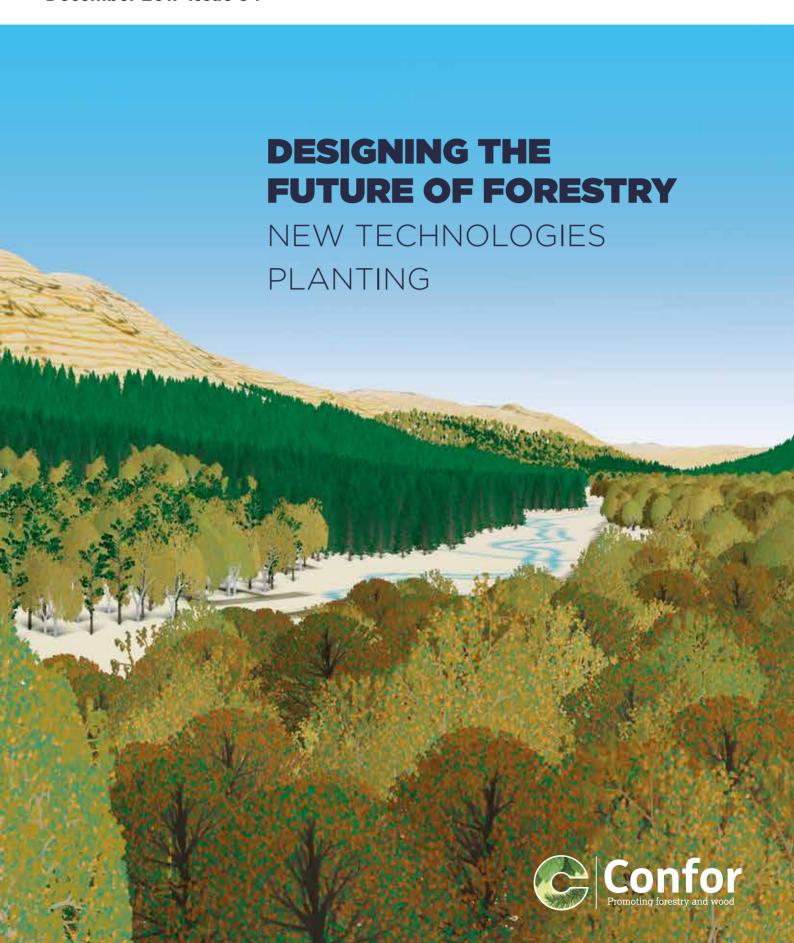
FORESTRY & TIMBER NEWS

December 2017 Issue 84







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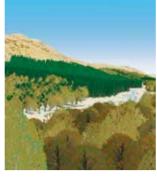
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ProfessorJulian Evans returns with his small woodlands owner articles next year.

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Forestry on the margins is forestry forgotten

STUART GOODALL CHIEF EXECUTIVE, CONFOR

eptember 01, 2019 will mark the 100th anniversary of the Forestry Act, and by then the Forestry Commission (FC) name will remain only in England.

The proposed structural changes to the FC in 2019 (reported on page 18) are the predictable culmination of the process of devolution, though the greater integration of forestry policy and regulation into government is partly a response to the success of the sector in raising the profile of forestry and wood processing.

I appreciate that many members would like less, rather than more political 'interference' in our sector, but additional financial support and improvements to regulatory systems are achieved through stimulating greater levels of political interest.

> Similarly, if we want forestry to be influential in the debate around what replaces the Common Agricultural Policy and in how the plethora of EU environmental legislation is translated/ interpreted into UK law then we need to be near the centre not on the periphery.

For that, they need to believe that the sector is important to their portfolios and that they can make a difference by demanding action from their officials.

Quite simply, forestry on the margins is forestry forgotten.

At the same time, we want to avoid unwelcome tinkering and poorly thought through policy-making. To achieve informed, long-term policy and action requires a position of influence accompanied by evidence-based proposals that are positioned to appeal to the audience - the minister and their key advisers.

In recent years, with the additional resource available from a growing organisation, Confor has been able to step up its development of well-prepared and targeted lobbying material. We have also built our networks of influence. And, quite frankly, we have learnt from experience what works and what does not.

Lobbying is far more than writing a strongly-worded letter to the minister or a one-off meeting. Every successful sector deploys considerable resource, over a period of time, and that sustained effort has to be undertaken professionally. The short-listing this year of Confor for the prestigious UK Public Affairs Awards is welcome recognition that we are being successful.

As we enter a further period of change, I now believe that, through Confor, forestry and wood processing enjoy a level of understanding and support across the UK that has never achieved before. This gives me the confidence to ask ministers in any of the countries of the UK to take an active interest in our sector - to ask them to make changes that will see more forests planted, more woodland managed, and more wood products produced.



DMMCNICATING

The world around us is changing fast and so are the way people access and process information. We at Confor are committed to stay on track and in 2017, have worked hard to improve the way we communicate with you, our members. See what's in for you - and please give us your feedback!

E-newsletter

Have you noticed that your e-newsletter is different this year? To keep up with digital marketing standards, we are now using mailchimp for our e-newsletter and some events communications.



What's new?

- More attractive layout, including pictures and featured content.
- Offers more flexibility for those of you who want content to be featured
- Lets us track who has received the newsletter. This allows us to make sure our news reach the people we want to reach
- Option to sign up additional members of your team to receive the e-news
- Option to unsubscribe or update your profile and preferences

Are our digital news updates reaching you?

We don't have e-mail contacts for all of our members. If you are NOT receiving our e-news, get in touch with us to provide or change an email address.

If you are a corporate member, you can sign up more team members by using our subscription form.

Online ticketing

Introduced for the Confor Woodland Show 2017, you can now

- Buy event tickets directly from our events webpages, using a safe online ticketing platform
- Choose to print your ticket or present it on your smartphone
- Get all events information in one place
- Select special requirements options, add catering and other purchase options where available

Social media

You might like it or not, but social media is a reality and its power has to be harnessed.



We have been increasingly using graphic e-postcards to promote

our core messages and campaigns, and have been collaborating with other organisations to get our word out to a wider audience.

In 2018, we will work more with you, our membership, to help you use social media to promote both the sector and your business. Watch out for a new section in FTN!

Infographics & media

We make all infographics, videos and other resources available on your website.

re a great way to

These graphic resources are a great way to get our sector's core messages out there – use them for your own events, or to get the point across to your farmer neighbour! www.confor.org.uk/resources/infographics-and-media/



FTN

We are proud of our handsome magazine and we have now at last settled what we believe to be a professional and attractive look. It's your magazine - love it, use it.

- The print magazine now offers additional web resources for some articles watch out for the mouse icon and go to www.confor. org.uk/FTNweb
- Forestry in pictures: Send us your striking photographs and sharp comments to be featured on the last page of FTN.
- Send letters to the editor engage in the discussion!
- Get involved: watch out for call-to-action boxes, engage with us!
- Remember, all past issues are available online and you can browse for individual articles here:

www.confor.org.uk/news/ftn-magazine

GET INVOLVED



There are two easy ways to give your feedback:

1 Online

Find a feedback form and a enewsletter subscription form here www.confor.org.uk/FTNweb

2 Contact the editor

E: Stefanie.kaiser@confor.org.uk T: 0131 240 1420



Tide begins to turn on productive planting



Confor's campaign for more support to encourage planting is beginning to bear fruit, as **David Lee**

reports

In terms of government spending, it was a proverbial drop in the ocean. But the £1m funding for the Woodland Creation Planning Grant could be the catalyst which stimulates a new generation of large-scale productive planting in England.

Rory Stewart MP was the minister responsible for forestry who announced the money at Confor's Westminster conference back in November 2015.

The initial promise of funding came from the Conservative-Lib Dem coalition government in early 2015, but it had not been confirmed before David Cameron won his outright majority in May 2015. Confor recognised the danger of the money slipping away and lobbied hard for the pledge to be honoured – and this was confirmed in a letter from the then-Chancellor George Osborne to Confor's Chief Executive Stuart Goodall. Mr Goodall went to the November 2015 conference with this important piece of paper in his hand – and it was to prove a pivotal moment.

The Woodland Creation Planning Grant (WCPG) was highlighted last month by the largest productive planting scheme to be approved in England for more than 25 years.

More than 213,000 trees will be planted over 170ha at the Lowther Estate, south of Penrith, Cumbria, this winter 120ha of productive softwood species, while the remainder will be predominantly productive broadleaves.

David Bliss, Estate Manager for Lowther Estate, a long-standing Confor member, said: "The Woodland Creation Planning Grant funding helped Ian Jack, our recently-retired forester, to plan and gain approval for this magnificent commercial woodland, which will in the fullness of time support many local jobs and associated forestry businesses. We are extremely excited to have gained consent for the largest conifer planting scheme in recent times. We now look forward to the challenge of planting."

'Brilliant news'

Confor's England Manager Caroline Harrison said the granting of Countryside Stewardship approval for Lowther – known locally as Jack's Wood to reflect lan Jack's dedication to the project – was brilliant news for the sector, especially with other largely productive planting schemes in the pipeline awaiting approval.

Andy Howard, the project manager behind the large-scale Doddington North planting application in Northumberland, has also highlighted the WCPG as an important factor in the decision to prepare an application for an even larger proposed new productive scheme.

Caroline Harrison said: "The WCPG really has

been the key to unlocking new productive planting at scale. We are now seeing the combined fruits of Confor's hard work and the determination of applicants like Ian Jack – proving that it is sometimes a small investment early in the process that can make all the difference.

Plummet

"We have seen productive planting plummet to its lower level in a generation, but Confor has continued the fight to turn the tide. Hopefully, other schemes will follow Lowther and give real confidence to the sector that England is open for high-quality, large-scale productive planting schemes. This winter, the Lowther scheme means we will see more large-scale planting activity in England than we have for decades and hopefully it will usher in a series of busy planting seasons. This will help protect and create jobs along the forestry and timber supply chain and investment in our rural communities, have a positive impact on climate change targets and the wider environment and provide a great raw material for future generations to build with."

2016 was the worst year for new planting on modern record and Confor calculated that the UK Government's target to plant 11m trees by 2020 was more than seven years behind schedule – unless new large-scale planting schemes started to be approved.

Stuart Goodall said: "We are delighted to see the Lowther scheme approved and hope it signals a real upsurge in planting. Speaking to potential investors a few years ago I was told they needed political support and a scheme that wasn't 'anti-productive planting' if they were to look once more at England as a place for modern, new productive forestry. After a huge amount of lobbying and raising awareness in the media, we now have that political support and the WCPG, which we pushed for, has helped to 'derisk' the process of making an application. We also requested additional funding in recognition of the carbon benefits of tree planting and subsequently welcomed the introduction of the £19.2m Woodland Carbon Fund."

Mr Goodall said the larger schemes now coming through in England meant forestry was in a healthier state across the UK – with renewed optimism in the sector in Wales and planting rates pushing up to and beyond Government targets in Scotland.

"The *Branching Out* report in Wales laid down the need for more productive planting very clearly - thanks in no small part to the commitment of our Wales Manager Martin Bishop to telling the forestry story. Martin continues to work hard with politicians to ensure the 13 recommendations in the *Branching* >> >> Out report are implemented, especially the call to significantly increase planting rates."

Confor's work in Wales is starting to pay off, with historically low planting rates starting to nudge upwards – and in Scotland, the picture is even brighter.

As with the WCPG in England, it was practical action stimulated by Confor that has pushed up new planting in Scotland. After years of making improvements to successive grant schemes, Confor asked members what could make a final, decisive difference to planting rates. The answer was to learn from the planning process. Cabinet Secretary for Rural Economy and Connectivity, Fergus Ewing, seized on this and appointed former Chief Planner for Scotland, Jim Mackinnon, whose fast-track report recommended a number of changes to reduce bureaucracy and stimulate new planting. These were accepted by Fergus Ewing and projected planting for 2017/18 is 7250ha, with 2018/18 potentially seeing 12,000ha.

Confor has secured valuable cross-party support for forestry in the Scottish Parliament, and the Scottish Government subsequently raised its new planting targets earlier this year from 10,000ha per year to 15,000ha per year by 2025, linking the numbers closely with their impact on climate change targets and construction with home-grown timber.

Mr Goodall said: "We are very encouraged by developments across the UK. It is very pleasing when you start to see hard work paying off - but it is important that we keep up the pressure because we still have a long way to go.

"The UK is the second largest net importer of forest products, after China, and we simply have to grow more of our own timber for future generations. We are starting to see more joined-up policy thinking about forestry and timber, with the Clean Growth Strategy showing that the UK Government recognises the need to plant more trees linked to key policy areas like climate change mitigation, flood prevention and housebuilding.

"We need to do more work in England to identify, and remove, the barriers which are preventing more planting applications coming forward. It was great to see Dr Therese Coffey highlighting improvements to the Countryside Stewardship scheme last monthimproved application forms, guidance being release earlier and funding for a wider variety of options. It is practical steps like these – following on from the Woodland Creation Planning Grant – which will encourage more large-scale planting and help us increase woodland cover in England from its low base.

"At the same time, we continue to press for better restocking and improved woodland management – planting has been a high-profile issue and success, but we cannot lose sight of our existing resource."

• Lowther Estate: how to plant a large productive woodland, see p12

FTN WEB RESOURCES



Download the *Branching Out* report and infographic (right) **www.confor.org.uk**

ATION

ENGLAND

The UK Government was missing its very modest target of 11 million trees in the 2015-2020 Parliamentary term by a country mile. Confor calculated that at current planting rates, the target wouldn't be hit until summer 2027.

New applications for large schemes were unknown since the 1980s in England, and initially the agencies, including Forestry Commission, appeared unprepared and negative

CTION

CONFOR LOBBIES AT WESTMINSTER

In 2016, Confor lobbies at Westminster for funding to increase productive planting in England

- Secured commitment from Chancellor of the Exchequer George Osborne to a £1m fund for forestry
- Confor proposed in 2016 that it be used to de-risk new applications for large, productive planting schemes
- Oct 2016 Request to Ministers for additional funding for woodland creation
- Facilitated and organised high-profile media coverage of the planting challenge faced by the forestry sector

UTCOME

NEW FUNDING FOR WOODLAND CREATION APPROVED!

- Woodland Creation Planning Grant (when check)
- Creation of £19m Woodland Carbon Fund.

MEDIA PUTS FORESTRY IN THE SPOTLIGHT

Countryfile and the Guardian among other media outlets, take the lack of tree planting seriously for the first time.



UTLOOK

NEW PLANTING AT LAST!

A 170ha productive planting scheme has been approved on Confor member Lowther Estate and we are hopeful that an even bigger scheme will soon be approved at Doddington in Northumberland.





SECTOR'S PROFILE RAISED

Ministers are talking about the importance of delivering productive planting for the industry, and using more wood in timber building. There is a real appetite to deliver much more productive planting across England.

SCOTLAND

Although Confor lobbying ensured that the usual complete collapse in planting that accompanies a new scheme was avoided, and the right balance of productive and native panting was being achieved, the levels were still well below the 10,000 hectare annual target. Get this text checked



SECTOR IDENTIFIES KEY SOLUTION TO REMOVE BARRIERS TO PLANTING

When Fergus Ewing was appointed as Cabinet Secretary for Rural Affairs & Connectivity in May 2016, Confor challenged members to identify one thing that would provide for a step-change in planting. The answer was to take the experience of local planners into the Forestry Commission.



CHANGES IN FC SCOTAND

Mr Ewing accepts suggestions and appoints ex-chief planner for Scotland Jim Mackinnon.

Confor channelled the expertise of its membership into a review and its recommendations have seen real changes in Forestry Commission Scotland with the planting forecast now to rise to over 7000ha this season.



FUTURE PLANTING SURPASSES TARGET

Projected figures for 2018/19 - perhaps as much as 12,000ha, exceed the Scottish Government's 10,000ha annual target -with the prospect of rising further to meet the Scottish Government's raised planting target of 15,000ha per annum by 2025.

WALES

A long-term drop-off in planting has seen Wales lose 40 million trees in 15 years, threatening the future of an industry supporting 10,000 jobs.



CONFOR LOBBY ON NEED FOR INCREASED PLANTING

Confor lobbied a wide range of politicians, NRW and other stakeholders on the need to increase new planting and speed up restocking on the WGWE - and marshalled large rural employers to warn of the damaging job implications of a lack of future timber supply.



BRANCHING OUT REPORT

Confor input into the WG consultation on forestry policy resulted in the *Branching Out* report summarising the issues and calling on WG to act now. Published in July 2017 by the Senedd's Climate Change, Environment and Rural Affairs Committee, it highlights all the issues Confor had raised – including the benefits of tree planting to the economy, environment and communities.



FORECASTS FOR 2018 REMAIN TOO LOW

New planting forecasts for 2018 remain too low and much more needs to be done – and Confor continues to press for the *Branching Out* report to be implemented in full.

NRW forecasts and increase in restocking on the WGFWE from 2018 onwards to reduced the backlog.

Confor shortlisted for prestigious award

Confor has been shortlisted as a finalist in a UK-wide awards programme which recognises excellence in politi-

cal engagement.

The Public Affairs Awards 2017 includes a category for Trade Body Campaign of the Year, with Confor one of five finalists alongside high-profile bodies like the Federation of Master Builders and Royal College of Nursing.

Finalists in other categories include the National Farmers Union, National Union of Students, Greenpeace UK and the National Housing Federation.

Confor's entry focuses on its success in persuading the Conservative

Party to commit to tree planting targets ahead of the 2017 election, after real concerns that the commitment

> would be dropped as part of a slimmed-down manifesto

> The shortlisting is for Confor and Public Affairs Co-operative, which provides detailed support to Confor in a number of areas, including political en-

gagement, external communications, publications and events.

The Public Affairs Awards 2017 will take place on 14 December in London. https://thepublicaffairsawards.com/portfolio/lobbying-the-european-parliament/



Catch up dinner with Minister: Confor hosted a business dinner with Michael Gove at the Conservative Party Conference. The dinner provided an excellent opportunity for member businesses to brief the Secretary of State on the opportunities and challenges facing the forestry and timber sector. From left: John Paterson (Egger), Michael Gove and Athole McKillop (chair of Confor).

Forestry in the Scottish Parliament

On 7 November, the Scottish Parliament held the Stage One debate on the Forestry & Land Management (Scotland) Bill. The Stage One debate is when parliament formally agrees to consider a piece of legislation, but it is also an opportunity for parties to indicate what areas of the proposed legislation they may seek to amend, and what their overall position on the policy may be.

Confor has met with many of the members who spoke, either in committee or by organising visits to local forestry and timber businesses. Before the debate, we provided every member with an infographic-style briefing on forestry in Scotland.

The debate was striking in demonstrating the extent of cross-party understanding of the multiple economic, environmental and social benefits of forestry in the Scottish parliament. There was consensus amongst all parties on the importance of expanding forestry.

Fulton MacGregor (SNP) described how, as a self-confessed city boy, the debate had taken his appreciation of forestry from a love of climbing a pine-clad Munro, to an understanding of the complexity and importance of the forestry industry. Although officially a formality, the value of occasions like this in increasing understanding of forestry amongst policymakers and wider society is enormous.

FTN WEB RESOURCES



Read more about the topic:

- More quotes from parliament members
- Confor briefing on Stage 1 Report Scotland Bill

www.confor.org.uk

Confor engages with new Welsh Minister

Confor manager Martin Bishop, members of the Confor Wales committee and the forest business sector group met with Hannah Blythyn the recently appointed Welsh Government Minister for Environment.

The meeting concluded with much agreement on the need for action and we look forward to working with the minister to encourage planting in Wales in the future.



From left to right: Phil Wilkinson (ETC Sawmills and UKFPA Chair in Wales). Andrew Bronwin (Confor vice Chair in Wales), Chris Emery (Kronospan and Wood Panel Industry Federation). Gary Newman (Woodknowledge Wales). Hannah Blythyn (Environment Minister). David Edwards (Tilhill Forestry and Institute of Chartered Foresters president). Martin Bishop (Confor Manger for Wales). Dr Eleanor Harris (Confor Policy Researcher). Mike Harvey (Maelor Nurseries and Confor Chair in Wales). Alan Hunt (Forestry and Timber Development Advisor, NRW)



Planning for the future

I manage the forests around us – planning, restoring and conserving to maintain their health and protect their future. To do it properly, I need my tools to be reliable, dependable and built to last.

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Looking for the common ground

Confor has stepped up its work with fellow rural organisations in an effort to develop an inclusive rural policy after Brexit.

The publication of Confor's paper, *A Common Countryside Policy*, was followed by the recent conference in Westminster, to encourage open discussion on what future rural policy and funding might look like.

The centrepiece of the event - Towards A Common Countryside Policy - was a debate involving five rural groups with very different perspectives. Minette Batters of the National Farmers' Union, Beccy Speight of The Woodland Trust, Mark Tufnell of the CLA and Will Ashgley-Cantello of WWF-UK joined Confor's Stuart Goodall on the stage. Each spoke to the subject, What Does A Common Countryside Policy Look Like To You? before a debate with all the speakers.

Stuart Goodall said: "The discussion and the wider conference was designed to move the debate about our rural future away from polarised positions to examine where there is common ground. In addition, it was about recognising the challenges ahead but looking at solutions to those challenges, rather than being consumed by them."

The conference built on collaborative work with both The Woodland Trust and the rural land and business community through the CLA. A joint statement stressing the need for more tree planting - signed by Confor. The Woodland Trust and the CLA - was launched at the Conservative Party conference in Manchester.

The Woodland Trust's Chief Executive Beccy Speight also joined Stuart Goodall on a panel at the conference, alongside Forestry Minister Dr Therese Coffey.

At the conference, Mr Goodall presented the Common Countryside Policy document to Environment Secretary, Michael Gove MP.

Mr Goodall said: "Michael Gove has promised a green Brexit and forestry can play a big part in ensuring that is delivered

"However, we understand that there are many voices in the rural debate with their own perspectives. All we are asking in our discussion paper is for fair treatment for all rural land uses - and for funding to be targeted at specific, positive outcomes which deliver benefit to our rural economy, environment and communities.

"Confor hopes the conference can kick-start further collaborative work to help deliver a positive future for our rural areas."

Speaker Caroline Harrison of Confor asked the question: "How do we make tree planting happen as part of future rurual policy and funding?" The example of Lowther Estate (see panel) was used as a case study to outline solutions.

FTN WEB RESOURCES



See conference presentations and photos Download the report A Common Countryside Policy Watch the animation online www.confor.org.uk

Lowther Estate: how to plant a large productive woodland

t annual Westminster conference, Confor launched its latest contribution to the debate on Brexit, A Common Countryside Policy. It calls for a fresh approach to rural policy and funding, based on a new system which treats different land uses equally and delivers support based on positive outcomes for our rural areas.

Attendees heard how businesses in the sector have grappled with the challenges of mixed land use under CAP, how they overcame those challenges and how they are looking to the future.

One land use that has been brought under keen focus by continued lobbying from Confor is woodland creation. Recent statistics show that there has been a gradual shift towards an increase in planting rates in England. However, in order to meet the sector's future wood supply challenges, there needs to be a dramatic increase in the amount of large-scale productive woodland creation. A joint Confor and Woodland Trust statement in 2015 called for the Government to support a planting target of 7000 ha per annum until 2020, with scope to increase

This is a fantastic example of integrated land use on the Lowther Estate. The application process

proved to be very onerous and may well have put a stop to the scheme, but, for the dedication of lan Jack and his belief that this substantial new woodland will provide multiple benefits to both the Estate and to the local community for generations to come.

CAROLINE HARRISON, CONFOR'S ENGLAND MANAGER

this to 10,000ha per annum from 2020 onwards.

Confor member Lowther Estate in Cumbria has recently worked with partners including the Forestry Commission to develop proposals and bring to fruition a new large scale woodland. Their work can highlight what can be achieved within the current funding framework and what lessons can be learned.

The Estate gained Countryside Stewardship approval for 170 hectares of new productive woodland 'Jacks Wood' which is part within the Lake District National Park. They will be planting the scheme this winter. 121ha will be productive conifer; the remainder will be predominantly productive broadleaves. In total, 213,098 trees will be planted - this will be the largest area of productive conifer to be planted in England since the 1980s.

Lowther Estates used the Woodland Creation Planning Grant (WCPG) to help with the design process for the new woodland, receiving payments to cover the costs of the planning process

David Bliss Estate Manager for Lowther Estate said; "The successful application is entirely down to the work of lan Jack our recently retired forester. The WCPG funding helped him plan and gain approval for this magnificent commercial woodland, which will in the fullness of time support many local jobs and associated forestry businesses. We now look forward to the challenge of planting the area."

Details

Keith Jones, Forestry Commission England's Area Director for the North West and West Midlands said: "This wonderful woodland creation scheme is well thought out and enacted. The development and approval of schemes of this type can only be achieved by proposing the right scheme in the right place and then by developing the important details of its design, through early and close working between the applicant, stakeholders and the Forestry Commission.

"This scheme shows that new large-scale productive schemes are possible when applicants follow UK Forestry Standard guidelines."

lan Jack, who led the development of the project for the Lowther Estate said: "Overall this scheme came about through excellent and professional team working between the Estate and the Local Forest Services office."

Application forms and guidance for the Countryside Stewardship woodland creation grant funding were made available in September this year to allow more time to plan applications. The application window itself opens on Tuesday 2 January 2018. www.forestry.gov.uk/england-grants

Woodland Carbon Fund

Similar schemes might also be helped via the Woodland Carbon Fund (planting rates at £6800 to £8500 per ha depending on location). Under this scheme, agreements can be in place (subject to EIA consent)



lan Jack

from submission of a full application within just three months. Alternatively, an expression of interest, accompanied by an FC-approved WCPG Stage 1 checklist, can get an 'in principle' approval within one month which may help to secure investment.

In recent weeks a number of changes have also been made to the Woodland Carbon Fund in a bid to encourage more interest in the offer. Firstly, the threshold for minimum size applications has been lowered to allow for applications of a minimum of 10 hectares (previously applications had to be a minimum of 30ha). Secondly, eligibility for continued Basic Payments has been extended to include Woodland Carbon Fund applicants. And finally, funding for roads/tracks and a second stage payment at year 5 following the successful establishment of trees (£1000k per ha) have been made available. However, these extra incentives are time limited, so only applications that are made soon will be able to take advantage.

Woodland creation essential workshops

Organised by the Institute of Chartered Foresters and FC Scotland, this series of events in spring 2018 will give you the opportunity to explore how to identify key issues when preparing applications for grant aid in Scotland.

- Thu 01 March New Lanark Mill Hotel, Lanark
- Thu 08 March Easterbrook Hall, Dumfries
- Tue 13 March Drumossie Hotel, Inverness
- Thu 15 March Battleby Conference Centre, Perth
- Tue 20 March Park Inn Hotel, Aberdeen

More details to follow soon on

www.confor.org.uk/resources/events/

Planting and optimism grow but Brexit brings uncertainty

There has been some improvement in optimism and planting rates in Northern Ireland in the last year but this is starting from a relatively low level. With nearly 12 months without an Assembly in Stormont, the Northern Ireland Forest Service has been working to continue to support and administer new applications as well as dealing with the uncertainties of Brexit.

Planting The FES Scheme has been popular, with 410ha planted so far, with this year 38 applications received for 350ha. The planting target for this RDP programme has now been doubled to 1200ha. It is hoped and assumed that FES will continue post Brexit, potentially under national funding alone.

There are some concerns that a significant percentage of proposed schemes are declined, with approximately 150ha turned down last year. A variety of reasons have been suggested including proposed costs being higher than the FC standard cost lists, failure to fully identify constraints and in some cases owners simply withdrawing the schemes.



John Hetherington of Premier Woodlands recently planted a new productive woodland of nearly 40ha near Garvagh, which is one of the largest new commercial woodlands in Northern Ireland in recent years. The site was mainly improved grassland, with significant area of rushes. Approximately half the site (17has) was planted with Sitka spruce, with Lodgepole Pine used as a nurse crop in an intimate mix in some areas. Picture shows birch/alder ending at excluded deep peat area (photo Premier Woodlands)

Brexit

Brexit is a major issue for Northern Ireland and the lack of an Assembly has made discussions challenging. Confor's Northern Ireland Chairman James Hamilton Stubber and representative Andrew Heald, have held a number of meetings with key stakeholders to identify the main challenges and share the concerns of processors, growers and agents.

Biosecurity

Plant health controls is a recurring issue, particularly as there are no major tree nurseries in Northern Ireland, so the majority of plants are imported from Ireland. However, the conversations and proposals in other parts of the UK is to significantly restrict the importation of plants from Europe, Confor has repeatedly raised the concerns as to how this could impact new planting in Ireland. There appears to be no appetite for a return to a hard border, so one

suggestion has been to recognise the island of Ireland as one plant health zone.

Timber trade

There is also significant timber and forest product movement both from Scotland to Ireland, and from Ireland to Northern Ireland. It remains unclear how this trade will be impacted, whether by tighter import controls or tariffs on cross border movement.

Workforce

The challenges of skilled labour is also significant with many people travelling across the border in both directions to work each day. The 'Common Travel Area' covers the whole of the island of Ireland and the UK, and predates any EU agreements for the free movement of people. It is assumed that this will not change regardless of any Brexit negotiations.

CONFOR IN NORTHERN IRELAND



Confor will continue to speak with the Northern Ireland Forest Service and others, to inform and hopefully influence the Brexit discussions and negotiations. We will be circulating a short survey to all members in Northern Ireland in the next few weeks, to further clarify and quantify key

Brexit challenges. If you have any specific concerns about how Brexit will impact your business do not hesitate to speak to James Hamilton Stubber or Andrew Heald.

Andrew.heald@confor.org.uk

James Hamilton contact



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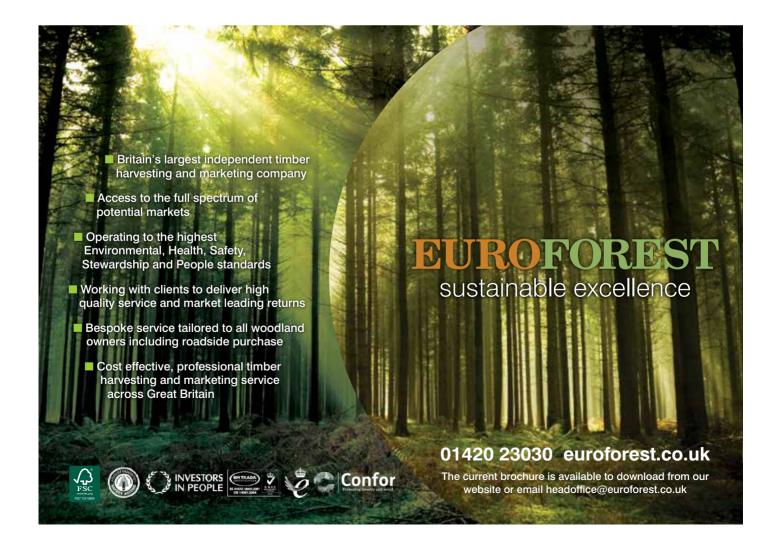
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Confor takes central role at FSC General Assembly



Confor's technical director **Andrew Heald** reports from the FSC General Assembly in Vancouver.

arlier this year I had the honour to be contacted by Hans Djurberg (who sits on the International FSC Board, representing Economic North) and asked whether I would coordinate the economic chamber at the General Assembly (GA) in Vancouver.

Following discussions with Stuart Goodall and a number of Confor members we decided that this would be a unique opportunity to influence FSC at an international level, and to ensure the concerns of UK certificate holders were heard at the highest level.

In addition, I had tabled a Motion at the General Assembly, which called on FSC to make better use of audit date, to try to drive forward risk based auditing, enable informed standard revision and better demonstrate the impact of FSC certification.

As a coordinator my role was to help prepare and support the debate around the Motions, and if possible connect Motion proposers to other proposers with similar ideas. I also worked with the two other chamber coordinators to introduce proposers to FSC staff who could explain if their idea was included in the Global Strategic Plan.

The trade unions renewed their call for a variety of ILO labour issues to be included in Chain of Custody requirements, but their motion was not supported. There was a Motion for a 4th Chamber to represent Indigenous Peoples, but this also failed to attract sufficient support.

Some of the positives I would highlight from this GA:

- renewed interest and support for small-holders. A lot of the FSC challenges for smallholders are universal for all forest owners, so solving them should result in significant overall positive change.
- the pesticide policy is now more pragmatic and workable
- some of the ideas discussed in FSC 2.0 sessions were very exciting

There were also some challenges:

• the FSC family is still arguing about Controlled Wood and Intact Forest Landscapes (IFL).

I think this General Assembly actually helped reach, if not a solution then at least an agreed direction of travel for these key issues.



Andrew makes a point in Vancouver

I am concerned that there seems to be a general fatigue particularly around public consultations, and that some organisations are concerned about the 'value proposition.

The General Assembly is democracy red in tooth and claw; some great ideas are rejected and some less good ones are supported. Some members want to see FSC as the platinum standard and to drive forward protection of intact forest landscapes, other members that FSC should remain as a market driven mechanism to support the sustainable management of forest products.

FSC can often feel strategically very chaotic and it was frustrating to read a Greenpeace article published immediately after the GA, complaining that very few Motions had been passed. The Director General of FSC, had specifically asked the Membership not overload the FSC staff with additional work, and for a focus on delivering the Global Strategic Plan.

From my own and Confor's perspective, I think the GA was reasonably positive from the original 60 motions, a large number were withdrawn or amalgamated and there were no sudden shifts in policy. My own 'Motion 16' was supported unanimously without a single vote against, it was one of only fifteen motions approved during the week. I had worked very closely with WWF and with IPEF and IBA, (who represent a large number of Latin American companies) to ensure that the language of the Motion was fully acceptable.

FSC's biggest challenge is how to enable the 600 General assembly delegates to work together, to listen better and most importantly, to all trust each other a little more.

Kerb now approved for certified forests

Following a review of FSC Pesticide procedures, it was decided that Propyzamide the active ingredient in Kerb (a winter herbicide for grass) was no longer a "Highly Hazardous" chemical. This means that Kerb can now be used in certified forest properties.

Derogation to use Kerb was withdrawn by FSC a number of years ago, and this review is a very welcome and represents a more scientific approach to pesticide management.

FSC are having a complete revision of their pes-

ticide regulation, and are now taking a much risk based approach. This includes a traffic light system for individual pesticides rather than the previous "highly hazardous" list. Confor has already responded positively to the initial consultation and we hope to see this revised approach fully implemented in summer 2018.

More on Kerb in Colin Palmer's Pesticide Notebook on page 62



Beyond the Commission

here will be new arrangements for crossborder working in public sector forestry following Scottish devolution. From 2019, Forestry Commission Scotland will cease to exist, and forestry will be brought under the direct control of Scottish ministers. As Scotland is home to almost half the sector, this has significant implications for the whole UK.

Confor has pressed ministers to provide clarity on who UK-wide aspects of forestry, such as the UK Forestry Standard, Forestry Statistics, Forest Research and Plant Health, will be co-ordinated in future. On 7 November, when the Scottish Parliament debated the draft devolution bill, the ministers responded with an announcement. The graphic [below/left/right/above] sets out the new structures as announced.

Devolved delivery

Following devolution, England, Scotland and Wales will be in charge of their own arrangements for delivering forestry services to the private sector (grants and regulations), and for running their own national forest estate.

The Scottish government has given assurance that, although they are bringing in new legislation, the service delivered under the new structures should be 'business as usual'.

England, conversely, has announced that al-

Confor will be pushing for reassurance, in the form of specific arrangements, to ensure this commitment [to new planting]

though it is retaining the same structures, this is an opportunity to refresh the work of Forestry Commission England. The English Forest Estate aims to develop more diversified business activities, although it may be hampered by the requirement in the 1967 Forestry Act to manage forestry land for forestry-related purposes, a requirement which Forest Enterprise Scotland were keen to see removed from their new legislation.

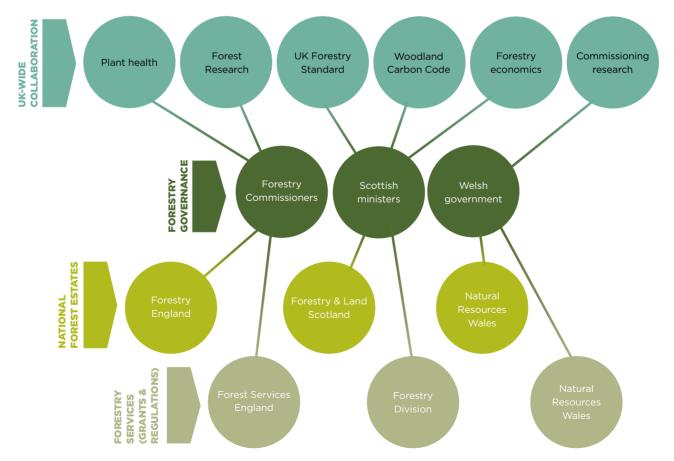
UK-wide collaboration

There is almost universal agreement within the sector that the UK Forestry Standard and Woodland Carbon Code, Forest Research and plant health should remain UK-wide. Following sustained lobbying by Confor on the subject, ministers announced that these would indeed remain UK-wide.

As the graphic [below/left/right/above] shows, the arrangement proposed is that England, Wales and Scotland will host different areas of activity.

Forest Research will be based in England, although our understanding is that facilities in Scotland will remain. Commissioning of research will be overseen by Wales, as independent from the English and Scottish public and private sectors which will deliver most of the research.

UK-wide arrangements for Plant health will also continue to be delivered by England.



The UK Forestry Standard and Woodland Carbon Code will be based in Scotland, which will also lead on 'forestry economics'.

Questions and concerns

These announcements raise as many questions as they answer.

How will the research arrangements operate in practice, and what is included in 'forestry economics'? Will Forestry Statistics remain intact, or will some aspects, for example timber production forecasting, be part of 'forestry economics'? Confor will seek clarity on this issue, and for an increased role for the private sector in forestry research.

How will devolved governments ensure buy-in from one another to the arrangements they decide? For example, Natural Resources Wales, where forestry is already fully devolved, has begun to issue its own guidelines on forestry and water, in parallel to the UK Forestry Standard Forestry and Water Guidelines. What will prevent standards diverging over time across the UK? Will the valuable time-series of UK-wide forestry statistics be broken as different parts of the UK begin using different forms of measurement? Already, governments are eager to switch to new measures which amplify the extent of forest cover, in the face of Confor's successful work to highlight lack of new planting in the press.

Confor will be pushing for reassurance, in the form of specific arrangements, to ensure this commitment. For example, a suggestion we have made before is to re-establish regular meetings between UK forestry ministers, to ensure political buy-in to arrangements, rather than leaving civil servants to be pulled several ways.

How does the Northern Ireland Forest Service fit into the arrangements? In the absence of a government in Stormont, Northern Ireland has been unable to participate in these discussions.

What next?

We expect further announcements in the coming months, and will be following developments closely and updating our members through FTN and e-news. We will also continue to ensure our concerns are kept before governments and asking that the private sector is consulted on arrangements as they are developed, rather than being kept behind closed doors.

GET INVOLVED



We would be grateful to hear from members on any questions you have about the arrangements: please Eleanor Harris me at eleanor@confor.org.uk

FTN WEB RESOURCES



Forestry Commission England has produced a useful animation on The Future Forestry Commission Watch the animation online www.confor.org.uk

Confor: A year in the media

Confor has secured significant, high-profile coverage for the forestry and wood-processing sector throughout 2017. Here are some of the highlights...



BBC COUNTRYFILE FORESTS SPECIAL

Confor worked over a period of several months with the Countryfile production team to persuade them to run a specific programme on forestry in the UK - and then to set up filming at a number of locations. Chief Executive Stuart Goodall was interviewed in England's largest forest, Kielder, to discuss the need for far greater productive planting - and a number of Confor members were interviewed for different elements of the programme, watched by more than 7.5m people.





BBC RADIO 4 COSTING THE EARTH

MAY

Stuart Goodall accompanied presenter Tom Heap to the Jerah planting site in central Scotland and the Glennon Brothers' Windymains sawmill in East Lothian to take a detailed look at the industry and the need for enhanced productive planting. "Woodlands are to be used, not just to be admired," Tom Heap concluded at the end of the programme.



HE TIMES

SEPTEMBER

From Trees to Timber Homes conference special



BBC RADIO 4 TODAY PROGRAMME/BBC WEBSITE

OCTOBE

Confor worked closely with Chris Morris of the BBC's Reality Check to plan a programme on the planting crisis, which lead to a five-minute feature on the Today programme and an accompanying piece on the BBC website.



BBC CBEEBIES LET'S GO CLUB

DECEMBER

Once more, Confor was able to offer the BBC guidance and production input for one of their programmes. In this case, the children's magazine The Let's Go Club (Cbeebies) was looking at three ways to reuse a Christmas tree. Confor was contacted by BBC for guidance and was able to source three suitable Christmas trees with only a few days' notice, thanks to member Oliver Combe (York Christmas Trees, Wiggington).



BBC RADIO SCOTLAND

NOVEMBER

Stuart Goodall appeared in a feature on BBC Scotland ahead of the Bonn Climate Change conference



BBC ONE SCOTLAND THE FOREST

JANUARY 2018

Forestry and timber production will be in the spotlight in a new six-part television series. The Forest is a new observational documentary series which provide the general public with an insight into forestry and timber production at Galloway Forest Park. Episode one will also feature operations at the James Jones Sawmill in nearby Lockerbie. The work of specialist contractor Dewi Williams, who regularly comes to Galloway to harvest trees from the forest's most inacceptable areas, will

harvest trees from the forest's most inaccessible areas, will also be highlighted in another episode. *Pictured: Andy Campbell at James Jones sawmill (Photo: Tern TV/BBC Scotland)*



THE SCOTSMAN

FEB, APR, JUNE, AUG, OCT

Regular opinion columns on variety of forestry topics, including Scottish Forestry Bill, climate change and new planting.



TRADE PRESS

REGULAR

Confor puts out regular news releases and has gained detailed coverage over the course of the year in publications including Forestry Journal, Pro-Arb Magazine, Fencing News and TimberWeb, as well as wider rural publications including Scottish Farmer.



FTN WEB RESOURCES

Find links to programmes and PDFs of articles in FTN additional resources on ${\bf www.confor.org}$



ANNE McCALL

Confor asks the recently appointed director of RSPB Scotland about her vision of a future integrated land use

What do you anticipate to be the main sustainability challenges related to land use in the next 5-10 years?

Climate change is one of the biggest challenges we all face. It is already affecting our wildlife and adding to existing pressures driving declines in biodiversity globally. It will have widespread impacts on land use sectors and individual businesses as a result of more extreme weather events, increased pests and diseases and changing growing conditions. However, land use itself is part of the problem. Agriculture and related land use account for almost a quarter of all greenhouse gas emissions in Scotland and much greater effort is needed to reduce this, but farming, forestry and activities such as peatland restoration are also part of the solution and can help to store soil carbon and provide adaptation responses to a changing climate. If we get it right, we can tackle climate change in ways that also benefit wildlife and make sense for rural businesses.

Have you/RSPB got a vision for land-use policy post-Brexit? Is 'evolution' or 'revolution' the way to get there?

Brexit raises significant challenges for the land use sectors but has also created an opportunity to have a fresh think about the policies and funding that support them. RSPB Scotland, along with our conservation partners in Scottish Environment LINK, has set out our initial ideas on future rural land use policy in the report 'Renewing Scotland's Rural Areas'. This makes the case for maintaining rural funding but rethinking how we spend this money. We want to see much greater emphasis on encouraging and rewarding foresters, farmers and other land managers for producing environmental goods and services - such as wildlife, attractive landscapes, and clean water - that the market doesn't pay for. At the same time, investments are needed to help such businesses adapt and develop and be able to maximise market opportunities for products such as food and timber. But change can't and won't happen overnight and we need a period of transition to give businesses time to adapt to new policy and support measures.

In your opinion, what should the role of forestry be in future rural policy?

Forestry is one component of an integrated approach to land use management. It is important that we continue to support a sustainable, domestic timber industry, but increasingly other sectors need to work together to deliver public goods and benefits (for example rewarding farmers

who plant appropriate trees as part of diversification and as a contribution towards reducing agricultural carbon emissions).

The UK is now the second largest net importer of timber in the world after China. From an economic, environmental and even moral point of view, should we produce more of the wood we consume?

In a Scottish context, we have a strong timber sector which is exporting to mainly to the rest of the UK. The comparatively low planting rates in the other UK countries may be of more concern. We support sustainable forest management, whether that is in the UK or internationally. In terms of carbon footprint, it makes sense to source timber products locally, provided they are from sustainably managed, (and preferably FSC certified) forests. It remains important to ensure that new woodland planting does not cause damage to our priority open habitats and species, and that mistakes from past periods of inappropriately located afforestation continue to be rectified. We welcome the ongoing commitment of the timber industry and Scottish government to sustainable forest management (SFM), and support the UKFS as a minimum standard acceptable for SFM.

From an RSPB perspective, what planting targets should we pursue, and how should the mix between native and productive woodlands ideally look like?

In broad terms, we support woodland expansion, where it will be ecologically and environmentally beneficial and sustainable. All new woodland planting needs to be subject to assessment, including EIA when appropriate. A stronger spatial planning approach would allow better decision making about not just targets but where those targets can be delivered.

There doesn't need to be a hard distinction between 'native' and 'productive' forests, native woodland can be managed with a wide range of 'products' as outputs. This is not to say that we would support our best woodlands for wildlife being regularly harvested though. As part of an integrated approach to land management, woodland can be built into land management plans to provide a wide range of benefits, including social outcomes, biodiversity, environmental (carbon & water management), as well as economic products. Government funding should enable this to happen.

Where do you see opportunities for productive planting in the UK, and more specifically in Scotland? What are the current barriers in your opinion?



Productive planting should be targeted to the areas where it will deliver the most public benefits and fewest negative impacts. As someone with a planning background I'd like to see spatial planning playing a strong role in ensuring that we plant the forests of the future in areas which are not only less environmentally sensitive but also have the right infrastructure to ensure the timber can get to market. Our own experience of tree removal in the Flow Country has amply highlighted how poorly located woodland can not only damage important habitats but can also be extremely tricky to remove due to the capacity of existing road networks. We are currently working on our woodland expansion policy, which will set our thoughts out in more detail (due by spring 2018). Barriers to woodland creation include land availability and cost. We have been involved in the Mackinnon review, and subsequently formed delivery and implementation working groups, which investigated how the forest planting process could be streamlined and speeded up.

Are Confor's and RSPB's objectives at odds? And where do you think there is scope for greater collaboration?

We work closely with Confor and have similar policy positions in a number of key areas, including supporting woodland expansion and viewing forestry as a core component of a broad integrated land use approach. We have hosted joint events, such as the Future of Forestry dinner which was attended by MSPs and senior representatives from across the government, forestry, environmental and agricultural sectors. We sit on a number of industry groups including the steering group for UKWAS, the Mackinnon review working groups and the Forestry Commission Customer representatives Group and I'd like to think that there is considerable scope for further collaboration.

The RSPB works closely with farmers across the UK to show that farming can be economically and environmentally productive. The RSPB also has its own demonstration farm at Knapwell in Cambridgeshire – do you think that RSPB should take the same approach to forest management?

I'd like to think we already demonstrate good practice in forest and woodland management across our reserves network. We also work well with our neighbours, and are partners in a number of schemes including Cairngorms Connect and the Great Trossachs Forest. We believe in maximising dialogue and engaging early with new woodland creation schemes, as well as responding to consultations when ap-

proached by the sector. We have had early talks with Confor and some of its members about developing a demonstration productive forest which delivers shared, agreed objectives and I'm always open to new ideas for partnership working.

RSPB recently renewed its UKWAS certification, how are you finding it?

In broad terms we are very supportive of certification, particularly the high environmental standards required to gain FSC certification. All of our reserves with woodland 10ha or more are currently certified. We are represented on the steering group of UKWAS and have been closely involved in the latest review of both the UKWAS standard and the light-touch review of the UKFS. However, as a charity we're also mindful of the need for economic return from woodland and one of the benefits of accreditation has been that it makes financial sense - this year we've increased income per tonne from sawlogs, slats and chip directly as a result of being FSC accredited.

What helps you relax outside of work?

I guess not surprisingly I like to spend time outdoors – either visiting nature reserves, walking or working in the garden. Time with friends, family and the odd art gallery or two are firm favourites as well.

Reliability is key for family-run Welsh sawmill

Martin Bishop and Stuart Goodall visit Welsh familyrun sawmill James Davies. ames Davies Ltd is based at Cenarth in the beautiful Teifi valley in West Wales. Today the business is managed by Quinton Davies and employs 34 local people, and it can trace its roots back over a century.

The area has a long history as a woodworking centre – in the 19th century most of the village's families were involved in making wooden bowls, spoons and stools from local sycamore and ash.

The Davies family's workshop in the village of Abercych was in operation in the late 1800s using water-power to produce turned wood products. The company as it exists now was incorporated in 1953 when it relocated to its current site on the banks of the River Teifi.

Quinton puts a business focus on reliability: "As a family-owned sawmill and timber business we have more than a century's experience putting dependability at the heart of what we do".

Today, the medium-sized sawmill takes in around 50,000 tonnes of wood a year, with significant investment in new equipment in recent years.

The main species sawn are spruce, larch and DouglasfFir. all sourced from within 80 miles of the

Guinton Davies (left) with Martin Bishop and - below - a vintage shot of the workshop

sawmill. About 40% of what comes in is larch, mainly for fencing products, but also decking with the onsite moulder. The spruce goes for feather edge fencing, motorway rails and carcassing.

Recent investment totals about £4.5m, targeted at a new re-saw and incising machine, feather edge line, optimising edger and a new sorting line. The main mill is set-up so that James Davies can be very flexible on log size and sizes produced, enabling us to meet the needs of small to medium sized fencing retailers and contractors.

James Davies now offers 15-year lifetime guarantees with products incised and stamped for traceability. About 500m³ a week is treated, heat treated and kiln dried.

The mill operates at an average 60% recovery, with good markets for the co-products as well onsite use in a 500kw boiler supplying heat to onsite kilns. There has been an increase in woodchip demand from local businesses and farms that have invested in biomass plants. James Davies are on the Biomass Suppliers List (BSL). Other by-products, sawdust and woodfibre, are widely used as animal bedding and tracks.

Quinton is worried that margins are still tight, with log prices remaining high and mills struggling to raise prices with their customers.

While the investment has made the business more efficient, the site is constrained by a lack of a





James Davies Ltd is a member of the Wood Protection Association and is an Associate Sponsor of the WPA's British Softwoods Field Trial. The key objectives of the field trial are:

- 1. To assess the natural durability of the key plantation grown softwoods grown commercially in Britain – spruce, pine, Douglas fir and larch;
- 2. Objectively assess the benefits of incising technology of these species in UK ground conditions; in marketing materials and;
- 3. Compare the impact of two different pretreatment drying regimes on Sitka spruce;
- 4. Compare the impact of two different preservative loadings in UK species and UK ground conditions;
- 5. Provide relevant data to better inform future developments in BS8417 (use class 4) treatment specifications.

The project is expected to run for up to 15 years.

broadband capacity in the area which leaves them unable to realise the full benefit of the considerable investment. Confor's National Manager for Wales, Martin Bishop has raised this with the local Assembly Member and we hope that the Welsh Government will take notice and take action. Rural broadband is an important issue for many businesses in the forestry sector and not just in Wales. www.jamesdaviessawmills.co.uk

AMs and MP visit James Davies

Following an invitation from Confor Wales, Leanne Wood, the Plaid Cymru Assembly Member and leader of the party, Simon Thomas, Assembly Member for Mid & West Region and Plaid Cymru Shadow Cabinet Minister for Energy, Climate Change and Rural Affairs, visited James Davies Sawmills recently.

The purpose of the visit was to highlight the difficulties rural businesses face with a limited broadband connection and to highlight the opportunities the forestry and wood processing sector can provide. They were shown the working sawmill, from the initial breakdown bandsaws right through to the new investments of sorting and stacking lines. Always quite impressive for anyone outside our sector to see as they get quite close to the action when they are in the control cabins.

The technology in the wood processing sector is always a surprise to others not involved in it and they were very impressed with that and the skills of the workforce needed to operate it.

After the walk around we had the opportunity to discuss what the sector needs and how the politi-



cians can helps us.

Joining us for the visit were David v Edwards and Iwan Lloyd-Williams of Tilhill Forestry to put the perspective of the growing sector, and Lyndon Lloyd, the local councillor for the area who is a great supporter of the business and has been very active in getting support from WG for the sawmill.

Left to right, Lyndon Lloyd, Iwan Lloyd-Williams, David v Edwards, Leanne Wood, Simon Thomas, Quinton Davies, Ben Lake, Martin Bishop and Alun James



Ken Skates, Cabinet Secretary for Economy and Transport at the National Assembly for Wales, was introduced to staff at Maelor Forest Nurseries during a constituency visit this autumn. www.maelor.co.uk

Makita opens Glasgow centre

Makita UK has opened its first regional Factory Service Centre (FSC) & Training Academy and training academy in Glasgow's Govan commercial district. It will support Scotland and Northern England. The FSC has also been awarded the national responsibility for the secure environment of servicing Makita's range of dust extraction machines.

The Factory Service Centre & Training Academy delivers technical repairs and maintenance services for the full range of Makita products, including all mains and cordless construction machines, and the expanding range of grounds care tools, including petrol engine products.

Makita uses training to ensure that both authorised distributors and operators are fully conversant with the power tools, how to obtain the best performance from the machines and how to maintain them for efficiency and productivity. Makita offers a full itinerary of training courses covering the extensive product range.

Tilhill honours students

Forest Management student Jonathan Hawick from Inverness College UHI has won the Tilhill Forestry Award for Best New Planting Application following a report he prepared in his forestry policy and law module on woodland creation.

Jonathan (below) was presented with a wooden trophy in the shape of an acorn by Phil Di Duca, North Highland District Manager for Tilhill Forestry at the Scottish School of Forestry, Balloch, along with £250.

In Birmingham, Hannah Clarke, 22, has won an award for being the top student on the Countryside and Environmental Management Course at Harper Adams University. Hannah was presented with her trophy by Tilhill Forestry Regional Manager Iwan Williams along with £250.

As part of the company's work to strengthen links with students, Tilhill Forestry presents awards to top performing forestry students at leading universities offering qualifications in Forestry. The company also runs a popular graduate placement scheme and a structured programme to grow the management skills of their staff.

www.tilhill.com



Are you Confor subscriptions tax deductible?

We referred this question from a Confor member to our retained woodland taxation helpline (David Gittins) who has given the following advice:

"If you are an individual or simple partnership owning a forest, the answer is NO. Since the change in the tax laws under Chancellor Lawson. non-corporate owners do not need to make a return of their commercial forestry activities to HMRC. Therefore no income, gross or net, need be declared and I would hope that such people are not declaring their forestry net income or net expenditure to HMRC. I would certainly encourage people to keep accounts (to provide evidence that the woodlands are being managed on a commercial basis, as I suggested in my briefing note two years ago) but encourage them to omit any mention of those woodland accounts in their tax returns. Corporate owners may submit accounts to HMRC as, for example, part of an estate tax return, but in any tax calculation the net forestry expenditure or income is excluded.

"Clearly, any income from non-forestry activity within an owner's woodland, such as shooting or windfarm rents should be returned to HMRC. But I do not think that a Confor subscription can be subtracted from that income.

"If, however, you are paying tax on a trade carried on in connection with forestry - nurseries, forestry professionals, contractors, sawmills etc., - then the answer is YES: a Confor membership fee should be a legitimate expense to charge against your trading income."



NEW MEMBERS

Alan Lawson - Angus
Ellinor Dobie - Gwynedd
Jemima Letts - Cambridgeshire
John W Trimble - Co Tyrone
John Walker - Gwynedd
Peter Roe - Gwynedd
Piers Hugill - Oxfordshire
William J Marshall - Cumbria
Elizabeth Heighway Translations Birmingham
Tomorrow's Forests Ltd - Devon

Confor associate partner of Timber Expo 2017

Recognising the importance of featuring British forestry, organisers of Timber Expo 2017 invited Confor to represent the domestic forestry and timber sector to the crowd of construction and architecture professionals who attended the event. The event was a great opportunity to raise our sector's profile

Timber Expo is part of UK Construction Week, an annual event being held in October at NEC Birmingham. This year, visitor numbers reached a record with a 11% increase from last year. Brexit was widely discussed this year and Confor had a number of relevant publications on display.

Confor's core message at the stand was "British timber is fit for purpose", for which a leaflet targeted at wood end users (joiners, builder) was designed, in collaboration with James Jones and Sons and BWS. Egger kindly provided a visually striking exhibition piece, showing the variety of products that can be made from homegrown timber (see picture). After the success at the Confor Woodland Show, the VR headset showing the FC film *Forestry in Scotland* in 360 degrees was once more a highlight at the stand.

One of two catered events, a drinks reception was held for architects, with Peter Wilson presenting his new book *The Modern Timber House in the UK*, sponsored by Wood for Good. A great opportunity for Confor to reach out to a slightly different, but nevertheless very important audience.

After many conversations with bright, young engineers and architects, Confor staff flagged up the fact that many them thought of homegrown timber as an inferior product, and that there was a communications gap that needs to be addressed in the future if homegrown timber is to be promoted.









Confor and ICF host joint conference

The impending downturn in softwood timber availability has become a matter of great concern to the sector in recent years. This renewed need for woodland creation coincides with ambitious Government targets for tree planting which it is currently struggling to achieve. It was against this background that the Confor and ICF North of England Regional Groups hosted a conference on *Productive Woodland Creation: Challenges and Solutions* on 18 October in Hexham.

Oliver Combe (Roots to Prosperity) and Richard Greenhous (Forestry Commission England) outlined the scale of the need and how public policy supported productive woodland creation. Athole McKillop (Land Factor) posed questions as to land availability post-Brexit. Mark Broadmeadow and Richard Hellier (FCE) described work undertaken to identify where such planting could take place and how it could be designed to complement the landscape, at the same time as satisfying stakeholder needs and smoothing the way for approval.

Jason Sinden (FIM Ltd) gave insight into how

investors viewed woodland creation and Alice Snowden (Future Trees Trust) gave a timely reminder of how with the aid of tree breeding broadleaves could play a role in productive woodlands.

Ewan Calcott (FCE) described the regulatory setting for new planting and Brad Tooze (Natural England) provided a broader environmental perspective. Case studies of Doddington North Moor by Andy Howard (Pennine Biomass) and Richard Pow (FCE), and Jerah by Andrew Vaughan (Tilhill), completed the day by highlighting the challenges and solutions for practitioners and regulators alike.

Feedback from the day indicated that much remains to be done in order to achieve the aspirations and targets set out at the start of the day, but this event proved to be one small step in the right direction.

Presentations can be downloaded here: https://www.charteredforesters.org/event/2017icf-north-england-productive-woodland-creationchallenges-solutions/



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The Internet of Trees



Jez Ralph, of Timber Strategies on creating and managing data

he world now revolves around data and digital information, increasing amounts of it in every walk of life, some of it useful, some interesting, lots surplus. Forestry isn't immune to this and how we collect, store and analyse data is becoming increasingly important in order to sort the useful and interesting from the surplus.

As forestry becomes more complex, collecting and dealing with data will become ever more important. Changes in silviculture to more complex forest structures, advances in automation and the burgeoning amounts of timber products being developed all create more data that needs to be efficiently managed.

Data, data everywhere

All of this data is being created by new methods of capturing information. Whether it is a blue-tooth connected caliper, motion sensor cameras, stack measuring apps, on-harvester digital tools all are collecting data meaning every forest and tree is becoming part of the digital data cloud.

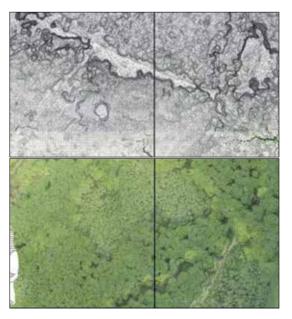
The collection of this data is the easy part of the process, it is the analysis and storage in an accessible format that becomes difficult. Take the simple act of photographing every compartment in a woodland. Easy enough to take multiple photographs showing typical woodland structure, typical tree form etc, however, creating many hundreds of photographs and paying for file storage becomes a big issue for images that may rarely be used. The simple act of renaming files and properly cataloguing as soon as possible after they were created, harshly deleting unnecessary images that don't give good value information creates a more useable an accessible resource.

On a more complex scale, 3D inventory of forests using LIDAR or photogrammetry will start to become common practice. For those using it, the

photogrammetry at Hooke Park and resulting mesh analysis to start to analyse tree density and canopy condition. Pictures: Architectural

Drone-based 3D

Pictures: Architectural Association: Landscape & Urbanism



acquisition of data involving drones, scanners and cameras is new and exciting work. The immense amount of point-cloud data generated however is daunting, indecipherable and storage intensive. Companies (and new open source software such as 3D Forest) exist to take this acquisition and analysis on but it is vital for the end-user to know exactly what is achievable and what data they require in order to get the outputs required. These technologies can only be successful if knowledge of the technology is coupled with silvicultural or timber processing experience by the end-user of the data.

When every tree becomes digital

The days of sample plots and tripping over brambles to get far enough out to get a top height may be numbered as the digital inventory world advances. With in-forest LIDAR allowing mensurational data on a tree by tree basis the opportunities are enormous (refer to article number 14 rezatec). On a forest level, the use of this data could allow us to monitor canopy or soil health or annual increment by comparing annual scans. On an individual tree level we can identify qualities such as straightness, taper, curve for specialist applications, possibly even knottiness tree by tree to aid marketing or thinning.

On a small scale, the work of the Architectural Association at Hooke Park provides an extreme look forward at the opportunities data presents across the supply chain. Working from a demand-led perspective of sourcing timber for a building design, architecture students are able to work with the forester to find the best material for specific applications. In the case of the boiler house and the woodchip store, 3D scans of standing trees were generated using a variety of tools. These scans could be interpreted for centre lines, specific radii of curves and end diameters and the resulting information fed back into algorithms to find the best stems for individual elements within the building. The forester is then able to extract only those stems that were needed within stands of specialist timber and adapt thinning cycles accordingly.

A new silvicultural craft

What is fascinating about these advances in data acquisition and interpretation is that they present a new decision-making tool for silviculturalists and timber users. Unlike the use of single-age monoculture grid plantings that generally made silvicultural and processing strategies easier this new paradigm of data orientated forestry doesn't prescribe interventions or investments but allows increasingly complex decisions to be made. It doesn't take away the need to understand the complexity of an individual woodland or timber but adds to the understanding. In this way new technologies and new approaches to data will represent the most significant change to forestry and timber in a generation providing anew paradigm for forest and timber management.

Satellite-derived forestry intelligence

Philip Briscoe outlines an innovative and complementary alternative to Lidar for forestry management decision support

orest analytics is a complex business, reguiring the sophisticated analysis of data gathered across sometimes vast geographical areas. Delivering it can be done using networks of ground-based sensors, aerial sensors such as drones or Lidar data, and geospatial data sourced from satellites. Lidar and satellites are particularly useful because they provide forest asset information with greater accuracy, depth and contextual detail across large areas. In turn, this improves the efficiency of ground team deployment. reduces associated logistics and materials costs and enables intelligent planning for forest operational activities

Lidar offers valuable detail but it has its limitations

Lidar (Light Detection and Ranging) is a remote sensing method used to examine the surface of the Earth, and it can provide a highly detailed snapshot of a forest. Its strengths lie in measuring accuracy and detail; it can provide forest metrics such as tree height and structure, for instance, However, the imagery and data it captures show a single point in time. With prohibitively high data acquisition costs - aircraft and equipment, for example - and data capture being dependent on clear skies, it can be difficult to gather data on a regular enough basis.

The price of using Lidar data is not just down to acquisition costs; following a Lidar data capture flight, the data must then be processed by highly skilled analysts in order to yield the commercially important forestry insights for which it was gath-

With gaps between data gathering of up to 10 vears or more, this makes Lidar of limited value in spotting forest change over time. This means that important forest changes - such as pathogen outbreaks, species diversification, wind blow damage, urban creep and other factors - may be missed. Realistically, Lidar is therefore typically only used to capture a proportion of a forest, with statistical techniques then used to derive estimates across the whole forest area.

Satellite data provides a complete picture of forest change over time Satellite data technology has evolved to provide huge quantities of geospatial information in a short space of time. With such data increasingly available and providing high-resolution earth observation insights, satellite imagery enables deeper and more regular forest intelligence for a complete view of the forest landscape as it changes over time.

Skilled analysis of satellite data yields detailed insights that would not be possible with aerial or ground-based data gathering methods. This detail goes right down to tree species identification and health analysis. Furthermore, earth observation satellite data can be gathered weekly or even daily, enabling the live monitoring of forests without the guess work between Lidar updates.

The continuous management of forests using such up-to-date information means there are fewer chances to miss environmental and anthropogenic changes. Significantly, it also helps with mitigating the risk of insurance claims being invalidated by detecting changes such as fire damage or storm damage too late.

Satellite data has other advantages over Lidar. It is much less weather-dependent, as syntheticaperture radar can penetrate cloud cover to collect geospatial data whatever the weather. It is also able to provide analysed data for an entire forest area, rather than the small proportion covered by Lidar. In addition, the scale and rate of earth observation data capture is growing almost exponentially, meaning there are now large imagery archives of increasing resolution available either as open source data or for acquisition at commercially competitive prices. Increasing demand and availability has produced a competitive market in which data that used to be prohibitively expensive is now affordable. As

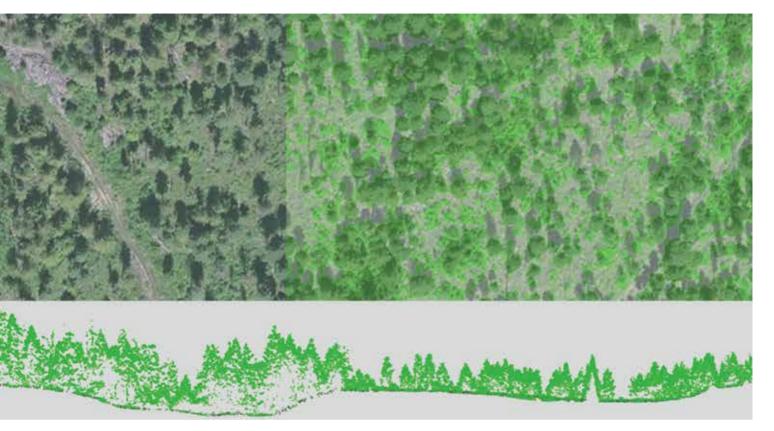
this trend continues, there will be an enor mous amount of data collected daily that is beyond current analytical capabilities provided by airborne collection.

Ground truthing

Whichever method vou use, a large percentage of forest analysis costs arises from the need for extensive ground truthing to make the captured data useful. The need for this ground-based manual data collection can be minimised by the abilities of powerful machine learning algorithms, which are deployed in satellite data analytics and allow smaller ground-captured datasets to train the advanced artificial intel-







ligence. This improves the efficiency and targeting of ground-based data capture, reducing the costs associated with deploying ground teams.

However, cost reduction is far from the only advantage of using satellite data over Lidar. Traditionally, with random sampling and regular passing observations, ground teams need to cover a large area to gather information about a woodland, but they will never be able to capture the whole picture at any given time. What's more, there might be many weeks or months before a revisit, particularly in remote or inaccessible locations. While this is not problematic for species identification, it can mean missing important variations in tree health, growth and yield as a result of issues such as disturbance damage, disease onset or stunted growth.

Earth observation provides consistent data and analysis on a large scale, allowing for better targeting of ground team efforts so they are not wasting time and money visiting 'healthy' locations. Although it is also useful to have this data for calibration and verification purposes, the earth observation datasets ultimately enable more targeted and efficient management of the ground team resource. This means smaller teams, a more focused and efficient approach, and lower costs.

Enriching the picture

For organisations in which Lidar is already an important part of geospatial forest analysis, earth observation can add a level of detail and regularly-updated data that enables a comprehensive understanding of what is happening between Lidar updates.

This has the potential to reduce dependency on Lidar for considerable cost savings.

Combining earth observation with Lidar results in a 'best of both worlds' scenario: detailed Lidar data teaches the system what to look for in larger-scale earth observation datasets, replicating the results across entire land assets quickly and accurately.

Standalone forestry intelligence

With limited resource for ground truthing and no budget for Lidar, satellite data analytics alone present a very attractive option for small and medium-sized land owners with forested assets, whether they are plantations or natural managed forests. Satellite data combined with minimal ground truthing data can provide derived insights on mensuration, species or type classification, health and disturbance. Accessible to companies of all sizes, this scalable forestry intelligence helps inform land management decisions. What's more, clients can decide on the update frequency of earth observation data and on the size of area analysed, meaning all budgets and geographical areas of interest are catered for.

Earth observation - an ideal forestry decision support tool

Whether you decide to use Lidar and enrich it with satellite data, or replace Lidar entirely, the benefits are considerable. You can use earth observation data to complete and enrich the picture of your forest, removing data fragmentation by filling in the gaps in your forest landscape knowledge. It can also be aggregated with all other ground-sensor data to ensure no data silos exist. Where Lidar excels, satellites offer a highly competitive alternative; and where Lidar cannot detect, satellite data completes the picture

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Satellite data provides complete picture of forest change over time

Filling the perception gap

Ian Thomas talks about his experience using the Prospect Forest Design Software and how it can be a powerful ally for stakeholder engagement.

reating a new woodland is a leap of faith for all parties. Even for professional foresters attempting to imagine a currently treeless agricultural landscape as a maturing diverse woodland is a challenge, so for non-forestry people who are interested in woodland creation, painting the picture in their minds eye of what might be is a problem, and this is a problem with consequences.

The problem for the forest industry is that this perception gap is filled with assumptions based on often limited information and the bias to which we are all subject. Mention a commercial conifer woodland to most lay people and the vision that comes to mind is likely to include celebrities, tax avoidance, dead waders, wall to wall impenetrable Sitka spruce, and toilet paper....not necessarily in that order.

Great progress has been made to changing the perception of what woodland creation means, and the UK Forestry Standard (UKFS) and the UK Woodland Assurance Standard (UKWAS) have played a very positive role in this respect. Experience of woodland creation in both Scotland & England suggests that the awareness of how commercial forestry has changed for the better is very different in each country. In general, the Scottish experience is that most stakeholders are aware of how much forestry has upped its game to deliver truly multi-purpose commercial forests, while in England the lack of commercial woodland creation has meant that the UKFS & UKWAS are often a totally foreign concept. Within this knowledge gap the old bias against forestry flourishes and this can be exploited by parties for whom forestry is considered undesirable even within a mixed landscape.

So the problem is how to demonstrate to other people who are often time constrained what it is you are trying to achieve? Plans, text, maps and guidelines are pretty accessible to most foresters as these are the tools of our trade, but for non-foresters these can represent an impenetrable obstacle to seeing the wood for the trees.

Computer generated visualisations producing an accurate representation of how a proposed woodland will look offer the potential to address this perception deficit, and potentially help to overcome many of the hurdles that woodland creation faces.

The Forestry Commission (Scotland) have been working in partnership with Mapmaker (based in Carradale, Argyll) to create a new visualisation tool called Prospect. The objective was to create a tool that would facilitate both woodland creation and improve the design of existing woodland. Having used similar more basic software for many years, I have now had the opportunity to trial the new Prospect software on a number of projects including both woodland creation and Forest plans. In my view, the Prospect software offers a number of advantages over the existing fairly limited competition and is well worth considering.

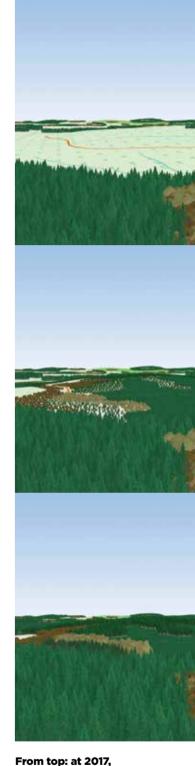
For stakeholders, a visualisation can show what a well designed mixed woodland will look like. The dry percentages of broadleaves, mixed conifers and yes even Sitka Spruce come alive and are immediately apparent to the viewer. What people might see from their own house, or the impact on views from inside the wood can be immediately demonstrated.

66

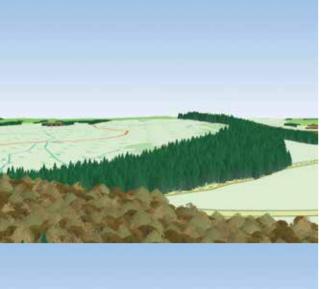
Plans, text, maps and guidelines are pretty accessible to most foresters... but for nonforesters these can represent an impenetrable obstacle to seeing the wood for the trees.

While inaccurate suppositions may hopefully be laid to rest by using the software, the caveat to this is that the woodland actually does need to be well designed! If the design proposal is wrong in land-scape terms then the software won't paint a pretty picture however hard you try. This is where another feature of the software comes into play, and this is in the interactive element that allows adjustments to be made to the plan, and then to see clearly the impacts of the changes instantly in the visualisations. This is not only a great way of engaging with stakeholders, but even more crucially perhaps, it enables the forestry professional to experiment and design a forest that truly fits with the landform beneath.

The software works by using OS open data terrain files and imported GIS shapefiles to create a range of draped options which can include a realistic portrayal of tree cover and drapes to indicate tree species or felling date. The realistic tree cover option



woodland creation site prior to planting in 2017 showing proposed forest road line; at 2027, woodland creation site at 2027 showing semi mature crop; at 2060: Woodland creation site at 2060 showing mature woodland.







Once the system is set up, simply adjusting the date slider shows how the woodland grows and develops over time, and this can include felling and restocking. Percentages of forestry species are also indicated.

The interface is based around an interactive map (OS base layers or aerials can be imported) showing the proposal at any time in map form, and this then links directly to the panorama function to create the visualisations. There are a range of parameters which can be adjusted to alter both the map and the appearance of the panorama image.

In common with all software Prospect has a lot of

functions that I personally will never use, and I have only scratched the surface, but from my perspective it does exactly what I want from it. The software can generate photomontages and there are also various options relating to how complex the project is that can simplify the whole process.

Considerations of complexity, compatibility and ease of use are vital for the forestry professional with often limited time.

GIS is a pretty essential tool for all forest managers now, and with a good grasp of GIS the Prospect software is straightforward to use. It also integrates well with all the outputs from commonly used GIS systems. There are a number of options intended to enable the software to be used by people with limited GIS knowledge but I haven't trialled these yet.

The two main potential uses of the software are for woodland creation projects or forest design planning for existing woodland. There is a static version of the software that demonstrates the appearance of the woodland at a fixed point in time, but the software comes into its own when you apply changes over time to the proposal. This is based on inputting values for planting date, Yield Class, species, spacing and felling date. Many of these elements are generated in any event as part of the plan design process, so these can be readily imported into the software. For woodland creation projects the required shapefiles are easy to create and simple to use in the software. In contrast using the software for the forest

GIS is a pretty essential tool for all forest managers now



This arises because for existing forests the software is designed to run using the Forestry Commissions Sub Compartment Database which performs a lot of functions and is of necessity complicated. Despite this complexity, I have managed to get the software to work well with private sector forest plans, so a bit

of perseverance for this element is perhaps required.

planning of existing forests is more complicated.

An added advantage of the temporal function is that both clients and foresters can get some idea of how their cherished new woodland will look like in the distant future, even if we won't be around to see the real thing for ourselves!

ianthomasforester@gmail.com http://prospect.mapmaker.com/ Felling phases can be shown as discrete colours.

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My future, my technology

one-of-a-kind conference held by RFS on 20 October, saw a group of forestry and arboricultural students challenged to drive a technological revolution to transform the way toods and trees are managed in the UK.

Future Foresters was the first national conference for forestry and arboricultural students. Held by the RFS in partnership with Sorbus International and Stihl and hosted by Moulton College, it attracted more than 200 students, recent graduates and apprentices from organisations across the country. Companies and organisations provided hands on exhibitions and demonstrations from drone technology to the latest chippers, and from computerised callipers to innovations in climbing harnesses.

Here, three attendees of the RFS Technology day give their perspective on the future of forestry and the role new technologies will play in their career.



There is a new future and it is digital and it is going to come very fast. You are the people who will take up that challenge. Part of it is understanding the past, understanding the history of timber use and then taking that further.

JEZ RALPH, KEYNOTE SPEAKER

RESOURCES

Slides, videos, information on speakers and exhibitors from the Technology Day will be available at **www.rfs.org. uk/events/future-foresters** and a full report will appear in the QJF in January.



Forestry student Jemima Letts, 20, spends the summer seasons working as an outdoor activity instructor.



7 @Foresterthought

What made you attend the event?

I really wanted to get an idea of the technology which is out there and being used by professionals in the industry, and see how technology is changing both forestry and arboriculture. It also seemed like a great opportunity to meet other students from all over the country at an event which was organised just for students and was believed to be the first of its kind in the UK!

What do New Technologies mean for Future Foresters?

I have seen how technology has revolutionised some aspects of forestry, and how it will continue to do so. I aspire to work within community forestry and have seen how technology is being increasingly used with and by the general public and not just forestry professionals. This means that in the future, I will be able to use technology to involve and engage the public in forest projects and operations, with community science projects also benefitting from such advances.

'We', the next generation of foresters, need to be the ones pushing forward new technology, raising awareness about how it can help and increasing its use in both large commercial forests and smaller community woodlands. However, as so elegantly put by Professor Dan Ridley-Ellis, technology is not just all about the gadgets, but about the application of our knowledge and understanding. At the event, Mr Phil

Wade highlighted that technology can and should be used in conjunction with traditional methods.

How can and will new technologies change the UK forestry sector?

Technology is playing an increasingly important role in the forestry sector, with its reach stretching the length of the timber supply chain, with it also helping us to make the most of the timber which is being grown in Britain. It is allowing wood which would have otherwise been discarded to be analysed and 'fitted' into designs for timber structures. Technology is also shaping change in the field of arboriculture, with it now being used to determine if urban trees are safe, with technology adding depth to the traditional visual tree assessment.

Are new technologies duly considered and discussed in your forestry course?

One of my university lecturers has always talked about how all us foresters will soon be replaced with drones, which will be able to do everything we do, but quicker and better. Although we all used to just laugh, drones are starting to become commonplace and have a lot of different applications in a forestry and arboriculture setting. In spite of this, new technologies are not discussed in depth on my course and after attending the conference. I think this needs to change - we need to graduate being the foresters that can control the drones, not the ones being replaced by the drones!

Fiona Andrews, 22, is a forestry student focussing on conservation (BSc Conservation in Forestry). fiona.andrews95@outlook.com

What made you attend the event?

As technologies are not really discussed during university lecturers/seminars, I felt it would benefit me to hear some of the latest research in forestry which may become common use during my career.

What do New Technologies mean for Future Foresters?

Technology is the future in forestry development, especially when it

NEW TECHNOLOGIES



>> comes to using resources efficiently and identifying trees suffering from disease before problems arise, especially in urban areas where property damage could occur if a tree falls. Development is still needed but forestry is improving all the time. I see new technologies shaping forestry in many ways, and assomeone who is interested in the management of forests under continuous cover forestry, technology I feel will become a dominate tool, especially in mensuration and yield class which still needs development to account for multi-structured forests.

How can and will new technologies change the UK forestry sector?

Technology can change forestry in many ways and I feel this will improve efficiency on mensuration, identify the most effective use of timber and identify diseased and damaged trees early to be able to prevent damage in urban areas.

Are new technologies duly considered and discussed in your forestry course?

I feel they are not talked about enough, especially in my course. It is not helped that the university do not have access to the latest technology to then be able to learn about them, both in physical instruments and software.

I would love if universities all were able to at least arrange with companies to see and 'have a go' with new technologies in the sector so students can see what technologies they are likely to come across during their forestry career. Forestry student George Dennison, 20, has worked part-time in arboriculture in the Peak District National Park.



@GDennison1997

What made you attend the event?

The RFS Future Foresters Technology day was the first of its kind. A symposium designed specifically for students and recent graduates. Talks throughout the morning were aimed to inspire students, discussing the rapid technological development paired with its influence on directing the future of forestry and arboriculture. The afternoon brought a selection of companies all able to help develop understanding of the desired characteristics of an employable graduate. This combined with a great array of technologies which will be developed and used within the industry.

What do New Technologies mean for Future Foresters?

The profession of forestry is forever evolving. Over the last century, but mainly in the last decade, our profession has become safer whilst our work efficiency has increased. Options now available to a forester have vastly increased their silvicultural toolbox. The industry requires multidisciplinary, individuals capable of considering various circumstances whilst adopting the wide variety of revolutionary advances.

The incredible speed at which technology is developed and then applied within the industry is outstanding. My generation are described as digital natives. With this title, it is our duty and honour to take on and develop this technology further. The rate and accuracy of data collection allows forests to be assessed more frequently and vigorously. Furthermore, technology facilitates the ability to accurately assess the quality and quantity of ecosystem services, thus helping diversify forest income.

How can and will new technologies change the UK forestry sector?

Forestry is becoming more accessible, moving away from traditional stereotypes. Diversification is the buzzword. Developing capabilities in the field of genetics allows the foresters to create resilient and dynamic ecosystems in the face of climate change and foreign pests and diseases. This will expectantly increase the volume of afforestation as forestry becomes a more reliable and profitable investment. Not only this, but public perception of forests and their level of involvement is changing. Youth is more involved and aware of environmental issues than ever before, combined with a formidable attitude for change. This will undoubtedly lead to further planting for the purpose of biodiversity retention and habitat creation, along with the social values this brings.

Are new technologies duly considered and discussed in your forestry course?

During lectures discussion occasionally breaks into the future technology within forestry. However, it is outside of the lecture room where the future technology within forestry is discussed along with its applications. Professors are knowledgeable on the subject and do inject fresh viewpoints and up to date information about recent developments in the sector.



Haglof impresses with digital calipers

George was among many impressed with the demonstration of Haglof callipers. "When I saw the Haglof callipers at work, I was mesmerised at how quickly and easily you could set up your sample area and collect the data, with it making me wish I could have had a pair for my fieldwork!" he said. "The fact that you could then transfer the data you collected onto a computer in a spreadsheet format seemed almost too good to be true."

Bangor University was the lucky winner of a Haglof DP II computer calliper mensuration system, generously donated by Haglof, for its submission on *The impact of advancing technology on Future Foresters*.



Female students offered hi-tech opportunity

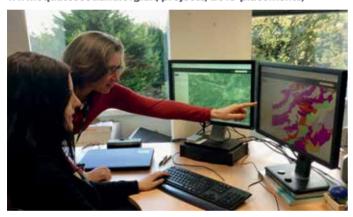
Forest Enterprise Scotland (FES) is offering two female students the chance to gain hi-tech skills which will improve their future employment prospects.

The students will work with FES's Geographical Information Systems (GIS) team, which uses state-of-the-art technology to support forestry and land management operations across the country.

The three month long placements are part of a national Scottish Government drive to attract more women into the technology and science sectors, as well as helping address the gender imbalance in the workplace.

The student placements are based in Edinburgh and Inverness and run from June to August 2018. Forest Enterprise Scotland is working with Equate Scotland, which is the national expert in gender equality through the STEM sectors.

www.equatescotland.org.uk/projects/2018-placements/



Drones for weed control

Drones can do more than surveying and some US businesses are now using them for weed control and planting.

'Precision forestry' company DroneSeed is one of these companies that is currently conducting herbicide applications and is working on systems to precisely deliver seed to forest sites. This spring they received US FAA approval to use "drone swarms to deliver agricultural payloads (fertilisers, herbicides, and water)".

Drones are already widely used to accurately map the locations of weed species. These maps can then be used to develop a treatment plan to efficiently target each species with herbicide delivered by a drone. Spot treatments of individual plants should be possible. This will minimize herbicide use and reduce the impact on non-target species.

Using a drone to conduct herbicide treatments in forests offers significant advantages over the use of manned aircraft and ground crews on foot equipped with backpack sprayers, says Drone Seed. www.droneseed.co

Cyberforests help predict climate

Forests take eons to grow, making it challenging to assess just how they will be affected by long-term climate change. Now researchers at Washington State University have created the world's first computer simulation capable of growing realistic forests. Using a model they have named LES (the Russian for forest), scientists can grow a virtual forest over a few weeks.

news.wsu.edu/2016/02/24/145871/

www.echo-tools.co.uk



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DEPEND ON IT







New boiler in the right spirit for Scottish distillery

A Scottish distillery has confirmed its commitment to environmentally friendly production techniques by choosing locally-sourced woodchip as its primary power source.

Ncn'ean looked into their options and decided that a woodchip boiler would be ideal for their needs, offering a low carbon footprint, low running costs, and in a part of Scotland with plenty of commercial forestry, fuel could be easily transported, minimising both costs and pollution. But there was a catch. Founder of Ncn'ean Annabel Thomas explains that they needed something a little different from the norm.

"Unlike most biomass boilers in the UK, distilling requires steam, not just hot water, so it was important to us that we found partners with the right expertise who could deliver a high-quality product that met our specific needs."

Challenges

Enter re:heat, biomass energy experts with years of experience in fitting renewable heating systems tailored to their clients' individual requirements. Director Neil Harrison was keen to get to grips with the unique specifications of the unusual Ncn'ean project and the challenges that would be faced in the course of its completion.

Neil said: "Providing a boiler that would produce steam as well as hot

water was probably the easiest part of the brief for me. This is definitely one of the most beautiful locations I've worked in but its location also made things tricky in a variety of ways.

"The distillery is located at the end of a 22 mile single track road on the Morvern Peninsula, not a situation that's designed to assist in the delivery of a complex engineering project, and even more difficult to deal with than a project we completed on North Uist in the Outer Hebrides, which just shows how awkward access was and how much we had to account for this when carrying out the works.

All challenges were met and the 850kW woodchip boiler system has now successfully finished its commissioning and first period of operation, reliably providing low carbon, low cost steam for the distillery since January this year. In addition to providing process steam, the boiler also heats the distillery office, visitor centre and toilet block, and one of the two whisky maturation sheds. It will save over 230 tonnes of CO₂ each year compared to running its oil equivalent. It will reguire around 300 tonnes of woodchip annually, all of which is sourced from low grade and unmerchantable timber from the surrounding forestry on the estate, typically travelling no more than five miles from where it grows to where it is used

www.reheat.uk.com

Kaolinite for clean biomass?

In its September 2017 issue, the Swiss Forestry magazine Wald und Holz reported that researchers at the Technical University of Hamburg have found out that emissions of fine particles during the burning of wood pellets can be reduced by 50% by adding kaolinite to the pellets.

These are first results and studies continue. The researchers hope that this cost-effective and easily implemented enhancement of wood pellets could make its way into the European regulations for biomass. They hope that this technique could widen the spectrum of materials that can be used for biomass pellets – in the future, it might open the possibility of producing 'mixed pellets' – using the widely available straw in combination with traditional sawmill produce.

A wide range of literature and case studies on mixed biomass pellets has been produced in the last 15 years in countries like Finland, Austria or Germany.

Leading researcher for this project is Prof. Martin Kaltschmitt, head of the University's Institute for environmental and energy technologies. kaltschmitt@tuhh.de

Bruce Allen, Chairman of Woodsure

"ENplus A1 Pellets are amongst the cleanest burning wood fuels especially when combusted in modern highly controlled boilers. Recent studies have shown the benefits of such a combination of boiler and fuels. Any innovative treatment that reduces particulates has to be welcomed although adding any chemical to clean fuels is a matter for careful study to ensure that gains in one area e.g. particulate reduction, are not lost in other areas like unnecessary chemicals in the emissions or anything that could react with or corrode boiler components. We would be interested in seeing the test results and would welcome any progress in the area of reduced environmental impact."



No short-cuts to fire performance standards, says WPA

Fire performance and preservative treated wood quality top Wood Protection Association priorities in 2017

he Grenfell Tower disaster has catapulted the fire performance of buildings into the public spotlight. Building materials and techniques are coming under scrutiny like never before. Wood and wood based materials will not escape this scrutiny. WPA director Steve Young says that it is absolutely critical to the future prospects for timber in construction that the reaction to fire performance qualities of timber components are better understood and that the techniques available to retard ignition and the spread of flame across its surface are not only specified correctly but are also verified as compliant with this specification at the construction site before installation.

Over the last two to three years, WPA has been campaigning for better implementation of Building Regulations and CPR compliance requirements for flame retardant wood materials, wood panels in particular. As part of this campaign, WPA has recently entered into a partnership with Local Authority Building Control (LABC) to promote and underpin product knowledge and awareness of flame retardant enhanced wood to LABC staff, building control officers and the designers, developers and contractors who are LABC customers. A range of communication activities are planned over the next two years including bespoke articles and publications and online CPDs and videos.

"The WPA position on flame retardant treatment for wood is based on a simple premise," says Steve Young. "The only effective means to achieve the required fire performance standard or CPR compliance for a [timber] component is to use a proven flame retardant applied by a quality assured factory applied process. There are no short-cuts to achieving Euroclass fire performance standards."

Building Regulations Review

The WPA believes that the independent review of Building Regulations relating to fire currently underway may well result in changes that affect the use of wood. WPA Technical Director Gordon Ewbank confirms that WPA wants to see changes that will require greater diligence in the specification and use of flame retardant treatments. He says: "WPA has responded strongly to this reviews call for evidence and our submission sets out clearly the proven long-term performance qualities of factory applied flame retardant treatments and requirement for on-site verification of compliance with standards and CPR declarations of performance."

Steve Young emphasises that the same principles

will be at the heart of the WPA role in contributing to the development of a Confederation of Timber Industries (CTI) guide to the fire mitigation techniques for wood and wood based materials which is anticipated will be published by CTI in 2018. In the meantime, the WPA has taken the decision to help raise awareness by providing its FR Specification Manual & Checklist as a free download from the WPA website . A free information sheet about the fire performance of external timber cladding in response to a steep increase in enquires in the wake of the Grenfell Tower fire is also available.

WPA commissions BRE to conduct materials health project

Material health, indoor air quality and healthy buildings are factor of building design that are assuming increasing relevance in construction design. WPA believes that the potential for these matters to adversely affect demand for treated wood cannot be ignored. Steve Young confirmed that the wood protection sector was unable to react positively to these issues due to a lack of supporting technical data and this needed to be corrected. In July, BRE was commissioned by WPA to implement a project to get to grips with the information gap and make the WPA the top authority on indoor-air quality data for treated wood.

Preservative treated wood priorities focus on quality assurance

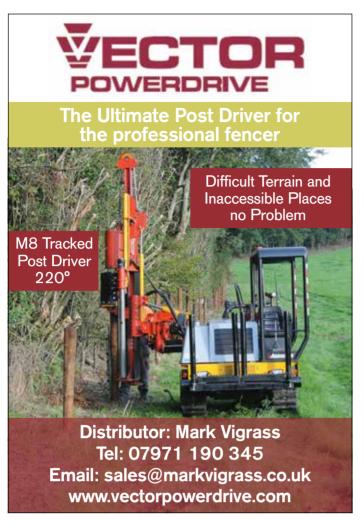
At its annual conference in April, the WPA announced the results of market research carried out in collaboration with other trade associations. The results highlighted that low levels of understanding about pre-treated wood specification and quality/fitness for purpose characterised the supply chain. "Supply chain knowledge has been a perennial issue in the timber industry for as long as I can remember." says Steve Young who confirms that WPA is committed to working with Confor, TTF and Wood Campus on activities to help address this over the next 12 months.

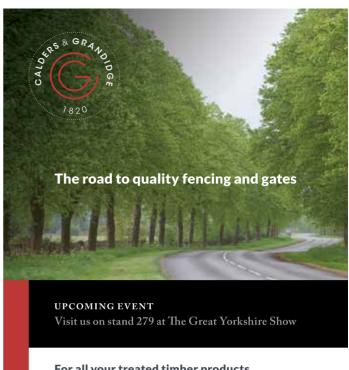
On treated wood performance the WPA Benchmark is a quality assurance scheme designed to confirm that an individual piece of wood has been treated correctly for its end use as specified by British Standard BS 8417. "This is an independent, highly credible, verification of treatment quality and fitness for purpose of an individual product like a fence post" says Steve who added that the scheme would be further enhanced in 2018 by the introduction of a 'performance bond' for treated wood used in ground contact applications.

www.wood-protection.org



The Grenfell tragedy put the fire safety of buildings into the public spotlight as never before.



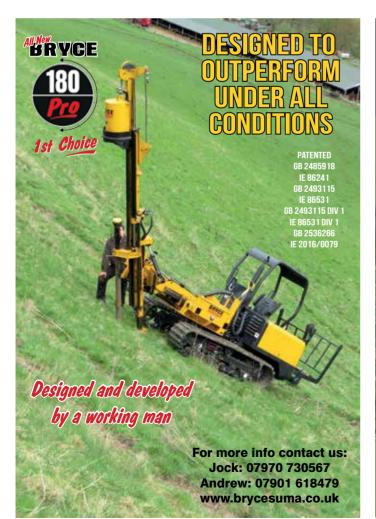


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BASF Wolman treatments get WPA approval

BASF Wolman has recently been granted approval for its vacuum pressure treatment wood preservatives Wolmanit® CX-8WB and Wolmanit® CX-8F by the UK's Wood Protection Association (WPA).

The approval is linked to a thorough check of the wood preservatives efficacy based on the highperformance requirements of the WPA Approval Scheme

Dr. Stephan Breyne, Regional Sales Manager for BASF Wolman's UK and Nordic regions, highlights the importance of the registration: "We are delighted in having received the WPA approval for Wolmanit® CX-8WB and Wolmanit® CX-8F. The approval underlines the outstanding efficacy of our CuHDO-based wood preservatives which fulfill the strict approval specifications of the WPA. This is an important step to further enhance high quality treatment in the UK and acknowledges the importance of the WPA Approval Scheme."

With these approvals, all of Wolman's wood preservatives registered and marketed in the UK are now listed under the WPA Approval Scheme.

BASF Wolman GmbH is part of the Construction Chemicals Division of BASF. The company develops, manufactures and distributes high performance Wood Protection chemicals for industrial use to protect timber against wood destroying fungi and insects, extending the life cycle and thus further increasing the sustainability of timber.

www.basf.com/wolman





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Today TANALITH is a tried, tested and trusted protection for our modern timbers across global markets. And this trusted performance and the confidence it brings to timber treatment companies and their end customers is even more important as regulatory factors are increasingly influencing the wood protection industry.

Andy Hodge, marketing director on Lonza Wood Protection explains, 'The Biocidal Products Regulation (BPR) now drives the make-up of our future wood preservatives with increasing pressures on the palette of effective biocidal actives that are available to wood preservative suppliers.'

'One typical example is Boron – a traditional ingredient in many wood preservative products but now increasingly under pressure from both a health and environmental aspect.'

'Lonza's aim has always been to provide our customers with tried, tested and proven wood preservative products that will not only meet our customers' current requirements but to be adaptable to meet their future needs.'

'The latest TANALITH wood preservatives from Lonza have all the right ingredients and proven performance to help keep our customers ahead of the regulatory game and let them plan with confidence for their different treated timber markets.'

Those credentials are impressive:

- All TANALITH preservatives are boron free formulations.
- TANALITH was the first copper based wood preservative to gain BPR approval.

- TANALITH contains tried and tested biocide actives to provide the broadest range of protection against decay and insect attack.
- Only TANALITH preservatives incorporate innovative and award winning BARamine application technologies to deliver premium treatment and long term protection results.

Andy continued, 'The Lonza regulatory team provides a vital 'behind -the-scenes' service. To make sure our current and future products are used in a safe and responsible manner and to keep our customers ahead of the ever changing regulatory requirements across all of our markets, we have a team of experienced regulatory and legal experts directly involved in a wide range of industry bodies.'

'The wood preservation industry is highly regulated through a range of governmental organisations that can impact both locally and at EU level. We cannot underestimate the power of such legislation and compliance is a critical aspect of our product management. As a global leader in biocides and wood protection technologies, Lonza is ideally placed to keep our customers abreast of, and respond to, the increasing scope and complexity of such regulations.'





Using lasers to improve wood modification

A consortium made up of specialist companies and institutions has received £1.2m of co-funding from the UK's innovation agency Innovate UK. The funding is for a project which aims to improve permeability and processing of timbers during resin treatment.

The consortium members are Fibre 7 UK Ltd, Millennium Lasers Ltd, Bangor University and Coventry University.

Treatment using resin is one of a growing platform of wood modification technologies which can alter the properties and service life of timber for use in demanding environments or to enhance aesthet-

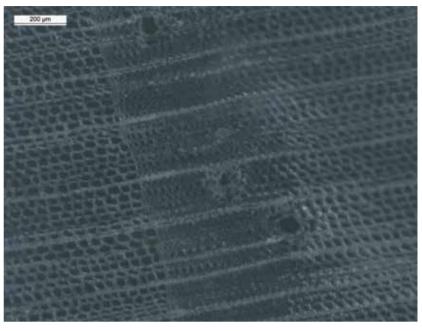
Patterns of micro-incisions will be made in the faces of wood prior to treatment to improve penetration of resin into wood pieces. This will enable a greater range of timber species to be modified. including those growing in the UK. Since lasers are able to "drill fine holes", with the appropriate pattern of incisions it is believed that an even distribution of fluid can be achieved to considerable depths.

Significant benefits

Andy Pitman, Fibre 7's Technical Director believes "this laser-drilling offers significant benefits for our wood treatment process increasing the range of timbers we can employ and the section sizes we can modify."

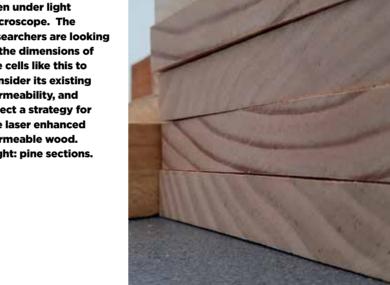
He added, "The technology offers others needing to impregnate timbers with fluids such as wood preservatives an additional tool, since far less damage will be caused using lasers compared with mechanical incising meaning it can be used on joinery timbers. "The project runs through to December 2019.

The work at Bangor University will be carried out by Bio Composites, which provides innovation and biomaterials for industry.



Close-up of a crosssection of pine. seen under light microscope. The researchers are looking at the dimensions of the cells like this to consider its existing permeability, and select a strategy for the laser enhanced permeable wood. Right: pine sections.





WPA

Atlast a UK quality scheme for treated wood!

WPA Benchmark – the quality scheme that gets right to the heart of treated wood fitness for purpose. WPA Benchmark provides independent reassurance that timber has been treated correctly for its enduse to deliver a service life in line with BS8417. Operated by the Wood Protection Association, the UK authority on wood preservation, WPA Benchmark has the credibility and relevance essential to build buyer confidence in treated wood performance.

> For sources of treated wood products with the WPA Benchmark of quality e-mail: info@wood-protection.org Visit: www.wood-protection.org



things you need to know about

Xylella fastidiosa

Forest Research scientists Ana Perez-Sierra and Joan Webber, with Animal and Plant Health Agency inspectors Edward Birchall and Lucy Carson-Taylor, provide an update on this emerging risk to plants and trees across Europe.



What is Xylella?

Xylella, or more properly Xylella fastidiosa, is a disease causing bacterium that can infect many woody plants including broadleaved trees. There are at least four accepted subspecies of Xylella which attack various plant types inciting different types of symptoms. They are -

- · Xylella fastidiosa ssp. fastidiosa
- Xylella fastidiosa ssp. pauca
- Xylella fastidiosa ssp. multiplex
- Xylella fastidiosa ssp. sandyi

Until recently, Xylella was only known from the Americas and Taiwan, but it first became notorious in Europe following reports of the rapid decline and death of ancient olive trees in the Apulia region of southern Italy in 2013. X fastidiosa was confirmed as the cause and the subspecies identified as X fastidiosa ssp. pauca. Now around a million trees in southern Apulia are affected by the disease, referred to as Olive Quick Decline Syndrome (OQDS). Subsequently other Xylella outbreaks in Europe have been found in France, Spain and Germany (see Timeline) with a wide range of plant species affected. In addition to X fastidiosa ssp. pauca causing OQDS in Italy, subspecies fastidiosa and multiplex have also been found in other European countries. To control this bacterial pathogen which is now treated as a quarantine pest, stringent measures are in place. All EU Member States are required to eradicate any outbreaks, or if that is impossible, to prevent further spread.



Where has the disease come from?

Before the findings in Europe, *Xylella* was encountered mainly in the Americas. Subspecies fastidiosa is found in Central America, North America and Taiwan, where it affects citrus, grapevines and coffee and almond plants. Subspecies *multiplex* has mainly been found in the USA and probably has the widest host range which includes trees such as oak, elm and plane. *Multiplex* is considered to pose the greatest risk to trees in the UK.



What does Xylella do to infected plants?

The bacterium invades the water transporting xylem vessels in plants, blocking water movement and causing symptoms that initially resemble water stress. Depending on the susceptibility of affected plants and the *Xylella* subspecies,

impacts range from wilting, growth stunting and leaf scorch, to dieback and the death of entire plants. In olive trees for example, the disease starts with withering and desiccation of the terminal shoots, but as the damage expands through the canopy, trees collapse and die.

Typically on trees such as oak, elm plane, maple (Acer spp.) and Aesculus, visible symptoms caused by Xylella fastidiosa ssp. multiplex are mainly leaf scorch so in the USA the disease is known as bacterial leaf scorch or BLS. Some effects, however, can be more severe and include twig and branch dieback or growth stunting of the entire tree. The characteristic leaf symptoms which are most visible in later summer include browning at the leaf margins (not along the main veins), often with a yellow edge to the browned areas. However, other disorders can cause similar symptoms (see Disorders box).



How does *Xylella* spread?

In the natural environment *Xylella* is exclusively transmitted by insects such as leafhoppers and froghoppers which feed on xylem fluid. There are various insect





Figure 1 Olive quick decline syndrome (left) Early *Xylella fastidiosa* symptoms (branch wilting) on an olive tree in September 2014; (right) symptom development on the same tree by May 2016. (Courtesy of Donato Boscia from CNR-IPSP, Italy)

Xylella timeline									
2013	2015	2016 (July)	2016 (October)	2017 (August)	2017 (June)				
X fastidiosa ssp. pauca first confirmed in causing devastation to olive plantations in southern Italy.	X fastidiosa ssp. multiplex identified affecting several plant species in France and Corsica.	X fastidiosa ssp. fastidiosa confirmed in a German glasshouse on an oleander plant and then on Rosmarinus, Erysimum and Streptocarpus.	Infected almond trees were found on Mallorca and then other affected hosts on Ibiza and Menorca.	Grapevines were also found to be affected on Mallorca. The Balearics now have many outbreaks involving three subspecies of <i>X fastidiosa</i> .	X fastidiosa ssp. multiplex was found on the Spanish mainland (south of Valencia) on Prunus dulcis (almond).	The most recent figures from Europe suggest around 150 shrub and tree species have been infected.			







species in Britain that could become vectors if *Xylella* was introduced, including the common froghopper (meadow spittlebug). Although these insects generally only fly short distances they can be moved much further by the wind. As they feed, they pick up the bacterium from infected plants and pass it onto healthy plants. Movement in trade of infected plants also aids disease spread.



How likely is it that *Xylella* might establish?

Xylella has not yet been found in the UK, but if it arrives at least one subspecies is likely to be able to survive and establish most probably in the warmer parts of the UK, especially in regions with minimal frost episodes. Xylella fastidiosa ssp. multiplex which infects various forest tree genera is active in temperate regions of North America.



What are we doing to prepare?

The Forestry Commission undertakes targeted annual surveys of susceptible tree species as part of the surveillance activities against X fastidiosa. The Animal and Plant Health Agency (APHA) also conducts official surveys for X fastidiosa and works with businesses which import susceptible plant species. Landscapers, designers, retailers and anyone directly importing plants are now subject to the same stringent requirements as growers and suppliers. Prior to the movement of all potential Xylella 'host plants' across the EU they must have been officially inspected and be accompanied by a plant passport to show they have been sourced from disease free areas/sites. High risk hosts such as Coffea, Lavandula dentata, Nerium oleander, Olea europaea, Polygala myrtifolia and Prunus dulcis have extra requirements.

Figure 2 Xylella bacterial leaf scorch symptoms on tree foliage (left) American sycamore (Platanus occidentalis); (centre) English oak (Quercus robur); (right) elm. (Courtesy of Theodore D. Leininger, USDA Forest Service, Bugwood.org, John Hartman, University of Kentucky, Bugwood.org and Sandra Jensen, Cornell University, Bugwood)org)

Disorders with similar symtoms

Several disorders produce symptoms similar to those caused by Xylella fastidiosa.

- Horse chestnut trees commonly suffer from a fungal disease which causes a brown leaf blotch with a yellow halo. The horse chestnut leaf miner also damages foliage but causes an inter-veinal browning of leaves rather than marginal browning.
- Elms suffer from Dutch elm disease which also causes wilting and browning of foliage.
- Plane trees suffer from a fungus called anthracnose which causes twig death and leaf blight. Powdery mildew can also cause yellowing and distortion of young plane leaves.
- Drought stress can cause cupping and browning at the leaf margins.



What happens if *Xylella* is found in UK?

An outbreak in the UK could lead to destruction of host plants within 100 m and a 5 km movement ban for 'specified' plants for five years. Any findings will dealt with to reflect risk and evidence of spread.

Where *Xylella* is found on a plant and the disease has spread or there is risk that spread has occurred, then a 5 km demarcated area is required - the size and how long it remains in place will depend on a risk assessment.

If infected plants are recently arrived but vectors carrying *Xylella* are not found, then a demarcated area is not needed. Plant Health Services will require destruction of the infected plants and any nearby potential hosts will probably have to be destroyed as well.

For isolated outbreaks resulting from introductions of infected plants where there is robust evidence that spread has not occurred and other actions are taken, the buffer zone width may be reduced to 1 km and restrictions revoked after a minimum of 12 months.



Good practice to combat Xylella

- If importing plants, ensure that plant passports arriving with host plants are correct and keep the passports to aid trace back if necessary.
- Source from known suppliers or visit suppliers to view their procedures, biosecurity arrangements and the plants they grow. See web resources.
- Ensure imported plants originate from and are sourced from disease free areas. For regularly updated details on affected >>



Figure 3 Laboratory processing of tree foliage samples at Forest Research for the detection of *Xylella fastidiosa* (Forestry Commission).



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VIEW FROM THE EMERALD ISLE

SÉAN LENIHAN



- >> areas, known plant hosts and legislation, see web resources.
 - Isolate or quarantine new plant batches and monitor them during the growing season for any symptoms whilst not a legal requirement it is good practice to place 'imported' hosts of Xylella in a quarantine area ideally some distance away from other host plants and under physical protection if possible. If an outbreak is confirmed all 'host' material within 100m will be destroyed.
 - For contractors/designers, ensure that plants are ordered early and monitor for disease in a low risk area before final planting.
 - Label and keep records of all received batches of plants including where they came from and when. Also maintain records of pesticide treatments.
 - Destroy old or unusable plants.
 - Comply with the UK national requirements to notify the UK Plant Health Service about certain species of plants under the 'EU Plant and Tree notification scheme'.



If you suspect a plant is affected by *X fastidiosa*

Suspected *X fastidiosa* outbreaks must be reported to the relevant Plant Health Service authority:

- For Forestry Commission use the Tree Alert form: http://www.forestry.gov.uk/treealert
- For England and Wales, contact your APHA Plant Health and Seeds Inspector or the PHSI Headquarters, Sand Hutton, York. Tel: 01904 405138 or email: planthealth.info@apha.gsi.gov.uk
- For Scotland, contact the Scottish Government's Horticulture and Marketing Unit by email: hort.marketing@gov.scot
- For Northern Ireland, contact the DAERA Plant Health Inspection Branch: Tel: 0300 200 7847 email: planthealth@daera-ni.gov.uk

FTN WEB RESOURCES



Find links for:
Guidance on high risk hosts
Information on affected areas,
hosts and legislation
Additional information on UK
Plant health
www.confor.org.uk

Ash dieback update

Since it was first discovered in County Leitrim in October 2012, Ash dieback has been confirmed in 384 forest plantations, and is now present in every county in the Republic. These were the official figures at 31/7/2017 but there has been many reports from forestry consultants of new outbreaks in August, September and October.

In response to the dramatic rate of increase in incidents of the disease, the Forest Service introduced a more pragmatic policy for the removal and treatment of the infected ash crops this year.

The previous one-size-fits-all which stipulated 100% clearance and disposal of all material by burying in pits or trenches (unless it was fit for firewood) has been modified by the introduction of a three category classification system with associated requirements:

- Class 1: <7m top height Remove all ash trees
- Class 2 > 7m < 15m top height or 18cm DBH or 25 years old

Remove infected individual trees

• Class 3 >15m top height or 18cm DBH or 25 years old

Consultant produces Management Plan for owner which may or may not include partial removal.

The requirement to bury all infected material is now optional with onsite windrowing now permitted.

With an estimated 20,000ha of ash planted in the Republic between 1994 and 2011 growers and foresters will be dealing with the consequences of Ash Dieback for many years to come.

Forestry producer/owner groups

It is a major indication of how the private forest industry in Ireland is maturing, and now entering a new phase, that Forestry producer/owner groups which commenced in the mid-noughties have become firmly established. This development can rightly be regarded as a landmark one for the private forest industry in Ireland.

The Forestry Division of TEAGASC the state agency with responsibility for Agricultural R&D in Ireland were instrumental in starting and organising the various groups nationwide, and there are now 20 plus groups covering the entire country with varying degrees of involvement from basic

Knowledge Transfer to the processing and sale of first thinnings and firewood. There are 2,000 owners now officially registered with Producer Groups which represents about 20% of all private forest owners. Some of the groups have employed foresters to advise owners on planting, management etc. which has been a cause of concern for some forestry consultants and companies due to the fact that the groups have received state funding from the Rural Development Programme and some are now effectively in competition with private sector businesses.

One of the first groups to get established was the Donegal Woodland Owners Co-Op which markets itself as a wood supply co-operative actively involved in thinning and sales of firewood, and which has being pro-active in promoting the use of woodfuel in Donegal. Another progressive group is the Irish Wood Producers which has 650 members based in Wexford, Kilkenny and Laois.

Afforestation outturn 2017

There is a real probability that the afforestation target of 7000ha will not be achieved in 2017 unless there is an unprecedented level of planting in the final two months of the year. To date approximately 4250ha have been planted and realistically a final outturn of 5500ha would be an excellent achievement at this stage. Many reasons have been put forward for the drop in in planting levels, from high prices for land leasing, expansion in the dairy sector post-quota removal, sterilisation of large area for environmental reasons where no planting is permitted, higher levels of bureaucracy with the Forest Service. and the new requirement to erect site notices on the land where a licence to plant is being sought, and the new mechanism which allows objections from the public to the issuing of planting licences. Even though the new afforestation licence requirements were only introduced in June 2017, there has been 15-20 objections to the issuing of new licences by members of the public which does not augur well for the future.

Timber Prices

Timber prices have remained steady throughout 2017 with roadside prices currently averaging:

- Commercial sawlog: €72
- Pallet: €Đ46
- Pulp: €27

Demand is strong for all grades although pallet roadside prices have softened a little from since the first quarter of 2017. **www.kestrelforestry.ie**

Fertility control helps tackle grey menace

by Bob Cartwright, UK Squirrel Accord

n 2014, DEFRA and Forestry Commission England published their Policy and Actions for Grey Squirrels and England's Woodlands¹. They put the annual cost of grey squirrel damage to our broadleaved and coniferous woodlands at between £6m and £10m. How many commercial enterprises can afford that cost each year yet remain profitable?

For most parts of Britain this would be reason enough to look beyond traditional trapping and shooting as ways to control greys. But the 2014 report also noted how greys squirrels out-compete our native red squirrels. Greys spread squirrel pox virus too, a disease almost invariably fatal to reds but which leaves the greys unaffected. The diaspora of greys since their 1870s introduction from America – and the explosion in numbers now estimated to exceed at least 3.5m – means that red populations, particularly in England, have become confined to isolated populations. They are genuinely threatened with extinction

In 2015, on the initiative of HRH Prince Charles, 32 organisations, including Confor, signed the United Kingdom Squirrel Accord. Its aims are to bring a concerted and coordinated approach to securing the future of our red squirrels and woodlands; and controlling the introduced grey squirrel. Earlier this year, the Accord, now 35-strong, commissioned a five-year, £1million research programme by the Government's Animal and Plant Health Agency (APHA). The objective? To create and deliver an immunocontraceptive vaccine that will control grey squirrels' fertility. The Accord's Autumn 2017 Meeting in October², held at the APHA's headquarters near York heard of good progress on laboratory-based trials. Field trials will follow, then applications to register

the vaccine and delivery system. The meeting also heard emerging evidence that grey squirrels, already notorious for bark stripping could, in the process, be spreading some imported tree diseases such as Ash dieback and Oak wilt.

The potential game changer is a novel formulation that would deliver the immuno-contraceptive orally through bait treated with sporopollenin exine capsules (SpECs). The bait is likely to be in paste form, delivered through grey-only feed hoppers. Laboratory tests are initially examining the effectiveness of the contraceptive and the take-up of bait from the hopper. If these tests and the succeeding captive and field trials prove successful an application will follow to register the vaccine for wider use. Once eventually approved, the scientists still stress that the vaccine will never replace trapping and shooting and the Accord and APHA will be mounting a parallel programme to raise public awareness. But if effective, the vaccine should secure a crash in the national grey population that, with complementary control measures, could contain and then reverse their march across

If the vaccine isn't the single silver bullet, are there innovations in trapping that improve cost-effectiveness?

APHA has recently re-tested the Good Nature trap, a less labour intensive system than the usual live and kill traps. While only useful in non-red squirrel areas, they emit a scent that lures the creature into the trap and triggers an instantly lethal gas-propelled piston

the UK







Grevs threaten both our woodlands - and our native red squirrel

into the animal. All being well, the trap will be added to the approved list by summer 2018. Gradually, new tools are being added to the toolbox. Together they should make woodland planting more profitable, pest control more cost effective, and a future for our much-loved red squirrels more secure.

The UK Squirrel Accord and APHA have produced a regularly updated Frequently Asked Questions document³ to keep interested parties abreast of the research programme's progress. At this stage, many questions inevitably remain to be answered. Will the vaccine prove effective? Can we be sure the hopper will prevent access by red squirrels? The research will answer these questions. But then, if it does get the green light, will the vaccine and hopper be affordable? Can landowners and trained volunteers deploy the hoppers and replenish stocks of treated bait? Or will the role be confined to licensed pest operatives?

At this stage, we should congratulate the UK Squirrel Accord for commissioning the research. For the first time there is a realistic prospect of an affordable and effective solution. A solution that offers real hope for the health and welfare of our woodlands - and our precious red squirrels.

FTN WEB RESOURCES



Links to the references (right) can be found in FTN web resources at www.confor.org.uk

REFERENCES

1. Grey Squirrels and England's Woodlands, 2014, DEFRA and Forestry Commission England 2. UK Squirrel Accord and Royal Forestry Society Autumn Meeting 2017

3. Grey Squirrel Fertility Control Programme FAQs v 4.0



Alternative conifers: different perspectives

ast Lothian-based Alba Trees Plc - the UK's largest container grown forest nursery - hosted a meeting of the Royal Scottish Forestry Society on 05 October to discuss the increasingly relevant topic of 'alternative conifers'.

Although billed as 'The Nursery Persepective', a number of speakers from across the forestry industry were in attendance to give their views on the use of these species.

Alternative conifers for Scotland: past record and future opportunities

Dr Scott McG. Wilson stressed the need to diversify the current stocking mix was discussed and some of the reasons given were to increase resilience to the emerging threat of pest and disease, to take account of future climate change, to facilitate silvicultural diversification and to meet the increasing demand for external timber cladding for use in construction.

Scotland has a long record of introducing and testing additional species, for example in arboreta, forest gardens and scientific trials. Effective silviculture has been established for Douglas fir and Norway spruce. Scottish forestry has some experience of western hemlock, wester red cedar, Serbian spruce, grand fir and noble fir, however, further trialling is required as well as provenance and silvicultural investigations. There are other species present, but these are less well understood and include coastal redwood, Pacific silver fir and Japanese cedar (read more on p19) and cypress.

Scott identified that these 'alternative' coniferous species display options for use on more sheltered, better drained and fertile sites of lower slopes and valley bottoms in addition to Sitka as part of the species mix. Scott closed by stating that tree breeding and provenance trials continue to be important and that nurseries should focus on these species, but more knowledge needs to be gathered amongst foresters and the processing sector.

Nursery perspective on alternative conifers

Alba Trees Managing Director Rodney Shearer stated that the nursery has grown a number of 'alternative conifers' over the years and continues to do so to meet the demands of forest managers interested in diversifying their planting stock.

Of the 9,338,252 trees sold by Alba in sales year 2016-17, 5,481,811 (58.7%) of these were conifers. Of all conifers sold, over 85% were Scots pine or Sitka spruce - meaning that a limited percentage of the nursery's sales were made up of alternative conifer species.

Despite some interest, nurseries are reluctant to



Picture: www.pinterest.co.uk/ source/itascagreenhouse.com/

upscale alternative conifer production in case there is insufficient demand from the market.

Additional problems include the sourcing of seed and seed costs. These costs, in addition to a high proportion of crop failures and the increased time required on the nursery does mean that some alternative conifer species are considerably more expensive than other commercial plants. For example, seed grown Sitka spruce is sold at an average price of £0.24 per plant. Grand fir sells for £0.40 and coastal redwood for £0.70.

If the market exists, the nurseries will do what they can to supply the required plants - but future research in the following areas is required:

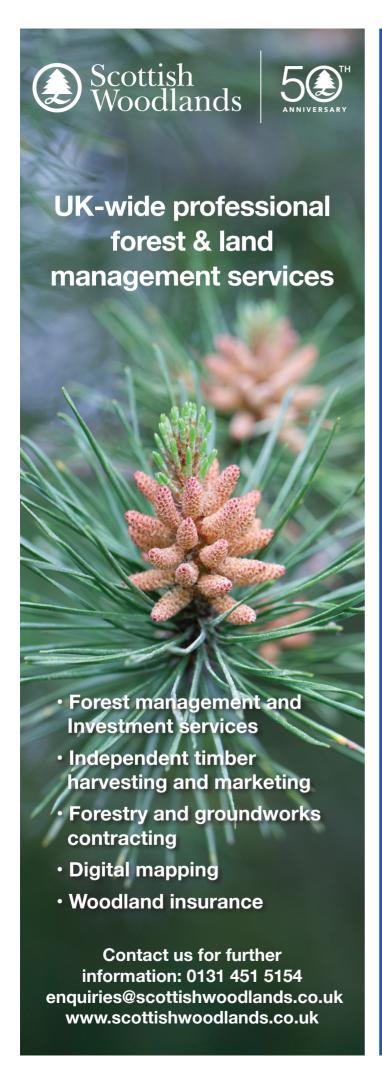
- UK seed sources versus imported seed sources
- Understanding adaptation and performance of introduced species
- Biosecurity risks of new species
- Alternatives to seed production.

A forester's perspective

Andrew MacQueen, Forest Manager, Tilhill Forestry, raised the question forest managers should be asking themselves – "how do we do alternatives well", rather than "should we, or shouldn't we."

Andrew discussed how alternative conifer species have a lot to offer, but that they cannot be shoe-horned onto unsuitable sites - these species can perhaps be used in conjunction with Sitka, but only if site conditions are adequate. There needs to be a move back to a greater focus on silvicultural skills and techniques that puts the right plants in the right areas, versus a blanket usage of Sitka on better

>>



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>> ground where alternative conifers or even productive hardwoods could be used.

Public/Forest Enterprise perspective

Alan Gale (Resilience Manager, Forest Enterprise Scotland) outlined the Forest Enterprise Scotland's land management planning process and introduced the group to the rationale behind FE's restocking species choice. The public forestry sector has different aims to the private trade – FES has to strive to meet the Scottish Government's ambitions as well as ensuring a supply of productive timber.

Suitability of alternative conifers for construction grade timber

Dr Steven Adams (Reasearch Fellow, Centre for Wood Science and Technology, Edinburgh Napier University) summarised the current knowledge about the properties of the candidate species, compared to Sitka and detailed what the industry is doing to get more information about that.

Considerable work has been done by the Strategic Integrated Research in Timber (SIRT) group since 2003 on testing the properties of tree species for construction grade timber. Douglas Fir has been identified as fairly suitably, while a recent paper by Forest Research has demonstrated the qualities of noble fir, western hemlock and western red cedar. Testing is also being carried out on silver fir, Japanese cedar and Serbian spruce.

Steven advised that a timber species survey has been conducted amongst timber processors who were asked to give their opinions on various alternative species. The results of this survey are awaiting analysis, but may be useful. Steven ended on an interesting note. Why not consider productive hardwoods, i.e. birch, sycamore?

Plant Breeding

Dr Steve Lee (Science Group & Programme Leader, Forest Research) discussed the importance of the best adapted seed source and advised that their had been limited work carried out in the breeding of alternative conifers. He posed the question "do we know best provenance?"

Forest Research are revisiting historic experi-



t Attendees of the RSFS
meeting held at Alba
Trees nursery on 05
t October 2017

ments from the 1930s and are looking to select stands (and individuals within stands) to start a breeding programme.

Where are the good stands? Steve noted that it was critical to be vigilant when collecting seed from small, obsure stands - to ensure that individuals aren't related. Genetic markers can be used to identify this.

Seed orchards could be created (by selecting individual good trees from various stands). This isn't always guaranteed, but should be an improvement on the native range. Genetic testing can be carried out to establish if they are really better and, if so, seed can be collected and grown on in the nursery. It was noted, however, that this process was very expensive.

Tree breeding and selection is likely to be low key unless there is a major cash injection or significant interest in a certain species.

www.albatrees.co.uk www.rsfs.org





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Japanese Red Cedar

'The Azores' experience

Based on his experience on the Azores Islands, engineering consultant **Daniel Estrella** offers a 'biopic' of a tree that seems to be promising as a timber species in the UK

ryptomeria grows in relative warm and humid climates with high precipitation and is very shade tolerant. In terms of soil type it does not show to have specific requirements. In the Azores it grows in very steep terrains, usually between the altitude of 300 to 800 meters, where temperatures are cooler, more similar to South England and Wales.

It is a fast growing species with a very narrow sapwood. Annual growth rates in the Azores average to 21 m³ per hectare which produces an estimated 630 m³ per hectare when reaching the legal felling age of 30 years. This species reaches heights of 35 to 45 meters with dbH of 60 - 80cm; however, it can reach diameter of up to two meters in older trees. In dbH of 30 cm. Presently, the older stocks available are aged 40 to 50 years old in western parts of the main island and of 60 years in the Eastern part. The main island holds about 75% of all stocks.

Tree characteristics

The tree is characterised by a straight fust and small diameter branches. Three distinct tree varieties exist with the heartwood varying from a pinkish color (the most common), a reddish brown and a dark brown. Trees with pinkish color heartwood are lighter and have less mechanical resistance than trees with the darker heartwood which stronger and denser. However, no significant differences have been noted in dimension stability.

The tree's density averages 330 kg/m³ at 12% humidity but these values can vary considerably with many factors, from tree to tree and within a tree, from 280 to 380 kg/m³. Recent approved guidelines for visual grading of Cryptomeria, requires, among other factors, density to be of 310 kg/m³ in order to be classified as a C14, in terms of mechanical resistance class.

Silviculture

Reproduction of trees is achieved trough plantation of elements obtained trough seeding. However, plants can be obtained via rooting of stem cuttings. Plantation occurs when elements are at the age of two. In more exposed areas, plantation could occur at the age of three, although this is a more difficult process. Germination rates of the seeding process usually vary between 35% to 50%.

Tree spacing varies from 1.5 to 2.2m. Tighter com-



A *Cryptomeria* plantation in the Azores

passes are used in more windy and exposed areas and larger compasses used in more protected areas. It is common to use a shorter compass in the outer perimeter of the plantation so it could work as a wind curtain for the inner trees. It is a delicate balance to meet.

Ground maintenance after plantation is undertaken twice a year for the first two years and once a year for the following three to four years. Pruning should be undertaken three times at heights 2/3m, 4/5m and 6/7m.

Thinning should happen three times, respecting minimum periods of at least four years, until the tree reaches about half the legal felling age, to reduce trees to a density of about 700 units/ha.

Although these are the guidelines for an efficient production, they are not always followed. It is common to find old stocks and even new stocks where trees are left to self prune and thinning is not managed but rather happens in a natural form, resulting in plantations with much higher tree densities of 1900 trees/ha. In this case the norm is to find many trees of small diameter which do not have commercial value.

The present tendency is to use larger compasses of 2.2m to attenuate the thinning process. *Cryptomeria*, as many other trees, is susceptible to the Armillarea mellea fungus disease and using these larger compasses makes it more difficult for the disease spread from tree to tree.

Timber uses

Japanese Red Cedar (*Cryptomeria Japonica*) commonly known by *Cryptomeria* was introduced in the >>

>> Azores in mid-XIX century as an ornamental tree. Today it occupies almost two-thirds of all production forestry at an estimated 8572ha according to the last Forestry Inventory (2007).

Along many decades, due to its abundance, its timber was used for a variety of applications. First-grade quality *Cryptomeria* has been used in traditional building in roof structures, wood ceilings, windows and doors and in carpentry. Second grade quality produce finds use as roof underlay, in concrete form work and some in field fencing. More recently, for the last 15 years, it has also been used in milled log homes and in the fabrication of wood laminated panels.

Durability

Cryptomeria is well respected for its natural durability, which makes it a potential alternative to other similar species in the UK market. It produces lightweight timber with a high strength-to-weight ratio and very good dimensional stability. It's easy to work with and also glues and stains very well. It has a distinct and pleasant cedar type odor.

Red cedar is an easy timber to process however it does require cutting tools to be sharpened as it has a soft surface.

In general one of *Cryptomeria* main advantages would be its fast grown potential, specially consid-



ering shorter rotation periods. The other main advantage is its natural durability, not common in most softwoods commercialised in larger volumes, which makes it ideal for use in cladding and in the construction of milled log homes among other applications









A very delicate balance



TIMBER
AUCTIONS
MARKET
REPORT
Oliver Combe
Timber Auctions

SOFTWOODS

The second half of 2017 has been characterised by a steady and consistent increase in demand for almost all UK produced timber products, this has finally lead to upward movement in end product prices. Whilst this has not been dramatic, it has begun and at a time of year when processors are normally building stocks, winter 2017 has seen gaps in some mills inventories and even shortages of some key pallet board sizes.

The Achilles heel of the sawn timber market has for much of 2017 been the kiln dried and graded carcassing market which has stubbornly refused to accept price increases. However, Q4 of 2017 saw some aggressive pricing by Swedish and German producers who asked for a £20 per m³ increase, confident that volume not placed in the UK could be diverted to the USA or Asia. This gave the domestic mills a long awaited chance to increase their prices which they will be looking to capitalise on in spring 2018.

Whilst the exchange rate has helped domestic producers through most of 2017, the recent interest rate increase by the Bank of England has stabilised the pound and latterly led to modest increases.

The unseasoned market has seen a number of modest price increases through 2017 and the processors will be looking for further increase in spring 2018 provided demand continues.

So the trend for prices has started to move upward but there is a strong BUT here! The price increases have in no way compensated for the steady increase in log prices seen throughout 2017. Processors have been hit hard by two factors: firstly, the log prices increase has been running six

to nine months before the sawn timber increase began and secondly, log prices have risen faster than the sawn prices.

This has happened because supply has been out of balance with demand. Most of the larger processors have been steadily increasing their production in 2016 and 2017; despite some smaller mills closing the overall demand has increased. In addition, small roundwood demand has picked up in the second half of 2017 as Kronospan are back to full capacity, new capacity at Ashington comes on line and the Verdo plant at Grangemouth has started up under new ownership. All of this has occurred at the same as most of the established domestic

FACTORS IMPACTING ON SUPPLY

1 There appears to be less volume available in the South and Central England forcing mills there to look North and West for their supplies.

2 The shakeup of long-term contract arrangements in Wales has increased competition to buy on the open market at a time when private supplies have been sporadic.

3 North East England and Eastern Scotland have seen a continued shortage of good sawlog parcels leading to some very strong prices as mills seek to secure core volume.

4 Increased demand from the Irish mills in the west of Scotland has taken up the potential oversupply here from the increased private sector offerings.

5 Standing timber prices have been strong and some of the large institutional owners appear to have hit their budget income targets from selling less timber so have reduced their total felling volumes

producers are running at or near full capacity and the seasonal upturn in biomass demand kicks in. So overall demand is strong and appears to be increasing.

Demand has exceeded supply for most of 2017 leading to steadily increasing standing timber prices. Timber prices have now

HARDWOODS

Sawlogs

The major talking point in the hardwood market has been the Europe-wide increase in oak sawlog prices finally having a pronounced impact on the UK market. It is well documented that for the last three years, oak prices have been increasing throughout Europe but 2017 has seen very strong prices and shortages of supply.

Croatia has banned the export of round oak logs to try and stimulate its domestic processing sector, EUTR regulations appears to have reduced supplies from the Ukraine whilst a number of factors appear to have reduced overall supplies from Germany, France and the lowlands. At the same time, whilst demand for oak across Europe relentlessly increase, there is improving demand from China, Vietnam, Malaya and other Asian countries for all grades and qualities with particular demand for good planking oak.

In the UK, there is good demand for oak at a time when there is less material available from Europe, the price is increasing and the quality is variable. With increased interest from end users in 'English oak', there is now really strong demand for home-grown oak parcels. There has been a strong increase in prices during Q2 and Q3 of 2017 which has carried on into the winter.

As of end of November 2017, prices for oak are very strong and a quick summary of recent sale prices is shown below (all prices per hoppus foot at roadside)

- Good planking logs: £6 -9
- Planking/beam oak: £5 8
- Beam oak: £4 6
- Fencing/landscaping oak: £3.50 5.

The market for other species remains subdued at the moment, but there are reasons for longer term optimism as increased global demand for legal, sustainable and ethical temperate hardwoods should improve the market for species other than oak.

Ash has seen increased domestic interest for good quality white planking ash of 15 mid-quarter girth and larger, whilst the export market remains interested in both white and olive second quality ash where quantities and access make container loading viable.

Beech has also seen a slight increase in domestic demand and also some interest from the export market although the overall volumes required are small relative to oak and ash.

>>



The export demand for poplar has slowed down in 2017 and currently there is little demand for poplar so owners advised to hold onto parcels until the market improves.

The market for sycamore remains quiet, with the closing of Nidd Valley sawmills there is little domestic demand except for a few mills looking for high quality figured logs. The export market for figured sycamore was also quiet last year and there is currently little sign that it will improve

significantly although there are still exceptional prices being paid for very high quality figured logs. A 4.5 m³ figured sycamore log (80cm+ diameter x 8.5m long) recently sold at auction in France for over 60,000 Euros to a German buyer. At today's prices, this is about £12,000 per m³, at roadside.

Firewood

The firewood market has been quietly improving over 2017, there does not appear to be the very high stock levels seen in 2015

and 2016 and demand appears to be quietly improving. There are still areas of local shortage although on the whole prices seem to have settled down at around £40 to £45 per tonne at roadside for first grade firewood with parcels with a high ash content reaching £50 per tonne in some areas.

There is less demand for oak firewood and this is usually between £5 and £10 per tonne cheaper than the first quality species (ash, beech, sycamore).

£ per tonne delivered to customers in £ per tonne delivered to customers in Wales, central and south England north England and Scotland Product Lower price Upper price Product Lower price Upper price Log 18 £62.50 £67.50 Log 18 £62.50 £67.50 Bar 14 £50.00 £55.00 Bar / pallet 14 £42.50 £50.00 SRW £35.00 £42.00 **SRW** £32.00 £38.00 Fencing £48.00 £52.00 Fencing £48.00 £52.00 H Wood firewood £45.00 £50.00 £45.00 H Wood firewood £40.00 These prices are for guidance purposes only and are based on historic market information.





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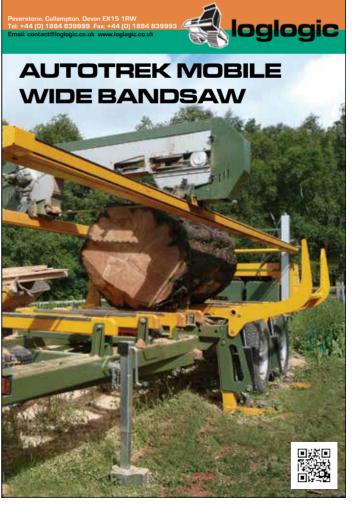


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>> equalised across the mainland and whereas the South and Wales had higher prices in the first half of the year and the North and Scotland lagged behind there now appears to be parity across the UK.

The net result is that particularly sawmills have seen a serious erosion of their margin between sawn timber prices and log costs which has seriously reduced their profitability.

As we now enter the seasonal slowdown in demand, processors will be looking very carefully at their costs, cash flow and capacity. There are already mutterings that if the situation does not improve then capacity will have to be taken out of the market in the winter of 2017/18.

Normally, this is done by working a shorter week, ending overtime and extending maintenance shutdowns, all of which reduce the demand for roundwood and so lead to a stabilising of log prices.

The situation is 2017 is unique in my experience in that capacity restriction is being talked about when sawn stocks are low and demand is relatively good, this could actually lead to shortages of some key products

and may just accelerate the price increases.

The desired effect for the processors would be a stabilising of roundwood prices and further increases in finished product prices allowing them to restore profitability and continue to invest in process efficiency and product development.

Hopefully a period of stability over the next six months would allow the market to take stock of the situation (sawn timber prices, domestic demand, interest rates, Brexit) and adjust accordingly and be sustainable in the long term.

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GLOBAL TRENDS

Global consumption of softwood timber has increased with almost all the major markets increasing their demand.

China continues to be the major influence on the global markets; increasing wealth and rapid urbanisation are leading to increased softwood consumption, whilst domestic supplies are becoming increasingly constrained. To feed this insatiable demand, increasing volumes are drawn from the rest of the world. Historically, Russia and Asia were key suppliers but we now see increasing volumes from Canada, Asia, the Pacific Rim and recently Western European producers.

Russia's sawmill capacity steadily increases, following a period of heavy investment in new processing capacity, particularly in Siberia and the North West. Much of this volume heads east to China with the balance being absorbed by the domestic market.

The North American market remains strong and has seen record sawn timber prices over the last couple of months, as short-term demand for hurricane rebuilding and the longer-term impact of the US tariffs on Canadian timber have come into effect.

The USA has in 2017 become a very

attractive market for European mills whilst the Canadian mills have focused their efforts on China.

Europe is steadily improving, however, North Africa continues to be difficult due to civil unrest and lack of finance; fortunately the North American and Asian markets have more than compensated for the North African

Overall, whilst supply has increased, demand has increased further which has lead to rising finished product prices and increasing log prices in some areas where supplies are keenly contested. There is still uncertainty in the UK due to Brexit, rising interest rates and latterly increases in timber prices. So whilst demand and volumes have been increasing, there are now concerns that higher prices and increased costs will stagnate or even reduce overall demand next year. If the pound remains weak and other global markets continue to develop then the importers will look to move surplus volume elsewhere so although UK demand may slacken one would hope that prices will remain stable.

GiB harnesses power of social media

Social media activity, including a Thunderclap (joint Tweeting campaign), the launch of an e-postcards series, and posts on and from multiple Grown in Britain Week events, culminated in the campaign gaining over 2.5m 'impressions' - opportunities to view its messages promoting British-grown wood - during the annual celebration from 9-15 October.

Grown in Britain Week was welcomed in by Parliamentary Under Secretary of State for Biosecurity & Rural Affairs, Lord Gardiner of Kimble, in Westminster. This was followed by a joint conference to demonstrate the commercial value of woodlands, staged by Grown in Britain, the Forestry Commission, and the Country Land & Business Association. Running parallel but at Timber Expo. Grown in Britain partnered the British Woodworking Federation to demonstrate the use of British-grown hardwood and softwood in two exemplar timber windows. Grown in Britain licence-holders held their own events and promotions, adding to the week's activities.

Grown in Britain CEO Dougal Driver comments: "We now plan to keep up the momentum with our weekly 'Old Chestnuts' e-postcards, a newsletter, further partnerships and media activities, to maintain and expand the good wood business represented by timber that's Grown in Britain."



Pictured: Lord Gardiner of Kimble (right) in Westminster with Dougal Driver. CEO of Grown in Britain.



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Another sound year in the forest property market



PROPERTY MARKET 2017 REVIEW Fenning Welstead, John Clegg & Co

e have reached that time when we gather together the evidence of market activity over the previous year. Our records indicate that over £110m of forestry property was sold on the open market. That's an uplift of about 40% on 2016. The overall area of forestry sold has remained remarkably constant, at about 17,500ha. However, the reason for value increasing is that in 2016, the properties presented to the market were generally in lower value parts of the country, whereas 2017 has seen a return to the more competitive, higher quality forestry properties. In addition there has been a relatively high degree of off-market activity which, by its nature, is difficult to record - but we would expect something in the region of £20m of woodlands to have changed hands by negotiation.

Scotland

On the commercial forestry front, the sale of the Stellar portfolio of ten forests, generated considerable interest and was successfully sold as a complete portfolio. The total area of approximately 1500ha achieved a sale price of £12.5m. The ten forests were of varying character and location, from Inverness-shire to the Scottish Borders, and the range of woodlands offered excellent quality commercial crops alongside a mixture of amenity and long-term woodland features.

Perhaps the strongest indicator of the level of interest in commercial forestry in the Scottish Borders was the sale of Letham, The Hass and Broombaulks. This forest is of high quality, planted between 1987

and 1995, and extending in total to 783ha. These substantial blocks of commercial conifer crops approaching harvesting, were complemented by mixed broad-leaved woodlands, rivers, small lochans and a ruined cottage. The property achieved a sale price of just under £15,000 per conifer hectare. One of the noticeable features of the closing date was the range of offers. This appears to be a feature of the current marketplace where bid prices can vary widely.

Another Border forest sale was Polmoodie near Moffat. Planted in the early 1970s and with 200ha of mature timber to exploit this is a well located property. However, there are some steep slopes to contend with and the market understandably took this into account. The sale was completed at a figure of around £11,500 per hectare.

The Scottish Government's objective of forest expansion is beginning to work through the system and there have been several farmland properties traded through the year where the buyer is intent on afforestation. There follows a potentially lengthy application process of consultation leading to planting approval - with no guarantee of success. It takes a degree of confidence to make these investments in land. Not only is this an issue for the investor but the forest nursery and contracting businesses have to second guess their workload and demand for trees years in advance.

Clearly specific sites have their own development issues and may need substantial investment in roads and fencing. As a broad range there have been land purchases at comfortably over £3000 per hectare with forestry as the objective. There is little evidence of market activity of land with planting approval but anecdotally it can be at much higher figures to reflect the security of having an approved scheme. Could we see a return to the days when farmers secured planting approval before marketing the land?

Wales

There has been little of note, or scale in Wales over the last year. At 92ha Cefn Creuan Isaf in Gwynedd contained a significant proportion of Sitka spruce dating from 1978. In combination with some attractive broad leaves and an area of ground without replanting obligation, this sold for well in excess of guide of £10,000 per hectare. Off-market it is rumoured that 129ha of pure 1983 spruce sold for a price in the region of £11,600 per hectare. However, in comparing this with Scottish Border results, one needs to bear in mind that there was a requirement for major investment in the external and internal roading.

The smaller woodland market has also seen a lack of product for buyers. Prices per hectare achieved have varied considerably. Well stocked spruce continues to >>



Jed Water flowing through Lethem. The Hass and Broombaulks



Market opportunity for UK ash sawlogs

Competitive market prices for quality ash sawlogs felled and at rideside

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Specifications

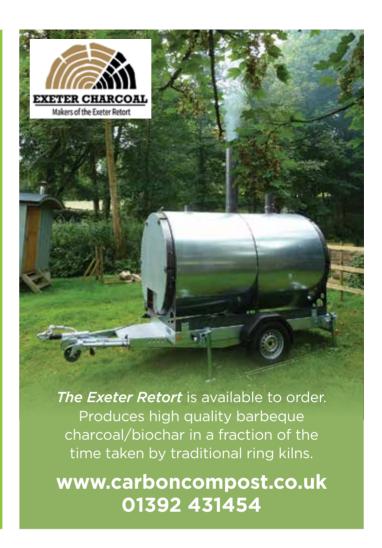
Minimum: **30cm** mid-diameter Minumum: **3.3m** length







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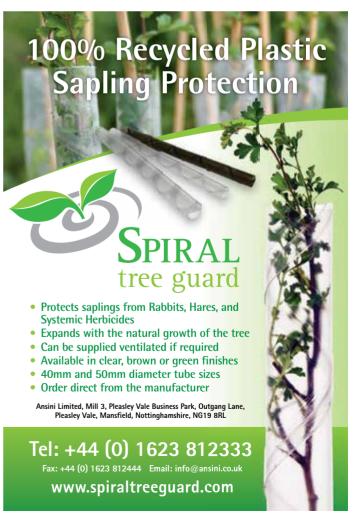
The volume of material is significantly reduced and can be reloaded and mixed with other products before being applied to the ground. These machines have been in production for more than 20 years and can be designed to individual requirements. A wide range of options are available for traditional and in vessel composting.

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>> attract good interest. Broadleaved restocking sites have proved less appealing to purchasers unless they are in small packages. The spread of deer across Wales is beginning to hurt the prospects of young broadleaved woods where protection from browsing may be inadequate and potentially expensive to remedy.

England

The market through England now appears to be much more sensitive to location. Strong public access in woods is a notable deterrent for many purchasers. Pull out Woodlands that have become almost public parks in terms of walkers, horse riders. mountain bikers, etc, struggle to sell. At the quality end of the market things are different. Redleaf Wood, 21.7ha and The Grove, 19.8ha, near Tunbridge, Kent achieved over £20,000 per hectare. The woods had been in the same family ownership for over a century. Almost 50 years ago these woods were noted "to be beauties of a well-managed forestry enterprise, predominantly conifer, but with just the right ingredients of old hardwoods, coppice and mixtures, to be a continuous pleasure to both humans and birds".

Moving into Kent, the Leeds Castle woodlands saw an offering of ten woods ranging from 5.4ha to 49.6ha. These were mainly broadleaved in content, with strong areas of productive coppice. All of these woods attracted good offers, with prices generally between £9000 and £12000 per hectare. It is interesting to note the difference in market value between the woods at Redleaf and The Grove and the Leeds Castle results. The historic records for the former show that mid-way through the twentieth century, the plan for the woodlands was "to convert the oak standards and chestnut coppice, to conifer plantations embellished with many deciduous species". Readers may draw their own conclusions as to the results of that policy change.

Counties to the north and west of London have seen some eye-watering prices achieved for woods in the "right" location. Prices from £25,000 to over £40,000 per hectare in prized areas of Hertfordshire and Buckinghamshire, have been achieved. These prices are well in excess of other woods in apparently similar locations, but not quite the right "hot spot".

The effect and desire to be invested in the right location, was reflected in the sale

of Dunster Estate in Somerset. These woodlands were offered for sale by the Crown Estate. A total area of 341ha was sold at a price in the region of £15,500 per hectare.

SUMMARY

We see the forestry market to be in good shape. There is still strong interest in acquiring woodland assets. As you will read elsewhere in this edition, timber prices have strengthened, and we are beginning to see a resurgence in new planting proposals which at last appear to have political support across all three countries. There is a dawning realisation that we have to plant more trees if we are to meet not only the demand for timber, but also our climate change and diversity targets. It is a very encouraging picture.

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TIMBER
MARKET
REPORT
Graeme Ralph
Euroforest

s the chart below illustrates, the UK Construction Purchasing Managers Index is still in positive territory although it did dip below 50 earlier this year. Any number above 50 indicates growth in the sector with a current number of 50.8, up from 48.1 in September. This index is a measure of all construction projects and while new build housing is sustaining momentum there has been a noticeable drop off in major new projects feeding through. We await announcements in the November budget that might stimulate new house building projects.

What the chart above does illustrate very well is the fact that, compared with the last time that our industry benefitted from high standing timber prices, our market is currently in a much more fragile state. Demand for logs remains very high, which is driving prices to record levels, but the sawlog to sawn timber ratio, which reflects the potential for our sawmillers to make some profit, is currently too high. This means that log prices are unsustainable without a rise in sawn timber prices, and looking at the chart it is obvious that this is going to be a struggle unless demand rises from current levels. The message to you as a grower is that there is strong log demand, prices are as good as they have been, so whilst it might be tempting to hold off for better prices, now really is the time to get your

timber on the market to support our industry, as some mills are already being forced to take out production to meet availability, rather than pay even more than they already are for logs, which would take them further into unprofitable territory, which would not be good news for any of us in the long term.

In the small roundwood sector demand is good, and as sawmills reduce capacity the co-product volumes they produce will fall, meaning higher small roundwood demand to replace it. Kronospan are back up and running again at normal levels after their problems earlier in the year. Kent Renewable Energy are currently on target for opening in early 2018 which will provide a welcome new market for the hardwood which has not had a market for many years and has been difficult to manage commercially as a result. Verdo have sold their plants to German company Entrade and both have now reopened producing pellets and briquettes. In Scotland Norbord have successfully commissioned their new OSB line at Inverness, and with the construction equipment now departed, are keen to fill their new log yard before the onset of the Highland winter. Supplies are now being delivered here from across Scotland including regular cargoes by sea from the west coast. Although the new gasification plant at Killin, north of Stirling is slightly behind schedule this will be another new small roundwood outlet which will come on stream in 2018. In addition, the new CHP plant at Cramlington is in the commissioning phase, and will come into full production early next year. Add to this good demand from all of the existing markets and overall the small roundwood picture is good.

So overall the timber market message is one of good demand for raw material from industry, with all the signs being of continued cautious optimism for 2018. Best wishes for a Happy Christmas, and a busy and prosperous New Year!

www.euroforest.co.uk



New whistleblower' platform aims to expose illegal timber trade

A new initiative called 'Timberleaks' was launched this autumn by Earthsight, a UK-based non-profit.

Timberleaks will be regularly exposing cases of suspect wood in international supply chains, especially products imported and sold in the US and Europe. Both the US and EU have laws which make it an offence to import wood which was illegally sourced overseas. Most consumers also expect their wood to have been produced sustainably and without violating human rights. At pre-

sent, these laws and these consumers are not being respected. Contrary to their public statements, many companies continue to import and sell wood which they should not. By doing so, they are undercutting their competitors.

If you are aware of or suspect wrongdoing by your own company or a competitor, we encourage you to come forward. The Timberleaks website provides a means to do this securely and anonymously.

www.timberleaks.org/contact



NPTC spraying certificate validity

ndustry discussions earlier in 2017 high-lighted the fact that there is considerable confusion among foresters, Christmas tree growers and their contractors as to the validity of NPTC/City & Guilds certificates held – and their appropriateness for particular tasks.

This confusion is entirely understandable as the initial 1987 rules were revised in 1994 and again in 2012 each time changing the validity parameters for new certificate holders.

The 2012 rule change was particularly onerous as most, but not all hand held applications gained after 2012 became grouped under a PA6 umbrella but with NO allowance for one qualification permitting use of other application systems.

This means that if you have a post 2012 PA6A, you are not permitted, for example, to use a weedwiper or stem injection/ tree thinning technique without the appropriate PA6MC or PA6INJ certificate. Pre 2012 qualifications were unaffected by this change. The position was further complicated by the need for "grandfathers" to be qualified with a rather less onerous certification process.

It should be noted that all spray operators need a PA1 certificate in addition to the application certificate, unless they are "grandfathers" in which case a 051 certificate is required - even if a PA1 is held.

In order to attempt to provide more clarity the chart opposite has been developed over the summer and autumn, and is based on one produced by certification professionals in liaison with NPTC/City & Guilds in 2016. It has been modified for the guidance of certificate holders involved in forestry and Christmas tree production. As an indication of the complexity of this process, the table below is actually the eigth revision of the original paper!



If you haven't used the service to date, be assured it is a free service operated by Confor's crop protection adviser Colin Palmer on behalf of Confor members. Colin can be contacted 8am to 8pm Mondays to Fridays on 01531 633500 (leave a message if necessary) or by email to: branchline@xln.co.uk

EXAMPLES

See table opposite

Example 1

A tractor driver took PA1 + PA2 in 1990

This permits him / her to use hand held equipment such as a knapsack sprayer or hand held granule applicator, but not a hand held mistblower for which a PA9 is required.

Example 2

A forest worker took a PA1 + PA6 in 2001

He / she may also use hand held equipment such as a knapsack sprayer or hand held granule applicator, but not a hand held mistblower for which a PA9 is required.

Example 3

A spraying contractor took a PA1 + PA6 in 2015

He / she may only use a knapsack sprayer

or rotary atomiser. Other modules such as PA6MC for a hand held weeedwiper will be required before using any other type of applicator. Modules PA1 + PA2 would be required for tractor boom spraying, and PA1 + PA3A for a cannon type airblast sprayer. The same would apply to Christmas tree growers.

Example 4

A 73 year old Christmas tree grower has no spraying qualifications

As he / she was born before 31st December 1964, then modules 015 + 152 will be required for most hand held uses, and 051 + 054 for using a hand held mistblower. Modules 051 + 053 will be required for tractor applied boom or cannon type airblast sprayers.

New FR report on the integrated management of *Hylobius abietis* in UK forestry

Interim Guidance on the Integrated Management of Hylobius abietis in UK forestry - this new Note provides the latest guidance on the integrated pest management of the insect Hylobius abietis. It draws on some of the key findings after 7 years of an ongoing programme of collaborative forest industry research on alternatives to the use of the insecticide cypermethrin for protecting trees from Hylobius damage. In addition, as a separate Appendix, it summarises knowledge and guidance on the safe use of the insecticide acetamiprid, which is increasingly being phased in across the UK forest industry as an alternative to cypermethrin.

www.forestry.gov.uk/fr/hylobius

Kerb revival

As noted in Andrew Heald's Certification notes (see p17), the removal of propyzamide from FSC's Highly Hazardous list has led to renewed interest in the product as an alternative winter treatment to glyphosate. So how does it fit in the weeding programme? The following bullet points provide the main features:

- Unlike glyphosate, propyzamide has no foliar activity, and works purely by root uptake
- Propyzamide is very sparingly soluble, so requires plentiful rain to reach the weed roots, therefore the optimum timing tends to be November & December.
- Unlike glyphosate, propyzamide can be sprayed in rainy weather.
- It is essential that the herbicide has entered the weeds while they are semi dormant and before weed growth commences in the spring, as active weeds

can grow away from the weedkiller.

- Although overspraying of trees with glyphosate is ideally limited to pine & spruce, propyzamide can safely be sprayed over all crop species including broadleaves.
- Propyzamide reliably controls most grasses, but is not effective on tussocks, rushes and other coarse grasses. It can also have some activity on buttercup, sorrel and docks.
- There are currently over 40 propyzamide product with approval for use in the forest, including Kerb Flo, Kerb Granules, Careca, Cohort, Proper Flo, Relva and many parallel imports and "own brand" products sold by agchem distributors.
- Propyzamide is a lot more expensive than glyphosate, but as the above notes indicate, it nevertheless has a useful role in the vegetation control programme.

SPRAYER OPERATOR CERTIFICATES

How to use the chart: The headings identify the certificate types, and critically, the dates on which they were obtained.

NPTC Certificate Held: Date Certificate Granted:	-lloudhouse heleva	Tractor / ATV PA2A (i) (1987 - 1994) (ii)	Handheld PA6A (1987 - 2012)	Handheld PA6 (2012 to current date) (iii)	Handheld Grandfather (iv) 051 + 052
Will my certificate (above) allow the uses below?					
Applicator to be Used	Typical Use				
Knapsack/Rotary Atomiser to land	Weed control	Yes	Yes	PA6A required	Yes
Handlance from ATV	Weed control	Yes	Yes	PA6A required	Yes
Knapsack/Rotary Atomiser to or near water	Weed control	No	No	PA6AW required	Yes
Hand Held Mistblowers (v)	Insect control	No	No	PA9 required	051 + 054
Stem Injection (vii) Hatchet + glyphosate	Jap. Knotweed Tree thinning	Yes	Yes	PA6INJ required	Yes
Granules to land (Hand held)	Kerb Granules over transplant	Yes	Yes	PA6G required	Yes
Ecoplugs	Tree/stump control	Yes	Yes	PA6PP required	Yes
Weedwiper (handheld) Paintbrush	Weed control Cut stump	Yes	Yes	PA6MC required	Yes
Closed cabinet (vi) (forest nursery)	Hylobius control	No. PA12 only	No. PA12 only	PA12 required	051+ 054

Notes:

(i) PA2A pre 2012 also permits use of tractor / ATV mounted rotary atomisers (CDA) & weedwipers

PA3A is required for tractor mounted mistblowers.

- (ii) In 1994 the ability of PA2A holders to use PA6A equipment ceased.
- (iii) PA6 is not a qualification in its own right, but an umbrella for all the individual hand held application certificates. Units in brackets (...) indicate those units available specifically for this task, but alone will not be able to be used for other tasks. ie. If PA6A was taken post 2012, then this qualifies the operator for knapsack & rotary sprayers only, and would disallow (for example) use of weedwipers or Ecoplugs.
- (iv) "Grandfathers" refers to operators born before 31st December 1964 and using sprayers on their employers or own land only.

Unit 051 is required by all "Grandfathers" even if they hold unit PA1.

Unit 053 is required for tractor / ATV / mounted boomsprayers, mounted mistblowers, mounted granule applicators and mounted inter row sprayers.

- v) Unit PA9 is required for the use of hand held mistblowers, or units 051 + 054 for "Grandfathers".
- vi) "Grandfathers" using closed cabinet applications require units 051+ $\,$ 054
- vii) Glyphosate labels tend to call tree thinning by hatchet and spray or paintbrush "stem injection" so PA6INJ is required for post
- 2012 candidates. However, if a paintbrush is being used then PAMC will be acceptable. PA6A qualification taken 2012 onwards are not acceptable for this task.



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Taking it to the limit

he 3.5t towing capacity is rapidly becoming the industry standard for pickup trucks, with the current Ford Ranger, Isuzu D-Max, Nissan Navara, Toyota Hilux and VW Amarok all boasting about their 3.5t pulling capabilities.

However, having spoken to a number of you at the Confor Woodland Show in September, there seems to be a lot of confusion as to how that affects the payload, and what other legal duties foresters have when towing the full load. This article aims to shine some light on the subject.

How are towing capacities calculated?

Towing limits, like gross vehicle weights, have been devised to make sure each vehicle is safely operating within its capabilities. Various aspects of the vehicle are taken into consideration by the authorities when rating the maximum towing capacity like engine performance, braking force and suspension.

Vehicles that tow more than the legal limits will take longer to stop in the case of an accident, they can become unstable and therefore are more likely to lose control and it causes excessive wear and tear on components such as the suspension, brakes and tyres.

Gross combination mass (GCM)

One thing that the manufacturers rarely mention when they state their towing capacities is the gross





editor of

Professional Pickup

and 4x4 magazine,

on towing weights

and the law

combination mass (GCM), or gross train weight (GTW), which is the maximum amount that the vehicle and the trailer (and all of their contents) can weigh.

The reason why this is important is that the manufacturers will also state the payload in the brochure next to the towing capacity, but the gross combination mass will indicate that there is no pickup truck that can pull its full towing capacity and carry its maximum payload at the same time. In fact, they are usually nowhere near.

To give you an example, we'll take a pickup truck with a gross combination mass (GCM) of 5.7 tonnes (or 5700kg), which is the second figure shown on the vehicle's weight plate (usually located inside the driver's door or engine bay).

According to the technical specifications, this vehicle also has a payload of 1100kg, a towing capacity of three tonnes (3000kg) and a kerbweight (a vehicle without contents but driver, fuel and oil included) of 1900kg.

When towing a full load of three tonnes, this restricts the maximum weight of the vehicle and all of its contents to 2.7 tonnes. Given the 1900kg kerbweight, this leaves 800kg for payload, which is short of the 1100kg stated payload.

Golden rule

Towing a 3.5t load with a pickup breaks what many believe is one of the 'golden rules' of towing which is that the trailer should never weigh more than the towing vehicle. This is especially true with pickups, which have a much longer overhang (usually over one metre) than SUVs.

Although this is only a guideline, a fully laden 3.5t trailer can have a huge impact on handling, particularly during braking, even with modern technology like trailer sway control and weight distribution hitches





How not to...

Clearfell site or forestry graveyard? When looking at this scene, one can only wonder why the operator would leave such high stumps and where the supervisor was at the time; or even how much income the owner left behind. You can imagine the headache the new manager now has to ground prep this area. Should he hand cut stumps to allow machinery in? Cut his losses and direct plant? Whatever the answer is, it will cost the owner money. The alternative - employ quality managers!

Photo: Tim Kirk, Forest Valuations

Want to see your picture here?

Forestry in Pictures is a new regular feature in FTN. For every issue, we will 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 before 11 September 2017. Please include your name, brief description of yourself and the picture and a credit.

Photos should relate to forestry and timber and be of high-quality (minimum resolution 300dpi).

Exceptional pictures might be considered for the front cover of a future FTN issue.

By submitting a picture to Forestry in Pictures you give Confor permission to use the file for non-commercial purposes in Forestry and Timber News or the Confor website. Photos will always be credited.



COMING UP IN FEBRUARY

- GET INVOLVED If you would like to suggest an article for these features, please contact the editor before the the Christmas break. And, of course, we will continue to keep you up to date on important current topics, such as Brexit and planting in the UK.

We encourage members to inform us on what is going on in their businesses or raise interesting points to be discussed in future editions of Forestry and Timber News.

Don't forget that your opinion counts. If you would like to comment on any of the articles published in this issue, please don't hesitate to send a letter to the editor. Across the magazine, there are also specific opportunities for readers to participate:

- Give us your feedback on how we communicate and update your e-mail address, using our simple online form (page 6 /www.confor.org.uk/FTNweb)
- Not sure how the devolution of the Forestry Commission affects you? Get in touch with us (page 18)



And don't forget there is additional information on topics throughout this issue – FTN web resources are directly accessible from the Confor homepage. Watch out for the mouse icon in this magazine! **www.confor.org.uk**



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