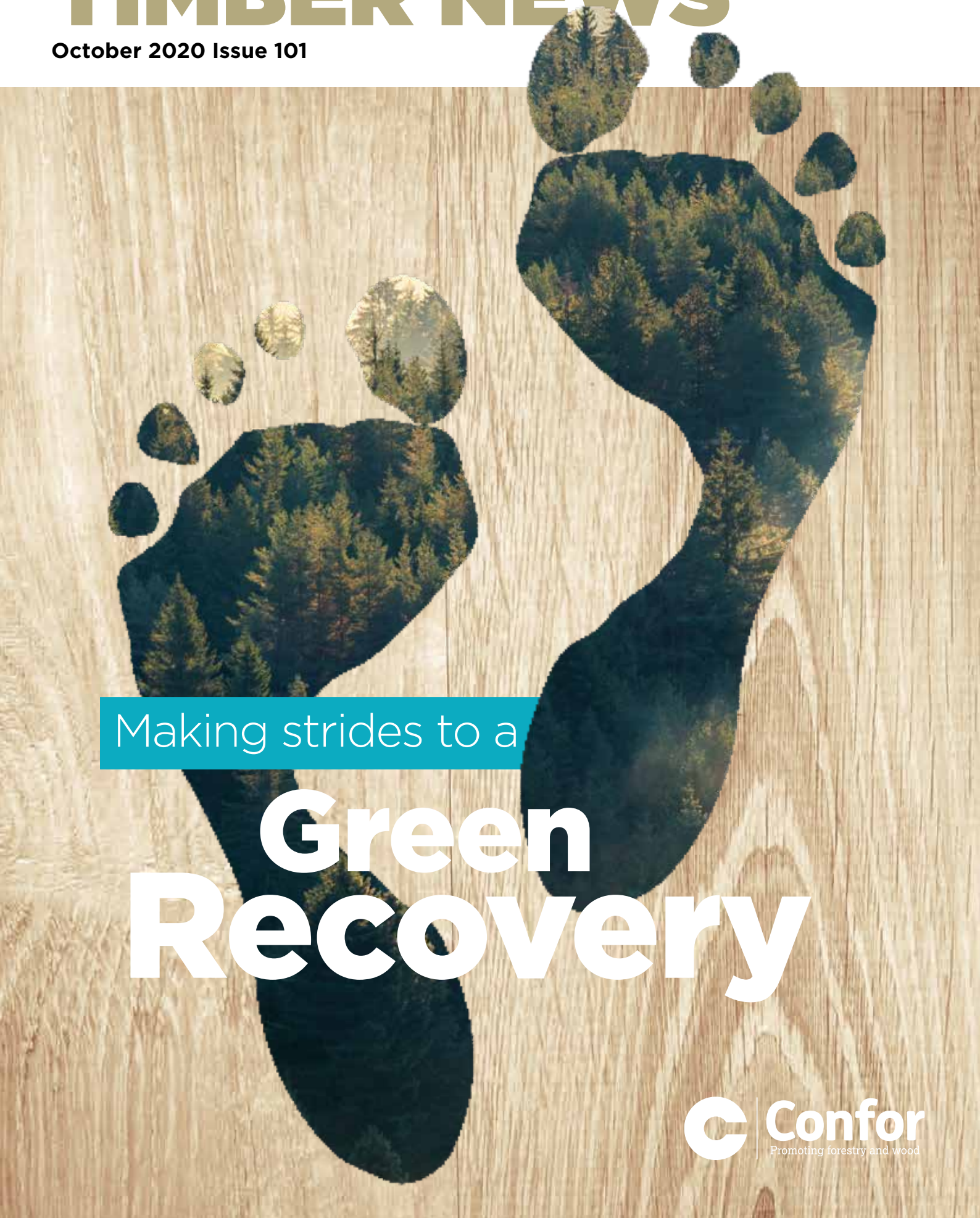
FORESTRY & TIMBER NEWS

October 2020 Issue 101



Making strides to a

Green Recovery

Confor
Promoting forestry and wood

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

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Quo Vadis

STUART GOODALL CHIEF EXECUTIVE, CONFOR

As a child, I remember watching Quo Vadis (not on its 1951 release!) and loved it. The film, which helped forge a life-long love of the cinema, was such a box office success, that it's credited with saving the near bankrupt MGM studios.

I had no idea what the title meant – a common translation is "Where are you going?", and that question now comes to mind as I reflect on how Confor's 2021 Business Plan should look amidst the current market and policy landscape.

In this issue of FTN the market reports convey a sense of strong demand in construction and fencing, with weakness in energy markets and pallets, and a mixed picture in hardwoods. In the softwood sector there is general optimism for this year, with real uncertainty over 2021. In policy circles, we have the development of post-CAP rural support schemes, a ramping up of government carbon reduction targets, demand for greater re-use of materials and much talk of a green recovery from lock-down.

I'm sure I'm not alone in seeking to trace a future path in among many moving parts.

At Confor, we aim to provide you with valuable information to help in decision making and to represent your interests, to give the sector a voice. I'm pleased to see that the profile of our sector has risen significantly over the last decade and we're seeing real progress in planting targets, in support for businesses, greater demand for wood, better regulation and much more.

In the coming months we will invest more in technical support for Members and in membership services. We're also making changes to the Board so that all parts of the supply chain and all parts of the UK can be represented. We are your voice, but we also need to hear what Members want.

With this new structure in place we can develop a stronger business plan and better answer the question "Where are you going?", and while I can't promise box office success, I'm confident we can deliver even more for you in the years to come.

So, if you have received a renewal invoice, please pay it promptly. We want to keep helping you to be successful.

Oh, and by the way, the name of the leading actor in Quo Vadis was Robert Taylor, whose real name was Spangler Arlington Brugh. I can't think why the studio changed it...

How the forestry and the wood processing sector can aid a Green Recovery

As society slowly adapts to the new normal and Governments within the UK wrestle with how they balance their nation's economy with the health of its people, industries are looking to the future, many with an eye on survival and the more fortunate ones looking for opportunities for growth. If there are such opportunities out there it seems that successful sectors will be those that can contribute to a Green Recovery and achieving Net Zero by 2045. With that view Confor has been working diligently to ensure that the UK wood supply chain is at the heart of governments' Green Recovery plans; promoting our sector as being in a strong position to deliver for a green recovery across a wide range of interconnected strategic drivers including climate change mitigation and enhancing the circular economy.

The rest of this four-page article will outline how further investment in innovation and R&D could enable our sector to contribute effectively to a green recovery in the short and longer term. We will expand on many of these subjects in future editions of FTN.

This summary provides an insight to short- and longer-term opportunities focussing on the potential for our sector to have a positive impact on climate change mitigation and enhancing the circular economy, many of which are being embedded in industry strategic documents such as Scotland's Roots for Further Growth.

HAVE YOUR SAY

New ideas will emerge and we will follow up on the topic in coming issues of FTN. We are keen to hear your thoughts on other opportunities where our sector can contribute positively to a successful Green Recovery. Get in touch with the **Stefanie.Kaiser@confor.org.uk**

SEE ALSO

Carbon and climate updates, p35
Forestry Transport – Zero Heroes - Decarbonising timber transport, p38
Carbon planning for future generations, p41

POTENTIAL FOR INCREASED CLIMATE CHANGE MITIGATION

Greater Carbon Sequestration

Increased carbon sequestration by increasing tree cover and wood use and growing more efficient trees.

OPPORTUNITY
Wider tree planting and wood use

Sustainably managed forestry and the increased use of wood in construction is now widely acknowledged by governments and many climate change bodies as key contributors to climate change mitigation, with Scotland predictably leading the way. This is evidenced in the UK by the published ambitions of the Climate Change Committee and the Scottish Government Climate Change Action plan, which includes targets for greater wood use and tree planting. In September, the Scottish Government raised its ambition further setting a target of 18,000ha/year of new woodland creation by 2025 and an increase of wood use in construction.

If UK governments' planting targets can be achieved, then it offers the opportunity to sequester more carbon and provide additional feedstock for downstream processing and manufacture into long life wood products. This in turn increases economic activity and jobs, and potentially, additional investment.

OPPORTUNITY
Increased tree quality & productivity

We mustn't forget there is already nearly 3.2 million hectares of woodland cover in the UK and timeous restocking with the appropriate productive species is just as important for locking up more carbon as trees which will eventually be processed into low carbon wood products.

If we could improve the productivity and quality of the trees we grow through tree breeding, this could provide the opportunity for economic growth as well as carbon sequestration. We are already seeing evidence of increased yields from improved Sitka Spruce crops and if research projects such as the Oxford University led Sitka Spruced are successful coupled with the continued good work of Forest Research Tree breeding team, Future Trees Trust and the Conifer Breeding Co-op, this should lead to further improvements to yields and quality and potentially shorter rotation lengths.

CASE STUDY
Future Trees Trust improving planting stock

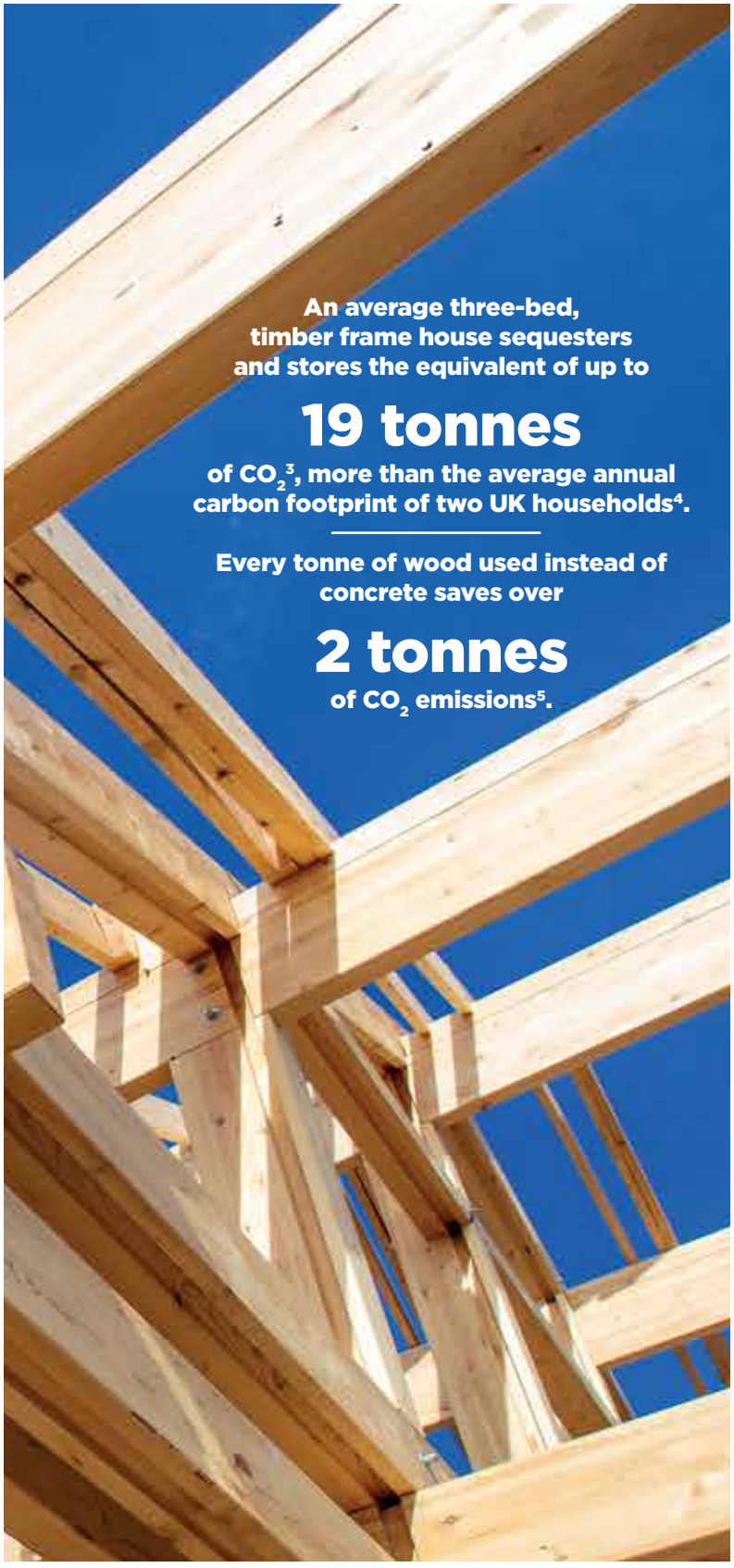
In the absence of full genetic gain or realized gain trials data, Future Trees Trust have undertaken juvenile/mature correlations and have deduced that even modest improvements of planting stock for stem form and growth rate can result in significant increases in timber yields - up to 20%. So tree improvement can not only help store 20% more carbon, but reduce rotation times significantly too, helping to mitigate against climate change. Future Trees Trust are aiming to establish demonstration plots, with improved stock planted alongside unimproved material, to show these gains and the benefits of investing in tree improvement.
www.futuretrees.org

Continued overleaf

POTENTIAL FOR INCREASED CLIMATE CHANGE MITIGATION

Carbon Storage and avoided carbon

Increasing carbon storage and substitution of higher embodied carbon construction materials through the increased use of wood-based products in construction and beyond.



OPPORTUNITY

Build with more wood

Increasing the use of wood products in construction is achievable by increasing market demand for existing products such as sawnwood, panel board, cladding, and engineered products such as I-joists, and manufacturing new low-carbon products. At present, the sector continues to focus on raising awareness of the benefits of timber in construction with construction professionals though initiatives such as Wood for Good. The current Wood Co2ts Less campaign is having great success in promoting the carbon benefits of wood products. However, if we are to accelerate and increase the use of wood in construction in response to the climate change emergency, we urge governments to consider introducing public policies that will influence the construction sector to use renewable materials first.

In addition, with continued Research and Development and support for innovation there are opportunities to manufacture more wood-rich construction products and systems such as wood fibre insulation, solid laminate engineered wood products and other engineered products which in turn will substitute higher embodied energy materials and imports. A lot of good work is underway at Edinburgh Napier University and Wood Knowledge Wales with industry partners to explore opportunities for commercialising these new products, which we will report on in future editions.

OPPORTUNITY

Using wood-fibre to replace petrochemical products – the bioeconomy

Looking elsewhere in the world, there is evidence of increased investment in emerging industries such as wood biorefining where wood-fibre is used as a feedstock to manufacture products to replace petrochemical based materials such as plastics, textiles, high value chemicals and fuels.

The nearest biorefineries are currently in Norway and Finland and outputs of these facilities range from bioethanol to industrial sugars, vanillin and textiles. In Norway, they are already testing manufacturing fish food and other proteins derived from wood fibre.

There are companies in Britain actively exploring new efficient processes for breaking down wood-fibre and it is a subject matter of increasing interest to academics in this country; there are currently two active PhDs at St Andrew's University and Edinburgh University.

ENHANCING THE CIRCULAR ECONOMY

A circular economy is an economic system aimed at eliminating waste and providing for the continual use of resources. The circular economy aims to keep products, equipment and infrastructure in use for longer, thus improving the productivity of these resources.

Demand for wood fibre is growing across the globe and in the UK we already import nearly 80% of the wood-based products we consume. Wood is not only a low carbon renewable resource but a reusable one and therefore is well placed to help society enhance its circular economy.

OPPORTUNITY
Resource efficiency

One key area we could improve is wood fibre recovery from harvesting; there is no doubt that on many of our post-harvesting sites a significant amount of 'usable' wood fibre is left on the hill. In fact, new businesses are developing that remove that material as a secondary operation, mainly for the energy market. In addition, there are potential volumes of fibre left above ground in the stumps.

Exploring and adopting viable new practices and felling systems may allow us to unlock that volume in the first pass of harvesting.

CASE STUDY
EGGER

EGGER utilises approximately 40% recycled wood in its production of over 1.1m m^3 of particleboard at its two manufacturing sites in the UK. The recycled wood material comes from furniture, pallets, wood packaging and suitable parts of construction and demolition timber and is sourced by a subsidiary company, Timberpak Ltd, which has four processing sites strategically located within the UK. They grade the recycled wood supplies which includes the separation and disposal of any contaminated materials such as metal, glass, sand, plastic and MDF before processed it into clean woodchips in several steps. **www.egger.com**

OPPORTUNITY
Extending the life of wood products through re-use and then recyling

There are very good examples of good practice within the UK wood supply chain of minimising waste and reusing wood fibre material, such as using residues for heat and power in place of fossil fuels and recovering recycled wood to produce paper products, panel board and wood energy.

However, can more be done in our wood supply chain? Can we extend the life of wood products such as carcassing, engineered wood products, panel boards and pallets? There is an increasing demand across Europe for deconstruction and re-use of materials to be designed into the construction of new building.

CASE STUDY
InFUtureWood

Edinburgh Napier University are currently participating in a transnational project called InFUtureWood, where they are exploring how recovered construction timber products can be re-used for structural purposes. If successful, this could result in an increase in the availability of structural timber to the market. At the other end of the market, how many lives could a pallet have through repair before being moved downstream for other purposes such as panel board or energy? **www.infuturewood.info**

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(3) **https://woodforgood.com/news-and-views/2014/09/22/uk-could-store-3.8-million-tonnes-of-co2-annually-in-new-build-timber-homes/**

(4) **www.theccc.org.uk/wp-content/uploads/2016/07/5CB-Infographic-FINAL-.pdf**

(5) **https://woodforgood.com/behind-the-facts-fact-4**

Confor responds to England Tree Strategy

Confor has submitted a detailed response to the first England Tree Strategy for 13 years. It consulted widely with members through a webinar, survey and meetings, and submitted a strong triple message to bring together the whole forestry and wood supply chain:

- Plant more trees
- Manage more of our existing woodland
- Use more home-grown wood.

The response also calls for tree planting targets to be enshrined in legislation to show a clear commitment by UK Government to meeting them. Confor suggests this could be done with an amendment to the Environment Bill.

Confor also wants a review of application and approval processes for planting in England, similar to the Mackinnon Review in Scotland, which kick-started a tree planting surge north of the border. Scotland is currently planting more than 80% of all new woodland in the UK.

Carolione Ayre, England Manager for Confor, said: "Our response is not just about tree planting, but about better management of the forests we have, and greater wood use. The three must be approached in a joined-up way; that's how we will deliver multiple benefits.

"However, planting trees is the starting-point - and targets are just numbers on a page, when it is about trees in the ground. That's why we think enshrining the targets in legislation is a great first step for the UK Government to show its commitment, combined with an external review of the approvals process.

"We also need a similar clear focus on supporting management of woodland – stronger markets for wood will help, as will finally taking the substantive action required to tackle deer and squirrel damage."

Confor's response says the consultation presents "an excellent opportunity to produce a Strategy for our economy, environment and society at a time when policy interventions delivering multiple benefits must be prioritised".

It continues: "As the UK plots a way forward beyond the pandemic, our forests and woods have a vital role in delivering a Green Recovery - as well as a crucial part to play in meeting longer-term targets, including the UK's ambition to be Net Zero by 2050 to tackle the climate emergency."

The consultation response says the key to unlock these multiple benefits is "an ap-

MORE CONFOR CONSULTATION RESPONSES

Committee on Climate Change Sixth Carbon Budget

UK Government launches its sixth carbon budget ahead of COP26 in Glasgow next year. This is a significant moment to demonstrate serious intent to reach net zero. The UK Committee on Climate Change (CCC) has launched a consultation with a view to making proposals on a budget later this year. Confor prepared an initial briefing, recommending that the budget explores the potential for more short-rotation forestry on farms, and clarifies the carbon benefit of using more harvested wood products from UK forests. Chris Stark, CEO of the CCC, speaks at Confor's AGM on 24 September.

The importance of migrant labour

Confor has surveyed nursery and tree planting businesses to establish the extent of the sector's reliance on migrant labour from the EU, and whether our workforce could be threatened by Brexit. We are using the results to lobby government to allow flexibility in the rules to ensure businesses can access labour. It is also an opportunity to remind businesses to ensure eligible EU citizens have applied for settled or pre-settled status.

All Confor's consultation responses are available on our website. You are warmly encouraged to submit your own responses to open consultations to strengthen the forestry and timber voice.

£10m funding

Confidence in the forestry sector in Wales has been handed a further boost with a new funding package of £10m for woodland creation.

Anthony Geddes, Confor's National Manager for Wales, said he was delighted with the support for round 10 of the Glastir Woodland Creation and Restoration scheme, as well as a new round of the Timber Business Investment Scheme.

The announcement came less than a month after new figures for applications under round 9 of Glastir showed a huge

proach to public policy and funding which works in tandem with woodland owners' and businesses' interests. Doing that will ensure benefits are sustainable and enduring, not just for the lifetime of a grant or specific initiative."

The Tree Strategy is linked closely to the development of ELMs, post-CAP funding for environmental land management England, in which Confor is closely involved. While this only applies to England, other nations will watch its development and trials closely, and use the outcome to develop their own rural environmental policies.

As a key stakeholder, Confor has an assigned Defra representative who is keen to visit forestry sites along with the Rural Payments Agency and ELMs communication team. Laura Henderson of Forestry Commission is working within Defra to ensure forestry is integrated in the scheme. While it is often frustrating to see forestry overlooked or misunderstood in a policy which is mainly focused on agriculture, the process is a tremendous opportunity to improve the understanding of forestry and wood within Defra.

We will look to set up visits with Confor members in coming months.

Tree planting and wood use at heart of Scottish Green Recovery

The Scottish Government has pushed up its woodland creation targets significantly as it announced increased investment in forestry and put tree planting and wood use at the heart of a Green Recovery.

An overall investment of £150m suports plans to plant 18,000ha of new woodland by 2024/5, a 20% increase on the previous target of 15,000 hectares annually.

The Programme for Government, published in early September, also pledged to increase the use of Scottish wood in construction - from 2.2m cubic meters in 2018 to 2.6m cubic meters in 2021/2022.

Scotland's Rural Economy Secretary Fergus Ewing said: "Having created more than 22,000 hectares of new woodland in the last two years, we are continuing to invest in nature-based solutions to climate change. The forestry sector makes a huge contribution to the rural economy - over £1bn Gross Value Added and 25,000 jobs. This demonstrates the scale of activity in Scotland's forests, and the potential for making a significant contribution to the green recovery."

Stuart Goodall, Chief Executive of Confor, welcomed the commitment, which includes £100m in planting grants over the next five years, £30m to Forestry and Land Scotland to expand national forests and land and £20m to increase the supply of young trees. He said: "This is great news for Scotland's environment and economy. The commitment to increase woodland creation target to 18,000ha by 2024/25 shows real ambition and a growing recognition of the importance of Scotland's forestry sector for the country's Green Recovery, its future prosperity and its net zero ambitions. It's excellent to see the related ambition to increase the use of Scottish wood in construction."

Mr Goodall added: "With around 90% of new tree planting being done by the private sector, the onus will be on Confor's member businesses to deliver these ambitions facilitated by further improvements to the current grant scheme - and we can see a strong planting pipeline already over the next few years."

As the planting target goes beyond the lifetime of the current Scottish Parliament, Confor is calling on all parties ahead of next year's election to incorporate the same level of ambition into their own policy platforms.

"With the UK Government aiming for 30,000ha of new woodland creation by 2025, it is clear Scotland will continue to deliver the vast majority of this. This positive statement of purpose puts the onus very firmly on the other countries in the UK to deliver their part of the overall target."

Mr Goodall said the Scottish Government had a strong understanding of Confor's three-pronged and joined-up approach - to plant more trees, manage existing woodlands better and use more home-grown wood.

windfall for Welsh forestry

appetite to plant trees among farmers and landowners.

The Welsh Government opened the ninth round of Glastir Woodland Creation (GWC) in March - and when the window closed on 31 July, there had been 379 expressions of interest received, to a value of £17.5m. The applications equate to 4200ha of potential tree planting with a budget to achieve just over half of this.

Applications are going through eligibility checks, before a formal scoring and selection process. Contracts to plant will be issued to successful applicants before the 31st December 2020.

Mr Geddes said: "These are hugely encouraging figures which show that there is enormous hunger to plant trees among farmers and landowners in Wales.

Confidence

Reflecting on the financial support for Glastir round 10, Mr Geddes said: "This will give real confidence to investors, landowners and managers to create new woodland in Wales. We know there is significant demand to plant from the round 9 applications and this new funding means we can look forward to a strong planting pipeline developing in 2021."

He thanked Lesley Griffiths, Minister for Environment, Energy and Rural Affairs, for her commitment to forestry and continued: "This is another significant step towards meeting decarbonisation targets - and goes hand in hand with the economic benefits this will bring to our rural areas and our preparation to grow more timber to meet a future surge in demand."

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Natural Resources Wales consults on Timber Sales & Marketing Plan

Natural Resource Wales released the consultation for their Timber Sales & Marketing Plan for the period of 1 April 2021 – 31 March 2026 on 1 September. The consultation seeks feedback on how the plan once written will increase the scope, process and impact of the products sold from the Welsh Government estate.

The text of the document is a combination of ambitious concepts and requests for feedback on proposed new directions.

For the harvesting and processing industry in Wales and the Marches it is certain that the next Timber Marketing Plan will bring change. Potential reduction in timber availability and increased standing sales will also impact upon private sector timber producers. As Confor we want to encourage all our members to get involved and ensure change is beneficial for the industry.

For some business, the shift away from direct production creates an opportunity. The reduction from the current programme of circa 100,000m³ per annum will undoubtedly create greater competition for what remains.

On the other hand, the overall reduction in available timber is a challenging message for our industry and 20,000m³ p.a. represents the consumption of a small mill, and the whole sector would suffer should this result in a drop in processing capacity. Our industry response must question how the productivity of the estate has fallen by significantly more than just the volume of infected larch harvesting and whether there are systemic management issues that risk production, and NRW's income, falling further.

Whilst the consultation will take feedback on the proposed harvesting targets it is also looking for guidance on the role NRW plays in developing the market for it products. There are questions on topics covering brash recovery and the role of Natural Resources Wales to encourage more Welsh timber use within the Welsh housing market.

Strong consideration must be given to NRW's aspiration to be an exemplar public body, promoting and maximising opportunities for social enterprises, skills development, and the promotion of well-being through the land they manage and influence, and the way they run our business. It will be important to secure the high levels of safety and quality to which professional businesses adhere . Any forestry operation carries a risk and all social enterprises or community interest groups must be required to work to the high standards required of our members.

There are many positive opportunities for the industry to engage with and embrace, not least the acknowledgement from within NRW that the industry needs them to provide better performance indicators and reporting. This is an opportunity to look at your business and share the methods and performance indicators that help manage your timber supply.

For the first time this is a public consultation so anyone can go to the website and respond. It is hugely important that along with the Confor response, as many members of the industry as possible also submit their thoughts and views. We have been told that numbers will count, even if they simply repeat the Confor response!

We are committed to taking the feedback from our members to ensure that the industry voice is heard. To support this, Confor will be holding a Consultation Webinar in the week commencing 5th October 2020 open to all members.

NRW advise that there will be customer & stakeholder engagement webinars but not dates have been released as yet. Please keep an eye on E-News for further details.

Contact **Anthony@confor.org.uk** for details on the consultation.

CONSULTATION KEY POINTS

A shift to a 'triple bottom line' approach in respect of timber sales, ensuring economic, environmental and social sustainability. Measures to deliver this include:

A desire to see more support and opportunity for community-based enterprises, small and medium sized businesses, and micro-businesses

Seeking to gain the greatest value for money for the public purse

Exploring opportunities and options available for alternative land management

A 20,000m³ drop in timber supply to 830,450m³ marketable volume each year

A shift away from direct production to nearly 90% Standing Sales

Four programmed sales per year with potential for additional interim sales

A commitment to improvement of safety culture in the industry

New performance indicators relating to delivery of Timber Sales.

CONFOR WELCOMES NEW MEMBERS

Matthew Cope, Perthshire
Bothy Stores, Edinburgh
Leyton UK, Edinburgh
Murray Snell LLP, Edinburgh
Tayside Forestry Ltd, Dundee
Treelike Ltd, Swansea

Q&A

Lord Ian Duncan of Springbank has been named as the independent Chair of Confor.

Appointed a working peer by UK Prime Minister in 2017, Ian is currently Deputy Speaker of the House of Lords. Previously Ian was a UK Government Minister, serving in each of the territorial departments (Scotland, Wales & Northern Ireland) and latterly as Minister for Climate Change with responsibility for international negotiations. Before joining the Government, he spent over a dozen years in Brussels, finally as an MEP. During his time in the European Parliament, Ian sat on the committees responsible for Environment and for Energy. He was the Parliament's chief negotiator on the reform of EU carbon markets and was his group's chief negotiator on nine pieces of environmental legislation. During his tenure he was ranked the 10th most influential MEP on environmental policy and 6th on energy by Votewatch; and 15th most influential individual in the EU on Energy by Euractiv. Ian previously worked for BP, the Scottish Refugee Council, the Scottish Fishermen's Federation and the University of Bristol. He is also Chair of the National Forest and a board member of the Schwarzenegger Institute.

What attracted you to the role of Chair of Confor?

My grandfather was a sawmiller at Kirkie's Mill in Perthshire, so trees and timber were a big part of my childhood. The resin-rich scent of cut wood still transports me back to the mill – now sadly derelict – that stood below the High Kirk in Alyth. I still have my grandfather's Hopus's Measurer in the house.

Over the years I have worked for a range of outfits – BP, Scottish Fishermen, various parliaments, I was even the short-lived production manager of a caravan manufacturer – but I have always returned to broad environmental issues. Being unshackled from government gave me the opportunity to explore which issues I wished to champion, just at the time that Confor was looking for a chair...

What are your first impressions of Confor and how do you see your role as a 'Member's Champion' evolving in the coming months?

Confor represents an intriguing amalgam of tradition and innovation, rural forests and urban demand, environmental solutions and environmental challenges. In many ways Confor and its members are the answer to any government's problem checklist: jobs in rural areas, the ingredients of greener buildings, a sustainable economic resource, a carbon sink, an necessary escape in a Covid world. The question is how to position ourselves to gain maximum value and traction from what we have to offer.

The next few months I hope to be able to meet the members face to face. So far it has been all Zoom. There is no substitute for hearing directly from the folks at the sharp end, and I look forward to that possibility.

Given your political background, what do you see as the biggest political challenges and opportunities facing forestry and tree planting in the UK, and how can we best tackle them?

The big challenge across the UK is governments' setting challenging tree planting targets but failing to recognize that there isn't the land available to meet the targets. Getting to the bottom of why not will be critical; examining the grant support and simplifying the procedure, addressing the failures in communicating the advantages to landowners, ensuring support is commensurate with the range of asks. A lot will be riding on the English Tree Strategy.

PERSONAL INTERESTS

Favourite film/ TV show?
It's a Wonderful Life or Some Like it Hot; Yes Minister or Dr Who

Favourite music?
Bach's Cello Concerto No 1 in G major, Johnny Cash Ring of Fire

Favourite tree?
The Fortingall Yew or Mary Queen of Scots Thorn in St Andrews

Favourite forest walk?
The Den o' Alyth

Favourite holiday destination?
Florence, Italy, or Virginia, USA

Favourite sport?
I like to run long-distance

What are you most likely to be found doing when not working?
Drawing or painting

And then there are the grander challenges: climate change; post-Covid expectations, Brexit and its implications for trade, increasing prevalence of tree diseases and restrictions on the chemical solution.

In the months and years to come it will be vital that the forestry sector speaks clearly with one voice.

Confor has a small team compared to other land-use and industry bodies, and the voice of environmental groups are much louder and more often trusted by the public, how can we be heard in presenting the true story of modern forestry and wood?

In my experience it is not size by which you are judged. A small, talented group, focused and well deployed can move mountains. To give an example. I worked for the Scottish Fishermen's Federation during the height of the cod crisis. The problems confronting us were legion. Political interest was dialled up to eleven. The media were constantly asking for comment. There were daily calls with ministers. And the entire operation consisted of me and Hamish the CEO. We were of course able to draw upon the experience and talents of the membership (much like Confor) but we knew our stuff, had a clear strategy, and were focused on outcome. In my time with the Federation were able to turn the industry around. But there were only ever two of us in the office.

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5 NATIONAL TREE COLLECTIONS.

8 SPECIALISTS.

1 CHAINSAW RANGE.

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Fuelwood Scotland to host demonstration days

This year's APF would have formed the cornerstone in the business plan for many of the UK's forestry machinery suppliers. Its cancellation leaves tens of thousands of customers unable to view machinery first hand and benefit from working demonstrations.

The impact of the Covid-19 pandemic has forced many businesses to diversify and develop imaginative solutions to continue to provide their services. Treeline Woodlands in West Linton and Fuelwood in Warwick have joined forces in an attempt to produce smaller, regional alternatives to the APF.

Working together as FUELWOOD SCOTLAND, the two companies will host two demonstration open days at their spacious, outdoor premises in West Linton, near Edinburgh on 9th and 10th October 2020.

This free event will enable all visitors to: have safe, socially distanced discussions with the Fuelwood team; see full working demonstrations; and have hands on experience of the full Fuelwood range of machinery.

The team will be showcasing an impressively wide range of wood fuel and forestry machinery including Heizohack chippers, Plaisance mulchers, FTG Moheda and Avesta Vagnen timber trailers and cranes, Mecanil grapple saws, Exac-One tree shears, Blacks' cone splitters, Lucas Mill sawmills, AMR saws and log splitters, and Japa and Fuelwood firewood processors and kindling machines.

They will also make sure to include examples of many associated accessories such as timber grapples, timber decks and racks, dust extraction systems, and log cleaning systems. The final jewel in the crown will be a selection of Valtra, Fendt, Predator, Caterpillar and Kubota machinery also on display. This event promises to be the most comprehensive working display of forestry and firewood machinery available in Scotland during 2020!

9/10 October

All those interested in attending the event are asked to register by calling 01968 660 698 or completing the registration forms at **www.fuelwood.co.uk/Fuelwood-Open-Days.aspx**, so that we can manage attendance and ensure that all relevant social distancing measures will be in place.

Tilhill launches carbon business division

This September has seen the launch of new carbon offsetting business CarbonStore, a business division of Tilhill.

CarbonStore will be utilising its unique partnerships with Tilhill and Maelor Nurseries (both part of the BSW group) to unite landowners, who are looking to sell woodland generated carbon units, with companies that are keen to offset their carbon emissions. The objective being to provide a woodland-based carbon offsetting service that is unique not only in the strong partnerships it enjoys, but the benefits it offers its clients and its trustworthy ethics.

CarbonStore will also be offering landowners the opportunity to use the CarbonStore website to openly market their woodland carbon, enabling them to secure an equitable price for their woodland carbon that is potentially free of any charges too. This offers market leading value for landowners while also securing an honest price for companies whilst helping them maximise the virtues of their carbon offsetting ambitions.

The team is led by David McCulloch who has a BSc (Hons) in Accounting, Finance and Economics and 18 years' experience in the financial sector based in London and Tokyo, initially as an equity salesman and latterly as a corporate analyst. David is supported by Andy Baker MICFor, who has a BSc (Hons) in Ecology and Environmental Science and gained his wide ranging forestry experience within Tilhill with carbon sequestration having been the driver of his forestry career. Andy also represents the Institute of Chartered Foresters (ICF) on the Woodland Carbon Code Advisory Board.

https://carbonstoreuk.com

New Chair appointed to Scottish timber industry group

Guy Watt has taken on co-Chairing the Scottish Forestry & Timber Technologies Leadership Group with the Cabinet Secretary for Rural Economy and Tourism, Mr Fergus Ewing, following the retirement of Martin Gale.

Guy brings with him 40 years of experience in forest economics, forest investment and rural economic development both in the UK and overseas.

He is highly regarded throughout the Scottish wood supply chain and beyond and was the author of "Roots for Further Growth" the current industry strategy for economic growth and the recipient of the Confor award for Dedicated Service to Forestry Award in 2019.

Please send your news to stefanie.kaiser@confor.org.uk


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LISTER WILDER

Bothy brilliance

Stef Kaiser talks to Bobby Niven, founder of Bothy Stores, a hi-spec hut imagined as a work of art.

Bothy Stores sells architect-designed prefabricated cabins, alongside a range of products developed exclusively by a selection of prominent artists, designers and makers.

Its signature product is the Artist Bothy – a compact multipurpose cabin that can be installed on almost any site to provide a comfortable and sustainable private retreat. Sales of the Artist Bothy help to fund Bothy Project – a network of artist residency spaces across Scotland and beyond.

Bothy Stores is supported by Scottish Enterprise and Social Investment Scotland.

The Artist Bothy is an evolution of the Bothy Project network of off-grid artist residency spaces. Designed by the project's founders, artist Bobby Niven and architect Iain MacLeod, it was developed in response to demand for a multipurpose self-contained cabin that can be located almost anywhere.

www.bothystores.com

THE BOTHY

A standard bothy is 16.5m² in size, with a sleeping maisonette, a composting toilet adjacent to the building, and an outdoor shower. A larger version would include an extension at the end with plumbed bathroom and a bed on the ground floor. Turnkey price for a standard both finished inside and out starts at £29,000.

Right: Bothy Project bothy at Inshriach estate

Below: Artist Bothy at Balcaskie estate

Artist and builder Bobby Niven (right) pictured with architect Iain MacLeod

How did you go from being an artist to designing wood cabins?

I was trained as an artist at Glasgow School of Art. In the art world, the challenge is sustaining practice and you end up working for other artists and galleries. And in doing so, you gain experience in working with different materials. While building timber constructions for gallery spaces, I started to enjoy joinery and carpentry and got interested in learning more about working with different types of wood or wood-based materials. From there, I started to get more and more involved in projects that required building wooden structures.

What are your considerations when sourcing timber for your bothies?

For Bothy Stores, we chose only trusted suppliers that we had experience working with before. For the cladding, we work with Russwood. As standard, they supply Scots larch for the gable end and the Russwood oak engineered floor, which is of European origin. For other timbers we have just started to work with Vastern Timber, who

THE BOTHY BUILDING BLOCKS

The Artist Bothy is constructed using a digitally-manufactured building system designed in partnership with Blok Build. The superstructure of these bothies is made out of closed-panel cassettes which are free of studwork. "It's a technique that could be using for housing but I haven't seen it being used in Scotland, Says Bobby Niven.

Sheets of OSB are cut into labelled parts on a CNC machine and assembled by hand into cassettes before being fully insulated and sealed. For the gable form the cassettes are joined by lap joints. This system is used for both the prefabricated and flat-pack version of the Artist Bothy.

The advantage of this construction technique is efficiency in both on-site construction and in resource use. The cassettes, which are made of OSB, don't rely on construction grade timber but use a lower grade sawmilling by-product, therefore maximising the carbon stored from a harvested tree.

offers a really great range of British timbers, including oak.

For us, price of materials is an issue because we face fierce competition from mainstream garden centres and other suppliers of off-the-shelf cabins. For them, cost is all that matters, not provenance of raw material, so that's who we compete with.

However, we'd like to use local or at least British timbers only and we are almost there. In some cases it is challenging to find suitable quality products at a competitive price, and we are still working a fair bit with Siberian larch, simply because of the excellent quality. The bulk of timber we use for our standard bothies is Scottish larch, which is fairly cost-effective and easy to source. If customers specify oak then there will be a mark up in price and it becomes a more exclusive designer product.

Currently, the OSB used in our cassettes is made from Smartply. I'd like to get more insight into provenance, energy efficiency and carbon footprint of the materials used. I would prefer it if the raw materials of the Blok Build cassettes were sourced from the domestic supply chain and be able to specify it. Smartply was chosen for its quality and suitability, but is being processed in Ireland.

What makes your bothies special?

Following the trend of diversification of rural estates, glamping has become popular and as a result, there is quite a range of pods, cabins and yurts on the market. Design and longevity is what differentiates our bothies.

Aesthetically, they clearly stand out from the rest of glamping pods that are commonly seen around our country. They are architect-designed for a new, contemporary look, featuring minimalist shapes and a corrugated metal sheeting with an attractive rust patina. Culturally, and in the context of the big Scottish vernacular, it is this look that appeals to people, it reminds them of the countryside, of holidays in the Hebrides.

The bothies are designed to last a lifetime and built with with energy efficiency in mind. Under ideal conditions, the lifespan of this metal sheeting is of 156 years, according to the supplier.

Who are your buyers?

A recent example of a Bothy installation is at Inverlonan estate, just outside Oban. The larger estate had been split up into smaller plots of land and they were looking to set up a Bothy hotel. The main farm steading was converted into a hotel centre with a series of bothies along the side of Loch Nell. Two bothies were installed at the start of this year and they are being used as "rough luxury" cabins. The resort was launched this year and demand is strong, especially given the staycation scenario. There is a key opportunity for landowners and events venues who need to move away from large gatherings towards smaller self catering units.

For the landlord, the return on investment for a cabin can be quite good, we're looking at 1.5 – 2.1 years to recover the cost of the bothy. But the benefit of the bothy over some other glamping pods is the return over the lifetime, because you can have it for 60 years.

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What has Confor done for you in 2020? Ask our members.

With this FTN issue, you will have received a copy of our annual report of Confor's work and achievement on behalf of our membership. But don't just take our word for it, see what our members are saying about the value of being a member of Confor.

ANNUAL UPDATE 2020

What does Confor do for me?

Confor is working for you all year round. These are a few highlights from the past year, illustrating the real value of your membership contribution to Confor.

A Stronger Voice: Political Engagement

- Our **2019 election manifesto** anticipated the UK Government's planting target of 30,000 ha/year by 2025.
- The SNP government joined with us to commit to **18,000 ha/yr in Scotland (by 2025)**, and has committed to increasing the use of wood in construction.
- We supported the Welsh Government in developing a **£1.5m Welsh Forest Industry Recovery Scheme** to support the supply chain.
- We are working with Northern Ireland Minister Poots to deliver **9,000 ha of planting by 2030**.
- Our **re-launched Westminster all-party group of MPs and Peers** has held online events with UK forestry minister Lord Goldsmith and Lord Deben (Chair of the Committee on Climate Change).

£110m+ secured in additional funding for woodland creation across the UK as a direct result of our lobbying

£2m funding made available to support nurseries and planting businesses

£7m was successfully distributed through the Scottish Timber Transport Scheme, with a further £1m awarded

Lobbied successfully for the revision of the Glastir Woodland Scheme to ensure all of the increased

£10m budget is allocated into deliverable schemes

Changing Attitudes: Promoting Forestry and Wood

- Confor continues to receive frequent requests to appear in the **media** – from broadcasters, newspapers and online publications.
- We launched our influential **Biodiversity, Forestry and Wood** report to demonstrate the true benefits of productive forestry for the climate and nature.
- **Interviews and coverage** with:

- We have produced over **80 press releases** on issues important to our members, and 90,000 people now see our tweets on average each month.
- A **media protocol** was updated in early 2020 to ensure inquiries were handled with speed, efficiency and professionalism.
- In 2020 we launched a new **Instagram** account @forestsandwood

Building Markets and Tackling Regulation

- With our partners in Wood for Good we are promoting **Wood COrts less** an industry-wide campaign that demonstrates that using more wood can reduce CO_2 in the atmosphere.
- We successfully lobbied for the **continued use of red diesel** in forests and we are now seeking the same in mills.
- We ensured new legislation on placing timber products on the market was light touch.

"It is a lonely life, being a forester. Kit, contract, Corvid, colleagues; and all that before you have even cut the tree. You cannot do it all by yourself; you need a decent union behind you. I turn to Confor at all levels in my business; it has a great team."

Jack Hanbury, Pontypool Park Estate

"As a small independent in an ever increasing industry that is swamped by red tape and bureaucracy, by joining Confor I feel someone is listening to my concerns and as a recognised forestry organisation they will be better placed to raise my concerns and help forge a path for the future of our forests."

Patrick Turk is a sawmiller with a background in bespoke furniture making. His knowledge of furniture gives him the insight to get the best out of a saw log, not from a quantity point of view but from a quality one, cutting planks that in their own right would be classed as works of art.

www.forest2furniture.co.uk

"The function that Confor carries out is essential to the work programmes of Scottish Woodlands and all the associated contract work force. Confor's lobbying strength and success in raising issues with Government officials to try and streamline approval processes has been vital to the progress we are seeing today."

Ralland Browne is the Managing Director of Scottish Woodlands Ltd. Scottish Woodlands is a predominantly employee-owned company providing a comprehensive range of forest, estate and land-related services over Scotland, North England, Wales and Ireland. Ralland became a Director of Confor on 1 August 2017. He joined the Board having been a member for many years and was keen to participate and contribute toward Confor becoming an increasingly strong representative body in the UK Forestry Industry.

www.scottishwoodlands.co.uk

"Forestry is a diverse business sector that is changed and influenced by many government and wider industry factors. Confor membership gives me a place to access current information concerning my business area, both online and in Forestry and Timber News. The range of services on offer and benefits of membership is extensive and constantly evolving demonstrating a progressive and focused approach to all aspects of the timber industry. During lockdown we had cause to engage the services of Confor and they assisted us to resolve an issue with swift and practical help that has provided us with a sound footing for the future. The assistance of Confor was invaluable."

Alan King is the Company Director of A & G King Timber Ltd, a successful family owned business supplying sawn timber products to a variety of UK customers from its base in South West Scotland. He has more than 30 years' experience in the timber industry.

CCF Group comments on Confor's Biodiversity, Forestry & Wood report

Dear Editor,
I am writing on behalf of the Continuous Cover Forestry Group (CCFG) to draw your readers' attention to our concerns about some assertions made in the recent Confor report, *Biodiversity, Forestry and Wood* (BFW).

While we understand the importance of summarising relevant research on the impacts of forest management on biodiversity, we feel that there are several places in Section Two of the report which contain misleading statements about Continuous Cover Forestry (CCF). These include poorly evidenced statements about negative effects on ground flora, lower yields and lesser carbon capture, and potential vulnerability to windthrow. Given the publicity being given to the BFW report, we must stress that these particular statements are not supported by either operational or research evidence.

We have prepared a short paper setting out our criticisms of this aspect of the report. This paper and supporting references is freely accessible on the CCFG website at **www.ccfg.org.uk/wp-content/uploads/2020/09/CCFG_comments_on_Confor_Biodiversity_paper.pdf.**

As the BFW report rightly mentions, British forestry will be increasingly characterised by a diversity of management approaches and we strongly believe that CCF can and will play a major role in that diversification.

WL Mason
On behalf of the CCFG committee

Note from Confor: We are pleased that our BFW report has generated a lot of thoughful debate. There is also a response from the British Ecological Society, found here: **www.britishecologicalsociety.org/biodiversity-forestry-and-wood-reflecting-on-the-evidence/**

Rothiemurchus pine juniper heather
Picture Eleanor Harris

FTN is your magazine!

If you are a Confor member, why not take the opportunity to get your news, stories and opinions out to the wider sector?

SHARE YOUR COMPANY NEWS

Send me your company's news updates. I publish a selection in a dedicated FTN section called "News from our members", right at the front of the magazine.

CHECK OUT OUR FEATURES AND PITCH YOUR CONTENT

Every FTN issue includes one or two feature topics – some of them might be particularly relevant for your business – so why not get in touch and suggest an article to showcase your expertise? Upcoming features and editorial opportunities are published in our enews, and you can find information about the next feature on the last page of each FTN issue.

DISCUSS YOUR STORIES AND PROMOTION NEEDS WITH THE EDITOR

Do you have an interesting story you want to share but are not sure how to use Confor's communications channels to promote it? Get in touch with me to find out how we can best make use of the magazine or other communications platforms, and what we can do for you. We can offer several formats: member profiles, feature articles, technical updates or contributions to regular sections. Note: if your content is mostly promotional, then advertising will be your best bet!

Next upcoming feature topics
FTN December: Wood science and Timber treatment; Professional services
FTN February: Forest Management and rural diversification; Human resources
Don't miss out, get in touch!

GET IN TOUCH

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The end of the Transition Period

Upcoming changes and ways to prepare

The UK left the EU in January this year and is currently in the transition period, which is coming to an end on 31st December. From January 2020, the UK and EU will embark on a new relationship. In addition, we recognise that businesses have been responding to an unprecedented pandemic. Whilst many businesses would have been preparing for EU Exit since last year, we recognise the impact the pandemic will have had on their ability to prepare and plan. Our new relationship will involve a series of changes and opportunities for businesses. Many of these changes will be required regardless of the agreement we reach with the EU on our future trade relationship as the UK will be leaving the single market and customs union. With this in mind, the forestry industry needs to be prepared for these changes as explained below.

Questions and enquiries to Andrew White, Principal EU Exit Advisor, Forestry Commission **andrew.white@forestrycommission.gov.uk**

Forestry Commission

LABOUR

As discussed by the law firm Brodies in this magazine's June edition (**www.confor.org.uk/media/247809/june-legal-matters.pdf**) the end of the transition period will mean the end of freedom of movement between the EU and the UK. There is expected to be a significant impact on sectors within forestry that rely on EU seasonal labour, particularly nurseries and planting & establishment businesses. Confor's July labour survey (**www.confor.org.uk/news/latest-news/confor-draws-government-attention-to-dependence-on-eu-and-foreign-labour-in-vital-forestry-jobs**) highlighted some businesses source over 50% of their seasonal labour from the EU and that the domestic workforce is likely to find it difficult to fill these positions in the short term. On top of this, a weak Sterling and the impacts of EU exit and Covid-19 present a risk factor that some EU seasonal workers do not stay in the UK.

There has also been ongoing work to ensure that forest machine operators and forestry managers can continue to be hired from outside the UK. The forestry industry has written to the Migration Advisory Committee to request the inclusion of these roles in the shortage occupation list, which would make hiring from outside the UK easier, however there is no guarantee that this request will be accepted.

BE PREPARED

EU citizens in the UK will have until June 2021 to apply for settled status. Businesses should ensure that current EU employees have applied for settled status and support them in the application process where necessary, including acting as visa sponsors. Businesses understand that hiring from outside the UK into these roles will be more challenging from January and make alternative arrangements where possible.

EU TIMBER REGULATIONS

The Government's 25-Year Environment Plan sets out our ambition to support and protect the world's forests, support sustainable agriculture and work towards zero-deforestation supply chains.

The UK was instrumental in the EU's adoption of the EU Forest Law Enforcement Governance and Trade (FLEGT) Action Plan, which aims to improve forest governance, reduce illegal logging and encourage trade in legally sourced timber.

This consisted of two regulations:

a) The EU Timber Regulation (EUTR), a demand side measure, which prohibits the placing on the UK market of illegally harvested timber. Businesses must exercise due diligence on timber imports to demonstrate legality of harvest when products are placed on the UK market for the first time.

b) The FLEGT Regulation, a supply side measure to improve the supply of legal timber. Once a timber producing country has agreed a Voluntary Partnership Agreement (VPA) with the EU and has subsequently met sufficient standards, they can issue FLEGT licences to verify legality of timber harvest.

The UK Government will maintain its commitment to tackling the trade in illegal timber and accordingly the Timber and FLEGT regulations will become retained EU law within the UK, while because of the Northern Ireland Protocol EU regulations will apply directly in Northern Ireland.

The only country that currently has an operationally approved FLEGT Licensing system is Indonesia. The UK has replicated this agreement bilaterally with Indonesia to ensure that we can continue to accept their FLEGT licenced timber post transition period. The UK will continue to replicate VPAs with other producer countries as they become capable of issuing FLEGT licences.

The Timber Regulations and FLEGT will continue to have the same requirements and operate in the same way after the transition period ends. Further guidance relating to the requirements of the Timber Regulation and FLEGT can be found at **www.gov.uk/guidance/eu-timber-regulation-guidance-for-business-and-industry**

IMPACT OF BREXIT ON TIMBER TRADE

Currently, the UK imports the majority of sawn softwood, particleboard, fibreboard, and paper and paperboard from EU countries; sawn hardwood and wood pulp from a range of both EU and non-EU countries; and the vast majority plywood and wood pellets from non-EU countries. The Forestry Commission does not think that things will change significantly in this flow of trade from January. However, stakeholders should be aware of a few points:

The value of Sterling against the Euro and Swedish Kroner will continue to influence prices and relative competitiveness of UK and imported timber.

Timber prices remain strong in the UK, standing sales prices are up 132% in real terms (177% nominal terms) when compared with prices realised 10 years ago

Import and Export

The Northern Ireland Protocol: This will be implemented from January 2021 and will require tariffs to be collected on goods at risk of entering the EU's Single Market at ports of entry, rather than at the land border between Northern Ireland and the Republic of Ireland (to avoid a hard border). The island of Ireland will remain a Single Epidemiological Unit for food and animal health purposes.

Exports: There will be an increase in the volume of Phytosanitary Certificates and regulatory checks required on regulated forestry material exported to all EU countries, as well as to Northern Ireland.

Imports: Currently, the UK imports regulated wood and wood products under the plant passports which do not require checks from the EU, From January 2021 this regulated material will require phytosanitary certification and checks before entering the UK. This will be in addition to the 400,000m^3 of third country wood and wood products which is currently inspected annually by the FC. From January 2020 only high-risk materials will require pre-notification and import checks, with full phytosanitary checks being phased in from April and from July 2021. It is assumed that the EU will implement checks in the same way as it does now for third country material.

Tariffs: The UK Global Tariff, which replaces the Common External Tariff, will come into force from January 2021. The main changes are liberalisation, where tariffs have been removed completely, and simplification, where tariffs have been reduced.

IMPORT TARIFFS

The following products will no longer have tariffs:

- Live forest trees
- Fresh Christmas trees
- Certain types of sawn and chipped: mahogany; virola, imbuia and balsa; maple, cherry, birch, poplar and aspen
- Wood sawn or cut lengthwise excluding those listed above and coniferous, oak and tropical wood
- Sheets for veneering made of: coniferous wood; a number of exotic woods;

The following products will have reduced tariffs:

- Various types of particle board
- Oriented strand "OSB"
- Waferboard and similar, including of exotic species
- MDF
- Fibreboard
- Plywood
- Cases, boxes, crates, etc. of wood
- Cable drums of wood
- Pallets & pallet collars of wood
- Box pallets & other load boards of wood

EXPORT TARIFFS

Export tariffs to the EU and other destinations are unknown until ongoing negotiations are concluded.

FORESTRY REPRODUCTIVE MATERIAL (FPM)

The UK will continue to be part of the OECD Forest Seed and Plant Scheme after the transition period ends. However there remains a risk that the EU does not immediately recognise OECD certified FRM as equivalent to their required standards, meaning the FRM sector may not be able to export to the EU for some time after the transition period. A request for agreement of equivalence has been submitted by Defra, but there has been no response yet from the EU.

BE PREPARED
Businesses that are able should export FRM to the EU before the end of the transition period, fulfilling orders earlier if possible, as a mitigating action.

WOOD PACKAGING MATERIAL (WPM)

Under a UK-EU relationship based on WTO terms it will be a legal requirement for all wood packaging material moving in both directions between UK and the EU to be compliant with a treatment and mark as specified in the International Standard for Phytosanitary measures No 15 (ISPM15). The UK will continue to take a 'targeted approach' to enforcement for WPM imported into the UK from the EU, adopting a phased approach to checks.

BE PREPARED
The WPM sector needs to fully understand the potential risks of non-compliance with ISPM15 requirements.

A voyage into uncharted waters

TIMBER AUCTIONS MARKET REPORT
Oliver Combe
Timber Auctions

UK softwood sawlogs

So, in mid-September 2020 we are on a roller coaster ride where the peaks get higher and the troughs get lower and now, we are suddenly climbing again.

After stabilisation in early 2020, there has been a sudden upward movement in log prices driven largely by increased demand and a seasonal lack of supply. Most mills are running at or near to full capacity and have been throughout the summer holiday season, demand is holding up unusually well into the autumn and stock levels are low. The increased processing activity levels have also seen the backlogs of sawlogs that built up during Covid now worked through and supplies from the forest now under pressure to the point where in some areas the situation is described as "hand to mouth".

This has inevitably put pressure on sawlog supplies and lead to a general trend of upward price movement:

Spruce sawlogs £75 – 85t delivered
Redwood sawlogs £80t delivered (La, Df, Pine)

The change in the market has been most pronounced in Scotland and results from this years Forestry and Land Scotland sales show the following;

- Standing sales prices have increased by 15% between 19th February and 15th July sales,
- All sawlog prices have increased by 15% between 19th February and 15th July sales,
- Small roundwood has decreased by -15% between 19th February and 15th July sales.

The figures from the 9th September sale have yet to be published but anecdotal evidence is of further increases of 5 to 10% on the July prices and although prices for sawlogs are increasing those for small roundwood and energy wood are static or decreasing and so standing sales prices have as a rule not risen to the same extent that they did in 2018.

England has seen a similar pattern of increases for sawlogs, whilst there has not been the same level of decreases for small roundwood that have been seen in the north, although the results from the most recent Forestry England sale on 3rd of September have not been published yet it appears that there have been further price increases from the July levels.

The sawlog market is also further now complicated is further complicated by some regional factors:

- The seasonal fall off in timber being offered to the market in Scotland and North England,
- Increased competition for sales on the Scottish west coast from Irish mills trying to replace volume held up in the Eire felling licence fiasco,
- In the south and midlands of England real signs that the long-awaited shortage of conifer timber is actually now happening, although the cancellation of shooting on some estates due to Covid and widespread ash dieback are providing a valuable opportunity to get harvesting work done in woodlands that were previously unmanaged.

The net result is that standing sales prices are all over the place and recent tenders have seen a noticeable spread in offer prices and highlighted the need for open market sales to back up negotiated sales.

In summary the sawlog market is moving upwards but the sudden and apparently fragile nature of the demand has made everyone very cautious and wary of a spike and subsequent collapse like that seen in late 2018.

Small roundwood

The small roundwood market in 2020 seems to be very different to the sawlog market and is characterised by oversupply in the north and south and downward price on energy wood due to very cheap oil and gas.

In the north, the oversupply is industrial conifer roundwood as a result of harvesting activity being focused on smaller crops during the peak of the first wave of Covid and although this situation is now coming into balance as harvesting resources are increasingly being moved back into sawlog rich crops, yards are full and prices are low.

Continued on p29

THE GLOBAL SCENE

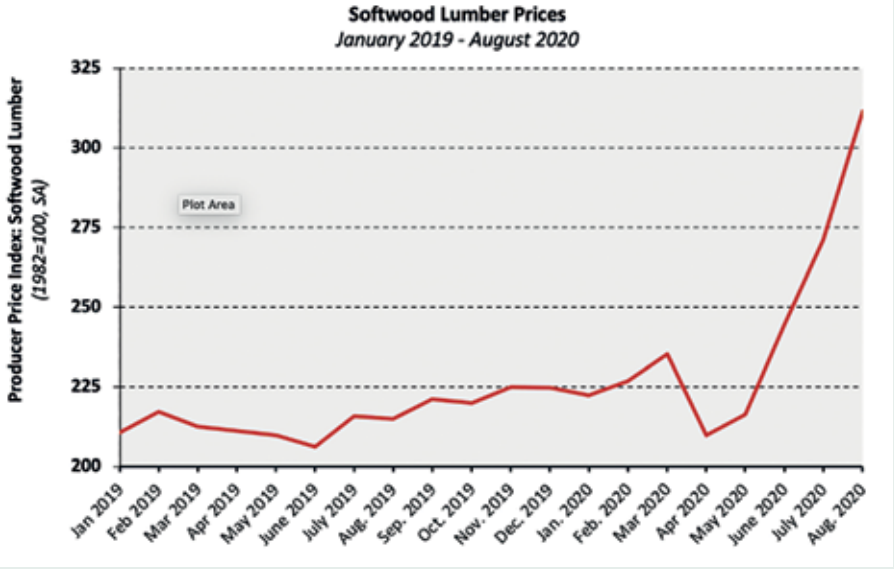
Supply and demand 'tip out of balance'

Quarter 3 of 2020 has been unprecedented in terms of the sawn timber market as global demand and supply have rapidly tipped out of balance in the two key markets of USA and China. What is highly unusual is that this market spike has only occurred in the softwood sawn timber markets and has had little impact on softwood small roundwood and hardwood sawlog markets where there appears to be declining demand and declining prices.

In the USA, against a background of declining demand, supply has fallen faster than demand and prices have rocketed to new record levels which would have been unimaginable even three months ago. The headline 2x4 grade 2 and better Western spruce, pine and fir mixed KD has rocketed to over $960 dollars per 100 board feet. This is against a previous high in June 2018 of $622. Low production levels and shortages of railway wagons or transport have pushed lead times out to three and four weeks.

Whilst the week commencing September 14 has seen a slight easing of the price at the start of the week there is now concern that the wildfires in California, Oregon and Washington, together with storms and floods in the Southern states, will further disrupt supplies from the sawmills to the markets and continue to see shortages of availability. In the past, the US has seen a seasonal downturn in prices during Q4 due to a slowdown in construction activity with an upturn in Q2 as spring sees an upturn again in construction activity.

The main driver behind the surge in sawn timber prices in the USA appears to be a rapid bounce back in new housing starts; July saw new housing starts jump by 22.6% to record the biggest monthly gain since October 2016 with the annual rate now at 1.496m units. July's increase has seen the overall starts return almost to the pre-Covid peaks seen in February 2020 and previously in July 2006. Activity slumped by



42% during April but has bounced back at a remarkable level.

The timber futures market in the USA is factoring significant delayed demand for spring 2021 and sawn timber futures are currently trading at 68% above their five year average.

Whilst prices surge in the USA, August showed the highest price increase recorded in 70 years, the other major global markets are also recovering with China, North Africa, Australia and New Zealand all showing signs of increasing demand.

China was the first country to impose a Covid lockdown and was also the first to emerge from lockdown and now seems to have avoided going into recession and back being the factory of the world and drawing in natural resources from around the world. Exports of roundwood into China have returned to near normal levels however, there appears to have been a major increase in the amount of spruce sawlogs going from central europe and in particular Germany to China in 2020 against a backdrop of record export levels in 2019.

So globally, two major markets have increased their requirements relative to available supply which has now pushed demand ahead of supply and lead to an unprecedented run of price increases the like of which has not been seen before, we are truly in uncharted waters in terms of lumber prices.

> In the USA August showed the highest price increase recorded in 70 years

Nearer to home this has had a sudden and pronounced impact on the North European wood fibre trade as demand for sawn timber has outstripped supply, inventory levels have fallen and prices have started to rise. Production levels in most countries remain below peaks as processors adapt to social distancing requirements in production facilities. This has meant that despite reduced demand prices have started to rise particularly in the key carcassing products.

Both China and America are now drawing significant quantities of sawn timber and sawlogs away from the European market and have changed a potential oversupply situation due to beetle and storm damage to a more stable market although at low price levels for growers, it appears that for the time being a catastrophic oversupply situation has been averted.

Logs exports from Germany to all other markets were 2m m^3 in Q1 2020 and 2.065m m^3 in Q2, whilst at the same time, exports of sawn timber have continued to rise and are currently well over two million m3 per quarter, although the central Europeans are not traditionally large suppliers of sawn timber to the UK the threat of cheap 'beetle' wood had together with falling demand throughout 2019 and early 2020 had lead to a downward trend in sawn timber prices which has just started to stabilise when Covid struck.

Now in Q3 of 2020 we are seeing a noticeable reduction in supplies of imported timber to the UK from the traditional Scandinavian producers at the same time as the potential supplies from central Europe are also diverted away from the UK to new nd better markets further afield

More locally, the Irish felling licence logjam has caused serious problems for the Irish sawmills by reducing the available volumes of timber to harvest and restricting production, given that the main export market for the Irish mills is the UK mainland this has further reduced supplies of sawn timber to the UK.

Recent changes to Irish law required the Department of Agriculture to license all forestry activity, including tree felling, planting and road building for log transport. This change also gives a broad right of appeal against the issuing of these licences, that allows virtually anyone to challenge such a decision. A small and active group of environmental lobbyers have used the opportunity to appeal against virtually every licence issued, without sufficient staff to deal with the appeals the system of issuing licences has ground to a halt with a two-year backlog of cases being appealed. This backlog is now threatening the processing sector who are in danger of running out of timber to process.

In the short term, the Irish mills have substantially increased their purchasing on the West coast of Scotland but this is not a long-term strategy for them as it is marginal buying and they need their core volume to come from Eire's forests for their businesses to remain viable.

Continued from p26

In the south, ash dieback related felling has seen a glut of hardwood biofuel and firewood come to the market which has resulted in prices steadily decreasing over the summer period and now settling in the region of £35 to £45 per tonne at roadside.

In the midlands and up into the north of England, the demand for both firewood and conifer small roundwood has held up remarkably well and there has not been the fall in prices seen elsewhere and prices have remained stable all year.

It will be fascinating to see if the seasonal upturn in biofuel and firewood demand starts to put pressure on available supplies and triggers price increases as we have seen in previous years.

Timber availability

The supply of timber to the market in the second half of the year remains a concern for most buyers who are now looking to secure wood for working in spring 2021, setting prices for the future today is only for the brave hearted!

Whilst currently there is good demand for finished products there is no knowing what the future holds, bought ahead inventories are falling and the wood needs to be replaced, then at the back of the mind is the question of is the wood going to come to market.

So currently whether they like it or not buyers of standing and felled softwood are facing serious competition to buy.

Hardwood saw logs

While the UK softwood market has weathered the Covid storm remarkably well to the point of now appearing to bounce back the hardwood sawlog market remains subdued, especially in the oak sector. The cooling of demand for oak across Europe has seen prices stabilise in the UK but there are regional variations. The West of England seems to have plentiful supplies of oak and the larger buyers are content to work through their existing purchases and have largely withdrawn from the market whereas in the east the supply is tighter and the buyers are continuing to look for logs.

On a more positive note there is little or no material coming in from Europe and where there is spot demand from local buyers for better quality logs good prices are still being realised.

The GB pound is hovering around the 1.10 to 1.12 rate against the Euro which makes imported material expensive and should favour home grown material.

The weak pound continues to benefit the export market and demand for export grade ash and beech is currently strong:

Ash £70-90m³ roadside less any handling costs

Beech £70-80m³ roadside less any handling costs

It should be noted that due to the requirement for export material to be loaded into containers the material often needs to be double handled which can cost £10 to £15m³ and needs to be factored into the net roadside price.

On a positive note the steady improvement in the economies of China, Vietnam and Malaya should start to see a pull effect on European hardwood species in late 2020 and early 2021 which should start to firm the prices.

Firewood

As mentioned earlier the firewood market is currently being strongly influenced by regional imbalances in supply and demand and as it is largely a secondary market fed by primary drivers the next six months will be interesting, in the south the primary driver is felling of diseased ash which produces some ash sawlogs, a bit more firewood and a lot of industrial biofuel. Currently this has led to an oversupply of biofuel and firewood but as the wave of activity moves northwards it appears that a vacuum of supply will be created in its wake. 10 years of targeting firewood sized material followed by a blitzkrieg on ash, coupled with habitat restoration and native broadleaf restocking policy has removed the prime 20 to 40cm dbh white hardwoods from our woodlands does not point to a sustainable supply of energy wood in England!

The firewood and biomass industry are going to have to adapt to processing oversize material, low quality and lower grade species such as sweet chestnut, oak, alder, field maple, birch and other mixed hardwood species, hopefully by the time this material hits the market oil prices will have recovered to $100 per barrel and we will get out of jail!

Summary

After the stabilisation of the market in early 2020 and the storm of Covid in quarter 2 the timber market is now experiencing a surge in demand and prices driven by the curious scenario of global supply falling faster than demand. The tipping of the supply and demand balance is driven by quite fine margins and the current market revival appears to be initially very fragile, lets enjoy it whilst we can.

If you have timber ready to market move quickly and give me a call to discuss your options for putting it to the open market.

TIMBER AUCTIONS

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

Forest market strong in period of uncertainty

FOREST MARKET REPORT

In an uncertain world, the UK commercial forestry market has not been immune, but it does appear to have bucked the negative trends and stepped up another gear. Bidwells' **Tim Barratt** reports.

As global economies have been turned upside down, UK forestry has remained a target asset class for investors. Looking back over the past 10 years, we have seen sustained, double digit rises in annual capital values for good quality, well located and productive forest properties. At the start of this period, the rise in forestry values largely reflected a re-basing of a historically under-valued asset class, but about five years ago it became clear that if these hefty annual rises in capital values were to be sustained, a corresponding rise in timber prices was needed. Along came Brexit, and with a comparatively strong UK economy which remains heavily dependent on timber imports, the impact of a weak Sterling made timber imports comparatively expensive, helping drive up domestic timber prices. As timber prices rose, the increase in forest property prices was sustained – good news for forest owners. Weak Sterling also made the UK attractive to European investors, drawn by the excellent timber growth rates but no longer put-off by the relative strength of the Pound.

Investor expectations

As we have moved through the last few years, investor expectations have changed in the face of an at times sluggish global economy, Euro member states days from default, American and Chinese trade wars and Brexit. In the face of volatile and unpredictable markets investors have sought safer homes for their funds, with a reduction in return expectations for UK forestry falling from approximately 6% to 7% ten years ago, to 5% or 6% by 2015 and down to 3% as recently as 2018. This lowering of investment expectations inevitably helped support the significant rise in forestry property prices observed over this time.

Allied to this, investors and their motivations have shifted too. Traditional forest owners have remained, but are joined by an ever-growing number of commercial and institutional investors, attracted by historic rates of capital return, the safety of an asset-backed investment and its green credentials in an increasingly image-conscious economy, where both corporate and social governance and environmental reporting regulations have played a part. Who would have thought five years ago that the next General Election would see forestry planting targets being front and centre for all major manifestos?

Supply and demand

The corollary to all the drivers for demand, is that most forest owners have wanted to retain their forestry investments – trees grow no matter what the economic conditions, so why sell one of your best performing and most secure assets? Where else could the sale proceeds be better invested? This has seen a relatively constrained supply of investment quality forest properties coming to the market in recent years, driving fierce competition. Many investors have sought off-market deals (with some succeeding), but in such a seller's market, it is difficult to understand why any forest owner would not seek to test the open market. Sale after sale has seen prices surpass even the most optimistic expectations. The timely and welcome publication of the Mackinnon Report has helped to unlock new planting opportunities in Scotland, providing investors with some of the necessary confidence to invest in bare land for afforestation at rates not seen since the 1980s. Even with this new outlet for investors, demand consistently outstrips supply, further fuelling competition.

So, a quick recap. Before the arrival of Covid-19, the forestry market was already

Continued on p33

Camps Woodland

Continued from p31

buoyed by rising timber prices, weak Sterling attracting European investors, the security of an asset backed investment in a volatile marketplace, excellent green credentials, many more investors than properties, not to mention healthy long-term forecasts, with global timber demand forecast to outstrip supply in the foreseeable future. Prices paid for forest properties were largely bound by conventional economics; the price of timber balanced against the internal rate of return an investor was willing to accept. As competition grew faster than timber prices, investors had to accept lower and lower rates of return. The stage is set. Enter Covid-19.

Where next?

All the rationales driving forestry investment six months ago have now been turbo-charged as stock markets have seen the modern stalwarts of investment falter. Oil companies are posting losses, some commercial investments appear as if perched on a precipice and many parts of the service sector have retracted and the focus is becoming sharper on green growth to build our way out of the Covid crisis. This has been reflected in prices being paid in recent transactions, with some investors clearly willing to accept extremely low or possibly even negative internal rates of return based on current timber prices to beat the competition and secure good quality forest properties.

We are also seeing larger institutional investors entering the market and not always7using 'traditional' forestry wisdom to support their purchasing activities. Such new investors may reflect the start of a new paradigm in forestry valuation, driven by the wider green agenda, where the value of forestry is not solely governed by the price of the timber that can be grown and sold but rather by the worth of the green credentials, corporate and social governance benefits, carbon credits or off-setting opportunities that forestry offers. Such a departure from conventional economics can be unnerving, as the sector may no longer be bound by traditional metrics of investment appraisal, moving towards individual investors assessing what value a given forest property might unlock in terms of allowing them to delivering on key sustainability targets or meet off-setting requirements under energy and carbon reporting legislation.

In this rapidly changing economic landscape, where substantial sums of money are seeking a safe-haven, there are risks and opportunities for our industry. Should forest property prices truly depart from conventional investment appraisals based on timber prices, then the fear is a bubble could be created as investors pay more than the forests are supportably worth. This risks losses for investors but also reputational damage for the forestry sector, which has worked hard to win hearts and minds (and political support) for the broad socio-economic, truly sustainable benefits delivered by our industry. The challenge to date has been how to consistently and transparently commoditise these intangible benefits in a green economy, while guarding against 'green-washing' by large investment houses, arguably more focused on short-term gain than securing sound long-term investments for their clients. These questions are easily posed but not so easily answered.

www.bidwells.co.uk

What a difference a month makes

TIMBER MARKET REPORT
Harry Stevens

Who was it who said that a week is a long time in politics? Well, if I may paraphrase them, at the moment it feels like a month is a long time in the timber market.

If we cast our minds back over the last few months we have seen a sector and a supply chain that came pretty much to a full stop but has now moved to a position where almost all processing plants are running at 'full bore' and still hungry.

Currently, and perhaps for the first time in several years, the sector is being driven more by the sawn market rather than by the small roundwood users.

Demand came back into the sawn market initially driven by the requirement for palletwood once the reality of lockdown hit the supermarket shelves and we all marvelled at our toilet roll mountains then panicked when they disappeared. However, conversely, as the nationwide lockdown recedes into history, palletwood is now the weakest part of the sawn sector as demand has well caught up with supply.

This was rapidly followed by the sawn fencing market as the nation went through a DIY frenzy in our gardens, thanks to furlough and the very good weather. Indeed, as I write (18 Sept 2020), The Office for National Statistics (ONS) have announced that retail sales volumes rose by 0.8% between July and August, mainly in household goods and the DIY sector. We are still seeing considerable shortages in this area, though as autumn and winter start to bite the supply chain should have a chance to catch up.

And now we have seen the return of demand in the construction market, as building starts to pick up. This is driven notably by the 'white van man' in the repair and maintenance sector and the fact that Britain is a less attractive market for the Baltic countries than USA where construction has taken off owing to fantastic amounts of money being pumped into the economy. The resulting building starts are sucking in imported sawn timber. Panel products have also experienced considerable price inflation. Inevitably, this supply chain will catch up at some point or demand will perhaps moderate, but for the time being it is having a considerable impact on availability in the British market.

Other troubles that we frightened ourselves with before we found ourselves dealing with a pandemic seem to currently be in abayance, such as oversupply of log and fibre in central Europe due to beetle damage and the resultant sanitation felling. This is being kept in check with export of logs to China and apparently India. Whilst undoubtedly at some point it is likely we will see this depress our market once more, for the time being this does not appear to be on the immediate horizon. Indeed, it is reported that in central Europe there are in effect gate fees for delivery of product to the panelboard sector.

Closer to home, just across the water in Ireland, the issues with felling licence delays continue and the sector appears to get closer and closer to the edge of the cliff where there may be considerable shortages of sawlogs and mills resulting in production outages.

So, what does this mean for the market for roundwood in Britain? The sector continues to come up to full production and harvesting contractors are now reported to be fully employed. As stated earlier, the market is being driven by sawlog demand, and we continue to see, what for recent years are, high stocks of small roundwood at roadside, though those of us with long memories will recall a period when late summer and autumn generally saw considerable roadside stock. It is expected that these stocks will have cleared, if not by Christmas than shortly afterwards, as the small roundwood sector is now largely back up to full speed.

Currently, there is a premium on standing parcels with high proportions of sawlogs, without exception across the country. Irish demand in the pest free zone is creating strong competition that is rippling across Scotland and in England and Wales an undersupply of parcels coming to the market is underpinning demand there also.

The intuitional investors are certainly 'making hay whilst the sun shines' and there are been a considerable number of standing parcels coming to the market that have all sold well with an increasing number of bidders.

It just leaves me to reflect on how fortunate we are to operate in a sector that, come what may, continues to be able to react to whatever international markets throw at us and come through successfully and, perhaps, even smiling.

Harry Stevens is timber buying director, Tilhill/BSW
www.tilhill.com www.bsw.com

Understanding UK's woodland carbon market

Michael Hay introduces his five-part series of articles for FTN which explain the basic concepts of woodland carbon and carbon markets.

Carbon markets are fast-emerging as some of the 21st century's most important. After decades of inaction, environmental 'externalities' are finally being shoehorned into our economic system, allowing their true value to be appreciated. But that process isn't necessarily a straightforward one, nor easy to comprehend. There is a lot to get one's head around, from the different types of carbon markets in existence – compliance and voluntary – to the different carbon commodities that can be sold, such as peatland carbon, woodland carbon, blue carbon, and more. Even within the woodland carbon category there are countless routes to market, and countless more acronyms. In the UK alone, we've got a 'Woodland Carbon Code', the 'Woodland Carbon Guarantee' and a 'Woodland Carbon Fund'.

But what does each of those mean? What is their purpose, and how do they relate to each other? More importantly, which one is relevant to you?

These are some of the questions I will be answering in this series of five articles. Starting with the 'Woodland Carbon Code', which underpins the woodland carbon market in the UK, I will look in future issues at what governs the price within carbon markets, how this market interacts (in England) with the 'Woodland Carbon Guarantee' and what the direction of travel for ecosystem services markets is, in this country. Finally, I'll be fielding questions from you, the FTN's readers. So, if any of the content I cover piques your interest then please get in touch with the editorial team and let them know!

Matthew Hay is project manager at Forest Carbon Ltd, which specialises in financing woodland creation for carbon capture.

WOODLAND CARBON EXPLAINED PART 1

The Woodland Carbon Code

For any voluntary carbon market to operate smoothly, a degree of governance and regulation is essential. Without this, as we sadly sometimes see in other countries, carbon offsetting (and the projects it finances) can become something of a 'wild west'. Happily this is not the case in the UK, but that is because our domestic market has its very own safeguard in the 'Woodland Carbon Code'.

Technically, the 'Woodland Carbon Code' (WCC) is a type of carbon standard, one of many in operation worldwide, and analogous to those managed by organisations like Verra and Gold Standard. The code can be thought of as a rulebook, with jurisdiction over any woodland carbon projects in the UK that wish to supply legitimate carbon credits to the market. Every project developed under the 'Woodland Carbon Code' has had to meet certain criteria in order to be validated, and this provides transparency and assurance to buyers of carbon, just as the FSC and PEFC do for timber (and non-timber forest) products in their respective markets.

In particular, the 'Woodland Carbon Code' tackles the key concepts of additionality and permanence head-on. This ensures that any and all carbon credits supplied to the UK's carbon market represent permanent sequestration of atmospheric CO_2, sequestration that would not have happened without the promise of income from the sale of carbon credits. It is hard to over-emphasise the importance of having a carbon standard like the 'Woodland Carbon Code' in place. Not only does it provide vital protection against cowboys and scammers, it gives buyers the confidence they need to participate in this market, and an incentive against procuring 'cheap' carbon from overseas.

For landowners or tenants looking to generate income from woodland carbon, the process starts by registering their project with the 'Woodland Carbon Code', or by finding a project developer who will do that for them. The landowner or tenant must be sure, however, within his or her own mind that income from carbon is critical to the economic viability of their project. Think of the 'Woodland Carbon Code' as existing to make financially unattractive woodland creation projects attractive. If your project is something you would be going ahead with anyway, for instance if carbon income didn't exist, then it is unlikely to be additional, and so will not achieve validation under the 'Woodland Carbon Code'.

Assuming the additionality is genuine, though, then once a woodland creation project has been registered with the 'Woodland Carbon Code' there are two types of carbon products a landowner or tenant can sell on the market: 'Pending Issuance Units' (PIUs) or 'Woodland Carbon Units' (WCUs). The differences between these are important, as they affect the price a project's woodland carbon can achieve and, crucially, when it can convert that value into cash.

> It gives buyers the confidence they need to participate in this market

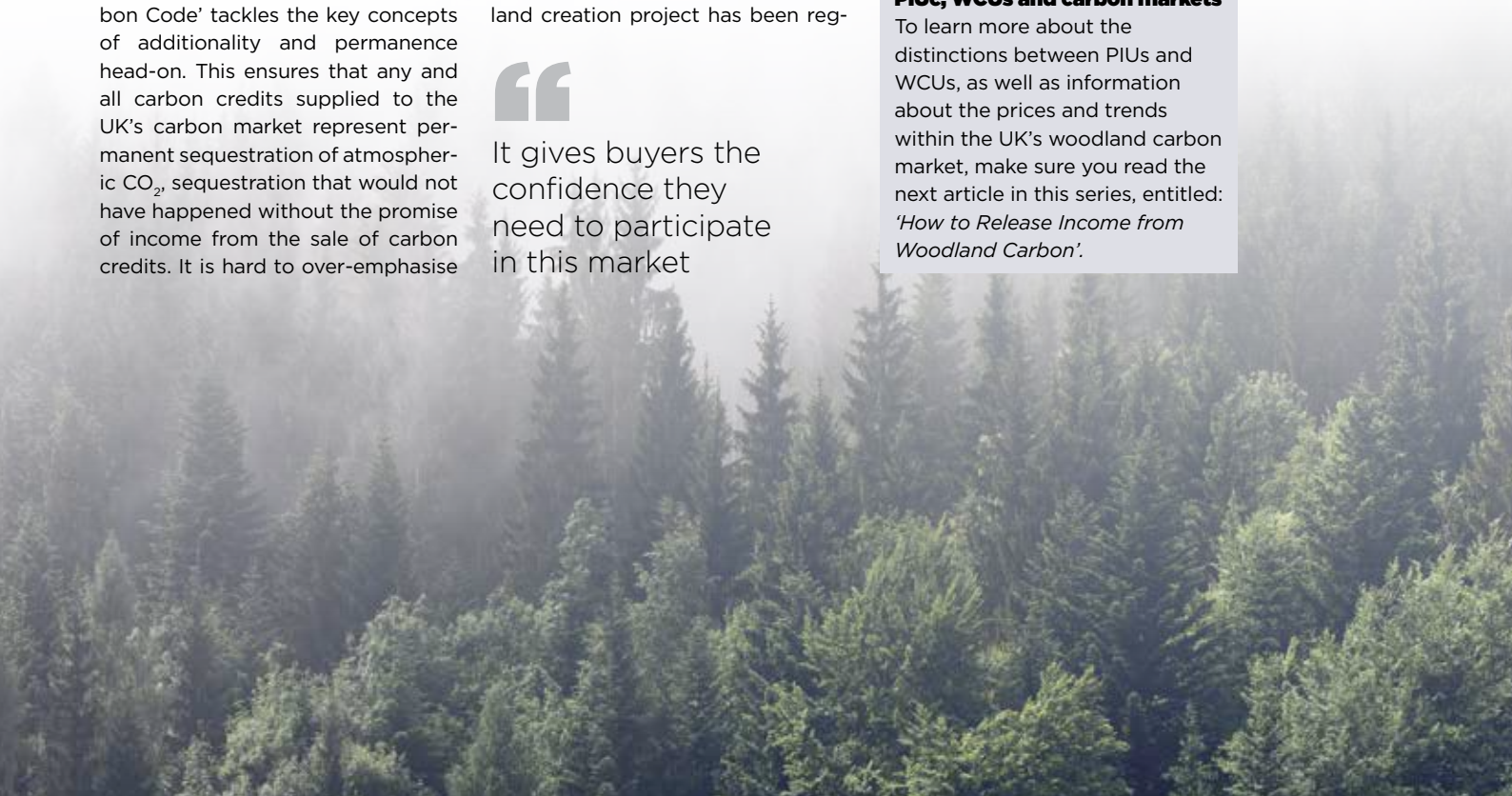
What is?

Additionality: This is a key principle that underpins the monetisation of ecosystem services. Its purpose is to safeguard 'Payments for Ecosystem Services' (PES), by ensuring that money is not being spent on ecosystem services that would have been (or were being) provided in the absence of PES.

Permanence: For an offset to work, removal of carbon dioxide from the atmosphere must be permanent, and not reversed at a future point in time. Woodland projects carry a risk of reversibility and as such safeguards must be in place to minimise that risk, as well as to guarantee replacement should a reversal occur.

UP NEXT

PIUc, WCUs and carbon markets
To learn more about the distinctions between PIUs and WCUs, as well as information about the prices and trends within the UK's woodland carbon market, make sure you read the next article in this series, entitled: *'How to Release Income from Woodland Carbon'.*



Forestry transport – Zero Heroes?

Neil Stoddard
Creel Consulting Ltd

Foresters literally are now 'carbon traders' and the sector has enviable low carbon credentials compared with many other industries and of course this is becoming a cornerstone for afforestation.

The timber transport sector in the UK has always been proactive in finding innovative ways to move timber – often with green credentials, examples are modal shift to shipping and rail systems, however, road haulage remains the core method of transport and the UK haulage sector faces a real challenge in the coming years.

Some numbers for consideration. In 2018, road transport accounted for 91% of UK domestic transport emissions. Heavy goods vehicles (HGVs) accounted for 17% of this. HGV traffic went up from 15.5 billion miles in 2012 to 17.1 billion miles in 2018. 2050 is the target date set by Government to reduce greenhouse gas emissions to zero, it maybe seems a long way away, but action really needs to start now.

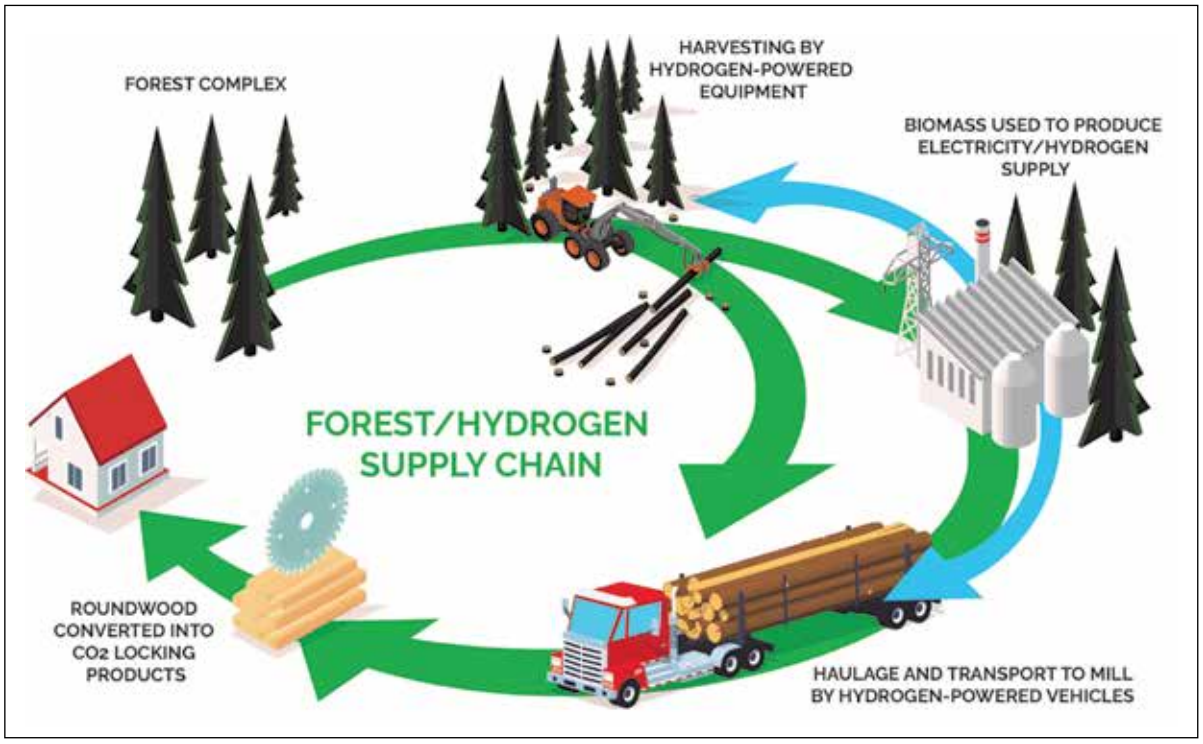
Grant Shapps, Secretary of State for Transport, notes "Success will require the sector, and its users, to embrace new technology and innovation like never before. We believe the transport sector is ready to step up and meet those challenges"

Heavy user

We know that the timber supply chain is a heavy user of fuel oil. Harvesting is improving with the likes of the impressive Logset 12H GTE 'Hybrid' harvester currently commercially available, and other manufacturers chasing improvements with clean Tier 4 engine in forest machines. There is no getting away from the fact a modern Euro 6 engine timber truck will only average around 6mpg of diesel, not surprising given the nature of rural roads and forest locations.

Sticking with fossil fuels, Natural gas is the cleanest-burning fossil fuel, and is expected to be the fastest growing fuel source in future looking scenarios and is noted as the cleanest fossil fuel in the energy system across the power, transport and heating sectors. Vehicles running on LNG produce lower levels of toxic emissions and air pollution than equivalent diesel engines. With up to 20% lower CO_2 emissions from tank-to-wheel. Air quality of LNG vehicles meets Euro 6 requirements which offer reduction in NOx by 50% and PM by 80% in the upgrade from Euro 5 engines.

SAS logistics in the south west of England are running a Volvo LNG timber truck and other general fleets are trying them out – Nicolls Transport from Sittingbourne have 10 Iveco LNG trucks on the road. Adam Spratt of SAS notes 'Leading factors into selecting an LNG solution was forward thinking as both a business and individuals, trying to break the stereotypes of our industry and to do what we can as a business to re-



A forest/ hydrogen supply chain (infographic by Creer Consulting)

Clockwise from above left: SAS logistics' Volvo LNG timber truck; Nikola Badger; and Rivian R1

duce our environmental impact over our next five year planning period'

LNG is nontoxic and non-corrosive and will not pollute land or water resources in the event of a leak. This is a major benefit when the working on forestry and sensitive rural sites where a diesel spill incident is most unwelcome.

However, as far as air pollutant emissions are concerned, the prevailing notion that natural gas engines are way cleaner than diesel, is perhaps already less valid in the current technology landscape, but they will form a cost effective bridging technology as hydrogen and electric evolve.

Cars vans and smaller commercials are becoming increasingly electrified, but to date large HGV's, while being trialed hard, have certainly not been easy to crack.

Iveco recently announced a European joint-venture with American NIKOLA Corporation (a global leader in zero-emission and infrastructure solutions), proof that zero-emission electric long-haul transport is becoming a reality. They are getting nearer, check out the aptly named Nikola Tre which is in the testing and validation stages with the projected delivery for the BEV trucks in 2021 and the Fuel Cell EV slated for 2023. The Tre will offer an impressive 644 HP and 250-mile range.

Nikola also announced on August 10 that they had secured a minimum order of 2500 electrified refuse trucks from Republic Services in Arizona.

However given the weight penalty and range anxiety of battery technology, ultimately, hydrogen will be more economically viable than BEVs because of the power required to pull heavy loads, the space available in the truck cab and the constant use that heavy duty applications require just to make them economical.

So hydrogen is probably the long term solution for powering heavy trucks. In fact, there are two different options for this;

- a fuel cell that uses hydrogen to generate electricity to power the electric motor, or
- using hydrogen as a fuel for the combustion engine.

Depending on how it is sourced, hydrogen can be referred to as 'grey' as it is often generated from fossil fuel. To be truly green, it needs to be produced through electrolysis (passing an electric current through water), with the only by product being oxygen.

Current hydrogen developments include the aforementioned Nikola, who have signed a purchase order with Nel ASA for 85-megawatt alkaline electrolyzers supporting five of the world's first eight ton per day hydrogen fueling stations. Together, these electrolyzers may produce over 40,000 kgs of hydrogen each day.

> Hydrogen is probably the long term solution for powering heavy trucks

Global engine giant Cummings now has more than 2000 fuel cells engines in operation globally, which includes trucks in Europe and buses in China. This OEM was recently awarded nearly $7m from the U.S Department of Energy (DOE) to enable more fuel cell development and accelerate the ongoing effort to drive down cost parity in a challenging field dominated by diesel.

Much closer to home, Aberdeen City Council, in conjunction with BOC have developed a flagship green hydrogen production facility at Kittybrewster. This produces 300kg of hydrogen a day, which is enough to refuel ten 42-seat buses, with each bus travelling up to 350km on a full tank. In addition to buses, the site is now also supplying fuel for other council assets including vans and road-sweepers!

Circular energy economy

The whisky industry has recently received £10m from the department of Business Energy Industry Strategy for their sectors low emissions/hydrogen development, so watch this space to see if we can get some support for a forestry-based initiative. For a true circular energy economy how about a biomass power plant located in forest complex hub – producing green electricity, and in turn hydrogen that then powered the heavy plant and trucks involved in the timber supply chain! You heard it here first.

The government believes the UK transport sector is ready to step up and meet the 2050 emission reduction challenges. The Timber Transport Forum are reviewing a 'decarbonisation plan' for timber haulage in readiness.

PS. It's obviously not just HGV's that are moving across to hydrogen and electric. UK forestry loves a pick up truck – and in only a few years time it could be an EV Rivian or a Nikola Badger, parked next to the Rangers and Amaroks at the forest roadside. For one, I can't wait.

www.creel.co.uk

Carbon and climate updates

With forests burning down the west coast of the USA, talk of Green Recovery (theme article page 6-9), and world leaders preparing to meet in Glasgow for the COP26 climate conference, climate has never been higher on the UK's agenda. In our own sector, UK foresters and wood producers struggle to plant and harvest in increasingly unpredictable weather, and seize the opportunities presented by the net zero agenda. In this context, Confor Policy Researcher **Eleanor Harris** rounds up and reflects on the latest policy and research developments.

Sixth Carbon Budget underway

At the end of this year, the UK Committee on Climate Change (CCC) Sixth Carbon Budget will recommend policies to UK government to deliver net zero by 2050.

Confor produced a briefing asking for the budget to include:

1. Short-rotation forestry (SRF) on farms: SRF is low-input compared with other biomass crops, delivers on-farm climate resilience, and yields a flexible crop for applications such as construction board, biorefining and bioenergy.
2. Harvested wood products (HWP): The CCC has recognised that HWP are a core part of the forest and wood carbon cycle. Yet HWP are often ignored or over-looked in policy analyses of the contribution of forestry to achieving net zero. All UK governments must commit to do more to increase the use of HWP, especially in construction.

The briefing is available on the Consultations page of the Confor website. We will continue to engage with the CCC as they develop their proposals.

Climate Assembly UK calls for trees and timber

A citizens assembly drawn from a representative sample of the population has produced a report with its recommendations to meet net zero.

Forests and better forest management was the top recommendation for greenhouse gas removals, recommended by 99% of members, while more wood in construction was recommended by 82%. Peat and wetland restoration was also popular, whereas more technological solutions were considered potentially costly and unproven.

The Assembly believed forests would deliver multiple additional benefits for nature, agriculture, flood protection, mental health, wood supply, the local economy, and landscape beauty. They cautioned that tree planting needed to be well-planned, diverse, and appropriate to the site.

They considered timber in construction to be a practical, reliable, and cost-effective way to store carbon, reducing the use of carbon-intensive products like steel or concrete. Timber had many other advantages such as speed of build, insulation properties and aesthetically qualities, although there is a need to assess and mitigate fire risk.

This report demonstrates ordinary people in the UK have a sophisticated understanding of forestry, timber and carbon substitution and will support policies to deliver them.

Tackling the net zero governance gap

The Institute for Government Net Zero report issues a stark warning that UK decarbonisation plans are off track, and proposes a governance approach to getting them back on course.

The report calls for climate change to be prioritised at the top by the Prime Minister, Treasury, and a senior minister. It must deliver a net-zero plan ahead of COP26 better than the Clean Growth Strategy it replaces: not merely a list of desirable measures, but a comprehensive and credible strategy with a clear and integrated plan for each sector.

Many of the report's calls align with Confor's own. For example, a coherent plan and consistent policy and regulatory frameworks which gives businesses confidence to invest, co-ordinated action integrating sectors and understanding the carbon flows between them, policies which deliver carbon and economic benefit together, communication to build public and political support for policies, and parliamentary scrutiny to ensure targets are actually met.

Many problems faced by the forestry and wood sector are common to businesses across the economy seeking to invest in green recovery and climate change solutions.

>>

>> Putting the 'net' in net zero

CBI, the Confederation of British Industry, held a major two-day conference on delivering net zero.

A major focus of this conference was the need to greatly increase renewable generation of electricity and hydrogen to enable zero-carbon home heating, transport and haulage. There was recognition that, while some fossil fuel with offsetting or carbon capture may be required, the focus must be on minimising this and maximising renewable generation.

It was striking, however, that this strategic approach did not extend to materials. There was discussion of how concrete, brick or steel could be net-zero. While brick and steel can theoretically be made using huge amounts of renewable electricity, concrete is inherently carbon-emitting due to the calcination process of manufacture, and plastic is made from oil. Moreover, all these materials begin with non-renewable raw material extraction, with irreparable environmental impacts of their own. The CBI's discussion of materials did not have the same strategic focus as power, to minimise the 'net' in 'net zero'.

Wood is to materials what wind is to power. It can replace old, non-renewable, problematic materials with one regenerated again and again by sun and rain to supply our needs. The UK has the capacity – the climate, land, people, businesses and skills – to upscale wood supply as it has upscaled wind power, in a similar investment timescale.

In the social media commentary on the conference, presenter Mary-Ann Ochota recognised that cities of the future need businesses with real-world solutions to their carbon problems, and that forestry and timber was such a solution *(picture)*.

Yet there is still much work to be done to ensure the business and political community realise what the citizens assembly saw: that wood is key to a strategic net zero.

Fighting climate change by creating UK forests

Confor member Tomorrow's Forests has launched a membership scheme where people or businesses can join to plant trees from £10/ month. The aim is to offer primarily businesses but also people the opportunity to kick back to nature and create diverse, fully functioning ecosystems here in the UK.

Each site will be completely different, Tomorrow's Forests will make sure that the right trees are planted in the right place, not for the commercial timber market but creating wildlife havens that will be protected.

Tomorrow's Forests will be planting a mixture of native trees in all sizes from small trees (60cm) to large standards (4m). Alongside the trees the company will also be creating wildflower meadows, digging ponds, installing bird and bat boxes. The company says it has some exciting prospects of re-introducing some extremely rare native frog species onto it first site next summer, so watch this space for that..

Live trial cams and webinars will also feature going forward, with regular updates on how the sites are progressing via our newsletters and blogs.

"The main point is that we are going to do this thing right!! No shady carbon offset scheme in Africa.. or mangrove plantation in South America. Just creating habitats here in the UK."

creatingtomorrowsforests.co.uk

Carbon planning for future generations

David Leslie
Joint Managing Director,
James Jones & Sons

James Jones & Sons has been working on the aspect of embodied carbon in timber products for over ten years through the first UK assessment of the carbon credentials of its I Joists and sawn timber production. This assessment, which has been carried out by Ecometrica, has allowed James Jones to clearly demonstrate and measure the net carbon storage credentials of its products to key clients in the house building, timber merchant and forestry sectors over this period.

The Company, which has had a long history of woodland ownership in Scotland, has recently acquired further areas of woodland and farmland for new planting as part of a strategic long-term timber supply investment and carbon capture programme and as part of the multi-benefit forestry within their portfolio.

Tillyrie, a 100ha bare land acquisition near Milnathort in Central Scotland, was purchased in 2018 as part of this investment programme. Planted in 2019 under a Forestry Grant Scheme, the woodland comprises a fairly standard mix of UKWAS approved species and land use with 70% spruce (Sitka, Norway, Omorika) 10% other conifers (Scots pine, Douglas fir, Western hemlock), 8% native broadleaves and 12% open ground.

The Establishment work, carried out by Scottish Woodlands, has included a combination of ploughing, mounding and hand screefing, resulting in an established woodland within two years. Extensive roading works will not only facilitate future timber extraction, but will allow public access between existing core paths around Milnathort and wider access network to the North.

Carbon storage is one of the key objectives of this scheme and in this respect Tillyrie offers an ideal benchmark in demonstrating the storage 'capacity' of such commercial woodlands, whilst being an 'exemplar' woodland of its type to demonstrate the company's commitment to long-term timber supply and confidence in the sector as a whole.

Shorter timeframe

In order to demonstrate and quantify the carbon storage opportunity at Tillyrie, the simple representation below shows how the 16,000 tonnes of carbon to be stored within the forest is built up over the 65 year project timeline. The scheme, which has been registered through Markit, comprises a management plan for the felling of the commercial spruce crops and long term retention of other species beyond this timeframe. Unlike native woodland schemes, which offer ultimately more extensive carbon storage, commercial schemes are de-risked through shorter timeframes and the offset of genuine commercial timber production and potential spin off carbon storage benefits through timber supply.

James Jones & Sons strategy differs from other carbon storage management models in that rather than selling the 'futures' of the stored carbon, the company intends to grow their strategic carbon reserve in parallel with their business, thus providing long-term sustainable offsetting of its operations that are not accounted for by Ecometrica in the production of sawn timber.

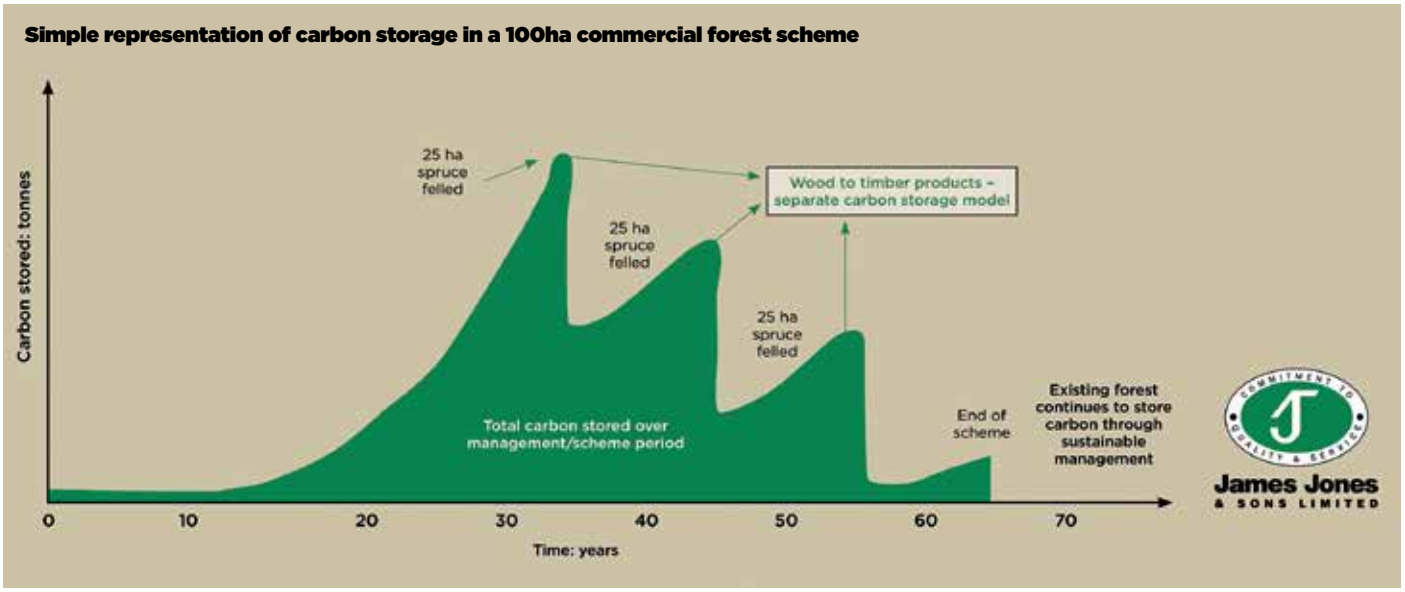
With a planting programme of some 2000ha (400 ha/annum for the next five years) and with the land already in hand to achieve this, the company hope to achieve a total of stored carbon potential in excess of 300,000 tonnes by 2025. This will of course be additional to the net tonnes of carbon offset that can be passed on from its current annual 600,000m^3 and growing sawn production in the future.

With climate change mitigation being a key objective for Government and Industry, woodlands, such as Tillyrie, offer the perfect opportunity to provide a long term timber supply, habitats and diverse ecosystems, public access, water supply security and flood mitigation as well as storing Carbon and mitigating against such change across the UK.

Commercial woodlands managed through the UK Woodland Assurance Scheme are the key to climate change mitigation and sustainable timber supply for the UK. Combined with harvesting best practice through ISO 14001, processing to the highest environmental standards and effective chain of custody monitoring through PEFC and FSC certification, James Jones can clearly demonstrate these benefits throughout the supply chain to ensure all stakeholders CSR responsibilities are met.

www.jamesjones.co.uk

Simple representation of carbon storage in a 100ha commercial forest scheme



Educating the workforce on impact of diffuse pollution

Improving environmental protection awareness and keeping pollution prevention in forestry operations is high on the assurance agenda; Tilhill has developed a new training video on diffuse pollution for both its approved contractors and anyone operating heavy machinery in its managed forests and woodlands. **Nicola Abbatt** reports.

As a company we work hard to promote environmental awareness and responsibility both with our staff, as part of developing their skills and competence, and with our contractors through, for example, our Insist on Safety Days where we cover environmental issues, alongside safety.

Protecting and conserving biodiversity and our natural environment goes hand-in-hand with day-to-day forestry and harvesting activities. These work activities both enhance the environment but also have the potential to negatively impact through pollution of air, land and water.

Clean water is imperative for the natural environment and diffuse pollution from forestry operations is one of the more significant negative environmental impacts from harvesting and other operations that can affect the water catchment in both rural and urban environments.

Although sources of diffuse pollution are often minor, collectively they can result in significant environmental damage at the catchment scale. Getting this message across to the operatives who are at higher risk of contributing to diffuse pollution events and also are best placed to respond and mitigate these risks, was Tilhill's focus in developing the new training video.

Historically, Tilhill has worked closely with environmental regulators in relation to the water environment. Over the past 10 years, we have delivered diffuse pollution training for our staff and contractors working in partnership with SEPA to deliver this training across the UK. We've tried to ensure that key personnel from the Environment Agency and NRW are also invited to these events so we can discuss best practice and share learning. We have also held events to help train staff from SEPA, SNH and Scottish Water which were well received and helped ensure better understanding of our industry within the regulatory bodies.

Tilhill's in-house Forest Ecologist John Gallacher has worked in the forestry industry for the past 21 years and has significant expertise in managing the risk of diffuse pollution. John, as a representative of Confor, was involved in developing the Forestry and Water Scotland Know the Rules booklet, working closely with SEPA, Scottish Government, Forestry and Land Scotland, and Scottish Forestry. This booklet for the forestry industry provides guidance on controlling the risks of diffuse pollution from operations such as woodland management, felling, forwarding, spraying and forest road construction.

> Although sources of diffuse pollution are often minor, collectively they can result in significant environmental damage at the catchment scale.

Within Tilhill we have actively promoted the use of the booklet and wanted to take this one step further and create training modules with tested understanding on completion. Training which is also accessible to all our operators on site. Diffuse pollution is increasingly a challenging issue on site where we more frequently experience 'unseasonal' and 'exceptional' weather with the driest months ever now regularly being recorded followed by dramatic rainfall with widespread flooding.

We wanted a training solution

Above: John Gorman, SEPA's forestry lead introduces the Module 1 of the training;

Left: Know the Rules and Stop Think Act are key messages in the Training Videos, briefing at pre-star meetings underpins this learning

Right: The Project team on a filming day:

KEY MESSAGE OF THE TRAINING VIDEO

We all have a role to play, from Forest Works Managers to each and every operator on site.

Planning for diffuse pollution must be robust.

We must safeguard against heavy rainfall or snow melt.

We must check pollution controls are in place on sites at start of work, that they are checked and maintained as work progresses and draws to completion.

That we remember to STOP, THINK AND ACT to prevent diffuse pollution.

which caught all new starters to forestry operations, ensured a mandatory induction into the issues and proven confirmation of understanding before starting work in our managed forests and woodlands.

The new training is very much focused on plant operators on our sites, whether undertaking forwarding, ground preparation or forest road construction activities. It is the next step to our programme of diffuse pollution training courses.

When putting together the training material, Tilhill's Project Team worked with The Airborne Lens Company to capture high-quality and engaging aerial drone footage. The training has had extensive review and input from among others SEPA, Scottish Forestry, NRW and our contractors. We were also grateful for the voiceover to the video which was provided by Stephen Lowe (@axemanlowe) who while now featuring on BBC Radio Lancashire as the presenter of Lancashire Outdoors, has also worked in the forestry industry for many years.

The training is made up of two brief modules, operators will watch each video module and answer a series of multi-choice questions. The expectation is that all operators will complete and pass the training before working on our managed forest properties.

Tilhill is excited to be now rolling this training out to our contractors and others operating on our sites, we hope it is the first of many environmental training shorts. We will also continue to work with others in the forestry industry including environmental regulators with the aim for it to be the industry norm for all forestry contractors to receive this type of environmental protection training before operating on site.

Nicola Abbatt (MICFor, CEnv, MIEMA) is Environment Manager at Tilhill.

RESOURCE

The Know the Rules Booklet can be at **www.forestrywaterscotland.com**

Tube trials: alternatives to plastic

Alex MacKinnon, Tilhill

Over a year ago, Tilhill decided to commence a trial to put non-plastic tree guard alternatives to the test. The company is proactively looking for ways to prevent, reuse or recycle plastic from its operations.

At the time of commencing our project, we considered ourselves to be the only members of the industry running such trials and reporting on the results, many of which were very much still in the prototype stage. To make sure the trial was fair and reliable we used ten of each alternative method or material on five different sites across the south of England. Over the course of the year we were pleased to meet others in the industry starting to develop their own alternatives and carrying out their own trials.

After one year of the various shelter options being tested out in the environment, we now have more robust results. Each shelter has been through storms, droughts and freezing temperatures. The results reflect the actual performance of the tubes in a real-life environment. The performance across each site is largely comparable with only subtle unique factors.

Trial result: Cardboard

We trialled two cardboard alternatives:

1.'Egg box type of cardboard' (below left) This was possibly the most advanced in terms of design and manufacturing. The shelters were supplied nested inside each other but required folding into a cylinder shape and locking into place with inbuilt tabs. The tabs then doubled up to hold the shelter to a stake. The stakes supplied were very long eucalyptus poles.

These have worked well in terms of strength and durability. Being solid cardboard, these stakes were, as expected, completely opaque. This didn't appear to be a problem for the plants inside them. The shelters were relatively easy to construct and over the trial period have seemingly offered good protection from browsing animals.

A a serious problem was that, over the year, the repeated wetting and drying of the shelter caused the material to lose it structural rigidity and collapse under its own weight. This happened to all shelters of this type on each site but one.

2. Thin, coated cardboard (below right) This type of cardboard shelter trialled wasn't supplied until later on in the trial, so results are only preliminary. This shelter was constructed of much thinner card coated with a plant-based film to help water resistance. Again, the shelter needed to be constructed using the inbuilt tabs, which turned out to be much trickier than the other cardboard version.

So far, this shelter has performed reasonably well, with some learning points. The stake must be level or protrude from the top of the shelter if not, the unsupported section will collapse over time. Any damage caused during construction also lead to increased water ingress into the cardboard and contributed to the sagging an eventual collapse of the shelter.

Trial result: Biodegradable plastic spiral shelter

With obvious limitations of only being a spiral rather than a full 1.2m tall, this shelter still performed as well as any other type of spiral.

It does, however, require more careful handling as the spiral is more brittle than previous standard non-degradable versions. In addition, when nested together the material needs to be kept dry and out of direct sunlight otherwise, we found that the spirals have a tendency to start melting and then stick together.

In our trial, many plants were browsed above the top of the spirals, but I understand full height variants are making their way to the market which will help alleviate this.

Trial result: Sweet Chestnut Stakes

As an alternative of our own, we developed a shelter made of several sweet chestnut stakes tied together by cotton string, so forming a simple cage around the tree sapling. In addition to this we then attached sheep wool to the outside of the cage as an additional deer deterrent. These were laborious and time consuming to deliver and construct on site but an interesting test regardless. The shelters are still present and correct and seem to be working until plants fall outside the cage, at which point they are susceptible to browsing.

Trial result: Flax Seed and Cashew Nut Resin

We were given just a few samples of a shelter made of flax seed and cashew nut resin. This shelter, although we only had very few samples has seemingly worked well so far. Very much a prototype, the shelter still requires fine tuning. Including an effective method of securing the two halves together, however, purely looking at the material, the shelter seems to stand up well to the elements and provide adequate protection to the tree.

How do alternatives compare to plastic tubes?

Finally, we incorporated ten standard plastic tubes and ten unguarded trees as controls. On inspection at almost all sites, the unprotected trees were either lost through animal browsing or rendered unidentifiable amongst other vegetation on site.

The ten protected controls in almost all cases were present and showing far improved signs of vigour when compared to all other examples. This goes to show the advantage that the current plastic tree shelters provide thus highlighting the scale of the challenge that finding a suitable alternative will be!

We look forward to more new and improved variants coming to the market soon and hold out hope that one will be a reliable alternative to replace the use of plastics.

Forestry revolution does away with decades-old practice

Josh Roberts (Forestry and Land Scotland) presents the results of trialling the TreeTape method for the tree nursery sector.

In the June edition, I wrote an article about some of the new technologies that we have been trialling recently to aid forest nurseries. I also mentioned that, in order to try and overcome some of the challenges of running a nursery in lockdown, we were taking a calculated risk on our plant supply this year.

What that involved was planting four million trees – the equivalent of our entire in-house annual production of Sitka spruce – by means of a technology that had until now never been tested with trees before called TreeTape.

TreeTape is a new approach to growing tree seedlings and it is revolutionary.

The current system for transplanting Sitka beds (or 'lining out') at Newton uses a five-row system with trees planted at two inch spacing within each individual row giving a maximum stocking density of 90 trees per square metre. A fully staffed 'Super Prefer' machine used for this task – with a team of five planters and one driver – can line out around 60,000 trees in an eight-hour shift. However, thanks to the innovation of TreeTape, this might all soon be consigned to the past.

Over the course of the last year we have been working with Michael Ashby* of Cumbria Tree Growers to refine and modify a system used in the vegetable growing industry to make it suitable for the needs of the forest nursery sector.

What is special about the TreeTape method?

The system works by sowing tree seed into a continuous, biodegradable, paper ribbon of compost filled pockets (picture A). Once sown, this ribbon of pockets is then placed in a glasshouse, providing the young trees with optimum growing conditions in much the same way as a conventional container nursery (picture B). Growing the seeds in a more or less flat ribbon of pockets rather than a series of round cells allows around 840 plants to be grown in a 40 x 80cm tray – approximately three times the stocking density of most container-based systems.

However, the real breakthrough is what happens once the trees have germinated and grown. Removed from the glasshouse after about three months, the tree-filled, biodegradable ribbon is planted into an open field. There, the trees are left to grow big and strong enough – with well-developed roots – to be planted in the forest, and all for a fraction of the price of growing them entirely under glass.

It is here that the adapted technology comes in to play to plant out the trees. Pulled by tractor, the machine's six planting units (picture C) form shallow channels in the soil, run the tape into it and cut the tape into individual pockets at predetermined intervals. This system allows an entire bed of trees to be planted at once, and with six rows at the same two-inch spacing, gives a (maximum) stocking density of 108 trees per square metre.

The TreeTape machine can also be operated with just three people – one driver and two people to load trays – although a fourth, 'quality control' person could follow the machine checking for any tape breakages and monitoring planting.

During a trial in September at our Newton Nursery, the TreeTape machine managed to line out just under one million cells in a day, an increase in productivity per person of nearly 2000% over the conventional system currently used.

These trees will now be grown on until, in about 12 months, they are large enough to be sent out as planting stock. Needless to say I'm on tenterhooks to see how it works out and not just because of the gamble we have taken to secure this year's planting. If this technology works it would create a seismic shift in the way that forestry trees are produced, and not just by FLS or even just in Scotland, and that's exciting.

** In May of this year, Michael, his wife Angela, and Brian Fraser of Oakover Nurseries formed a separate company, TreeTape UK, to further develop and market the growing system to wholesale nurseries.*

***Phytophthora* site**

Every Cloud... a plant health perspective from the harvesting sector

Simon Wallis
compliance manager at Euroforest Ltd

The forest industry is unlikely to be accused of taking a short-term view on anything; we are familiar with the concept of talking in years or decades rather than weeks or months, and policy decisions and the procedures and processes which evolve from them are rarely hasty, but rather are they collected, considered and circumspect. However, the current and emerging threats from landscape-scale plant health issues have somewhat challenged that view and has required the harvesting sector to move with pace and purpose to seize an opportunity that in the short-term will provide benefit to the entire supply chain.

There are currently many insects and diseases with potential to cause significant damage to our forest and woodlands. The three most significant are already having a pronounced effect both visually and operationally: *Phytophthora ramorum* in Larches and increasingly Noble fir and other species, *Dothistroma septosporum* (needle blight) particularly affecting Lodgepole pine in north Scotland, and Ash dieback potentially reducing Ash numbers by 95% across the UK. The potential for all three to significantly reduce the return on a landowner's investment is very real and any return that can be realised will be diminished by delay, furthering a need for prudent harvesting and targeted marketing strategies.

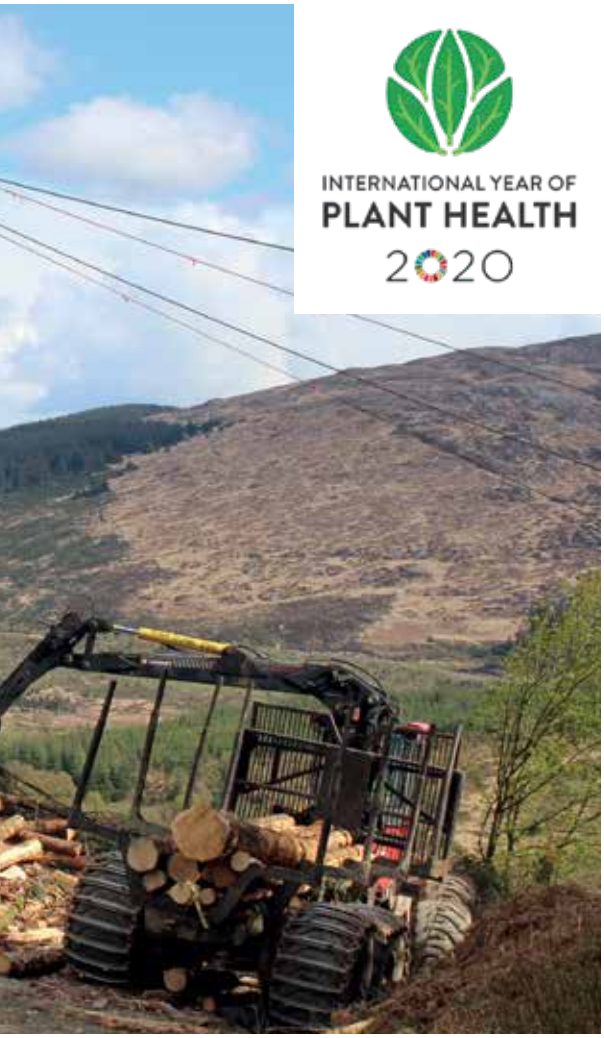
Euroforest Ltd, the UK's largest independent timber harvesting company, has been at the forefront in terms of developing solutions which optimise return for landowners and deliver viable raw material into the processing and energy sectors. A comparatively lean and flat management structure through the company promotes an empowerment which allows local managers to respond to opportunities with expediency.

As *Phytophthora ramorum* manifested itself across the southwest of England and south Wales, Euroforest were quick to recognise that if the value in the timber was to be realised we would need to grow both our own capacity in terms of management and supervision and at the same time develop additional capacity within the contracting sector.

Since 2014, in south Wales alone we have harvested over one million tonnes of infected material through standing sales (long and short-term contracts with both the public and private suppliers), and through our management of close market relationships this material has been delivered successfully into the processing sector. The volume and scale of these operations enabled a number of local professional contractors to confidently invest in their businesses. Harvesters, forwarders and several specialist winching units developed specifically to work the difficult steep and small-scale landscapes of the South Wales Valleys were either purchased or replaced to recover this timber. Personnel at these businesses were provided with training opportunities and valuable new employees were attracted into an industry which too often struggles to recruit.

The discovery of *Dothistroma septosporum* needle blight (DNS) as a major disease affecting Lodgepole pine in north Scotland brought different challenges but also was accompanied by a piece of fortunate timing, coinciding with the Balcas CHP and pellet plant going into production and generating a sharp rise in demand (350,000t P.A.) for wood fuel.

For Euroforest, this meant an



increase of ca 100,000 tonnes of small round wood (SRW) per annum. Initially, 'standard' harvesting machinery was used (John Deere 1470's/1510's), which evolved into more specialist machinery and work methods in order to recover maximum fibre from the deep peat sites in Caithness/Sutherland. With the inland provenances of Lodgepole pine, the worst affected by DNB, and these crops providing only minimum brash to protect soils and aid machine floatation over this challenging ground, it was clear some development was required. Working in conjunction with Roland Forestry, we devised a system of work using a wide padded track machine with extended long reach, capable of harvesting 3-4 additional rows per drift thus maximising brash material under the machine and maximising recoverable stem-wood.

Initial concerns that DNB would have a significant effect on native pine woods has not at this time been borne out, the thinking being that DNB has been present at low levels in Scots pine for many years and that healthy trees, although slowed in terms of growth rates, can survive the disease. The reaction of Lodgepole pine to DNB may be a symptom general poor health due to wet, poorly drained sites with very low nutrient levels, DNB may simply have hastened the inevitable.

In 2016, just as the wider significance of Ash dieback was being realised, Euroforest Ltd signed an exclusive supply contract to a new Biomass power-station in Sandwich, Kent. The plant demands 240,000 tonnes of wood fibre per annum of which 205,000 tonnes is derived from forest production including roundwood and wood chips and in return provides electricity for 50,000 homes and heat for the local science and Innovation Park. The project has provided a significant opportunity to bring back into management the deciduous woodlands of southeast England, and in this context, the only viable outlet for the millions of tonnes of infected Ash material that would otherwise have overwhelmed local firewood markets.

The National Forest Inventory estimates 44 million cubic metres of standing Ash across the UK at least eight million of which is in Southeast England. Potentially 95- 98% of these trees will become infected and die within the next five to ten years. Euroforest is leading work to salvage this material whist it holds a merchantable value and potential return

Phytophthora

for the landowner. We have focused on innovative ways of harvesting Ash in particularly around roadside trees where a primary objective has to be a reduction in landowner liabilities. The result of this managed and focused response has seen the proportion of Ash delivered rise from 5% in 2018 to 57% by the end of Q2 2020.

Whilst undoubtably, Ash dieback, *Dothistroma septosporum* and *Phytophthora ramorum* will continue to play a significant part in the supply chain in the years to come, more than half an eye must be kept on the other tree pests and diseases looming. Whatever, the future brings in terms of similar challenges, the experience gained during the last eight to ten years in dealing with the situations briefly described above should allow landowners and processors to be confident that the harvesting sector will seek every opportunity to provide a little silver lining to the plant health cloud. **www.euroforest.co.uk**

Dothistroma

Controlling damage by pine weevil

Imam Sayyed (Maelor Forest Nurseries), **Andrew Leslie** (University of Cumbria) and **Lorenza Pozzi** (Maelor Forest Nurseries) describe the results of trials testing measures to control pine weevil.

This article provides an update to the articles written by Tim Liddon and Kerstin Leslie and by Chris Hardy in previous editions of FTN. Preventing damage to young trees by pine weevil on restock sites remains one of the most pressing problems to solve for commercial forestry in Britain, and damage through loss of trees and beat up is estimated in 2012 to have cost €40m per year in the EU (then including the UK). Many possible methods have been identified and research is ongoing but there is currently no simple solution that can be applied to all situations. The problem is made more complex by pressure on the forest sector from government agencies and certification bodies to reduce the use of harmful insecticides, the main method used to reduce damage in Britain.

Maelor Forest Nurseries has been establishing trials testing measures to control pine weevil damage since 2009 in collaboration with sectoral partners such as Tilhill, Scottish Woodlands, state forestry organisations, Forest Research and agrochemical companies. Each trial tested chemical control, the use of barriers and planting larger stock. Two recent publications have arisen from this work, one reporting on results analysed by Forest Research and the other reporting on more recent trials, analysed at the University of Cumbria. This article describes the results from the later trials and an overview or results is shown in the graph below.

Chemical treatments

The chemical treatments included two insecticides routinely used in pine weevil control: alpha-cypermethrin applied by electrodyne and acetamiprid (marketed as Gazelle), but also a new lower impact insecticide, chlorantraniliprole (marketed as Coragen), that has not been used to moderate weevil damage. Two application methods were tested for Coragen and Gazelle; a conventional spray to apply the insecticide and an ultra low volume (ULV) method of treating the trees. The high efficacy of Coragen in these trials and the ULV method of application is promising in terms of reducing environmental impact and later trials established by Maelor Forest Nurseries have tested other insecticides.

Barrier treatments

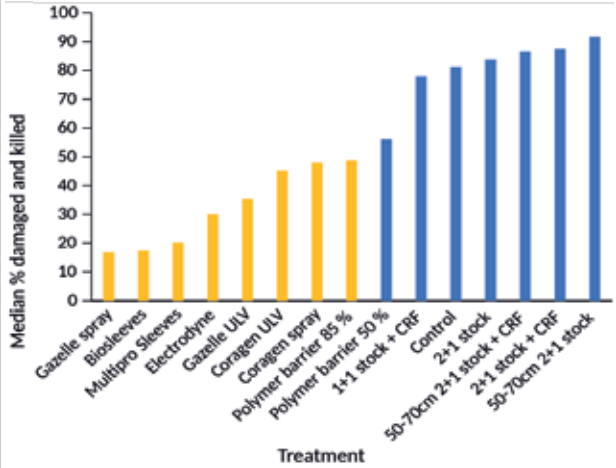
The barrier treatments used protective sleeves and coatings to the stem. The sleeves comprised Multipro sleeves (a sleeve of waxed cardboard) and Biosleeves (a plastic sleeve), both of which had been evaluated in earlier trials. Results showed that Multipro sleeves and Biosleeves and the more extensive (85% rather than 50%) coating of the polymer were promising. However, there are known operational difficulties experienced with the use of sleeves; for example the plastic Biosleeves became brittle when seedlings with them attached were stored in a cold-store. There have also been difficulties in ensuring at planting that there is not a gap between the sleeve and the soil on stony ground. The experimental polymer used in these trials also had shortcomings as it poorly adhered to the tree's stem and developed cracks which allowed pine weevil to damage the trees. The polymer's composition was reformulated for the 2018 trials and an additional commercially available coating was also tested. Barrier stem coatings, notably Norskwax (a wax) and Conniflex (sand and glue) are used extensively in Scandinavia to protect trees and have largely replaced the use of chemicals. However, populations of weevil are usually lower in Scandinavia than Britain and applying coatings on an operational scale at a reasonable cost to bare-rooted stock will involve innovation in the nursery.

Sitka spruce protected by Multipro sleeve

Planting larger stock

In Scandinavia larger trees and particularly larger trees established with bare ground around them suffer less damage. The final category of treatments at this trial was larger 2+1 planting stock which gives the trees a greater girth than the 1+1 stock in the other treatments. A taller 50-70cm 2+1 treatment was also tested. These were compared with and without the addition of Treeboost fertiliser at planting. Damage to the larger stock was not different from the control so this approach cannot be recommended. Fertiliser application has been shown to increase damage by pine weevil but in these trials it did not appear to make a difference.

In conclusion, no treatment tested was effective on sites with higher populations of pine weevil, although the trials have highlighted potential control measures that are as effective as the best, yet result in lower environmental impacts. It is likely that reducing pine weevil damage to acceptable levels across all sites will require a combination of measures.



Percentage killed and damaged by treatment by pine weevil after two spring periods of damage and one autumn period of damage across all five trials. The yellow bars describe treatments that are not significantly different from the best treatment (Gazelle spray), while those coloured blue are not significantly different from the control (no treatment).

PALMS

Timber trailers and cranes supplied by Riko UK.

Europe's largest manufacturer of forestry trailers & cranes.
That is quite a claim and some might question it, but if we are talking about trailers & cranes that are truly made in the EU, rather than in a far east suppliers' factory, then it is pretty sure that with over 25,000 cranes and 23,000 trailers produced, Palms probably does comes out on top.

With a family manufacturing history going back many years, co-founder Mr Anti Puusepp started the company Palmse Mehaanikakoda LLC in 1995 to produce forestry trailers and cranes. PALMS is founded on 4 core values: • Passion for building the best equipment. • Innovation to make forestry easier for our customers. • Uncompromising product quality. • Value of long-lasting customer relationships. The factory is over now over 9000 square meters and the 63 staff created a 2019 turnover of €28.6 Million.

The success of Palms is further backed up by the passion and commitment to using European materials. Such as STRENX steel from the renowned Swedish company SSAB. This steel is specifically manufactured to stand the stresses and strains exerted on trailers and cranes. And is why Palms come with a 3-year warranty on the trailer frame and the crane 'Kingpost' and booms. A 3-stage treatment and painting process ensures the product looks good its whole life.

Palms trailer range now cover single beam, ladder chassis and 'forwarder' chassis with a gross capacity from 8 to 18 tons. Many of the trailer are available with driven wheels with either Black Bruin hydraulic wheel motors, that can provide 2wd or 4wd or the traditional Hydraulic 'cage drive' 4wd. Palms is one of the few manufactures producing 4wd trailers using 'forwarder style' axles. Here there is a choice of mechanical drive using the tractors 'ground speed' PTO drive, or a variable flow hydraulic motor in the trailer chassis that is powered by the tractor PTO and uses sensors to match the trailer speed to the tractor speed.

Palms cranes come in 5 categories to suit the semi-professional to fully professional customers. Maximum reaches vary from 5.4 to 9.4 meters with a wide range of hydraulic control valves and choices of control levers, pilot operated mini joysticks and even full radio remote. Valves can be set up for open centre, closed centre or load sensing.

It is fair to say that Palms should have a trailer and crane combination to suit every user.

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FSC unveils new pesticides regulations

The new FSC Pesticide Policy should have become effective on 1st August 2020, however, due to Covid-19 the transition period was extended to 31st December 2020. From 1st January 2021, certified forests will need to be compliant. The FSC Pesticides Policy was written to cover global forestry across a wide range of administrations and governments so, in a heavily regulated and compliant country like the UK, the impact is not particularly onerous but is significant.

The new policy has two areas where we need to take action to maintain compliance. Neither is new but we need to be more specific in how we deal with them. External audits are bound to focus on the new pesticide policy and given the sensitivity with which FSC treats pesticide issues we cannot afford to make mistakes. However, on the plus side, at a time when pesticide use is under increasing scrutiny by the public, showing compliance with FSC requirements is an excellent means to demonstrate that we work to the highest standards.

Given the range of pesticides we use in the UK, there is nothing in the new Pesticides Policy that restricts what we do, beyond what is already required by best practice. FSC-UK worked hard to ensure that the implementation of the new policy is reasonable and balanced, given the regulatory background we already operate under. The only area where there the process has been disappointing has been inclusion of use of urea for stump treatment within the policy. Urea is not regarded as a pesticide by the UK Government and strictly it is used as a protective coating not as a pesticide.

Integrated Pest Management (IPM)

The purpose of IPM is to reduce or eliminate the need to control pests and ultimately to avoid the use of pesticides where possible. This has been part of the UKWAS pesticide requirements for a long time but has never been a heavily audited issue. In the future, you can expect to be challenged on this at audit. That is to say that the auditor will be looking for evidence of an IPM approach, not trying to prove that you were wrong to use a pesticide.

IPM requires that the reason why the application of a pesticide was required is properly assessed and recorded. IPM goes much further back than a simple site inspection identifying a problem and we should be able to demonstrate that species choice, ground preparation, transplant size, non-chemical methods of control, fallow periods and any other factors were considered as part of the management process. The auditor can use a discussion with the manager as part of the evidence gathering process to demonstrate compliance, so managers need to be able to clearly explain their approach.

Step 1: Management choices to preview pest problems

Avoid pesticide use by
- Ground preparation to control weeds and promote early growth
- Fallow periods to reduce weevil populations
- Plant species appropriate to site
- Use of HMSS

Step 2: Non pesticide interventions

Avoid pesticide use by
- Doing nothing
- Hand cutting weeds
- Sleeves as barriers to control weevil damage

Step 3: Control using pesticides

Minimise impact, use
- Lowest hazard effective pesticide
- Lowest effective dose
- Spot treatments
- Planting treated trees

The IPM approach

Environmental and Social Risk Assessments (ESRAs)

Once the IPM approach has justified the use of a pesticide, FSC require us to carry out a local-level ESRA. As noted above, the FSC policy is a global one and many of the required elements are already well-established practice in the UK.

The FSC policy allows standard setting bodies around the world to develop national-level ESRAs to assist certificate holders with compliance (and by implication auditors with auditing). Scottish Woodlands provided significant input into this process and FSC-UK have published the main UK-level Environmental and Social Risk Assessments (ESRAs) on their website. These provide managers the framework of controls to carry out the local level ESRA.

The local level ESRA must show how the controls identified in the UK level ESRAs are met at site level.

Continued overleaf

None of the required evidence should be difficult to achieve and most would be covered by a normal pre-commencement meeting with the contractor or estate foreman. Therefore, the local level ESRA may be a prepared from a common template and applied across several sites. Then add a good map and limited additional documentation to define the site-specific requirements. This will require some knowledge of the site and of any sensitive features such as water supplies and footpaths.

Different ESRAs for Different Pesticides

Each active ingredient has a different ESRA but the handheld application ESRAs are very similar. The exceptions are aerial application of Asulox and the use of dyed blue urea which are of necessity different. This keeps the system as simple as possible for contractors, but managers will need to make sure that they are aware of the differences between ESRAs.

Checklist for local ESRA

The list of controls common to most UK ESRAs, when translated into the checks managers need to make, looks straightforward and could form the basis of a local ESRA.

- Operations conform to FISA guide 202.
- All operators are trained and competent
- There is a CoSHH Assessment
- All operators use the prescribed PPE in the CoSHH
- The product label is followed (or off-label approval)
- Buffer zones from water courses and water supplies are respected
- Pesticides are stored in a locked transit box and mixing, and measuring is carried out away from buffer areas
- The contractor returns a completed Pesticide Application Record Form
- Public Access route are protected
- The appropriate agency is consulted before pesticides are applied to designated sites.

Add the site map to show any sensitive areas including required buffers, warning sign locations etc and you are almost there.

All the other UKWAS, FISA and HSE safety requirements relating to pesticide use still apply, although they may not be explicitly stated in the ESRA. Welfare, waste disposal, weather conditions, maintenance of equipment etc are all implied from FISA 202 and from UKWAS 5.4.1 (the general Health and Safety Requirement in the standard). Therefore, there should still be an accompanying Health and Safety Risk Assessment. Depending on existing practice it may be possible to merge the ESRA and the Health and Safety information into one suite of documents.

Records

FSC require that records of chemical pesticide use are made and kept for five years, including:

- Trade name
- Active ingredient
- Quantity of active ingredient used
- Period of use
- Number and frequency of applications
- Location and area of use, and
- Reason for use.

There is also a requirement to follow up on any acute health effects reported by operators. This would commonly be a RIDDOR in the UK in any case.

UK ESRA control	Local ESRA	Audit evidence from Local ESRA
All operators are appropriately qualified	Competency of operators is checked before work starts	All operators named on contract have certificates held on file

Example of ESRA process

Other requirements

Not all the UK-Level ESRA requirements translate directly into obvious on-site controls. There is a general requirement for managers to keep up-to-date with new developments and alternative pesticides or methods of control. There are regular features in this magazine and other trade magazines that would help with this.

With both acetamiprid and glyphosate as restricted pesticides there is also a requirement for individual or group certificates with more than 5000ha who use these pesticides to contribute either in kind or in cash to research into alternatives. The Scottish Forestry Trust holds a dedicated Hylobius Research Fund which will be distribute funds to projects researching alternatives to acetamiprid. At this stage we would suggest that certificate holders may contribute to this fund as a means of meeting this requirement.

There are currently no similar arrangements for glyphosate although the industry may develop some similar mechanism in future.

For more information, search for “FSC UK Pesticides Policy”

Timber train trial in far north

Frank Roach
Highland & Island Transport Partnership (HITRANS)

Until recently, the last timber to move by rail from Scotland was in 2009 when the economic downturn brought the timber by rail service from Arrochar and Crainlarich to Chirk to a halt. Services within England and Wales have continued but restarting timber by rail from Scotland was proving difficult.

Following the dramatic reduction in demand for coal trains the rail industry has been set targets for the expansion of rail freight into other sectors and despite the real challenges of dispersed supply and lack of infrastructure on the rural lines, timber has always been under consideration. There is potential for rail to offer lower-carbon transport and to take timber lorries of some of the more fragile lengths of road in Scotland.

In 2019, following HITRANS' *Wood You Use Rail?* report, Cabinet Secretary Fergus Ewing hosted a summit at Scotland House, London attended by timber interests as well as leaders of all rail freight operators and logistics providers. This was followed up by a workshop in Perth.

During the winter of 2019-20, HITRANS and Victa Railfreight worked on the cost-model for a merry-go-round timber train that could pick up and deliver timber at various sites, identifying wagon provision as the most important area to de-risk. Discussion took place with Transport Scotland on the potential for government to assist with the lease costs of a rake of suitable wagons.

In early summer Victa submitted a successful bid to Transport Scotland's Rail Freight Fund for support to run timber trains from Caithness, working with Munro Harvesting to deliver material to Norbord. Once the award was made, Network Rail moved very quickly to help with making siding space available in Inverness Millburn Yard prior to the deployment of autumn leaf fall trains.

The original plan was to run from GELP's Georgemas terminal to Inverness for transhipment by lorry to Norbord, with variations to the schedule to service Kinbrace, Lairg and Kyle.

DB Cargo pipe carrying wagons were identified as being available at short notice, although it was recognised that they do not provide for an optimised payload, and West Coast Railway Company were contracted to provide locomotives.

Loading the train at Georgemas. Photo: Frank Roach / HITRANS

Network Rail approved train paths at very short notice, and HITRANS funded the clearing-up of the terminal.

> Train performance was exemplary. The timings allowed for a single driver to lodge in Thurso and return with train the next day.

Trains commenced in August for six weeks with timber trucked into the sidings at Georgemas yard which has ample laydown. Loading was done by lorry-based independent crane. Trains departed Georgemas late afternoon on Day A with a late arrival in Inverness in the evening. Unloading and trucking the timber the six miles east to Norbord began early on Day B with train clear by late morning allowing preparation for a mid-afternoon departure back to Georgemas. Train performance was exemplary. The timings allowed for a single driver to lodge in Thurso and return with train the next day. On one occasion a DRS driver was drafted to cover rest days.

The trial had hoped to service other locations, but the sidings required clearing at Kyle of Lochalsh while the Kinbrace (lineside loading) and Lairg were impacted by overnight engineering possessions. This would have carried timber from other suppliers including saw logs which would have maximised payload.

The trial is now complete and being written up. Once a review of the operation has been carried out, discussions will be held to consider options for further timber trains, including using wagons with a greater payload. Purchasing the timber by cubic metre rather than tonnage would also help in future.

Cabinet Secretary for Rural Economy and Tourism Fergus Ewing MSP visited the operation in Inverness and appreciated how all partners had managed to shift from policy/strategy to real trains running.

www.hitrans.org.uk

Making Wood Work for Wales

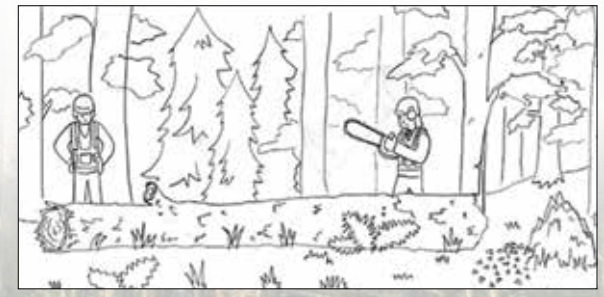
Local wood supply chains supporting employment in the rural economy

Maria Wilding
Llais y Goedwig - the community woodland network for Wales

Often, looking back, we imagine a halcyon time when communities tended local wood and trees as a source of building material, to make furniture and baskets and to burn to cook and heat the home. These days, the supply of wood is more industrialised - it goes off in big loads on the back of lorries and comes back as flat pack or pellets. But is it possible to re-imagine local self-sufficiency for the 21st century? What might it look like? Could woodland resources really build houses, support local jobs, heat homes and make enough money to put back into forest management? In small ways, people across Wales are coming together to reignite community and taking the first steps to explore circular economy, transition, self-sufficiency, greening ... there are as many terms as there are groups. Here we look at one such group in NE Wales and what can be achieved by putting wood into local supply chains.

Elwy Working Woods

Elwy Working Woods is a worker's co-operative committed to managing the woodland surrounding the picturesque Elwy valley in North Wales. The coop is a fluctuating group of 25 people who operate a social enterprise ranging across saw-milling, traditional timber framing, basket making, charcoal burning, firewood, tree planting and forestry. In mid-2019, EWW negotiated access to fell, fence and restock with broadleaves a small area (0.5 ha) of mature conifer forest.



The area was part of a compartment planted in 1956 with Douglas fir (DF) as the main species, with Norway spruce (NS) and Corsican pine (CP) as secondary species.

After felling, the logs were sorted into lots to suit the seven buyers that had been identified through local contacts *(see infographic)*

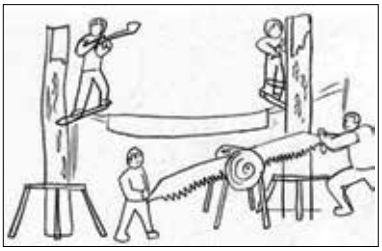
The fiddly and time consuming bit was sorting out the various species, log length and grades, but transport costs were low, as 70% only went 10 miles from the wood and 25% making the longest haul to a sawmill just over the border in England.

Value-addition to rural economy

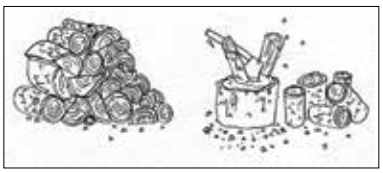
A surprising number of people were involved in the sale and use of the wood in five small-to micro-scale rural enterprises (contractor, haulier, timber-frame co-operative, signs workshop and firewood merchant). Most of the buyers added value to the wood by processing and selling on the wood in the form of signs, houses and pellets. The most dramatic transformation being the crafting of the large DF logs into a 15-tonne timber-frame for a house in Preston which paid for the wood, transport and £30,000 towards salaries for five people. Altogether, these Welsh enterprises contributed to 16 rural jobs.

It wasn't all work though - the CP logs went to the local axemen who went about things the old fashioned way and reduced the logs to firewood with axes and saws in competitions and to entertain the crowds at country shows.

There are always a few twisty logs left over and neighbours who come



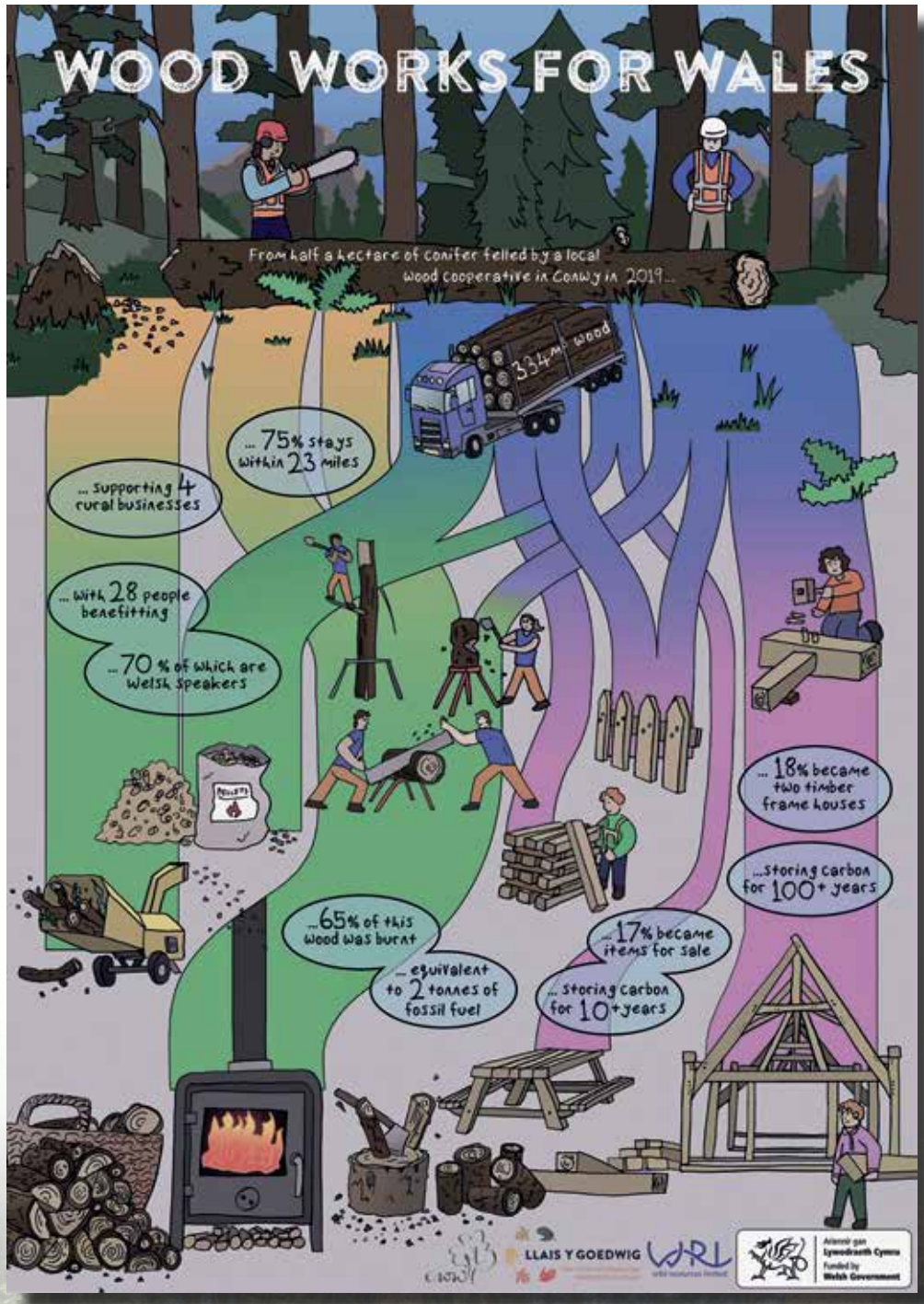
over for a chat and go away with a load of logs. This is a time-honoured way of sharing out resources and saving on heating costs.



This case serves as an illustration of what can be achieved by allowing local contractors to bid for small scale standing wood sales which include good quality timber and feeding the local wood supply chain. It shows significant gains for the local economy over business which has logs directed into a smaller number of larger scale sales. Opening up wood markets and connecting supply to local needs is an easy way of creating benefits for local rural economies, culture, well-being and climate change which deserve greater recognition.

Estate managers should look again at procedures for making small standing lots available to the local markets, consider facilitation of onward sales and allow appropriate access to contracts by consortia of local operators and buyers.

For more detail on this case and to read the full case study visit **https://llaisygoedwig.org.uk**



Woodland creation on Cairnhill Farm

Tom Black Savills

Cairnhill Farm sits in a low valley of undulating hills which grades into the Galloway hills to the south and east. Lateral burns have created incised gullies of native woodland down some of the steeper slopes. These add to hedges and small woods to shape the field structure before reaching the valley bottom and the main Dyrock Burn.

The topic of woodland creation came out of a discussion with a long-term advisor in Savills Food & Farming. At 215ha, the farm was likely to be put under economic pressure, as the viable size of agricultural units gets steadily larger and levels of subsidy support look set to reduce.

On this basis, the family decided that diversification was the right decision for them, especially while Central Scotland Green Network (CSGN) funding was still in play for the area. While needing to stack up as a sensible, long-term business decision, the move would also have to consider and compliment the strong connection with the land held by each generation that had grown up there.

At the outset several scales of planting were modelled, however, the final design settled at 68ha gross, divided into three discrete blocks – roughly a third of the farm. While still occupying fertile ground compared to an upland scheme, these blocks were concentrated on the less productive and harder-to-work stock parcels.

During the survey phase, archaeological interest across the farm was found to lie largely in areas of post-medieval agriculture and several old farmsteads, and did not have a strong influence on the design. Also, despite the improved nature of many of the fields, and no designations on the site, several small habitats of ecological interest were found.

The most interesting of which were the aforementioned gully woodlands, which observations and historical maps showed to be Ancient Semi-Natural in origin. The species mixture of these often steep-sloped strips, included some impressive alder specimens, relatively little oak, and surprisingly few non-natives. A particularly satisfying element of the final design was the protection of these existing habitats within the deer fence boundary, and their expansion and partial linkage through the planting of new native woodland in the adjacent fields.

The soils across the farm were dominated by brown earths, with limited gley areas on the lower slopes of Dyrock and the east of Troquhain. Many of the planting areas have been cultivated in the recent past, leaving the soils deep and free-draining. This left the method of ground prep relatively unconstrained and a mixture of ploughing and mounding was assigned according to Bulletin 119 and more recent draft guidance.

Having demarcated a strong core of Sitka Spruce across the design, the secluded centre of the Troquhain block was given over to a mixture of Downy Birch and Sessile Oak. A productive complement to the native habitat that both bounded and

criss-crossed the space. From a landscape design point of view, the broadleaf and diverse conifer elements were concentrated on the lower and steeper slopes of Whitehill and Dyrock in order to soften the main conifer edge to best effect.

Future walking access, especially into corners of the scheme like Troquhain, was a particular focus for the family during implementation. Rather than closing the gate and walking away, they look forward to getting more involved in forestry as the scheme establishes and grows.

Despite the dry spring, most areas are now establishing well, with only the Scots Pine element showing some lasting drought effects. As we move into year two, we look forward to watching the new woods take shape in a new chapter for the farm.

CAIRNHILL FARM

Location: Cairnhill Farm, Kirkmichael, South Ayrshire.

Total Size: 68ha

Composition:
- Sitka Spruce – 41ha (65%)
- Diverse Conifer – 4.3ha (7%)
- Productive Broadleaves - 3.6ha (6%)
- Native Broadleaves – 8.2ha (13%)
- Designed Open Ground – 6.4ha (10%)

Planted: 2019.20

Management aims:
- To diversify and support the farming business through the creation of productive woodland blocks
- Protecting and enhancing the family's enjoyment of the holding's history and landscape.

Contributors: Tom Black MICFor, Mark Hamilton Landscaping, Andrew Maclachlan MICFor, Euan Wilkie.

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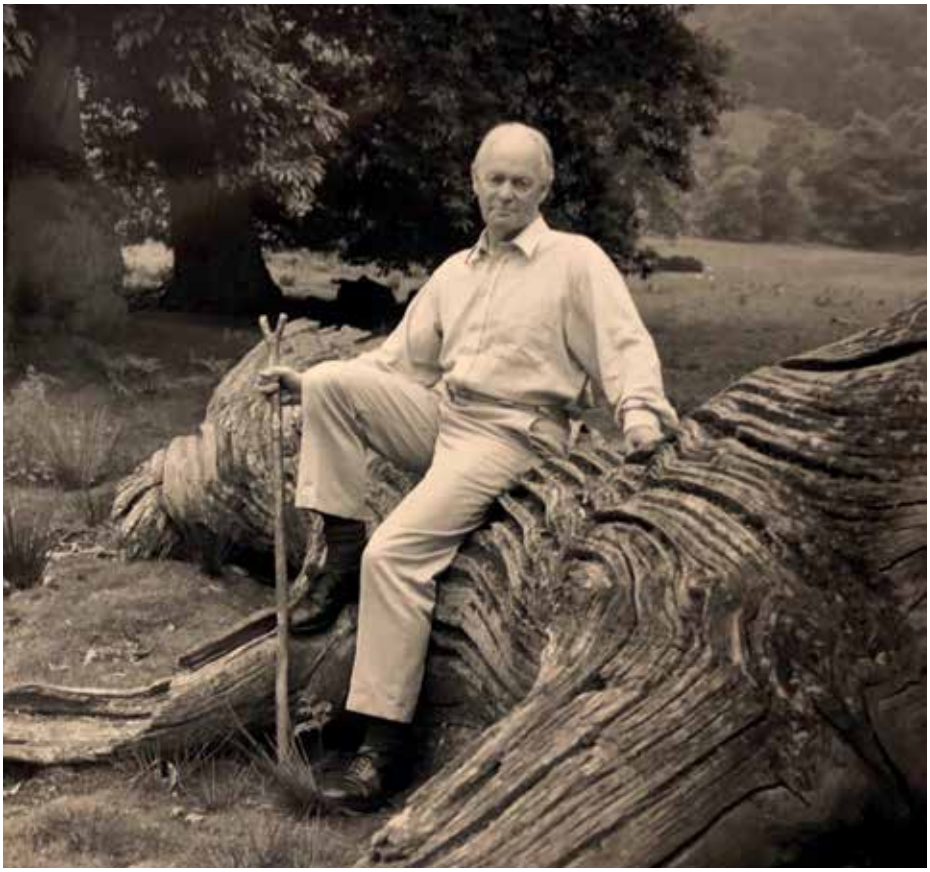

Bede Howell died peacefully in his sleep in August 2020, aged 84. He leaves a massive void for those that knew him within the forestry world, but one that will no doubt be filled by wonderful memories of a true character, with an incredible knowledge of his field and a great sense of humour.

When he left school, Bede worked for a short time in the Wyre Forest. Later, having completed his National Service, he worked locally in Worcestershire for Major Lawrence Pilling, a Partner in West Midland Woodlands. At the same time Bede studied at the Worcester Technical College to get the necessary qualifications to read forestry at Aberdeen University under Professor H M Stevens. He joined the Royal Forestry Society (RFS) in 1958.

Bede loved his time in Scotland, working for local Estates during the vacations. After graduating he travelled to France and worked in a French sawmill. Thereafter he always had a keen eye for timber in its final form, which explains why he could suddenly leap up and turn a chair over to examine it, or dive behind the oak counter in a shop to study the growth rings in the timber!

He returned home and started work with Major Pilling, practising forestry on Worcestershire Estates. Bede married Elizabeth in 1965 and over the years had six children, James, John, Rosemary, Thomas, Judith and William. He was a great family man, and a wonderful grandfather, where his sense of fun and love of Hilaire Belloc, along with others came to the fore.

I first met Bede in 1985 as the then Senior Partner of West Midlands Woodlands, which became Abbey Forestry later that year. Over the following years I was lucky enough to experience a "Bede Howell" apprenticeship. He was generous with his time, taking great care to explain the finer points of silviculture and forestry operations to young protégés.

Bede sat on RFS Council and served a term as President of the society. He was awarded the RFS Gold Medal in 2012 for services to forestry. He also served on numerous committees and steering groups. He was a significant figure in Woodland Heritage, the Future Trees Trust (BHIP as was), the European Squirrel Initiative to name but a few.

He was a dedicated Chartered Forester, attending seminars, field events and conferences whenever possible. He had an insatiable thirst for knowledge; you usually found Bede at home, leaning against the Aga, reading a book on silviculture, European history or engineering. He would then tell you how many rivets were used in the Titanic! He combined his love of oak, and of all things French, by translating Jean Lemaire's technical guide *Oak: fine timber in 100 years* in 2014.

Bede's energy, enthusiasm and undoubted dedication to forestry was infectious. He was an inspiration to so many of us in the industry. He was my forestry guru and great friend. Rarely do you know a legend in his lifetime, but that was certainly the case with Bede!

Andy J Shirley-Priest

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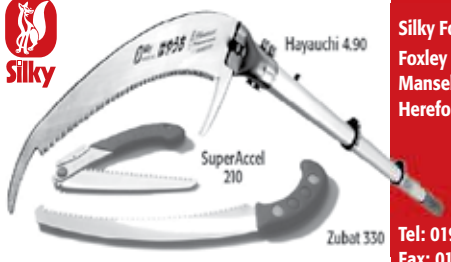

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SMALL WOODLAND OWNER

PROFESSOR JULIAN EVANS OBE FICFor

Benefits of long-term research

Julian Evans reflects on how both large and small woodland owners benefit from data resulting from long-term forest sampling.

Yesterday, I stood in a Forest Research permanent sample plot (PSP) of oak trees that had been laid down in 1953. I was with someone new to forestry and many questions were forthcoming, not least what was such a long term 'experiment' for and who pays for it?

The permanent sample plot network enables accurate measurement of tree growth and development for all our major species. Over the years, the number of plots has been reduced in response to priorities though new ones are established to meet changing silvicultural practices such as in species likely to increase owing to climate change and continuous cover forestry (CCF) with its wider range of tree sizes (and ages and form factors) compared to conventional even-aged plantations. But what are they for and do they help the small woodland owner?

Data from sample plots provide the empirical information to model tree and stand development. Tables of growth and productivity, of outturn by size classes, of thinning schedules and the like all ultimately derive from this national PSP network. We can refer to them in book form or have them on our computers and smartphones. So while the owner of large productive forests benefit most, all of us who own and manage woodland of whatever size can be assured that the kinds of yields to expect from say Yield Class 6 oak or YC 18 Douglas fir are based on real data from evidence drawn from a range of sites. Data are not 'pie in the sky' but soundly based. They are a great aid to management, particularly if timber production is an objective.

In the stand my friend and I visited yesterday there were actually four oak PSPs adjacent to one another. The trees had been planted in 1928 and the first thinning done in 1953 (age 25 years) when the sample plots were established. Four different regimes have been maintained ever since, namely one plot receiving very light thinning just removing dead and dying trees, two of moderate intensity following 'low' or 'crown' thinning prescriptions, and one of very heavy thinning. The contrast at age 92 years in stand density and tree size was plain to see – as were the painted numbers and DBH marks and on each tree. And the data are there, stored and analysed, from 67 years of assessments made at five-year intervals.

Permanent Sample Plots are just one of numerous investments by Forest Research to support best practice in British forestry, but my friend asked who pays for it? And this raises an important question. Clearly such long-term science as a sample plot network requires long-term commitment and usually this means state funding in some form. But need this apply where research has shorter time horizons or is highly practical, applied or regionally focused?

Funding for future research

The last thought was prompted by Confor's excellent special report, 'Biodiversity, forestry and wood', published earlier this year. It makes a powerful case that modern forestry and wood production can co-exist with and frequently enhance greater biodiversity. After 25 pages of well argued text supported by 15 well presented case studies – though a pity only one was from Wales – there are three whole pages of research recommendations. Of the points made and the topics proposed few would disagree; however, nothing is said about funding such work. Of course as a forest scientist I would say that being so aware of all that urgently needs to be done! Perhaps Confor can revisit their first rate report and explore how industry – with forestry and timber valued at £2bn to the economy - might play a bigger part and burnish further their green credentials? Just a thought.

Environmental science students from Reading at the base of FR's gas exchange tower in an oak woodland learning about long-term monitoring.

FORESTRY IN PICTURES

The bambification of wildlife and woodlands

It is a fact that, in modern landscapes shaped by humans, deer populations need controlling in order to maintain something resembling an ecological balance. I am intellectually aware of this fact. However, looking at the above image, all I can feel is a motherly instinct to protect this beautiful and fragile creature. Followed by a heart-wrenching sadness as I think of Bambi, and its mother's death.

Probably my entire generation will experience a similar heart / mind dilemma, to a point where Ralph H. Lutt wrote a paper called *The Trouble with Bambi: Walt Disney's Bambi and the American Vision of Nature* (1992).

He argues that the image of Bambi is so engraved in our mind that it has greatly shaped people's attitude towards woodlands, wildlife, and deer, in particular. And the death of Bambi's mother is a wound that we all seem to carry in our hearts; which makes the task of finding a positive PR approach for deer control rather challenging.

Text: Stef Kaiser Photo: Shutterstock

Want to see your picture here?

Forestry in Pictures is a regular feature in FTN. For every issue, we select the most impacting photograph sent by a reader. If you have a photo you would like to see published here, please send your file to **Stefanie.kaiser@confor.org**. Please include your name, brief description of yourself and the picture and a credit.

Photos should relate to forestry and timber and be of high-quality (minimum resolution 300dpi). Exceptional pictures might be considered for the front cover of a future FTN issue.

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COMING UP IN DECEMBER – GET INVOLVED

In December, we will follow up on our theme of Green Recovery throughout the magazine and will run features on Wood Science and Timber Treatment, and 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 can send us their company news updates or pitch stories for feature articles.

Note that our general editorial deadline for our December issue is the 10th of November. If you would like to pitch an article idea, please de so by the end of October. **Stefanie.kaiser@confor.org.uk**

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