so high, but understanding of the industry can be improved. Members have been calling for Confor to do more to promote the sector while continuing to address issues such as skills, technical advice, statistical information, research and much more. In 2022, we will continue to increase our service to Members while launching a new promotion campaign. Your continued support is vital to enable us to help you. If you wish to discuss the new fees, please do get in touch.

sarah@confor.org.uk

NEW MEMBERS

We are delighted to welcome the following new members to Confor:

Bio-Sep Ltd; Coed y Cardi Sawmill; Benmore Estates; L McInally Forestry & Tree Services; W L West & Sons Ltd; James Jacek; Judith Peachey; Gregg Boxall; AJ Paul; Alistair Anderson; Daniel Leigh; Denis Torley; Richard Gray; Duncan Wells.


Kielder Forest

continued from p13

Guy Opperman, to discuss developments in the county and beyond.

Borderlands Inclusive Growth Deal

This included the Borderlands Inclusive Growth Deal, a partnership between the UK and Scottish Governments and five local authorities either side of the border - Northumberland and Cumbria County Councils and Carlisle City Council in England and Scottish Borders and Dumfries & Galloway councils in Scotland.

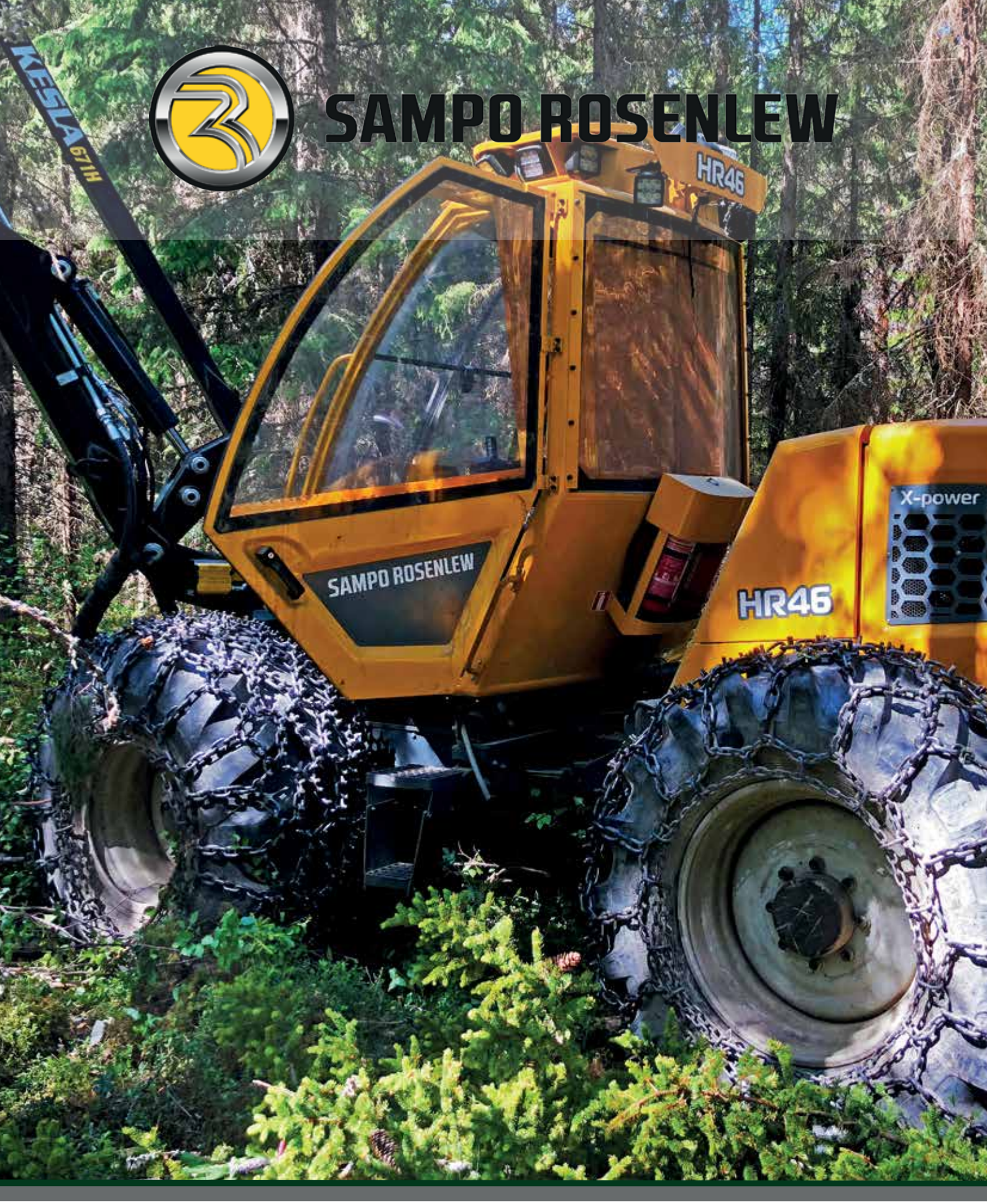
The main pre-pandemic Borderlands discussion among forestry groups (including Confor) was around establishing a forestry innovation centre. After Covid-19 delays, the Borderlands Partnership plans to set up facilitated discussions involving the main players to see if the idea can be shaped into a formal proposal.

Cumbrian and North England Timber Transport Groups

There are also positive developments about re-establishing a regional Timber Transport Group. Mike Yerbury, Director of Forestry at EGGER, and Chair of the new group, said: "We have a strong, positive model in Scotland and there is real enthusiasm to get the Cumbrian and North England groups reinvigorated. By combining these neighbouring groups, our vision is to offer a unified, professional voice in support of timber transport within the region.

"Our first step will be to identify roads crucial to our industry but which need improvement. We will then aim to develop a pilot Strategic Timber Transport Scheme project which we can use to highlight the benefit of establishing a permanent fund."

EGGER, which employs 650 people at Hexham, hosted a September visit by new Forestry Commission Chief Executive Richard Stanford. After the visit, Mr Stanford highlighted his desire to increase planting, saying: "The UK is the second largest importer of timber in the world, with 80% of timber and timber products coming from abroad. Forestry Commission is working with landowners and stakeholders to try to reduce this reliance on imports."



+44 2838 330011
www.oakleafforestry.com

35a Derryall Road, Portadown, Co. Armagh BT62 1PL

Oakleaf
FORESTRY.COM

HARNESSING THE POWER OF DATA TO BOOST TREE PLANTING

Stef Kaiser speaks to Dr Matthew Brown, one of the founders of Forest Creation Partners, a business using data science and innovative financing to enable large-scale tree-planting.

Forest Creation Partners, founded by Matthew Brown and Rafi Cohen just last year, uses data sciences to help landowners, investors, and policy makers discover their potential for tree planting to contribute to their environmental and financial plans.

Planting the right tree in the right place depends upon a number of factors –environmental, social, financial and regulatory. FCP's key product, the software *ForestFounder*, utilises a wide range of geospatial data sources to scan unlimited land areas and pinpoint optimal locations for planting trees.

"We think of ourselves as a data science firm, but equally importantly as a mission-driven firm", explains Matthew Brown. "We set up the business because we want to have a positive impact on the climate and nature crisis, and that's our North Star. We have our nerdy roots in data science but we are driven by having a positive impact on the World."

For Matthew and Rafi, the combination of their robust data science background and sustainability-focused business ethos has proven to be a recipe for success: in August, the firm was granted UK Government funding to extend the *ForestFounder* software. The investment, which is part of the Department for Business, Energy and Industrial Strategy's commitment to increasing UK production of biomass, will enable FCP to upgrade and extend the software and broaden their capabilities in two ways: geographically, extending it to Scotland and Wales; and in the range of tree species, allowing to cover species for short rotation forestry or short coppice. The improved *ForestFounder* will be able to identify suitable locations to plant Eucalyptus or Willow, for example.

"We made this bid in collaboration with Forest Research and they have been really helpful to us already in the creation of FCP and so we are very excited to continue this working relationship with them. All of the data sets that Forest Research produces within their collaboration with us, such as data on new species or updated future climate datasets, will be made publicly available through the ecological site classification tool to benefit the wider sector.

In addition to incorporating data on new species into *ForestFounder*, FCP will use the investment funding to extend all of their existing capabilities, including their existing timber and nature focus, to Scotland and Wales.

"WE SET UP THE BUSINESS BECAUSE WE WANT TO HAVE A POSITIVE IMPACT ON THE CLIMATE AND NATURE CRISIS, AND THAT'S OUR NORTH STAR"

Dr Matthew Brown and Rafi Cohen (right)

Despite the fact that the BEI's funding competition highlights the need for biomass for energy generation, the investment will not narrow FCP's business aspirations: "There is a range of objectives that this country needs to get out of land management – we need food, wood, energy, places for nature to thrive, places for people to enjoy – plus all the other benefits we can get from forests. We therefore need all different kinds of 'biomass' (in the wider sense) in different places and we want to help enable all of that activity".

I enquiry about Matthew's and Rafi's career journey into the sustainability sector. Both could be described as 'nerds at the service of the environment'. Matthew

trained as a physicist and his business partner Rafi is a Chartered accountant with a degree in neurosciences. "Rafi and I are both passionate about protecting and enhancing the environment and trying to combat the climate crisis. That is what has driven our career up to date and that is why we wanted to set up this business. I worked as a government scientist leading the climate change mitigation team at Defra, and then went on to work with businesses at the Confederation of British Industry heading the Energy and Climate Change team. Similarly, Rafi has done a lot of this kind of work in his consulting career with businesses and governments looking at climate change related challenges."

Both company founders are clearly 'system thinkers' who enjoy exploring connections and understand how systems come together to create meaningful change. "I think our mindset has determined the way we approach the challenges we are trying to solve with FCP."

But what made the two eco-conscious entrepreneurs apply their nerdy skills to the very specific challenge of boosting tree planting in the UK?

"From a rational perspective, nature-based solutions are a part of the response to the climate challenge that has been less explored and there is still lots of potential", says Matthew. "We also liked the fact that there is a lot of scope to achieve multiple objectives at the same time, for example, the climate and biodiversity crisis can be addressed in parallel. It's an area with a lot of positive impact to be had. Within the nature-based sector, what drew us to specifically address the tree planting aspect is the fact that there is such a gap between where planting rates need to be and where they are at the moment. We felt that this was an area where we wanted to make our contribution."

Moving away from their business motivation, I want to know more about the expertise in their team. In order to offer recommendations on suitable planting sites, they will need to draw from a very diverse range of datasets from different disciplines – planning and infrastructure, soil science, silviculture, climate. And you can't be specialist in everything. How do they source these datasets, and, more importantly, how do you assess the quality and relevance of these datasets?

"We would never have got to where we have if it weren't for building relationships with experts in all these disciplines that feed into *ForestFounder*. Forest Research is an example of that – we could never hope to have the expertise in forest science that they do. The relationships and networks we have built to create *ForestFounder* have been more important than our data and coding skills and I'd say that the robustness of what we are doing comes from those relationships and the ultimate sources of the data."

When engaging with a client, Forest Creation partners are fully transparent about how a specific problem is being approached, and what the limitations of the datasets and outputs might be for their specific case.

"If we're scanning 30,000 hectares for a large landowner the output they would get is identifying the few thousand hectares that are very likely to be optimal for forestry. But there is always some ground truthing to be done. We are not saying that the maps we produce are definite answers. We take the client from a point where they don't know where to start planting on their estate to telling them which sites they should further evaluate for tree planting, sites with a high likelihood of being suitable."

The *ForestFounder* software can also quantify the potential for financial, carbon and biodiversity impact for specific sites that have been pinpointed for planting. It helps clients get a sense of the overall scope, how much tree planting could contribute to their sustainability strategy and potentially their financial strategy.

Visit *www.forestcreationpartners.com*

FSC FEE CHANGE FOR FOREST BASED PRODUCTS

The Annual Accreditation Fee (AAF) for forest-based products is changing to a process using a company's exact turnover figure (for forest products). The fee changes apply to Chain of Custody (CoC) certification taking effect from 1 July 2022. Almost all certificate holders will see a rise in AAF charged and for some this will be significant. Due to the UKs strong financial legislation this fee model will be easier to work out and auditable than some other parts of the world, certification bodies will require evidence of the turnover from forest-based products.

FSC states that "The AAF structure for Chain of Custody certification has been revised to make it more equitable and provide FSC with additional funding to invest in further increasing the value delivered by FSC for its stakeholders, including certificate holders.

As before, the revised fee structure is based on the value of your forest products turnover. The difference with the new fee structure is that the revised fee will be based on the actual turnover, rather than falling within a wide category band where the same AAF is paid by each certificate holder falling within that band. This makes it a fairer process and avoids sharp changes at the class boundaries."

The fee structure for Forest Management certificates remains the same.

Fee changes are among many elements why having your timber dual certified makes sense (having the timber supplied as both FSC and PEFC certified). This allows a great flexibility in the processing chain making supply easier for the entire industry.

DIVERSE WOODLANDS OFFERED FOR THE ROYAL WELSH SHOW

Tim Kirk reports on this year's Woodlands Competition

Following the cancellation of the July show for the second year running it was decided that the Woodlands Competition should go ahead, with social distancing easy for an outdoor activity. This late decision did coincide with an exceptionally busy spring for foresters in north Wales (the area for entries in 2021), so entries were down with 28 stand class entries overall. Prizes were duly presented at the show ground in September.

The judges were particularly impressed with the quality of reestablishment in the plantation entries, including Llandegla, Hafodunas, Cwm, and Hafod Boeth, all exhibiting superb growth in their early years. Bryn Haul excelled again as a well managed and productive small broadleaf woodland, winning both the Milford Silver medal and the RFS Gold medal certificate, for Ruth Pybus and David Brown. The very varied and interesting plantation Hafod Boeth in the centre of the Snowdonia National Park won the EFG Perpetual challenge trophy for Mr Giles Keating, now appropriately managed by EFG's successors Tilhill!

(From left to right): Simon Miller with the RICS trophy; Chris West and Aleksi Ehtee for Llandegla owners, the Church Commissioners for England.

Coed Llandegla won a number of stand prizes to take the Charles Shakerley Cup as well as the Williams-Ellis Cup, for owners, the Church Commissioners of England. With manager Simon Miller for Tilhill being awarded the magnificent ICF Challenge Trophy, as well as a number of gold medal stand certificates for several other entries.

Hafodunas is an almost unique farm/forestry development from the 50/60s plantings, and together with Cwm plantation scored well in the stand classes, winning Scottish Woodlands manager Charles Gittins the Wilson Memorial Shield.

Perhaps the most notable absentee was Natural Resources Wales, and we must hope they reenter the competition next year for the southeast Wales woodlands. But overall, it was a most satisfactory outcome undertaken in difficult circumstances and showing the health and productivity of woodland ownership in Wales.

PLANT HEALTH UPDATE

Caroline Ayre summarises the latest developments in tree health.

The larger eight-toothed European spruce beetle is back?

Ips typographus is a destructive pest of spruce trees. An outbreak was discovered in a woodland in Kent in December 2018 but was successfully eradicated. Since then, the Forestry Commission has been conducting enhanced surveillance across the southeast of England. This year, several further outbreaks have been found in Kent and East Sussex as a result of the beetle having been blown over from the continent.

The beetle is endemic to mainland Europe, but until 2018 it had not been known to be present in the UK. The species is therefore regulated as a Quarantine Pest to protect us from the introduction of the beetle.

The Forestry Commission's contingency[1] plan sets out the steps to be taken if an outbreak of larger eight-toothed European spruce bark beetle is discovered in Great Britain. The plan was put into action during the 2018 Kent event and is being followed to control the current outbreak in Kent and East Sussex.

The species is subject to the Plant Health (*Ips typographus*) (England) Order 2019, which gives the Forestry Commissioners powers to take steps to prevent spread of the pest from outbreak sites. More detailed information about these powers and restrictions, and the actions taken in Kent and East Sussex, is available on the government website[2].

If this pest was to become established in England, it would have a major impact on our wood-based industries and environment. By actively managing your woodlands, you can increase their resilience and protect them against future threats.

The beetle prefers stressed or dying trees. Recent finding have been on individual, wind-damaged trees. If you own spruce in the area highlighted on the map *(see above)* you may be eligible for support to fell and restock your woodland to aid landscape recovery. Maintenance payments for newly replanted trees are also available if you qualify. Speak to your Forestry Commission Woodland Officer about getting involved in the new Tree Health Pilot Scheme which could help with the cost of felling trees and restocking your woodlands.

(1) www.forestresearch.gov.uk/documents/7317/Ips-typographus_contingency-plan.pdf
(2) www.gov.uk/guidance/eight-toothed-european-spruce-bark-beetle-ips-typographus

Consultation on the Plant Biosecurity Strategy

This consultation has been launched by the governments of England, Scotland and Wales to inform Great Britain's (GB) approach to plant biosecurity over the next five years. Responses will help inform the new GB Plant Biosecurity Strategy that will be published in 2022.

Responses should be received by 30 November 2021.

Confor will be submitting a response. If you have any comments or wish to have your views expressed please contact *caroline@confor.org.uk.*

Visit *www.consult.defra.gov.uk/gb-plant-biosecurity-strategy/a-plant-biosecurity-strategy-for-great-britain/*

Tree health pilot scheme

Landowners and managers are invited to express their interest to take part in the Tree Health Pilot designed to support action against pests and diseases affecting their trees. The Tree Health Pilot scheme will test different ways of slowing the spread of pests and diseases in specific trees.

It is a three-year scheme which provides an opportunity to trial and test new elements of the Tree Health scheme that will launch in 2024.

Funding from the Pilot can go towards paying back a range of measures including:

- felling diseased trees
- restocking and capital items
- maintenance of trees
- biosecurity items

The Pilot will work alongside the existing Countryside Stewardship Woodland Tree Health grants, which will continue to be on offer until 2024 when the new Tree Health Scheme will be adopted.

The scheme will be available for owners and managers of trees and woodlands who have a tree pest or disease confirmed in the locations by the Forestry Commission.

The trees or woodlands you manage must be one of the following:

- Ash with ash dieback
- Larch with *Phytophthora ramorum*
- Spruce growing in the high-risk spruce bark beetle (*Ips typographus*) area

- Sweet chestnut with *Phytophthora ramorum* or sweet chestnut blight

The pilot will initially focus on woodlands in the Northwest, Southeast and London, and the West Midlands.

You can express an interest in the Pilot on the government website. After consideration from the Forestry Commission, eligible landowners and managers will be invited to make a full application. Pilot agreements will then be established for sites where the most learning is to be gained.

Visit *All information can be found here: www.gov.uk/guidance/tree-health-pilot-scheme*

Plant health fees

Defra and Welsh Government are starting work on the next Review of Plant Health Fees (for England and Wales only). The last review was carried out in 2015/2016, consulted on in 2017 and delivered via legislation in April 2018.

This Fees Review will set the strategic, long-term approach to be taken when setting fees for plant health services in the future. It sits alongside the ongoing tactical engagement with Defra related to immediate concerns on the frequency of import inspections on EU goods and the subsequent fees.

Updated contingency Plans published for *Xylella fastidiosa* and *Popillia japonica* (Japanese beetle)

Visit *www.planthealthportal.defra.gov.uk/pests-and-diseases/contingency-planning/*

Government sets out new timetable for border controls

Businesses have faced a range of challenges over recent months as they recover from the global pandemic which has impacted supply chains across Europe. This is being felt particularly by the agri-food sector, where new requirements on importing products of animal origin were due to be introduced from next month. Rather than introduce these controls at this time, the government has listened to those who have called for a new approach to give businesses more time to adjust.

This includes changes to the timing of Sanitary and Phytosanitary (SPS) checks on animal products, plants and plant products imported to GB from the EU.

www.shutterstock.com/Luca De Gregorio

What has changed in the timetable?

- The requirements for pre-notification of Sanitary and Phytosanitary (SPS) goods will now be introduced on 1 January 2022.
- The new requirements for GB Export Health Certificates from EU exporters, which were due to be introduced on 1 October 2021, will now be introduced on 1 July 2022.
- Phytosanitary Certificates and physical checks on SPS goods at Border Control Posts, due to be introduced on 1 January 2022 and March 2022, will now be introduced on 1 July 2022.
- Safety and Security declarations on imports will be required as of 1 July 2022 as opposed to 1 January 2022.
- Full customs declarations and controls will be introduced on 1 January 2022 as previously announced.

CLIMATE CHANGE TO FEATURE IN 'TREE OSCARS'

David Lee presents the winner of the Scotland's Finest Woods Award's first ever Climate Change Champion award.

When judges in Scotland's Finest Woods Awards began the search for their first Climate Change Champion, they were searching for one of three things.

They wanted a forest or woodland clearly mitigating the impacts of climate change, or adapting to the changing climate – or sharing knowledge and information about the subject 'on the ground',

In the end, they found all three in the same place – and named Balbeg Estate's Bennan Hill, near Straiton, Ayrshire, as the first Climate Change Champion in the 'Tree Oscars'.

The small estate – owned by Andrew and Lynne Sinclair – won the new award, sponsored by CarbonStore, as the Awards returned after a Covid-cancellation in 2020.

Professor Chris Quine, Chief Scientist at Forest Research, led the team of expert judges assessing Climate Change Champion entries. He said: "Bennan Hill was a well-planned and well-executed case study, drawing on guidance and expert knowledge to address the climate emergency by establishing trees to sequester carbon and contribute to a decarbonised future.

"Even more noteworthy was the way the estate demonstrated an integrated approach to tackling climate change throughout its activities with actions relating to mitigation, adaptation and knowledge exchange. The owners demonstrated a strong commitment and a real consistency of vision which made this site a very worthy champion."

Balbeg won a double victory, also collecting the John Kennedy Trophy for Multi-purpose forestry for a whole forest or estate. Judges noted their surprise that such an excellent entry came from an estate with limited experience of creating woodlands.

Balbeg owner Andrew Sinclair explained this by saying: "I do not know that much about woods and I have relied on many people to help me. I feel quite humbled because I have gone with my gut and listened to advice given to me."

Judges selected two Climate Change Champion runners-up – Borders Forest Trust for an ecological restoration project at Corehead, near Moffat, Dumfriesshire and Aylsa Leslie (with forestry consultant Simon Jacyna) for Auchintender, near Huntly, Aberdeenshire.

Judges said Auchintender had "identified clear value in changing land use from arable agriculture to forestry" and showed strong commitment to carbon sequestration – and clear evidence of climate mitigation and carbon benefits, enabled through access to carbon finance. It was "an excellent example of accomplished establishment of fast-growing trees on a former arable site, showcasing an effective approach to climate change mitigation".

Corehead was described by the judges as an excellent example of a new native woodland integrated into sensitive management of the wider site with existing conifer blocks and sheep farming. Their commendations said: "Climate mitigation and adaptation benefits were clearly evidenced in design and choices made. Carbon finance is enabling a well-managed and resilient new native woodland to develop with space for expansion. Use of timber from the site to build a visitor cabin exemplifies contributions to tackling climate change by local resourcing and sustainable construction materials. This is an excellent example of the incorporation of climate change thinking into an ambitious large-scale habitat restoration project to deliver long-term benefits."

The Climate Change Champion Award was selected from entrants to other categories who specified that they would also like to be considered for the prize.

David McCulloch, Head of CarbonStore, said the quality of entries had been very strong.

He added: "CarbonStore is dedicated to helping mitigate climate change by uniting landowners keen to plant trees with companies wanting to offset their residual carbon emissions. We considered ourselves the perfect partner to sponsor the new Climate Change Champion Award in this highly respected, well-established programme, especially in the year COP26 comes to Scotland."

Other award categories

The 2021 Finest Woods winners also included Scotland's largest landowner, Anders Holch Povlsen, who won the New Native Woods Award for Killiehuntly in the Cairngorms.

Nikki and James Yoxall won the Farm Woodland Young People's Award for Howemill, near Huntly in Aberdeenshire - "a wonderful example of a unique integration of trees and livestock farming" - while the overall Farm Woodland Award went to Wendy Seel and Anne Taylor at North Tillydaff, an organic vegetable producer in Midmar, Aberdeenshire.

SCOTLAND'S FINEST WOODS AWARDS 2021

Climate Change Champion Award: Andrew & Lynne Sinclair, Balbeg Estate's Bennan Hill, Straiton, Ayrshire.
Farm Woodland Award: Wendy Seel & Anne Taylor, North Tillydaff, Midmar, Aberdeenshire.
Farm Woodland Award (Young People) James & Nikki Yoxall, Howemill, Huntly, Aberdeenshire.
Large Community Woodland Group: Craigmillar Castle Park, Edinburgh (Edinburgh & Lothians Greenspace Trust).
Small Community Woodland Group: Laide & Aultbea Community Woodland, Laide, Ross-shire
New Native Woods: Anders Holch Povlsen and Wildland Ltd, Killiehuntly Woodland, Cairngorms.
New Commercial Woods: Mrs J C Hands, Larriston Forest, Newcastleton, Scottish Borders.
Single stand of trees, compartment or small wood: Aylsa Leslie, Auchintender, near Huntly, Aberdeenshire.
Whole Forest or Estate: Andrew & Lynne Sinclair, Balbeg Estate, Straiton, Ayrshire;
Schools Award: Pitlochry High School, Perthshire
Early Years Award: Perth Outdoor Playgroup, Perth;

KICKSTART OF 25-YEAR NORWAY SPRUCE PROVENANCE PLANTING TRIAL

A provenance trial studying Norway spruce trees growing from seeds sourced from 16 different European locations has got underway, in a long-term project to identify trees likely to be resilient to climate conditions 50 years from now. Forestry England, a partner in the Conifer Breeding Co-operative, has recently planted 2,300 trees in Delamere Forest, Cheshire, as part of a total 17,200 trees planted across five sites in England, Scotland and Wales by co-op members.

The trees were grown in Scotland from orchard seeds from Sweden, the Czech Republic, Denmark, Germany and France, and a Forestry England selected-quality seed stand near the Forest of Dean. Used extensively for construction, Norway Spruce produces strong timber with a straight grain and fine texture, as well as being used for paper milling.

The provenance trial will compare trees from the 16 different sources as they grow to identify which have the best overall performance and show the strongest growth and good form. The trees will be monitored at different times over the next 25 years with the first two years assessing survival rates at each site. After that the height, diameter, stem form and density of plants from each of the 16 seed provenances will be compared. Co-op members involved in the trial will do additional assessments on their planting sites after extreme events like flooding, drought, or pest invasions to see how the trees have fared.

Norway spruce was chosen for the trial because it has high drought tolerance compared to Sitka spruce and can cope with upland acid soils, making it ideally suited to a more uncertain future climate in the UK. Some areas where Sitka spruce thrives now are predicted to become too dry for it to be a suitable species as they won't provide its high demand for soil moisture.

The Conifer Breeding Co-operative has a long-term ambition to develop an improved domestic population of Norway spruce to meet national demand and is working to a 30-year timescale carrying out selection and testing. This 25-year Norway spruce provenance trial is running alongside as an interim project to see which existing widely available European orchard and UK select seed sources are the best to grow before the domestic improved seed becomes available.

Nicola Rivett, Forestry England Seed Resource Manager spokesperson, said: "Being able to compare Norway spruce trees growing from such a diverse range of seed sources in this provenance trial will give valuable information about which seed is genetically best suited for future soil and climate conditions, and help Forestry England and partner organisations focus seed and plant supply on those varieties. We're working long-term on this, and it will be 2046 before the trees we've all planted this spring reach maturity. But the information they give us along the way will be crucial in helping steer the right course in adapting and planning our future Norway spruce growth and supply."

As well as focusing on Norway spruce, The Conifer Breeding Co-operative is also looking at Douglas fir, Sitka spruce, Scots pine and hybrid spruce, identifying the best genetic planting material, and selecting trees growing in good quality stands to create new seed orchards for future planting stock.

Visitors to Forestry England's planting site in Delamere Forest will have the chance to see the trial progress over the coming years as the trees mature.

COUNTDOWN TO COP26

WHAT ARE THE GOALS FOR COP26?

The key goal is for parties to work together to speed up the action towards meeting international climate goals, specifically to:

1. **Secure global net zero by mid-century and keep 1.5 degrees within reach**
2. **Adapt to protect communities and natural habitats**
3. **Mobilise finance**
4. **Work together to deliver**

What is COP26?

In November 2021, the United Nations' annual global climate change conference, also called COP (Conference of the Parties) will be held in Glasgow. Originally scheduled for autumn 2020 and delayed due to the coronavirus pandemic, this is the 26th COP conference, and is therefore called COP26.

The COP conferences are one of the largest meetings in the world and are key opportunities to achieve more ambitious country commitments to reduce greenhouse gas emissions. This year, in particular, the UN gathering is seen as the world's last chance to seriously act on climate change before it is too late to keep global warming well below the critical 2 degrees Celsius level.

It is expected that around 190 world leaders will attend the conference, with talks taking place from 1 – 12 November. Confirmed attendees include the Queen, US President Joe Biden and John Kerry, Pope Francis, Greta Thunberg, and Sir David Attenborough.

Depending on the Covid-19 situation this autumn, tens of thousands of businesses, government representatives, negotiators and citizens are expected to crowd the City of Glasgow.

The conference takes place at the Scottish Event Campus (SEC) in Glasgow. The official COP26 events are not open to members of the public, but to (1) representatives of Parties to the Convention and Observer States, (2) members of the press and media, and (3) representatives of observer organisations.

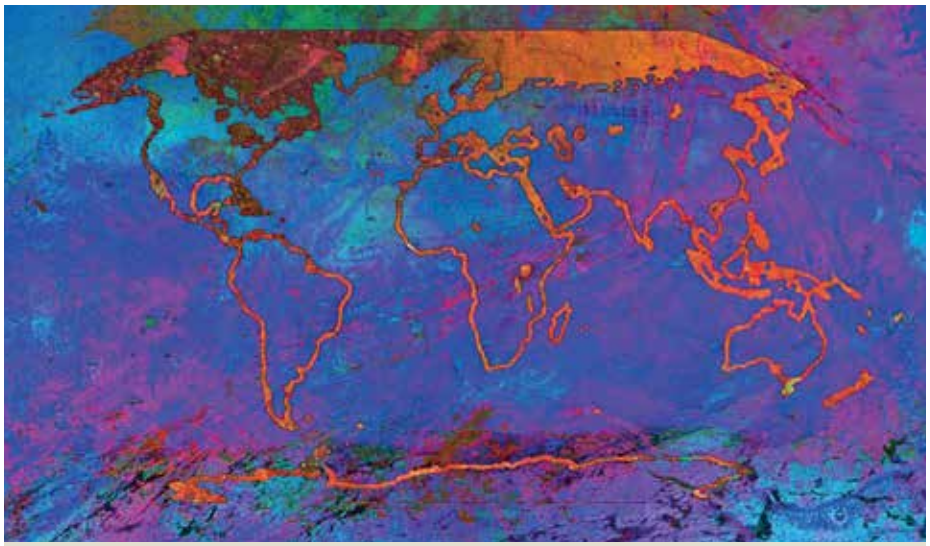


Photo credit: IPCC

THE CURRENT STATE OF CLIMATE CHANGE

The Intergovernmental Penal on Climate Change (IPCC) is the United Nations body for assessing the science related to climate change. IPCC's Sixth Assessment Report is the latest set of IPCC reports that assess the scientific knowledge on climate change, including our past, present and future climate; its impacts and future risks, and options for adaptation and mitigation. The reports inform policymakers on what scientists know about climate change. The latest report shows that the world is warming faster than we previously thought and that the world must take immediate action to turn things around.

SCAN ME

Read all you want to know about the 6th assessment here.

What is happening at the event?

The **Blue Zone** is a UN-managed space which hosts the negotiations. This is the space where official delegates share their stories at panel discussions, side events, exhibits, and cultural events.

The **Green Zone** is managed by the UK Government, and is a platform for the general public, youth groups, civil society, academia, artists, business and others to have their voices heard through events, exhibitions, workshops and talks that promote dialogue, awareness, education and commitments.

There are also a number of **fringe events** taking place around the COP 26 venue which will be open to the general public. This includes hubs hosted by media outlets, such as the New York Times *(https://climatehub.nytimes.com/)* Climate Hub or local groups such as After the Pandemic, *(https://afterthepandemic.scot/)* a Scottish-focused site.

Visit the official conference website for more information closer to the event date *www.ukcop26.org*

What's happening around COP26?

Wood for Good will map out COP26 fringe activities around forestry and timber.

UN CLIMATE CHANGE CONFERENCE UK 2021

IN PARTNERSHIP WITH ITALY

There has been plenty of discourse around COP26 over the past two years, it's hard to believe that the conference is now merely weeks away. The journey so far has been clouded in uncertainty. With a global pandemic, lockdown restrictions and constantly changing circumstances, it has been difficult to predict what kind of event we should expect. At the time of writing, it is confirmed that COP26 will go ahead, but there is a lack of clarity around what areas may be open and whether the public and invited delegates will be encouraged to move freely around these spaces.

Despite of this ambiguity, the timber and forestry sector have recognised the critical importance of having a presence at the conference. There is an array of fantastic different exhibitions, projects and events being planned from the sector in the UK. We know that forestry and construction are on the agenda for the organisers of COP26. There are designated days in the presidency programme that focus on the Built Environment and Nature, areas where wood is certain to come up as a topic of conversation.

Plans for putting wood on the map

As the industry's marketing promotional campaign, Wood for Good collaborates with others across the sector in all of our activities to ensure that we are representing the sector in the best way possible. Our approach to supporting the industry's presence at COP26 is no different. We are working with a variety of partners across the UK to bring together all forestry and timber related activities in one place.

Wood for Good is known for its clear, uncomplicated communications, so one of the ways we are supporting COP26 is through the creation of a visual guide to all things timber and forestry at COP26. The guide will show those attending COP26 - whether virtually or physically in Glasgow – where to find activities, events, projects, and exhibitions that are showcasing how timber and forestry are part of the solution to climate change. As part of this guide, we will also signpost to some of the fantastic timber structures that are within walking distance of the COP26 zone so that those attending in person can see existing examples of timber in construction within Glasgow. We are still collating all of the different activities and intend on publishing the finished guide in October.

We will be communicating and reporting from COP26 via Wood for Good's social media channels and website, providing our audiences with insight, coverage of various events and a look inside some of the fantastic timber structures planned for the Conference. To ensure that you don't miss out on any updates, make sure you're engaging with us via one of our platforms.

Wood for Good and Confor are both part of a global alliance from the wood and forestry sector who have come together to promote the use of timber in construction in the context of the COP26. Part of this work includes launching a manifesto for the timber and forestry industry to policymakers later this month. This manifesto will outline to key policymakers how timber can play a central role in decarbonising the built environment and help deliver Net Zero.

Ahead of the launch of the manifesto and guide, we wanted to highlight one of the projects that you can expect to see this November putting wood on the map and ensuring that sustainable forestry and timber in construction is a topic of conversation at COP26.

GET INVOLVED

IS YOUR ORGANISATION PLANNING AN ACTIVITY AROUND COP26?

Want to ensure that you're included in our guide to forestry and timber at COP26? Then get in touch with Wood for Good's Campaign Manager, Sarah Virgo at sarah.virgo@woodforgood.com

COMMENT

STUART GOODALL CHIEF EXECUTIVE, CONFOR

Access to COP26 will be severely limited by Covid restrictions and interaction with delegates will undoubtedly be much more difficult at this event, essentially only accessible to those able to enter the Green Zone. In light of this, Confor has been working to promote Wood for Good and its Wood CO2ts Less message as the principal vehicle to promote greater understanding and awareness of the carbon benefits of using more wood and planting more productive, managed woodland.

Thankfully, Confor has developed good relations with key ministers and officials across the UK, and those remain the key avenues to promote the sector domestically, with our new policy officer Maria Bellissimo adding valuable experience to our work. COP26 provides an additional opportunity to promote the sector through the heightened awareness there will be of the need to reduce carbon emissions, and the physical limitations of the event itself should be less of an issue to us doing that.

An image of how the house will look once completed

BEYOND ZERO HOMES

A zero-carbon, timber-frame COP26 House will be open to visitors close to the COP26 conference site on the Broomlielaw in central Glasgow. Developed and built by the collaborative group Beyond Zero Homes, the house will showcase zero carbon, circular solutions in building, and living.

Created and led by Peter Smith, Architect and Passivhaus Designer from Roderick James Architects, Beyond Zero Homes is made up of more than 20 organisations from across the home building sector. The members of the group are joined together by a single, mutual goal that goes beyond zero carbon: to demonstrate how beautiful, affordable, healthy and comfortable homes can be developed with minimal impact on the environment, throughout their lifecycle.

Every detail in the design of the COP26 House has been considered in terms of environmental and social impact, the performance in use, capacity for re-use of materials at end of life and – importantly - affordability. In addition, the house deliberately uses standard materials and readily available skills in construction, and is based on a 1.2 metre grid, so that it can be easily panelised and pre-fabricated, or self-built on site by two people.

The structure of the house is made from homegrown C16 Spruce, to avoid the need for imported timber – reducing the significant carbon impact of transport, as well as providing benefits for the local economy.

From windows to paints, drainpipes to interior doors, insulation to furnishings, members of Beyond Zero Homes are all contributing their expertise to ensure the house will be a true showcase of what can be achieved with the materials and skills available today.

The house will be open to visitors throughout the COP26 fortnight, after which it will be dismantled and rebuilt as part of a development of affordable homes near Aviemore. You can follow the house build process at www.beyondzerohomes.co.uk, or follow Beyond Zero Homes on LinkedIn and Twitter.

"THE GOAL IS TO DEMONSTRATE HOW BEAUTIFUL, AFFORDABLE, HEALTHY AND COMFORTABLE HOMES CAN BE DEVELOPED WITH MINIMAL IMPACT ON THE ENVIRONMENT, THROUGHOUT THEIR LIFECYCLE."

A quality future for biomass

The world is moving towards a low carbon future, and as such, there's been a huge amount of debate about exactly what the UK's future energy mix will be. **Helen Bentley-Fox**, Director at Woodsure, says biomass fuel should have a key role to play but managing quality is key to its success.

One of the biggest advantages that biomass, or woodfuel, has in the current energy debate is of course that it is known, tried and tested. In comparison with some newer fuels and technologies, such as hydrogen, the infrastructure, supply chain and end-users already exist. However, this doesn't mean it's the silver bullet for delivering low carbon heat and power to the masses. Nevertheless, it is likely to provide part of the answer to how we warm up the UK's poorly insulated and hard to heat homes using a sustainable fuel – and one that's available now.

The majority (85%) of residential buildings in the UK are currently connected to the gas grid. The remaining 15% of homes use other fuels including oil, LPG or coal as their main heating fuel or electric heating. Yet a Forestry Commission Public Opinion of Forestry survey suggested that about 12 per cent of UK households make some use of wood as a fuel, and it's estimated that between 1.5 and 2 million wood-burning stoves are installed across the country. There are huge challenges to be overcome in the long-term replacement of gas heating, and currently, around 70% of UK housing stock is thought to be unsuitable for heat pumps. It therefore seems sensible to consider using a combination of sources that can complement each other, which could include biomass fuel to provide top-up room heating.

Ready to Burn

A great deal of change, regulation and innovation has been required over the last few years, to improve the quality of biomass fuel. From planting to woodland management, through sawmills and the manufacturing process, to how it's used in our homes and buildings, ensuring a good quality product is now at the forefront of biomass fuel production more than ever.

For example, when the Clean Air Strategy 2019 made a commitment to reduce UK particulate matter emissions by 46% by 2030, new regulations made an explicit connection between improving air quality and using good quality fuel. This was a first step in helping to reduce the emissions emitted by burning wood and solid fuels at home. Wet wood emits around five times more emissions than Ready to Burn fuel, so it's critical that we get this quality message across to consumers to help them get the best from their fuel.

Importantly, as the certification body for the Ready to Burn scheme, we're working with producers and suppliers of all shapes and sizes to help them to meet Ready to Burn certification. We're keen to minimise the burden of administration that meeting new legislation can bring. As such, we also offer expert technical assistance to answer questions and give practical advice for those who need to comply now, and we're working with the Small Woods Association and others to set up a group scheme for those supplying less than 600m3. Small volume suppliers have until 30 April 2022 to comply with legislation but it's important that we work together now to find a way for them to share the cost of certification so compliance isn't prohibitive to their business. Most recently, this includes securing four organisations to run a pilot group scheme for small volume suppliers who the legislation will impact from 30 April 2022.

Amanda Calvert, Woodland Management and Membership Manager at the Small Woods Association, explains: "Many of our members were concerned about the new legislation because the income they generate from the small amount of firewood they produce provides income to help them manage their woodland. Joining the same scheme as bigger producers would wipe out this extra income, so for the past 18 months we've been consulting with our members, Woodsure, DEFRA and other stakeholders to devise a low-cost scheme that's more appropriate to their level of production.

"We're almost at the stage where we can move forward with a pilot for a group scheme that will enable smaller producers to prove that they are meeting the requirements of the legislation without feeling they would have to compromise the management of their woodland."

Biomass Suppliers List

Woodsure has also taken over the running of the government's Biomass Suppliers List (BSL). The BSL is a list of woodfuel that has proven it meets the eligibility requirements for the Renewable Heat Incentive (RHI) scheme. It allows RHI participants to demonstrate to Ofgem that the fuel they are using in their biomass boilers meets the sustainability criteria needed to claim their RHI payments.

To join the BSL, suppliers must be able to evidence that the fuel has been produced legally and sustainably. That includes demonstrating that the greenhouse gas emissions generated from the cultivation, processing, transport and burning of their biomass fuel are at least 60% lower than the EU fossil fuel average for heat. Suppliers also need to confirm that the wood has been legally felled and that the woodland has been sustainably managed.

While BSL authorisation doesn't currently guarantee the quality of fuel, Woodsure does make voluntary provision via a fuel quality certification scheme which is used by many BSL suppliers. As of April 2022, new legislation will require suppliers to demonstrate that their fuel is the right quality for the boilers they are supplying. Woodsure will be introducing the fuel quality policy element and working closely with the BSL advisory panel to deliver it.

We continue to make strides in working across the industry to improve quality standards and ensure biomass contributes to a low carbon future. We await the conclusions of the Government's Biomass Strategy expected towards the end 2021 to provide further guidance on the role the industry will be expected to play.

> TO JOIN THE BIOMASS SUPPLIERS LIST, SUPPLIERS MUST DEMONSTRATE THAT THE GREENHOUSE GAS EMISSIONS GENERATED FROM THE CULTIVATION, PROCESSING, TRANSPORT AND BURNING OF THEIR BIOMASS FUEL ARE AT LEAST 60% LOWER THAN THE EU FOSSIL FUEL AVERAGE FOR HEAT.

More information If you'd like to find out more about Woodsure, the Ready to Burn scheme, Biomass Suppliers List, or have questions about compliance, get in touch with Woodsure on 01684 278188 or email *info@woodsure.co.uk*

Going the extra mile for sustainability

Tony Hackney, CEO of the BSW Group, highlights some of the firm's most recent efforts to minimise the environmental footprint of their operations.

Over the last few years, sustainability has become a buzzword across industries and forestry is no exception. But while the word can sometimes be thrown around meaninglessly, it's encouraging to see more companies committing to producing timber in a way that minimises environmental impact.

As the UK's largest forestry business, at BSW Group we pride ourselves on innovating and implementing initiatives that go above and beyond industry requirements. We believe it's the role of companies such as ourselves to push boundaries and set the standards when it comes to operating sustainably.

It's great to see lots of businesses start to consider their carbon footprints, but the work of lowering emissions, reducing waste and improving the processes of reducing, reusing and recycling raw materials, can't be something that is merely tacked onto the job description of department heads as a box-ticking exercise. Our approach is more holistic, it's all of our responsibility not just the management team.

Alongside having individual sustainability targets for each part of the BSW Group, we have also recently created the new role of Carbon Manager to oversee management of carbon output across the entire group.

As a business that plays a part in every element of the timber industry, BSW is unique in its ability to develop this co-operation between stages of timber manufacture. Our wood waste, for example is used to create heat for drying timber in the kiln process, removing the need for burning fossil fuels. The heat generated from this process allows us to heat our buildings and offices, again limiting the requirement for traditional heat provision methods.

Having previously upgraded our mechanical handling vehicles to models with Tier IV diesel engines (which reduce harmful emissions by 85%), we have recently taken the decision to switch to a Tier V powerplant producing zero emissions and which also help to eliminate the fine soot particles that can cause air pollution and have negative health effects.

Efficiency is also a key part of this journey. Of course, machinery is needed for the manufacturing of timber, but the industry needs to work on operating them in an effective and energy-saving manner.

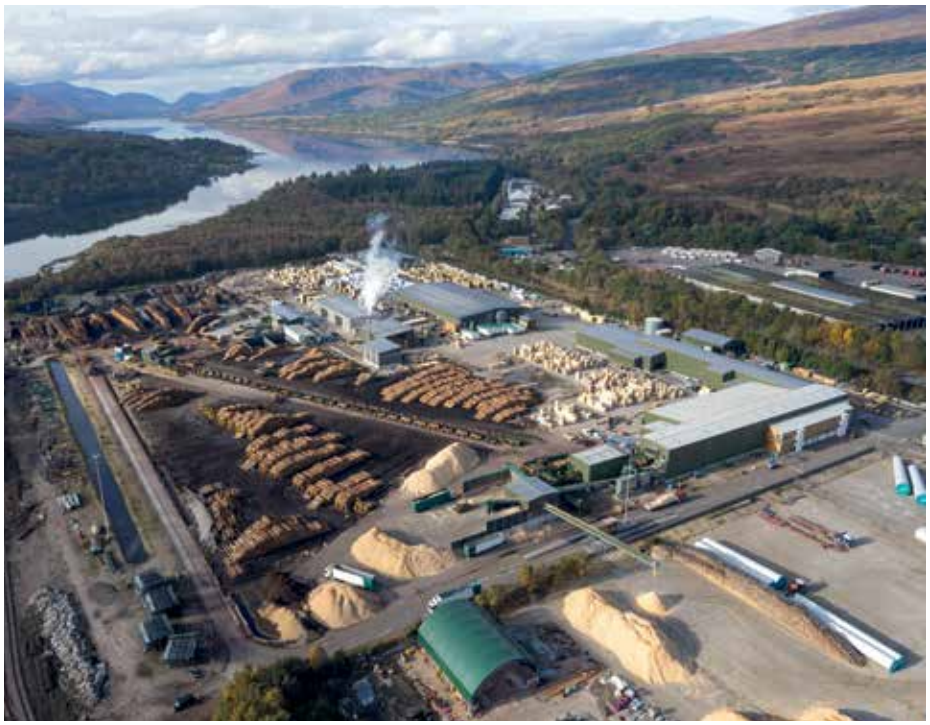


Photo credit: BSW

THE KEY TO TACKLING SUSTAINABILITY IS HAVING THE WILLINGNESS TO CHANGE AND ADAPT – CONSTANTLY ASKING, CAN THIS BE DONE MORE EFFECTIVELY AND SUSTAINABLY? THIS MEANS CONSTANTLY INNOVATING AND TAKING ADVANTAGE OF NEW TECHNOLOGY.

We are determined to improve this at BSW. Alongside trialling new, more intuitive electric forklifts, we are also installing digital management systems and weighing scales to all new vehicles to guarantee that we can get the optimum efficiency every day.

Of course, alongside these energy saving measures, we are also continuing to explore more renewable energy sources. Our Carlisle mill has a CHP (Combined Heat and Power) plant, and we are also investigating solar power at many of our processing plants.

Another element of timber production which can be improved is packaging. Reducing, reusing and recycling packaging, especially plastic, needs to be a key focus for us all.

We have partnered with Trioplast to make sure that all timber packaging used in our sawmills will be produced from 30% - 50% PCR (post-consumer recycled material) by 2022. After our use, it is then recycled itself, demonstrating a circular journey that reduces landfill plastic.

As an industry and as individuals, it is important that we are neither naïve nor complacent about our responsibility to work towards reducing our impact on the planet. The great strides that have been made in the last ten years alone show that the job, whilst difficult, is not impossible.

When you plant a tree, it is most likely the next generation that will be able to benefit from your hard work. With co-operation, innovation, and a willingness to adapt, we can all do our bit to ensure that our hard work is able to benefit generation after generation.

Managing woodlands for resilience

Emily Fensom, Woodland Resilience Officer at Forestry England, presents a case study illustrating how to adapt woodlands in the face of threats from climate change, pests, and diseases.

An exciting new series of ten case studies, 'Managing for Resilience', has recently been published by the Royal Forestry Society (RFS) in partnership with the Forestry Commission (FC). A short companion report, 'Resources for Managing Woodland for Resilience' is also available and contains links to predominantly free online resources and publications. The case studies highlight a proactive willingness to take measures now to adapt woodlands to current and future threats, whilst realising there are risks associated with trying something new.

The message is that adaptation measures should not detract from a commercial operation. Several case studies feature timber production and recognise the importance of a resilient woodland for producing that timber in the future. Another common element is the implementation of Continuous Cover Forestry (CCF), where implementing a more naturalistic approach can cut down on establishment costs, pest and disease problems, encourage natural regeneration, smooth cash flow, improve diversity and ultimately, make your woodland more resilient.

The key is to start with an accurate knowledge of your site type(s) and to understand what future climate projections may mean for those site types. This can then help inform your objectives. The case study (overleaf / below) outlined at Morton Hall is a useful example of how this can be achieved. It demonstrates how to start the process of adaptation by using accurate site knowledge to guide species choice and then use targeted thinning to develop mixed species stands with an irregular structure.

CASE STUDY
MORTON HALL RETFORD NOTTINGHAMSHIRE

Objective: Introducing Continuous Cover Forestry (CCF) to diversify species and stand structure and optimise the potential for timber production
Owner and manager: Dr Bill Mason

Morton Hall comprises 78 ha of secondary woodland located in north Nottinghamshire, originating from plantations of the nineteenth and twentieth centuries. The woodland area is divided into three main blocks; plus a few small outlying woodlands which are all of importance aesthetically, and are a resource for wildlife in an arable landscape. The soils are typical of the 'sandlands' of this area and range from acidic sandy brown earths to sandy podzols. The management of the woodlands passed to the current owner in the early 1970s, at which point the woods comprised either understocked, mature broadleaved woodlands (pre-1900) which had been affected by war-time fellings or mixed conifer plantations between 15-25 years old, dominated by pine and requiring thinning.

Since the 1970s, management objectives have focused on improving the quality of younger planted stands and increasing the stocking of old broadleaved woodlands to maintain and enhance their capital, biodiversity and landscape value. CCF was introduced to the mature broadleaved blocks in the 1980s and is used wherever practicable to diversify species and stand structure and to optimise the potential of the woodlands to produce quality timber. Other management aims include: increasing the biodiversity value of the woodlands and conservation of existing ecological features. The management approach includes taking all practicable measures to increase the resilience of the woodlands against the impacts of future climate change and other threats, including damage from pests and diseases.

The focus from the late 1990s onwards was not so much on trialling individual species as trying to be innovative in the way the estate used species on the different site types present in the woodland. Species diversity within the woodlands was already well developed with over 25 species planted and most shown by Eco-

KEY RECOMMENDATIONS TO BOOST YOUR WOODLAND'S CLIMATE RESILIENCE:

- Ensure woodlands have a comprehensive management plan that includes contingency plans.
- Make changes before the impact is observed, as this offers the highest potential gains for forest resilience.
- Accept that this approach also contains an element of risk. Take actions today which accommodate the more extreme climate projections up to the end of the century.
- Recognise the diversity of woodland types in England and that appropriate actions will vary with woodland type and management objective.
- Work with nature and natural processes to enable successive generations of trees and shrubs to adapt to climate change.

THE PUBLICATIONS

Taking steps to adapt forests to climate change is, at times, considered challenging due to the long-term nature of forest planning and uncertainty about how trees, woods and forests in England will respond to climate change. But we must not see this as a reason not to act, and act quickly. The RFS and the FC hope that reading the case studies in conjunction with the key recommendations from 'Managing England's Woodlands in a Climate Emergency' will encourage more such innovative adaptation to enhance woodland resilience.

logical Site Classification (ESC) analysis to be suitable for future climate scenarios, provided due consideration is given to soil types. For instance, ESC highlighted that podzols would be prone to drought in warmer, drier summers and so management will pay particular attention to developing mixtures on these soils.

Species and silviculture

Species selection and the corresponding silvicultural options are based around categorisation of the woodlands at Morton Hall into three forest types with their corresponding main species. Full details can be found in the online case study reports but in brief these are:

1. Mixed broadleaved stands on brown earth soils where sessile oak, sweet chestnut, beech and sycamore are the main species. These are managed primarily through a group selection system.
2. Mixed conifer-broadleaved stands on brown earth soils. The main species are Corsican and Scots pine, Douglas fir, sessile oak and beech and these are managed through group selection or an irregular shelterwood.
3. Pine dominated stands on podzolic soils where patch clearfelling or strip shelterwood will be used to diversify the species mix including acceptance of a broadleaved component.

The managers found that the costs of restocking were not always recovered through the income from timber sales. Therefore, it is beneficial from a silvicultural and economic perspective to expand the use of the CCF approach and encourage natural regeneration. In the two forest types on brown earth soils, natural regeneration of a range of species occurs provided adequate deer management is in place and vegetation competition is controlled. This regeneration, supplemented by enrichment planting where necessary, offers the chance to develop mixed species stands and irregular structures which should provide stable, robust and structurally diverse habitats. This diversity should enhance resilience to adverse climatic events and biotic threats and provide a sustainable timber resource.

In the pine dominated stands, there is limited natural regeneration occurring due to heavy competition from ground vegetation. In these areas, patch clearfelling or strip shelterwood using coupe sizes of 0.5–1.5 ha in combination with supplementary planting to diversify the species mix is thought to be the most logical silvicultural system. This approach will be implemented in areas where clear felling would typically occur when pine stands reached 60 years old.

What gets measured gets managed

Tom Astor describes Gresham House's inaugural Natural Capital audit of the investment firm's portfolio of forest properties.

The role that ecosystem services and natural capital play within society is increasingly being recognised. That is not to say it is just being discovered – there is little new wisdom within this paradigm. However, the benefits arising from these assets and services, and the costs from losing them, is becoming apparent to a widening segment of the population, along with the role that private investment can play in addressing this historic market failure.

Whilst the list of ecosystem services is long and varied, those which address carbon dioxide and biodiversity sit firmly at the top as the most pressing. Woodlands can provide many of these services, with carbon services more prominent in woodlands producing timber and biodiversity benefits felt to a greater extent in amenity woodlands.

The carbon sequestration aspect from woodlands is relatively straightforward to assess and quantify, but beyond adhering to or exceeding the UK Forestry Standard (UKFS) guidelines, the outcome for biodiversity is more opaque. Regardless of the primary function of the woodland, the UKFS states that the structure should "manage a minimum of 15% of the forest management unit with conservation and the enhancement of biodiversity as a major objective". It was in the first UK Woodland Assurance Standard in 1999 so this is not a new concept, but deeply engrained within woodland management. The extent to which this structure achieves its objective, and how this is measured, is less clear.

What we've done

This summer we conducted a natural capital audit of each property managed by Gresham House across the portfolio of 327 forests. This took the form of a questionnaire which was circulated to the woodland managers to complete.

Six specific sections were addressed:

- Property designations or certifications
- Habitat indicators
- Broadleaf condition
- Peat condition
- Public access
- Invasive species.

Why we did it

Timber production has historically been the main focal point of our properties, without the ecological value of productive woodlands having been called in to question in the past. Given that a significant portion of these properties are dedicated to biodiversity, and the growing interest in its value, it was decided to conduct an inaugural assessment. Anecdotally, there were numerous examples of valuable natural capital features from differing sources, but these had never been explicitly investigated and catalogued.

This audit was designed to provide us with a baseline for each woodland and ultimately an overview across all our managed properties. This will provide a valuable ecological database, including a selection of species, whose presence can be used to indicate which habitats are present.

In line with the mantra "what gets measured gets managed", this data can put us in a stronger position to support the current natural capital benefits of our woodlands. More importantly, it provides a starting point to demonstrably improve them further.

What next

It is particularly helpful to remember that whilst these results are a snapshot of individual properties, combined they cover the spectrum of the planting era from the middle of last century to recently planted woodlands. This selection of first, second or third rotation woodlands with areas of new planting, restocking, mid-rotation and mature crops provide a valuable insight as to how woodlands mature and the flora and fauna that colonise them.

Having a baseline picture of these properties from a natural capital perspective allows us to consider what is lacking, what can be improved and what requires protecting. Following these "whats" are the "whys"; the arising questions that then must be asked lead us to the "hows", ultimately presenting opportunities to improve the areas identified.

This audit will be repeated annually, refining the baseline study to improve the methodologies and sections to focus on.

Ultimately, we will improve our understanding of the ecological state of our productive woodlands and which areas require extra attention and improvement. We will also be able to provide the data to support this and enable positive change.

These lessons will allow us to not only improve the way we plan and plant new multifunctional woodlands, providing high quality timber and further natural capital benefits, but also transition existing properties, planted in an era with different objectives, to meet future requirements.

Giant Woodwasp - Urocerus gigas. An indicator of a healthy deadwood habitat. Photograph taken by a Gresham House employee.

Going Green: Unlocking valuable renewable chemicals from the by-products of forestry

Bio-Sep have developed a clean and green technology to separate woody biomass into renewable chemicals. **Miranda Lindsay-Fynn** takes a look at the drivers of the bioeconomy and how forestry waste products could contribute to the decarbonization of the UK chemicals industry.

As the world gasps from recent extreme weather events, all eyes are on the outcomes of the COP26 as we look to our leaders to work towards resolutions to solve this climate emergency.

We all have to ask ourselves - what we can do to change our carbon intense economy into an efficient, environmentally friendly one, where nature is protected, and societal needs are addressed? The circular economy and bioeconomy together provide valuable tools to combat climate change and protect nature.

Developments in the bioeconomy

The circular economy concept aims to recycle and repurpose waste, whilst the bioeconomy replaces unsustainable fossil resources with biochemicals from plant biomass. Combine the two and we can reduce reliance on fossil fuels by producing renewable carbon chemicals from efficient use of biomass waste streams.

The global biochemical market is growing at over 10% per year. Driven by market pulls and pressure from the increasingly environmentally aware consumer, governments cracking down on single use plastics and shareholder pressure on corporations to follow their ESG agenda meaning chemicals companies are investing billions to eliminate fossil fuels from everyday household and personal care products.

Most new biorefineries use food grade crops, such as maize and sugar cane, which are soft and relatively easy to process, but this takes valuable resources

including arable land and water from the global food chain. Forecasts expect that 14% of maize produced globally will be used in biochemical production by 2028.

A novel technology transforming wood waste into high value biochemicals

Bio-Sep have developed a low energy, sustainable biorefining technology that transforms woody biomass, the by-products of forestry and agriculture into high value biochemicals with a wide range of applications.

These biochemical products sourced from low value by-products and waste streams with no land use change will significantly contribute to meeting sustainability targets, while allowing the UK chemicals industry to meet the growing consumer demand for bio-sourced products.

We take sawdust, mix it with water and organic acids to make a slurry and our patented ultrasonic reactor creates powerful physical forces and chemical reactions that break the connections of the three core components of wood. The products from our process are a sugar syrup, cellulose, and natural lignin which is a complex aromatic molecule.

Exploring the performance properties of wood sourced biochemicals

These biochemicals will be purchased and processed by chemicals companies into end consumer products. They can be used to replace petroleum in multiple applications such as bioplastics, resins, cosmetics, food, and pharmaceuticals.

What is particularly exciting is discovering that these biochemicals have unique performance properties which come from their natural role in the tree itself.

For example, lignin is the substance that gives plants and trees their structural integrity and strength. It is nature's binding material, the glue that holds the wood together. It also is water repellent, has innate UV-shielding properties, antibacterial properties, and heat resistance.

Lignin is the only natural biochemical that can replace a toxic petrochemical called phenol commonly used in resins, coatings, plastics, and adhesives. Lignin as an eco-substitute not only reduces the carbon footprint and toxicity for the manufacturers but also provides these valuable performance benefits such as fire resistance and UV protection. As the second biggest renewable source of renewable carbon after cellulose it holds huge potential as a future chemical of the bioeconomy.

Lignin is more than just a material it also has applications in fragrances and flavourings as it is natures source of vanilla, which is found as vanillin in lignin. The reason your favourite wines and whiskies are aged in oak barrels is to absorb some vanilla flavouring from the lignin in the oak.

Miranda Lyndsay-Fynn in an interview with Stef Kaiser

Q Can you say anything about the process' overall carbon and environmental footprint, taking into account any energy or chemicals required for the biorefining?

The environmental and carbon footprint of the process is very important to us as a renewal technology company. When we designed and developed the process, key considerations were low energy usage and use of gentle organic acids which make the process environmentally sound, cost effective and simple to operate. A recent carbon analysis showed our products to be carbon neutral or negative, but the overall carbon impact does depend on other factors such as the energy source and transport of the feedstock, which will be important factors when we plan and build our commercial biorefineries.

Q What is your current state of production and how are you looking to work with the forestry – and therefore feedstock supplying - sector in the UK?

We have a pilot demonstration plant based in Melton Mowbray and are preparing to scale the technology with target for the first commercial biorefinery to be operational in 2023. We are keen to work with forestry producers or sawmills either in partnership for joint venture biorefineries or as licensees of the technology. As feedstock producers they could be supplied with a highly automated biorefinery that requires from them just feedstock, water (which is recycled) and electricity. We are happy to talk with and demonstrate the technology to any interested parties.

Q Future-proofing feedstock supply for the bioeconomy: How much of actually available 'wood waste' do we have in the UK, and how much demand for bioeconomy products can this feedstock meet? What if overall demand for bioeconomy feedstock will increase exponentially in future, as a major shift away from fossil-based materials happens – where will the feedstock come from?

There were 10m tonnes of softwood roundwood reported as being harvested in 2020 in the UK generating 3.9m tonnes of by-product (sawdust and wood chips) that could be valorised by a biorefinery process. This barely scratches the surface in terms of the bioeconomy demands. There are many other alternative woody biomass feedstocks including certain grasses, corn stovers, bagasse from sugar cane processing, and palm frond waste from palm oil operation in most cases up to 50% of the plant grown is considered waste or low value woody biomass.

Q Does using biomass / 'waste wood' for biochemicals have a better overall carbon footprint compared to using them for heat generation? Do you have figures on this?

It does depend on how the chemicals are extracted, and what they are used for. Using biomass for heat generation does release some carbon back into the environment whereas the advantage with bio-based materials applications is that they are a carbon sink.

By implementing efficient biorefinery processes such as Bio-Seps, forestry companies in the UK can also become part of the bioeconomy and take advantage of a substantial commercial opportunity to valorise these low-value residues through the production of sustainable platform chemicals for the chemicals industry.

Contact To find out more please get in touch Miranda Lindsay-Fynn; *Miranda@bio-sep.com*

LEGAL MATTERS

Windfarm clawbacks

Brodies LLP partner **Graeme Leith**, who specialises in forestry, answers some common questions about windfarm clawback agreements and what to expect when involved in sale negotiations.

These agreements have become an increasingly regular feature in UK forest sales over the past decade. It is now the case that most landowners considering the sale of forestry or even land for tree planting will at least consider making a windfarm clawback arrangement part of the sale contract.

WHAT IS A WINDFARM CLAWBACK AGREEMENT?

These agreements are entered into at the point of sale between a seller and purchaser and are essentially a means of ensuring that the seller will secure a share of any income if the land is used in the future for windfarm purposes. That may include use of the land for access, cabling or wind protection for a windfarm on adjoining land. Clawback arrangements have been a common feature in the sale of rural land for decades and are essentially 'anti-embarrassment' arrangements to protect the seller in circumstances where land was sold for a price based on bare land, only for the purchaser to subsequently procure a planning consent for development. That consent will generally result in a significant increase in the land's value.

As windfarms have become a more common form of land use, many sellers of land and forests have been successful in making such arrangements part of a sale agreement.

WHAT CAN A SELLER EXPECT TO RECEIVE?

The particular percentage is always open for negotiation but will typically be between 20% and 50% of qualifying income. In most cases this will be the percentage share of rental received from a windfarm developer, but a well drafted clawback agreement will also ensure that the seller is similarly compensated if the purchaser builds its own windfarm. Clawback agreements will usually provide either for a share of all qualifying income during a particular period after the date of sale (20 years being a standard period), or else a share of all qualifying income during the whole lifetime of the windfarm project that is commissioned within an agreed period from the date of sale. If you also factor in potential windfarm extensions then this might, in effect, result in a clawback arrangement spanning up to 90 years from the sale date.

A purchaser will always want to ensure that any income that they receive from a windfarm developer by way of compensation for lost timber or worked stone will be excluded from the clawback entitlement. The rationale is that the removal of trees will erode the value of the capital asset and compensation for that ought therefore to be paid in full to the landowner and excluded from the clawback arrangement.

SHOULD A SELLER ALWAYS SEEK A CLAWBACK ARRANGEMENT AS PART OF ANY LAND SALE?

The strength and competitiveness of the forestry market has meant that many sellers are in a strong negotiating position and can often secure a windfarm clawback entitlement as an extra incentive on sale. However, any clawback agreement will need to be negotiated and will therefore increase legal fees for both parties as well as add an extra layer of complication to the title, which is likely to be an issue if a purchaser is granting a charge over the asset to a funder. It is therefore only worth pursuing if there is a realistic prospect of a windfarm income at some point in the future.

Conversely, if windfarm development is very likely (perhaps where there is already an option to a developer), then a purchaser is likely to have factored the windfarm income into its financial appraisal and accordingly if it is required to share such income with a seller, then that may reduce the price that it is prepared to pay for the asset. The seller should also consider tax treatment of any future clawback income, as well as the logistical challenges of passing the benefit of the agreement to future generations.

CONFOR MEMBERS
FREE LEGAL CONSULTATION

Confor has partnered with law firms Brodies LLP and Atkinson Ritson Solicitors to run a legal clinic for members looking for guidance on key issues that impact forest owners and the forestry sector.

Whether your query is employment law, health & safety, planning, tax or property-related, contact one of our partners for a free initial consultation.

For members based anywhere in the UK
Brodies LLP
0131 228 3777
www.brodies.com
confor@brodies.com

For members based in England/Wales
Atkinson Ritson Solicitors
01228 525221
www.atkinsonritson.co.uk
info@atkinsonritson.co.uk

FINLAND

WOOD COULD BE THE STARTING POINT FOR FOODSTUFFS AND COSMETICS

Wood hemicelluloses has a huge potential to be used in foodstuffs and cosmetics, says researcher Mamata Bhattarai of Finnish Aalto University.

About one fourth of wood is made of hemicelluloses, which is expected to make a breakthrough in the food, packaging and pharmaceutical industries as stabilizers. Also called 'spruce gum', wood hemicelluloses are derived from sidestreams of pulp manufacturing.

It is believed that the task of hemicelluloses in wood is to make it more flexible. Without it, trees would not bend in the wind.

But how is it that, unlike cellulose and lignin, hemicellulose has not been utilized so far? One reason, according to Bhattarai, is that cellulose is the focus of industries to prepare paper and paper boards, and because hemicellulose research on applications is still in its infancy.

Separating hemicellulose from lignin is particularly difficult. "Another thing to study is whether the two could be used as raw material in combination," notes Bhattarai.

"Industry only began to utilize the potential of wood components other than cellulose as raw material a few years ago. By now the number of bioproduct mills are declining due to less demand of paper, and with new research results, they are sure to interest themselves in also using hemicellulose."

Originally published on forest.fi

UK

TRIALS TO TURN WASTE TIMBER INTO INSULATION USING FUNGUS

Multiplex is trialling an innovative process that turns waste timber into insulation materials that can be used in construction, after inoculating it with a fungus.

Multiplex has teamed up with biotechnology and advanced materials firm Mykor to send timber waste from its One Nine Elms project in London, where it is building separate 42-storey and a 56-storey towers, for upcycling.

Mykor inoculates pasteurised waste timber with mycelium (a network of fungal threads). The material is then bagged and goes through a two-week growth period at 25 degrees Celsius before it is placed in a mould to form a variety of different products, including cavity wall insulation, acoustic insulation and structural insulated panels (SIPS) for modular construction. It can also be used to 3D print homeware objects such as bowls and vases. At the end of its life, the object can then be composted back into the soil.

Reproduced with permission from Construction Manager magazine www.constructionmanagermagazine.com

Photo credit: Mykor

Rapid changes in the carbon market

The UK Woodland Carbon Code's **Vicky West** investigates the rapid expansion of the global and UK carbon markets

Growth of the market – global and UK

The Voluntary Carbon Market provides carbon credits to organisations and individuals that choose to compensate for their unavoidable emissions – in addition to doing all they can to reduce the emissions they are directly or indirectly responsible for. The last year has seen unprecedented growth in the global voluntary carbon market, which is on track to exceed $1Bn in transactions during 2021. This year has already seen 27% more credits transacted than 2020, in itself a record year for volume despite the global pandemic. Forestry and Landuse projects dominate the picture this year with more credits issued than for other any other project types including renewable energy, energy efficiency, agriculture, or waste disposal.

This rapid growth is mirrored in the UK. In the financial year to 31 March 2021, the number of projects registered with the Woodland Carbon Code almost doubled from 343 to 708, and so far, this year almost another 500 have been registered – a further ~70% increase in six months. The Peatland Code has more than double the number of projects now (32) than a year ago with greater interest in Peatland Code projects from forest agents. There is also increased demand from organisations looking to meet net zero targets in the coming years with an estimated 3 million of the 4.5 million issued woodland units sold upfront as 'Pending Issuance Units'.

As well as growth with the 'existing' woodland and peatland market, a number of new carbon standards have been proposed and received funding for development through Natural England's Investment Readiness Fund. This includes standards for lowland peatland, hedgerows, farm soil carbon, rewilding, salt marshes and sea kelp. The market for land and sea-based carbon credits could grow markedly in the near future.

Alongside the rapid growth of projects and participants in the carbon market are a number of initiatives to promote and ensure integrity and liquidity. The Taskforce on Scaling Voluntary Carbon Markets promotes the establishment of 'Core Carbon Principles' against which supply-side projects can be assessed for their quality; the Voluntary Carbon Markets Integrity Initiative focusses on the quality and accuracy of claims at the buyer or demand-side as do 'The Oxford Offsetting Principles'.

Carbon market 'principles'

The carbon market is based on trust; integrity and transparency are key. As the market grows rapidly, it's important to remember the 'key principles' embedded in the UK's Woodland Carbon Code which are common amongst the leading carbon standards globally and echoed by other 'standards-setters' such as ICROA, the British Standards Institute (via PAS2060) and the UK Government (via the Environmental Reporting Guidelines).

Additionality

This is the key 'criteria' for eligibility of carbon projects common across all carbon standards. The voluntary carbon market is looking to generate 'extra' emissions reductions or sequestration above what would 'normally' happen. This is generally assessed through two 'tests':

- **Legal test:** The activity cannot be legally required. If an action is legally required, then it's going to occur and is therefore not 'extra'.
- **Investment test:** Only 'unviable' projects should receive carbon funding. Projects that are viable without carbon funding are likely to occur anyway and are

continued on p33

continued from p31
therefore not 'extra sequestration'.

The investment test used in the Woodland Carbon Code is currently being reviewed in order to ensure it is suitably robust to withstand the increased scrutiny of the carbon market. For the investment test, it has to be demonstrated that, over the project duration, either

- Woodland creation without carbon income is not viable (ie negative Net Present Value)
- Woodland creation without carbon income is less viable than the previous landuse (ie Net Present Value of woodland creation is less than Net Present Value of previous landuse)

Buyers of credits want to know that their purchase of carbon units makes a genuine difference to the level of greenhouse gases in the atmosphere. Woodland creation projects which are viable through a combination of other incomes from grant, timber or other ecosystem services, are viewed in the carbon market as likely to be planted in any case without carbon credit buyers' help. An example from the energy market is that solar, wind and hydro projects were once considered 'additional' and eligible for carbon credits, but now that these projects have become more mainstream and cost-effective, they are now only eligible for carbon credits in a very small number of developing countries where they are still deemed 'unviable' without carbon income.

Permanence

The carbon market also attaches great importance to the permanence of carbon credits. A carbon credit sold to a buyer needs to represent a 'permanent' emission reduction from the atmosphere. With all woodlands there is a chance that carbon sequestration could be reversed. The Woodland Carbon Code and Peatland Code handles this risk through a shared 'buffer'. For woodlands, all projects contribute 20% of their carbon units to the buffer to 'protect' any verified units that the landowner sells or uses. Landowners and project developers should make themselves aware of the 'rules' surrounding the shared buffer; this is another area where we are working on some clarification to ensure landowners are clear of their potential future liability.

Credible claims about sequestration

Globally, it is agreed that only verified carbon units, representing actual sequestered carbon, can be used as 'offsets', to compensate for an organisation's emissions. This represents a conundrum for woodland creation which takes time, but Pending Issuance Units, effectively a promise to deliver carbon units in future, can be sold upfront where companies are looking to make plans to be net zero by a given year. Landowners and forest agents should be aware when making sales that Pending Issuance Units are not a guarantee of future verified units.

Avoidance of double-counting and transparency

Projects and carbon units from both the Woodland Carbon Code and the Peatland Code are featured on the UK Land Carbon Registry and each carbon unit has a unique serial number and can be transferred or assigned to the buyer. This ensures that carbon units are unique and can only have one owner. Buyers can keep track of which units they have purchased and indicate when they 'use' them against their emissions. Landowners and project developers should ensure that all sales they make are accurately represented on the registry. This level of transparency is vital in ensuring trust in the marketplace.

Validation, Monitoring and Verification

Woodland Carbon Code and Peatland Code projects are third-party checked by either Organic Farmers and Growers (woodland and peatland) or the Soil Association (woodland only). This makes the projects and credits issued credible and trustworthy in the marketplace and is an essential part of the process. As new methods for monitoring woodlands become viable and reproducible, these will be integrated into the monitoring and verification protocols.

The Woodland Carbon Code team is working to ensure that the Code continues to uphold these principles. This will be critical in order to maintain the integrity, transparency and trust developed in the carbon market so far, thereby enabling additional investment into woodland creation in the coming years.

For more information

Further information on all these issues is available on the Woodland Carbon Code website
www.woodlandcarboncode.org.uk
info@woodlandcarboncode.org.uk

FROM THE NEWS

OECD COUNTRIES ASKING FOR GLOBAL PLAN ON CARBON PRICES

The Financial Times reported on 13 September that, in order to address concerns over carbon trade wars between countries with different levels of sustainability policies, the OECD (Organisation for Economic Co-operation and Development) proposes a global plan for carbon pricing. This follows OECD's success in catalysing an international agreement on corporate taxes. A global plan would allow market spaces such as the European Union to take swifter action on emissions reductions while implementing carbon border taxes on imported goods from nations considered to be 'heavy polluters".

TIMBER MARKET REPORT

Harry Stevens, BSW Timber

Time for a deep breath

Good outlook for demand for construction products in 2022, if end-of-year slowdown can be avoided.

Maybe I am getting old, certainly that's what my children are good enough to remind me of on a regular basis, but the last year seems to have been incredibly hard work!

But now have we reached a bit of stability? And if so, for how long I wonder!

The supply chain for roundwood has caught up with the demand from sawmills and we even have a bit of stock at roadside. Certainly, the harvesting and buying teams are not chasing their tails as much and there has been an opportunity for people to catch up on those 'boring' jobs that have been piling up and, even more importantly, take some holidays.

The demand and supply balance in the roundwood sector feels much more balanced than it has done for months, perhaps even for a few years.

The sawn market which, as we all know, has been very strong, is now seeing a reduction in demand. The fencing markets is settling down to a 'normal' demand profile, by which I mean the typical annual profile; a busy spring followed by a slight hiatus as everyone takes a holiday mid and late summer and then busy, whilst the daylight holds, and then a slow decline with minimal activity over Christmas and new year, and then everyone stocks up in anticipation of a busy spring. So, we have had our busy (not to say exceptional) spring followed by the holiday period and now we anticipate a busy September and October, fingers crossed!

Kiln dried construction timber has remained strong and has not quite seen the reduction in demand mentioned above though there are certainly signs that demand has levelled off. There's talk of central Europe seeing rising inventories of finished product and the US benchmark for lumber (USD/1000 board feet) has been very erratic lately, having peaked in May, but now back to pre-Covid levels.

One of the interesting trends has been the widening of the gap between kiln dried timber and fencing. This gap had largely closed for several years but has now opened up with fencing perhaps 20% lower than kiln dried.

So, what's next?

An analysis of buying trends over the last quarter indicates that the sawlog price has been static for the period, having previously seen considerable increases. Supply chains have now filled up and sawmills are reported to be fully bought for between three and six months and looking to buy at replacement levels rather than to get ahead of the market.

Small roundwood which contributes between 10% and 20% of the value of a decent quality parcel similarly appears to be in a balanced position, though in certain regions we have seen the usual trend of stock build at roadside through the summer. This is likely to correct itself over the winter and by the middle of the first quarter of the calendar year this will have disappeared. With the sawmills remaining busy it is likely co-product will remain in good supply, all pointing to steady underlying demand for small roundwood.

International context

The wider world as well as UK macroeconomic drivers all suggest a busy international picture through 2022. In the US, the massive stimulus that the Biden administration has pushed through congress and the Senate of $3.5 trillion dollars will keep construction at healthy levels, whilst the impact of the fire season is likely to reduce the cut in Canada and northwestern US which will limit sawlog availability, all pointing to strong demand from across the pond.

The recently published Construction Industry Forecasts 2021-2023 forecast strong housing starts in the UK as well as a buoyant recovery after the slowdown due to Covid.

In conclusion, if we can avoid a pronounced slowdown in the sector through the end of 2021, we are likely to see strong demand from all products destined for the construction market, which is the majority of the sector through 2022.

MARKET REPORT **Oliver Combe,** Timber Auctions

Market has hit the bottom

Global Outlook

The last three months has seen a dramatic correction of domestic prices in the USA with a rapid fall during July and August but strong signs that the market had hit the bottom at the end of August and was trending upwards in September.

Early September has seen a noticeable upturn in demand from buyers who were sensing that the market had bottomed and were seeking to replenish their inventories after a year of running on minimal stock level.

The producers have been very astute at managing production levels and diverting stock to export markets during the price slide to avoid becoming forced sellers. Now an upturn in demand has seen order lead times start to extend from one week out to two and three weeks.

The market is now looking forward to see if the strong upturn in demand will continue into the autumn and winter of 2021.

Global demand for wood continues to increase on the back of the drive for a low carbon economy and investment in new wood products, however, the last two years have seen substantial investment in increased processing capacity both in the construction of new plants and investment to increase capacity of existing plants as well as bring mothballed lines back into production.

This should remove the bottleneck in processing capacity but may well move the constraints in the supply chain back to the forest, where there is increasing disruption to supply from natural factors (fire, flood and storm), pests and diseases and environmental pressure. Europe and Scandinavia are rapidly emerging as major whitewood exporters and strengthening their market positions in both the USA and China.

Another noticeable trend over the last three years has been a pattern of consolidation amongst sawmills both at national and regional level as well as internationally. The desire to secure plants with good raw material supplies, broaden product portfolios, increase operational efficiency and gain access to new market sectors remain key drivers in the globalisation of the timber industry.

THE MARKET DEMAND FOR MINOR SPECIES SUCH AS GRAND FIR AND HEMLOCK HAS SLOWED WHICH HAS LEAD TO A SOFTENING OF PRICES FOR THESE PRODUCTS.

UK softwood market

After an incredible 18 months there are now signs that the UK market is stabilising, the high prices have brought more timber to market, harvesting has gone well over summer and stock levels in the forest and mill yard have improved.

Demand for sawlogs and palletwood remain excellent whilst the small roundwood market remains more patchy with high stocks in the north.

Photo credit: Scottish Woodlands

Douglas fir remains a premium product.

The more comfortable situation has allowed buyers to be more strategic in their buying which has lead to a two tier market developing for sawlogs.

FSC certified spruce and Douglas fir remain a premium product and continue to attract high prices especially for large volume parcels with a high sawlog content.

Mixed conifers such as larch and pine are trading at a lower level however, as we move into winter demand for these products should pick up as processors focus on the fencing market.

The market demand for minor species such as grand fir and hemlock has slowed which has lead to a softening of prices for these products.

Although the construction market remains very strong there are now some signs that the fencing market is slowing down which is slightly unusual as there is normally a seasonal uplift in September and October after a quiet spell in the summer.

The market for more niche softwood products remains excellent and prices for large Douglas fir, larch and cedar logs have been exceptional over the last 6 months as confidence has returned to this market whilst supplies from elsewhere in the world

In summary, after a frantic period of activity the market is returning to more normal patterns and whilst there has been a softening of prices over the last quarter the current levels are still excellent relative to the last 10 years.

The pandemic, Brexit disruption and current global shipping container crisis have all reinforced the value of local procurement and the benefits of a shorter supply chain.

UK hardwood market

There are some really positive signs for the hardwood market in winter 2021, global supply of hardwood products has been severely disrupted and been subjected to major price increases all of which have forced buyers to look more closely at ways to use homegrown species.

A number of factors have come together which look to be positive for the UK trades;

After a slump in demand in early 2020 due to the first pandemic lockdown there has been a strong increase in demand for hardwood species in 2020 and 2021. Cladding, flooring, decorative timbers

Sea containers with timber and lumber at a container terminal. Photo credit: www.shutterstock.com/VolodymyrT

and landscape timbers have all done well on the back of a boom in creating home working space, home renovation and garden improvements.

At the same time there has been constrained supply due to the pandemic and massive increases in shipping container rates.

A 40ft container from Asia cost US$ 1500-2000 in autumn 2020 and now costs US$ 15,000-20,000!!!

A lack of return freight, containers piling up in the wrong locations and reduced numbers of ships have all contributed to this massive surge in costs. The start of the Christmas shipping season from China is putting further pressure on container availability and it appears that prices will stay high well into 2022 and that container availability will continue to be a challenge.

Timber prices are reported to have risen 8 to 10% but increases in shipping costs have pushed that upto 30%.

Faced with massive cost increases and reduced availability of US and Asian hardwoods, many European mills have been looking to use more local species particularly oak. Supplies of oak have been reducing over the last five years, Russian log exports being banned in 2022 and more local disruption to supply from environmental factors have all pushed prices up at the same as initiatives to use more wood and natural products in building have further increased demand.

AFTER A SLUMP IN DEMAND IN EARLY 2020 DUE TO THE FIRST PANDEMIC LOCKDOWN THERE HAS BEEN A STRONG INCREASE IN DEMAND FOR HARDWOOD SPECIES IN 2020 AND 2021.

The Croatian government recently decided to put all it better quality oak to sale by auction rather than tender; prices have risen by 15 to 25% in one year and forecast to continue to rise by 5% per quarter!!!

Oak prices in France and Germany have steadily increased over the same period, some prices in France are reported to have increased by 50% whilst availability has remained constrained despite high prices, hopefully this will increase demand for other "dark" European species such as Chestnut and Cherry.

Reduced supply of American white oak, ash and tulipwood has increased European demand for beech and has seen prices rise by 10% over the year although this trend has not yet filtered through to the UK.

The unfortunate consequence of the container crisis has been disruption to the export of ash, beech and poplar from the UK. The ash sawlog market is most definitely oversupplied, large volumes are being felled whilst domestic demand is limited and the export market remains very challenging but there are positive signs in the export market for autumn 2021.

A knock-on effect has been large volumes of ash hitting the firewood market and despite the firewood industry having a fantastic winter in 2020/21 and most businesses selling out prices have remained static. It will be interesting to see what impact the soaring oil and gas prices have on the woodfuel market in 2021.

In summary 2021, has seen a resurgence in the oak sawlog market and demand for good quality oak is exceptional, now is the time to market good oak!

Contact 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.

Paul Vidgen
Forest Machines Ltd

Forest Keep, Watersplash Lane, Ascot, Berkshire, SL5 7QP

Tel: **01344 873499** *Email:* **info@pvfm.co.uk** *Web:* **www.pvfm.co.uk**

Sole UK importers and dealers for; AHWI/Prinoth, Naturatec, Bruks Chippers, Trevi Benne Forestry Attachments, UOT Scarifiers & Mounders, King Kong Carbide Tools

Dealers for; BerCon Log Splitters, FTG Baltic Trailers and Cranes.

Alternative harvester brands

Andrew Smith, Forestry Lecturer at Scottish School of Forestry, UHI

With the recent announcement that the APF will be back in September 2022, I'm sure many of you will be looking forward to the event. The biennial opportunity to meet up with old friends and to view the latest offerings from the various manufacturers and suppliers of forestry equipment. Some of you will no doubt go straight to your favourite brands, but how many will look at the alternatives with anything more than a cursory, and often derisory glance?

Us humans can be a funny old species. Generally, we don't like change. We can be suspicious of new ideas, alternative methods of working and a different brand. Our purchasing decisions can be based on a number of factors, not only price. These factors may include brand loyalty (and snobbery!); our relationship with the sales person (remember that meal they bought you in the swanky restaurant); what the operator wants to drive (after all you want to keep them sweet, good operators are hard to come by) to name but a few. However, the glaring anomaly in my list is the machine being "the right machine for the job". Just because we have used the same brand for years doesn't necessarily mean it is the best option!

This month, I'm going to look at some alternative harvester brands. Alternatives to what I would refer to as the big brands (the green; red; silver; blue and yellow brands), you know who they are. These alternative brands all have machines working in the UK with various contractors, so they are not completely new, and someone has shown enough faith in these brands to make a purchase. Hopefully something to whet all appetites here.

SAMPO-ROSENLEW

Whilst being a relative newcomer to the UK forestry market, Sampo are no strangers to forestry and have been producing forestry harvesters since the late 1990s. They currently produce both harvesters and forwarders for forestry alongside their range of combines for the agricultural market. There are currently two harvesters in the Sampo line up, the 4 wheeled HR46x and the 8 wheeled HR86.

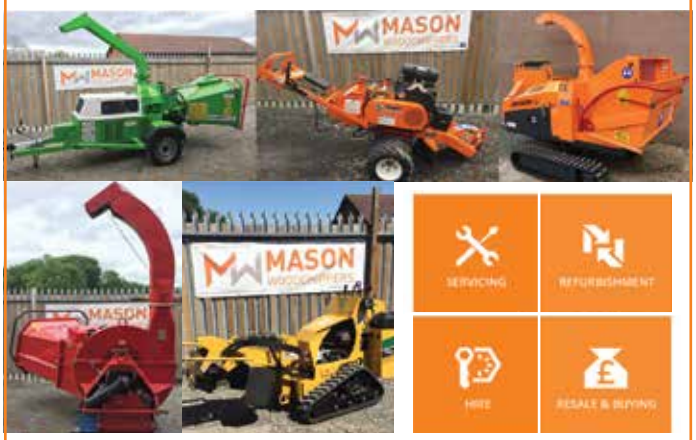
The design of the HR46x is what many of us consider as the traditional Sampo harvester. A small four wheeled machine, weighing between 8 and 9.5 tonnes and with a crane reach of 7.1metres designed with thinning in mind. Harvester heads are normally sourced from either Keto (eg Keto 51) or Kesla (eg 18RH), but this can be tailored to accommodate the purchaser. Computer measuring and optimisation is provided by Technion. The HR46x is a fully hydrostatic, articulated machine, and is powered by a 4-cylinder Agco (formerly Sisu) producing 140kW (190hp).

Operator comfort and convenience have been designed into the machine. The curved windscreen allows operators to view the treetops; daily checks and maintenance can be performed at convenient locations; the engine and the cabin are lo- >>

B. Price MUS-MAX® Specialist Ltd.

Tel: 01584 891 307
Mobile: 07518 810 269
Email: ben@mus-max.net
Web: www.mus-max.net

MASON WOODCHIPPERS



Quality refurbished woodchippers and stump grinders
All makes and models of chipper and grinder
3" to 12" tracked, road tow and PTO
All refurbished machines sold with 30 day warranty

Call us on 01325 377 475 or 07484 081 795
Email john@msonwoodchippers.com
www.masonwoodchippers.com

HOME FORESTRY LLP

Suppliers of new and used forestry machinery

Contact us for our Autumn Open Days

SYKETEC

- Range of models available
- Stoke or Combi with feed wheels
- CAN-MID length & diameter controls
- Suitable for smaller base units

Contact us for more information

UK & Ireland Alstor 8x8 Agent
Rabaud Forestry & Agricultural Machinery
England and Wales Syketec dealer
WORKBOX

T. 01746 718 456 • M. 07966 365 157
• E. nathan@homeforestry.co.uk •
Home Forestry llp, Willowdene Farm,
Chorley, Bridgnorth, Shropshire, WV16 6PP.

cated on different frames – the engine to the rear of the centre joint and the cabin to the front – providing a quiet operating station with less vibration. The people at Sampo have also thought about the forest too and have come up with their own thinning method - have a look at the Sampo Rosenlew website for more details on the Sampo Thinning Method.

In addition to the HR46x, and in a move away from their traditional design, Sampo have recently introduced the HR86 wheeled harvester to their range. This machine has been designed with finial thinning and clear fells in mind. The HR86 is an 8-wheeled machine weighing in at around 21 tonnes and is of the articulated design featuring bogie axles front and rear. Power comes from a 6-cylinder Agco engine producing 195kW (260hp), and the transmission is hydrostatic mechanical.

In contrast to its smaller sibling, the HR86 can be equipped with Kesla 25RH-II or 27RH-II harvesting heads. Dependant on the harvester head chosen, the Mesera 240H crane can be specified with a reach of either 10.3 or 11.1m. In a move in keeping with many of the better-known brands, Sampo have designed the HR86 with a levelling and rotating cabin. Measuring systems are again provided by Technion.

>>

NEUSON FOREST

Neuson Forest are based in Germany and produce a range of tracked harvesters. There are no wheeled models! They produce eight models in total, the 103, 104 and 243 are available as either HV(Rigid) and HVT(levelling) whilst the 204 and 264 are only available as HVT (levelling) models. Engine power is provided by John Deere engines throughout the range.

The 103 and 104 are fairly similar machines. The 103HV coming in at 12 tonnes whilst the levelling HVT variant comes in at 13.5 tonnes. The 103 is powered by a 103hp 4-cylinder engine and features a crane reach of 9.3m. The 104HV weighs in at 12.3 tonnes whilst the HVT is around 14 tonnes and features a 116hp engine and again features a 9.3m crane. These machines are compact with the wider levelling machines only 2.5m wide and exert ground pressures of 5-6psi.

The 204HVT is a 20-tonne machine and is only available as leveller. It is powered by a 222hp engine and is equipped with a Waratah parallel action crane available with either 10.2 or 11.5m reach. Suggested harvester heads include the Log Max 5000 and the Waratah H414.

The 243HV and 243HVT come in at 23.2 and 24.7 tonnes respectively. They feature 250hp 6-cylinder engines. Along with the standard crane length, they are also available with the extra-long crane length of 13.5m primarily designed for use in late thinnings. The 243, in either guise, sits at 2950mm wide. Lastly, the top of the range 264HVT utilising a 309hp engine and weighing in at 26.5 tonnes. The 264HVT has been designed to handle harvester heads weighing up to 2 tonnes, so those designed for handling large dimension timber typically found on clear fells.

The Neuson Forest range of machines is available with a range of options including different tracks. For example, single grouser tracks available for better climbing ability, or curved triple grouser tracks up to 800mm wide designed for soft ground applications. There is even a rubber track option if you want to go harvesting down your local road! All levelling machines are able to level up to 25° forwards or 15° to the left or right. All Neuson Forest harvesters have been designed with a minimum tail swing to prevent damaging the standing crop when working in thinnings.

VIMEK

The little Vimek 404SE harvester can be equipped with several different harvesting heads, with a maximum felling capacity of 340mm depending on model. Recommend heads come from the Keto and Nisula ranges. These four wheeled articulated machines are powered by a 50kW (67hp) CAT engine and weigh in at 4500kg. The computer measuring system is from the DASA range. The transmission is of the now "normal" hydrostatic mechanical type which many of you will be familiar with in more mainstream machines. Crane reach is 4.6m. Operators are catered for in a well-appointed cabin with air conditioning for those long hot days and LED lighting for the darker work periods.

As with most machines, the 404SE is available with a variety of options to suit owners, operators and foresters alike. Items such as refilling pumps for the diesel and hydraulics, stump treatment, and reversing cameras which we may take for granted nowadays are available here too. The machine is also available with the Vimek C12 clearing head proving the versatility of the 404SE.

I've mentioned Vimek machines previously in this publication. The Swedish manufacturer is an innovative producer of low impact forest machinery and SLU (Swedish University of Agricultural Sciences) are often involved in their research and development. In addition to the standard 404SE, there is also the 404 Duo which is a combi machine. Essentially a standard 404SE with the addition of a forwarding trailer on the rear, a complete harvesting outfit in one go.

VIMEK 404SE

ECOLOG

Whilst EcoLog itself is a relatively new name, their forest machines have been marketed under several different names over the years including Skogsjan and more recently Caterpillar. The EcoLog range of machines have recently been complemented by the 2020 addition of the Gremo machinery brand. EcoLog currently produce six harvesters in their range. Four of these harvesters are of the pendulum arm style, and two are of the 8-wheeled conventional bogie axle style including the 1058H5 which is from the former Gremo range.

The 550 T-Pro; 560F, 580F and 590F are the pendulum arm style harvesters and are all 6-wheeled articulated machines. Many of you will have marvelled at the acrobatics these machines have displayed at various exhibitions such as Elmia over the years. If you haven't seen this concept before, the pendulum arm design allows the entire machine to be raised and lowered. For example, it is possible to rest the entire machine on the ground at the end of the day, featuring levelling and rotating cabins and side-mounted booms. Reaches of between 9 and 11.5 metres are available and, as usual, are dependent on the harvester head that has been specified. Heads are available from either the EcoLog range or from Log Max range. These machines are fitted with Volvo Penta engines with outputs varying between 218hp and 320hp. They all feature hydrostatic transmissions, and weights vary between 19tonnes for the smallest 550 T-Pro and 21tonnes for the 590F.

ECOLOG 590F

The 688F is a move away from the traditional EcoLog design and is an 8-wheeled articulated machine with the conventional bogie system. The 688F has been designed for working on steep ground and many of the options are tailored to suit this including for example, the option of a third slew motor. Power comes from a 286hp Volvo Penta engine.

In line with others in the EcoLog harvester range, the 688F features a levelling and rotating cabin. The cab will rotate 350°. The side-mounted boom can be specified with a reach of 9-11.5m and can be equipped with either an EcoLog or Log Max head. The Log Max 5/6/7000 heads are all recommended for use with the 688F.

Last in the EcoLog range is the 1058H5, a machine inherited from the Gremo range. As such, its design is a little different to others in the EcoLog range. For example, the boom is mounted in front of the fixed cab. The 1058H5 is powered by a Cummings 6-cylinder engine producing 200hp, and comes on 22.5" wheels ensuring its 15900kg is kept low down providing good stability. Like all machines in the EcoLog range it is fitted with the DASA Forester computer system.

SB FORESTRY LTD

SB FORESTRY LTD

UK agents for new and used Eco Log forest machinery, Viking harvester heads and Northern dealers for Pfanzelt forestry equipment.

EcoLog Forestry of tomorrow | Loggtech | PFANZELT MASCHINENBAU | GB LUBRICANTS

SALES

sales@sbforestryltd.co.uk

REPAIRS

service@sbforestryltd.co.uk

PARTS

parts@sbforestryltd.co.uk

www.sbforestryltd.co.uk | Contact Scott Burton 07795 438 341

Gene Drive – a game-changing technology for grey squirrel control

Stef Kaiser speaks to Bruce Whitelaw, Prof of Animal Biotechnology at Roslin Institute.

Grey squirrels *(Sciurus carolinensis)* are an invasive, non-native animal in the UK and are a threat to the health of woodland ecosystems. Tree damage caused by squirrels costs the forestry industry £40m per year.

In addition, grey squirrels are rapidly pushing the UK's native red squirrel *(Sciurus vulgaris)* to extinction. It is predicted that without effective conservation measures, the red squirrel could be lost from the UK by 2030.

The UK Squirrel Accord is backing the development of an immuno-contraceptive approach to control grey squirrel numbers. In parallel, the Roslin Institute in Edinburgh, in collaboration with the European Squirrel Initiative, Edinburgh Innovations and the Biotechnology and Biological Sciences Council, proposes an innovative genetic control strategy to complement existing methods. The suggested technology, Directed Inheritance Gender Bias (DIGB), relies on genetic engineering technology; specifically, DIGB relies on gene drive, a proven innovative application of genome editing and GMO technology. DIGB offers a genetic alternative 'contraception' by skewing the sex ratio within the target population, leading to a population crash.

For less than the annual cost burden of grey squirrels, DIGB could be developed for £10m. It could be used to humanely eradicate the grey squirrel from regions within 20 years and could be applied for the control of other invasive, non-native species.

GENE DRIVE TO CONTROL GREY SQUIRREL POPULATIONS

- Drive infertility through the target population
- Genetic equivalent to immunocontraception
- Can be used in parallel to other control strategies
- Technology applicable to other pest species
- Humane (no animals killed)
- Specific for grey squirrel (no collateral)
- Possibility to limit gene drive to a number of generations.
- 5 + 3 yrs R&D (£10m)
- Then impact in 15-20 years
- Now seeking £10m funding for R&D phase

THE TECHNOLOGY

using Gene Drive for directed inheritance gender bias

Gene drive is the use of a genetic engineering tools to 'drive' a desired genetic trait through a population by increasing the probability that the trait will be transmitted to future generations (figure 1). It is currently being developed for use in insects, and the Roslin Institute proposes that the technology could be tailored to cause female infertility and be used to control grey squirrel numbers in our woods and forests.

Normally, what happens with inheritance is that both females and males carry two copies of the same gene (the copies are called 'alleles') but each parent only passes on one copy of the gene to offspring. Unless there is a selection pressure for a given allele, half of the first generation of offspring will carry the gene of interest, half will not and so on through generations (figure 1, left side).

Gene drive changes this inheritance pattern for the gene of interest with the aim that, theoretically, at some point 100% of the population will carry the gene.

The gene drive technique involves adding, deleting, disrupting, or modifying genes by using 'transgenes'. For gene drive to work, a transgene is inserted in

one allele of the gene (figure 2, left).

"As soon as we've done that, the introduced gene drive activates and copies itself into the other copy of the gene. Now, this animal has two copies of the desired transgene and, rather than 50%, all gametes (sperm or egg cells) will carry the gene drive. When a gene drive animal mates with a non-gene drive partner and fertilisation happens, the same copying happens again, and the offspring, once more, will have two copies of the desired gene. This way, the desired trait 'drives itself' through the population", explains Prof Whitelaw.

Gene drive can be used to 'drive' any trait, such as disease resistance or, in this case, infertility through a target population. In the case of the proposed project, the gene drive will be used to drive female infertility, and over time, this will lead to a preponderance of males. Eventually, the population will crash due to an absence of female animals.

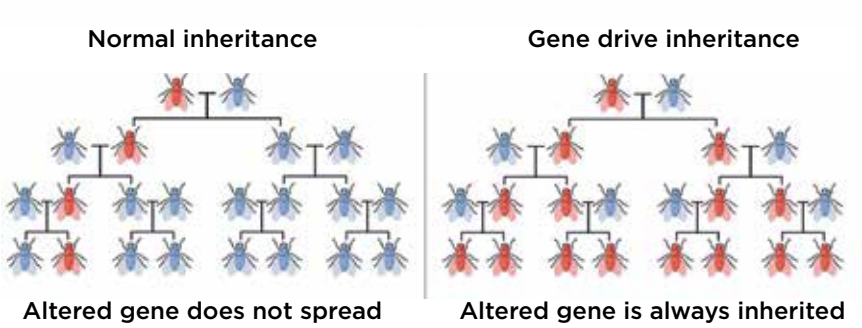


Figure 1

Figure 2

CREATION AND DEPLOYMENT

of genetically modified squirrels

This project is at an early stage an no animals have been produced. Looking forward, gene drive grey squirrels could be engineered. Such animals, who will be males, would be released into the target woodland. After natural mating, those males will pass their gene drive on to their offspring – and produce fertile males and infertile female.

Thanks to funding from the ESI, researchers have performed an initial simulation study *(Nicky Faber et al, 2021.Scientific Reports 11, 3719)* of a conservative gene drive strategy indicating that the release of 100 squirrels in a region harbouring 3000 squirrels could achieve eradication over a 20-year period (figure 3). This assumes a one-year breeding cycle. Further modelling will enable the deployment parameters to be refined to identify optimal release number and, reduce time to eradication predictions.

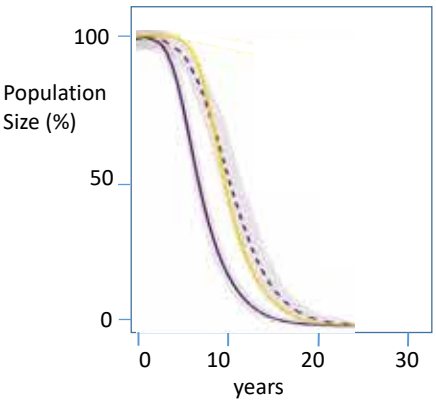


Figure 3

The team at Roslin will closely work with ecologists to model the impact of reducing grey squirrels in a particular ecosystem, and red squirrels filling the ecological niche.

Although there is considerable current activity developing gene drive strategies to control mosquito populations and mitigate disease transmission by these insects, using gene drive in squirrels would be pioneering, it hasn't been done before. There is no gene drive work in the world beyond experimental in mice, which was conducted in the US – with very valuable lessons learned about limitations of the technology.

>>

ASSESSING AND MITIGATING RISKS

When it comes to genetic engineering, a main concern for both the public and funding bodies will be the potential existence of unintended or unpredictable consequences on other species or the ecosystems as a whole, when genetically modified organisms are introduced into the wild. Currently, regulations for approval of GM projects are very strict, with a strong bias towards the principle of precaution. Equally, there is a consequence of not trying new control approaches to a pest animal which continues to expand its footprint in the UK.

Using the DIGB technology for grey squirrel control would come under Defra's GMO regulations – with the outome of their recent consulation on genetic technologies imminent.

Is there a risk of red squirrels or other species becoming infertile?
The first barrier to contamination of other species is the so-called 'species barrier'. The gene drive can only be transmitted to a animals that a grey squirrel could mate with. There are situations where certain similar species can inter-mate but usually the offspring will be sterile.

Beyond that, the gene drive will be tailor-designed to work only on DNA sequences that are exclusive to grey squirrels, or even a specific grey squirrel population. These 'personal sequences' are a common genetic denominator of a certain group of individuals (species, breeds or even families) that is different to everyone else. To illustrate this, let's say we wanted to target an isolated population of grey squirrels in Aberdeen. It is possible that these squirrels have slightly diverged from other populations and therefore have 'personal sequences'. It would be possible to design a gene drive that just works in this local population in Aberdeen. The likelihood of this gene to be introduced into other populations or even species would be in effect zero.

Is there a risk of eradicating the species as a whole, even in its native habitat, for example, by accidental return of individuals to their original habitat?
This risk does exist. However, there are tools to design strategies that limit the number of generations for the gene drive; this means that we can 'dial-in' an end point where the infertility trait doesn't get inherited anymore. This can be imagined a bit like 'planned obsolence' in electronic devices, or commercial seeds only working for a specific number of years chosen by the manufacturer.

An example for such a strategy is the 'Daisy Chain': within the transgene, there are in this case four gene drive sequences, with one targeting the next until the last sequence has no target and the gene drive stops. This strategy has been proven in mosquitoes under laboratory conditions.

Several parameters allow researchers to create a safe and bespoke grey squirrel control strategy that reconciles efficiency and speed of eradication with maximum risk mitigation. The choice of the genetic target sequence (to ensure specificity), the number, location and timing of animals released, and the number of generations the gene drive should work.

RESEARCH TIMELINE AND COST

A outline timeline to develop the DIBG project would be:

- **Years 1-3:** refinement and validation of gene drive technology and reagents
- **Years 3-5:** production of gene drive grey squirrels (in containment)
- **Years 5-8:** contained use field trials
- **Years 8-25:** deployment in our woods and forest

The project cost is estimated at £10 million, and the research consortium is currently looking for funding to start the research phase.

QUESTIONS FROM THE CONFOR COMMUNITY

Q What is the desired outcome – totally remove species or remove numbers?
Conceptually, we can either reduce the population or aim for a complete eradication at a local or regional level. Grey squirrels are an alien species that has negative impact on the environment; ESI's long-term aim is to see eradication of the species and for red squirrels to take their space.

Q Do you anticipate public opinion as a major challenge for funding and implementing this technology?
The public will have reservations against any kind of animal control. However, explaining the bigger picture and the reasoning behind control of invasive species usually has a very positive effect on public opinion, says Graham Taylor of the ESI.

The main aspects people are concerned with, in particular in the case of GM animals, is animal welfare and sustainability. In this sense, Prof Whitelaw believes that using this gene drive strategy to control grey squirrels is exactly what the public want –"it's humane and it's safe for the environment".

In Australia, scientists are looking into utilising the technique as a way of controlling rodents. Interestingly, it is PETA, an NGOs who you might not suspect of being supportive of biotech, who are coming out in support of this technology.

Q What is the likelihood of mutations occurring that would render the gene drive mechanism ineffective in 10 or 20 years?
Yes, mutations are a natural process and would limit the gene drive. There would be a natural selection favouring those mutations, once they appeared. As the model will be based on the gene drive working for a limited number of generations anyways, the effect of spontaneously occurring mutations on the efficiency of our control method should be negligible. In addition, sequential gene drives could be deployed to mitigate this.

Q How will trial areas be selected?
The initial trials would be conducted in containment facilities and after that, it could be trialled in specific forests. We do get a lot of interest from landowners who offer their forest for trials. The ideal site for an open trial would be an island with only grey squirrels – but that is wishful thinking, of course. But we could use 'island populations' of grey squirrels on the mainland. No GM squirrels have been produced yet, and we are still far away from the open trial phase.

Q What are the constraints of the technology?
The biological constraints are that no-one has ever genetically engineered a squirrel and we'd have to set up the practical capability to do that. In Roslin, we use similar strategies for mice, rats, chickens, pigs, sheep and cattle so we are confident that we can adapt the methods to squirrels.

Although gene drive has worked in insects and experimentally in mice, we haven't got any practical experience with the proposed technology working in squirrels. We might have to try a few target sequences and gene drives to figure out which one is the most effective.

We are still in the development phase, but we don't think any of the challenges are insurmountable. The insect research community will provide useful information that we can use for our R&D.

TIMBER LOADING IN SUMMER 1915

The various lockdowns have allowed us to have a bit more time to do things that in the normal course of events, we were too busy to do! This was certainly the case for Exeter woodland owner Charles Eden. His ancestors were very good about taking photographs, and the family photo albums have not been sent to the tip!

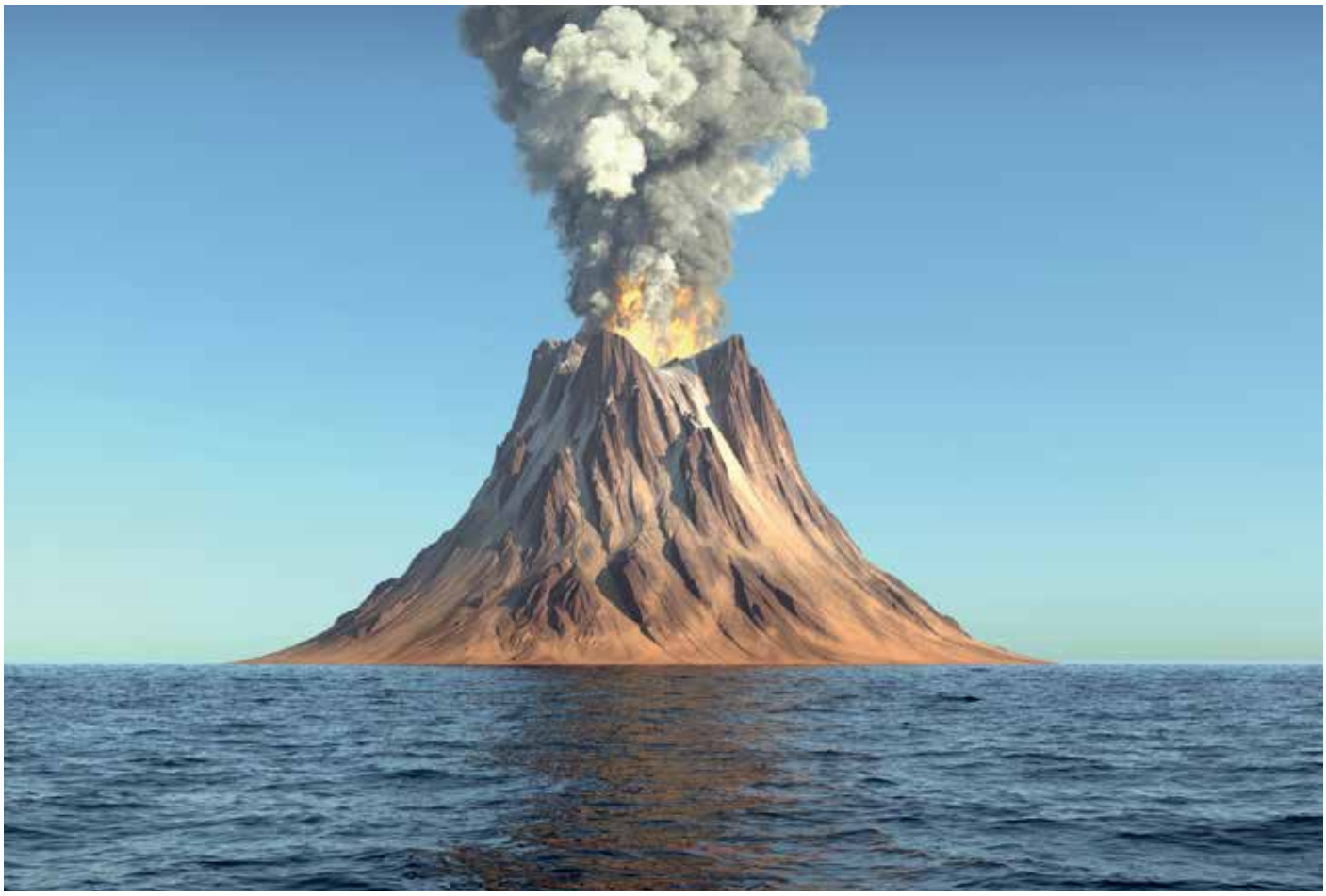
As a result we can hop into a time machine and return to another age. The pictures date from the end of the 19th Century and beginning of the 20th century and are obviously in black and white, but technology has moved on and it's now easy to add colour to them – this is called colourising.

So Charles dug out various photos, and via a colourisation website, obtained some remarkable images in full colour. The pictures below could carry the caption "Timber loading all summer" and were taken in 1915... probably in August that year.

"We used to have a house in the East Riding of Yorkshire, called Kilnwick Hall, between Beverley and Driffield, which was sold in the 1940s, and these photos were taken there", says Charles.

"I think it's amazing the oak had to be hauled by six horses – haven't machines transformed things! Interesting to see how the industry has changed!"

The colourising process can be useful for forestry operations in other ways too. The third colourised photo shows part of the two hundred acre Cotley wood on Charles' estate in Devon. This was taken when snow was on the ground at the end of 1907/beginning of 1908 and you can clearly spot an area that had been clear felled. It's interesting that you can see the track through the wood as it shows up white. This area was replanted at some stage afterwards and is now pure oak – it's grown rather slowly and won't be ready to be clear felled again for some time!



Timber supplies and the butterfly effect

Timber Transport Officer **Paul Boobyer** reflects on the impact of the recent crises – from climate, to Brexit, to a global pandemic – on our sector

"It was the best of times, and it was the worst of times", wrote Charles Dickens in the opening of *A Tale of Two Cities*. 162 years later, the same phrase could be applied to the forestry, wood processing and timber haulage sectors in Great Britain. Dickens was referring to events that culminated in the French Revolution, brought to a head by climate change, crop failures, unemployment, and the government's inability to service its debt. Thankfully, the situation is not as drastic in 2021 (let's hope) – certainly there's no lack of employment – but the business climate in which timber processors and hauliers are currently operating is highly challenging.

In many regards it's the best of times for the forestry and timber processing industries: timber prices are riding high, there are strong incentives for afforestation – the Climate Change Committee is promoting the use of timber in construction, and architects are increasingly using timber as an alternative to carbon-heavy materials such as concrete or steel; an example will be displayed at the COP26.

And it's the worst of times: The halt in sawmilling imposed during the Covid-19 restrictions meant that processors had to use up stocks to meet demands. Now that the UK has left the EU, movements of timber require more paperwork and is subject to stringent regulations, making it challenging to obtain road haulage rights, which delays imports from EU countries. Meanwhile, Russia is proposing a ban on roundwood exports, which will increase demand for supplies from Europe, which are also running low on stocks. severe shortages of products and materials, and a lack of hauliers to deliver them, is creating intense pressure on the forest products sector.

The crop failures in France in the 1780s were caused by a volcanic eruption in Iceland. Descriptions of the resulting climate change are like biblical portents of doom: Noon in London was likened to a rust-red dusk, and the English naturalist Gilbert White described a peculiar haze, or smoky fog that prevailed for many weeks. The changing weather patterns affected the Indian monsoon cycle and there was a succession of harsh winters in Europe.

The Butterfly Effect – the unforeseen consequences by which small changes in initial conditions can lead to large-scale and unpredictable variation – is perfectly demonstrated by the impact of climate change both in the 1780s and today. And in addition, the timber haulage sector is struggling due to increase in border legislation, a lack of staff and concerns about pay levels. These myriad factors have led to a perfect storm. We can only hope that climate change can be mitigated through decarbonisation at a global level in the longer term, and supply chain issues resolved in the short to medium terms, along with an increase in the planting of domestic, productive forests.

SMALLER, FEWER, LIGHTER, SHORTER AND NEATER

Eamonn Wall samples the Suzuki Ignis

Traditionally, Suzuki has been known for its small car expertise and internally follows a philosophy which translates into 'smaller, fewer, lighter, shorter and neater'. This certainly applies to its smallest car, the Ignis, reviewed here.

The current Ignis was launched in early 2017 as Suzuki's new global compact crossover and being only 3.7m long and having four doors it certainly fits the bill. It is a brilliant-looking vehicle and the good news is that it has a useful 180mm ground clearance and is available with 4wd. It weighs 900kg and can tow a braked trailer up to 1000kg. The fuel tank holds 32 litres, but the car easily returns 50mpg.

The exterior design is very unique and the interior design is also very appealing. In 2020, the vehicle was refreshed a little, a new hybrid engine fitted to all models and increased amounts of noise insulation fitted.

The updated engine known as the K12D is a four-cylinder petrol engine producing 87bhp combined to a five-speed gearbox. There are three models in the range; SZ3, SZ-T and SZ5. These are all fitted with 2WD as standard and 4WD is available only on the top of the range SZ5. Prices span £13,999, £15,499 and £16,499 for the three 2WD models. An automatic CVT gearbox adds £1,000 and the 4WD version costs £17,499 and is only available with the manual gearbox. I did not sample the CVT but when it comes to manual gearboxes I do prefer a five-speed gearbox, it feels more

natural than six-speeders, especially for non-motorway driving when you use the gearbox more often.

The mild hybrid system fitted uses a belt driven integrated starter generator (ISG) which acts as both an electric generator and starter motor combined with a small battery to store energy created under braking and provide a little help to the engine under acceleration. Cleverly the ISG unit detects when the brake pedal is depressed and through regenerative braking energy capture it recharges both the hybrid and conventional 12 volt battery. All this helps reduce fuel consumption. When driving the vehicle you do not notice the regen braking which is great because on some hybrids the regen braking is felt without the brake pedal being depressed or braking required. It is interesting to note how often one takes your foot off the gas just to coast a little but not wanting braking.

The Ignis adopts Suzuki's ALLGRIP AUTO four wheel drive system. Under normal driving conditions all the power goes to the front wheels and when slippage (ie a spinning front wheel) on slippery surfaces is encountered power is sent to the back wheels automatically via a viscous coupling unit. Enhancements now include Hill Descent Control and Grip Control.

Grip Control activates on slippery surfaces at speeds less than 18mph once switched on by the driver. It focuses torque on the driven wheels that have grip and will quickly apply braking to a wheel that is spinning.

The ALLGRIP adds only 45kg to the weight of the Ignis but due to the location of the rear differential viscous coupling for the 4WD system, the rear boot luggage capacity reduces from 260 litres to 204 litres.

The Ignis drives well. It has a comfortable ride and handles and brakes well. It does 0-60 mph in 12.8 seconds with a top speed of 103 mph. Very similar figures to the Fiat panda 4x4, perhaps its only true competitor, though the Panda is almost cheaper at £14,000. The Panda Cross 4x4 is a similar £18,000. In my experience the Panda 4x4 Twinair will do 43mpg whilst the more modern Ignis ALLGRIP will do 50mpg. Then again, a Dacia Duster 4x4 diesel costs £19,000 to £20,455.

The Ignis is a great looking vehicle and its interior is well thought out and nicely cool in design terms. It is good fun to drive, though the boot is small and it is not very fast. Though the rear seats can be folded down which improves practicality. Yes please!

Eamonn wall FICFor is a tree and woodland consultant and managing director of Eamonn Wall & Co.



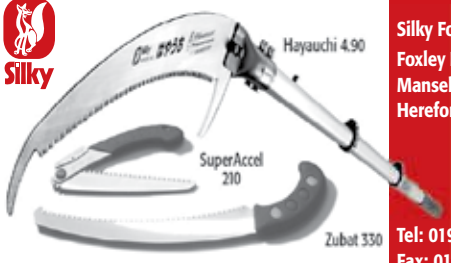



F&TN CLASSIFIEDS

MACHINERY EQUIPMENT

PRUNING MADE EASY

Silky



The world's finest pruning saws

Silky Fox Saws
Foxley Estate Office,
Mansel Lacy,
Hereford HR4 7HQ

Tel: 01981 590224
Fax: 01981 590355
www.silkyfox.co.uk

BIO-OILS

Plantoil cares for the environment

plantoil ...pure green
BIO-LUBRICANTS

CHAIN SAW OIL ● 2-STROKE OIL ● SAW BLADE OIL

FREEPHONE 0800 013 7363 www.plantoil.co.uk

FORESTRY CONTRACTORS

SHROPSHIRE FORESTRY CONTRACTORS

WANTED

STANDING TIMBER ALL SPECIES INCLUDING SOFT WOOD
ALL SPECIES AND GRADES OF TIMBER AVAILABLE FOR DELIVERY

ALSO OAK, ELM (PLAIN AND BURRS), BIG ASH AND FIGURED SYCAMORE

TOP PRICES AND PROMPT PAYMENT

CONTACT: JOHN HALL, FAIRACRES, COUNDMOOR, CRESSAGE, SHREWSBURY SY5 6AY

Telephone: 01694 731621
Fax: 01694 731624 Mobile: 07802 366653

WANTED

QUALITY OAK REQUIRED

Standing or felled

Good price paid for large clean planking logs

Also interested in other grades

Whippletree
Tel: 01763 208966 Fax: 01763 208977

NET PRODUCTS

NET BAGS & BULK BAGS

for logs & kindling.

Plain or with printed band.
1 - 3 day delivery anywhere in the UK. For the best quality, service and prices!

Contact Ian or Robert.
Medallion Net Co Ltd,
Franciscan House,
Grove Lane, Elmswell,
Suffolk IP30 9HN

Freephone 0800 7834018
Telephone 01359 242910
Fax 01359 245264
www.medallionnet.co.uk
Email bsmith4uk@aol.com

CERTIFICATION

An independent FSC® & PEFC Certified Forestry Group Scheme

Providing UKWAS certification to forest owners throughout the UK

UK FCG Forest Certification Group

The cost effective route to make certification work for you
Support, training, techinical industry updates, trademark use

PEFC Promoting Sustainable Forest Management www.pefc.co.uk

FSC www.fsc.org

Paul Sandys: 07803 619249
Phil Webb: 07970 388940
ukfcg@hotmail.com
forestcertification.org.uk

Make this space work for your forestry business

Call Laura on 01502 725 866

FORESTRY & TIMBER

FORESTRY&TIMBER LIMITED
INDEPENDANT ADVICE
Purchasing | Selling | Managing | Investing?

- Woodland
- Round & sawn timber
- Enterprise
- Products

Director Mike Mann provides a one-to-one service:
based on 40 years experience across the industry.
Free initial telephone consultancy

Required now by client: 10,000ft³ good quality homegrown Oak sawlog

Contact: Mike Mann T: 01579 350 096 / 07436 282 700 E: mike.mann@crocadon.co.uk

SMALL WOODLAND OWNER

Professor Julian Evans OBE FICFor

Resilience for forestry

In August I had the opportunity to attend a briefing day on resilience in Forestry England's Thetford Forest. It was excellent and thought-provoking and an exemplar for us all as we face a changing climate – literally and figuratively in people's expectations of us as we care for the nation's woods and forest - public and private.

Thetford Forest began in the 1920s and is pretty much a pine monoculture where Corsican pine quickly replaced the early plantings of Scots pine in the inhospitable Brecklands of East Anglia. The 20,000 hectares of planted forest now has many environmental and conservation designations; for example, it is nationally protected as a Site of Special Scientific Interest (SSSI) with woodlark and nightjar populations, and is much valued by visitors. But having got on top of the scourge of Fomes disease (Heterobasidion annosum) decaying trees and killing young ones by innovative biological control (a pathology research success story dating back to the 1960s), Dothistroma (red band needle blight) struck in the 1990s. A moratorium on planting Corsican pine was imposed and ways sought how to cope with the numerous severely infected stands and how to diversify species to spread the risk as climate changes and new threats emerge. At the same time, it is crucial that the increasing environmental and social values of the forest are sustained. Uniformity and monoculture are changing.

Changing silviculture

The old system of clearfelling and replanting is evolving to very heavy thinning and underplanting. This is bringing twin benefits. The much increased space around overstorey pine trees improves air flow

through the canopy and reduces the severity of Dothistroma infection. The benefit is measurable. Trees that previously had almost stopped growing have shown some recovery as can be seen on the cross-sectional disk in the photograph. Wide rings in the centre change to extremely narrow ones of about a millimetre during the years of severe infection followed by distinct improvement after the heavy thinning. While not back to normal, tree growth has improved. But the heavy thinning confers another benefit: underplanted trees are better protected from frosts, leading to a greater choice of species that can be used.

Increasing species choice

Several true firs and Douglas firs are able to establish beneath the heavily thinned pine and trials show that species such as Serbian spruce and western red cedar also have real potential. There are alternatives to pine and current planting programmes are focusing on this means of greatly increasing diversity. Better resilience in the future is the objective.

Nothing is ever simple!

Heavy thinning and underplanting means no clearfells but it is the young growth on such restock sites that provides a perfect nightjar habitat. Thus migrating – forgive the avian pun – to wholly continuous cover systems can't be the whole answer. And this too is being addressed at Thetford as is the deer browsing pressure on underplanted trees that may grow a little more slowly or be highly palatable such as Douglas fir. If we add the impact of the now massive abstraction of water, because it is so clean and pure from under the forest, the complex of issues just goes on increasing.

Application to the small woodland owner

Thetford Forest shows on a large scale that both imaginative silviculture and increasing the palette of tree species is the way forward. Both are applicable to the owner of a few hectares as well as many: the key is to be thinking ahead. What impressed me at Thetford is that they are getting on with it. Perhaps that's the best lesson for us all to learn.

FORESTRY IN PICTURES

"The enemy of the enemy is my friend", says Toby Allen, who obtained this picture from the wildlife camera of a local raptor group in a forest he was working in. "One could think that killing squirrels is the gosshawk's way of thanking us for planning work to avoid disrupting their breeding season."
Submitted by Toby Allen, Say it with Wood.

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, a short comment text to go with the picture, and an image 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 DECEMBER 2021 – GET INVOLVED

In December, we will run a feature on Wood Science and Timber Treatment. A second feature will look at Professional Services. 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 or pitches for feature articles. Note that our general editorial deadline for December is 10 November 2021. If you would like to pitch an article idea, please do so by the end of October.

Isuzu 3.5t Euro 6

Compact footprint, same powerful performance and payload.

Due to Isuzu's forward cab design we are able to fit equivalent body length to that of European manufacturers but reduce the overall length of the vehicle. For the ultimate flexibility the 3.5t Grafter chassis cab is available with either single or twin rear wheels. This versatility delivers a unique blend of body options, payload, comfort and performance.

ISUZU TRUCK UK

01707 282944 / isuzutruck.co.uk

*Terms & Conditions apply. Subject to specification. Images shown are for illustration purposes only.

JAS P WILSON

FOREST MACHINES

The one stop forestry shop!

Take Control with

BOTEX CRANE

Botex xCrane
Loader Control System

Excavator Attachments and Forestry Guarding

QUALITY MACHINES, QUALITY SUPPORT.

Tractor Based Machinery, Forestry Guarding & More...

www.jaspwilson.co.uk

Tel: 01556 612233 Email: info@jaspwilson.co.uk

FOREST MACHINE SPARES DIRECT

BOTEX · PLASCH · LASCO · IGLAND · TP · EAZIPAK · JAK · HARVADIC THE VERSATILE CHOICE · FAE · SP · Keto Harvesters