

FORESTRY & TIMBER NEWS



April 2016 Issue 74



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There's no simple answer to whether UK forestry would be better off in or out of Europe, says **Stuart Goodall**

On balance...

Our sector is strongly influenced by exchange rates and the EU, and they will become increasingly intertwined as we head towards the IN-OUT referendum on June 23.

The possibility of 'Brexit' has, along with jitters about the global economy, seen Sterling fall significantly from over €1.4 in December to under €1.3 in March. This weaker pound should help UK mills increase market share after a tough 2015. However, if the UK votes to remain in the EU, then we would likely see Sterling strengthen again.

Short term volatility in exchange rates should not be seen as an indicator of whether the forestry and wood processing sector would be better in or out of Europe. For that, much more information is required.

Forestry, like agriculture, is bound up in EU red tape, but also benefits from public funding that may not be maintained for rural areas if the UK left the EU and the Common Agricultural Policy. The free market provides cross-border access for goods and people – a good or bad thing depending on people's own perspective.

Confor is producing a paper analysing the sector and the EU, and we will feature an article on it in the June edition of FTN – a few weeks before the big vote.

I'm not convinced it will come up with a simple Oui or Non, Ja or Nein, but hopefully it will give you something to chew over as you assess which way to vote against a backdrop of Euro 2016, where the 'home nations', except Scotland, will be battling it out with our Continental cousins.

Of course, before the June edition of FTN we will have elections in Scotland, Wales and Northern Ireland. It's a brave person who will predict the outcome of an election, but, at this time, it doesn't appear that radical change is on the cards in Scotland anyway.

Confor has launched its new video introducing the sector, to very positive feedback, and will expand on this to produce shorter films about the various benefits that forestry provides, as well as highlighting more the lowland forestry story.

We have also launched a new animation that explains how wood is a part of everyday life and link that back to the forest. It is very short with a modern style and should appeal to the Youtube generation(s).

I would encourage you to share everything that we produce – it is there for politicians and the wider public to understand our sector better and to secure their support.

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‘Planting targets must be met to secure Scottish forestry’

Conference hears praise for Confor election manifesto

A major forestry and timber conference was told that Scotland must hit its planting targets if it is to deliver a wide range of economic, environmental and social benefits – and secure the future of a £1bn industry.

Forestry and Timber: Scotland’s Hidden Success Story heard that better communication was vital to tell the positive story of the sector, which saw a 50 per cent increase in direct employment in Scotland during the economic downturn.

Michael Russell MSP, who previously covered the forestry brief as Minister for Environment, said: “It is a very valuable sector and employs lots of people – but things are not happening that need to happen, especially planting. If we can achieve that, forestry is on an upward trajectory in Scotland.”

First Minister Nicola Sturgeon reaffirmed the Scottish Government’s commitment to plant 100,000ha of new woodland over a decade to 2022 in a major speech in late 2015. However, Confor’s election manifesto *Growing a resilient Scotland* calculated that the original annual contribution of 10,000ha for ten years needs to rise to 13,000ha per year to meet the target.

Michael Russell praised the Confor manifesto for its “simplicity and directness” and said its five main points effectively summed up the challenges facing the industry. The five action points Confor calls for from the next Scottish Government are:

- Hit the planting target of 100,000ha of new woodland in the decade to 2022, with 60,000ha of productive softwood;
- Improve the forestry applications system to encourage, not discourage, planting applications;
- Stimulate markets for wood and timber;
- Restock all our forests;
- Continue to support timber transport

Michael Russell said a range of approaches – including greater community ownership but also large-scale commercial planting in new areas – would be needed to hit the planting targets.

He also agreed that “reducing bureaucracy to an enormous degree” was vital. Raymond Henderson, a Partner with Bidwells, said an over-bureaucratic and dysfunctional grants system was the biggest barrier to increased planting: “Obtaining permission for significant new areas of woodland creation is on the whole extremely difficult.”

Andrew Vaughan of Tilhill Forestry outlined the bureaucratic challenge of creating Jerah,

Scotland’s largest new planting scheme of recent years, on a former hill sheep farm above Menstrie, Clackmannanshire. There were 19 versions of the Forest Plan before Jerah went ahead as a “multi-benefit site, with timber production as the primary objective”; 1.3m trees of 16 different species were planted on almost 600ha of the site.

However, the environmental impact statement for Jerah was more than 77,000 words with another 57,000 in annexes – and statements were even longer for ongoing schemes. Mr Vaughan called for a reduction in the “length, complexity, cost and stress” of documents but also recognised the need to “engage with communities, not just consult and inform”.

Jo O’Hara, Head of Forestry Commission Scotland, said we should look to the past to understand why modern forestry was not doing better when it had so much to offer: “We were so busy getting on with it that we missed the fact that the public did not like what we were doing. Those who fail to learn from the mistakes of history are doomed to repeat them. We can grow the sector and I think we will, but we must remember where we came from and what stopped us last time.”

“ Things are not happening that need to happen, especially planting. If we can achieve that, forestry is on an upward trajectory in Scotland.”

Andrew Heald, Technical Director of Confor, agreed, but said things had changed - and said the sector had to work better with everyone all of the time: “It’s up to us to create a woodland culture by getting involved in social media, going into local schools or organising open days or site visits. Getting people on site and explaining what we do makes a real difference. None of this is easy. It takes time and investment but we need to do it.”

There were further discussions around where to find the land to plant and positive signs of greater collaboration in this respect between farming and forestry interests.

Conference chair Muriel Gray, a self-confessed tree addict, said: “Forestry and timber in Scotland is vibrant, thriving and exciting and we should focus on making it grow and creating the industry it deserves to be.”



Animating Forestry helping to communicate the benefits

Confor’s Chief Executive Stuart Goodall stressed at the conference that the priorities of the forestry and timber sector are very clear: communication, communication, communication.

He said we had to keep shouting about the wide range of benefits offered by forestry and timber and launched Confor’s new short film, *Animating Forestry*. This follows the video *Our Forests, Our People* and a series of publications ahead of the manifesto in a very busy start to 2016.

Mr Goodall said after the conference, which was sponsored by Confor along with Bidwells, Scottish Woodlands, Tilhill Forestry and Anderson Strathern: “Confor is leading the way in taking the positive messages about forestry and timber to a wider audience. The conference reinforced the need to do that - and to do it better - but it also showed that we are making real progress.”

“It was very gratifying to hear Michael Russell MSP praise our manifesto for its clear, simple messages - and to hear a broad consensus from the panel of politicians that tree planting must increase, including large-scale commercial schemes. There was also an understanding that we must cut back the bureaucracy and complexity around the applications process.”

Mr Goodall added: “I was very keen to stress at the conference that Confor is not here to complain and highlight problems - we want to present solutions to politicians. Alongside that engagement, we will continue to lead the way in communicating the positive forestry and timber story in clear and honest ways through a variety of old and new media designed to capture people’s imagination.”

Above: a still from *Animating Forestry*, launched at the conference

Flooding: Confor takes lead in campaign to plant trees

Momentum is growing behind the argument to plant more trees as part of an increasingly natural approach to flood prevention – with Confor leading the way.

The devastating floods in late 2015 and early 2016 led to a much broader debate on how to reduce future risks, with an increasing emphasis on natural flood management - including tree planting.

Confor's discussion paper, *Forestry and Flooding*, published to stimulate debate on the issue, was launched at Westminster's All-Party Parliamentary Group on Forestry in February. At the meeting, there was renewed discussion of earlier report, *The Role of Productive Woodlands in Water Management*, led by its author Dr Tom Nisbet and Andrew Heald, Confor's Technical Director.

Neil Parish MP, who chairs the Environment, Food and Rural Affairs (EFRA) Committee, welcomed the detailed evidence presented at the meeting and said Confor would be invited to present to the future EFRA flood prevention inquiry. He acknowledged there is clear, well-documented evidence from different areas that planting trees can help prevent flooding as part of a wider package of measures – and said he now wants “really practical ideas” about how forestry can make a difference.

Andrew Heald, who wrote the *Forestry and Flooding* paper, said: “The APPG meeting was an important event in driving home the point that tree planting has a big part to play in reducing future flood risks. As we have often said, it is not a magic bullet - but we can see the UK Government is really getting to grips with the role trees can play. With the Environment Agency report suggesting tree planting can reduce

the height of floods by up to 20 per cent and the Defra response to the parliamentary petition, momentum is really growing. It is no longer a question of whether we do this, but where we do it and how we fund it.”

An Environment Agency report published in March, led by the Universities of Birmingham and Southampton, urged a strategic approach to tree planting around waterways in upland areas. It said most successful natural flood prevention methods are likely to be on a much larger scale than currently in operation and planting in the right places in river catchments could lead to a drop of up to 20 per cent in the maximum flood height. Simon Dixon from Birmingham University Institute for Forest Research, a lead partner in the study, said: “Where its possible to do more extensive planting than we're doing, we really need to do it. It's a bit of a no-brainer.”

Petition

Confor has also encouraged members to sign a parliamentary petition – *Make planting trees a priority to reduce flooding by improving soil and drainage* – which has received around 30,000 signatures in only three months. The petition triggered a detailed response from Defra, which begins: “Trees can slow the flow of water down and reduce the impacts of floods; we are currently exploring the increased role that this could play in flood risk management.”

The response also highlights “leading research and demonstration projects” supported by Defra – including the ‘Slowing the Flow’ scheme in Pickering North Yorkshire, which was a case study in Confor's *Forestry and Flooding* paper.

Mr Heald said: “The Defra response was



Confor's discussion paper *Forestry and Flooding* is helping to inform the debate.

very encouraging, reflecting the ideas and case studies highlighted in the Confor paper. It is good to see there is positive work going on to identify where planting would be best deployed and what form it would take. Confor will make the case for tree planting in the uplands by presenting documentary evidence to all relevant inquiries, including the National Flood Resilience Review led by Oliver Letwin MP. As Simon Dixon says, this really is a no-brainer. Confor will continue leading the way to make sure it happens.”

Confor's Chief Executive Stuart Goodall praised the efforts of APPGF chair Chris Davies MP, who has asked parliamentary questions about forestry and flooding and vice-chair Anne Marie Trevelyan MP, who is pressing for a massive increase in tree planting to reduce flood risks.



Confor calls for early publication of restocking report

Confor has been concerned for some years that the amount of restocking taking place across Great Britain has been less than might be expected – even taking account for such things as habitat conversion and windfarms.

Forestry Commission Statistics is advised by an expert group on which Confor and others in industry have a seat. This group asked that an analysis be undertaken to establish what the state of play is regarding restocking. The resultant analysis will be published as a report as Official Statistics and therefore Confor is bound by conditions on confidentiality regarding current drafts. However, recognising the importance of this work we have been pressing for early publication and alerted senior officials across Great

Britain to the issue as well as the forestry minister in Scotland.

Depending on what the final report contains, this could be an important report and it is vital that industry has the finalised detail on which to undertake appropriate follow-up with ministers and officials. The industry will also wish to consider carefully how the report's content is publicised.

As a sector we benefit from presenting ourselves as a sustainable industry. If action is needed to address an increasing ‘backlog’ of restocking then that should happen quickly. However, we do not want to inadvertently tarnish the image of our industry through oversensationalist reporting in the media.

The best future for Wales?

Andrew Bronwin ponders the question, would Wales and its rural economy be better off in or out of Europe?

The last time I wrote an article for Confor on the topic of the impact of Scottish independence on Wales I naively signed off as chair of the Wales Forest Business Partnership and was subsequently carpentered by Welsh civil servants for daring to suggest that Wales could not afford independence. As a consequence the Partnership lost its funding and I learnt a lesson about the sensitivities of thin skinned civil servants with an instinct to curb free speech.

Now although I no longer have to worry about the view from Cardiff the subject of this article, the impact of Brexit on Wales and the rural economy, is much less clear cut with strong arguments for and against. It is hard to be precise about the exact figure Wales receives as support via the European Union but it was in the region of £9 billion between 2000 and 2013 with £4 billion of EU Structural Funds and £5 billion from the Common Agricultural Policy. Wales, of course, contributes to the EU through its taxes which pass to Brussels from the UK government with the Welsh contribution estimated at €630 million per year but it appears to be a net recipient of over £100 million per year unlike the UK taken as a whole which is a net contributor of between €4 - €12 billion per year. This sum varies according to the rebate formula and the value of public sector receipts.

As we know the EU is highly prescriptive in the way the money is used. Huge sums have been invested through the structural funds in West Wales and the Valleys, probably as much as €4 billion since 2000. The other main recipient is the rural economy with €3 billion of funding between 2007-13 split between the Single Farm Payments under Pillar 1, the Rural Development Plan under Pillar 2 and Marine and Fisheries.

Under the current RDP, 2014-2020, Wales will be in receipt of about £900 million with possibly £50 million of that sum going towards the forest industry. Forestry is without doubt the poor relation and struggles to be heard above the clamour of the farming sector. The strict rules which accompany the EU funding create real problems for the recipient



countries. Instead of Wales being able to assess the needs of its rural industries and then use EU funding in a way which creates maximum benefit, it has to spend the money to fit the rules regardless of whether these are appropriate or needed. Add to this mix a very risk averse civil service which is terrified of being fined by the EU for 'misuse' of funds and we end up with bureaucratic, gold plated schemes being delivered well behind schedule and a real risk of a missed opportunity to properly stimulate and pump prime the rural economy. We are also told that Welsh Government does not have the money to match fund all of the RDP contribution with

“ The UK gives a lot more than it receives back and the funds we do get are strangled by inappropriate rules and regulations. Well, maybe the alternative is also fraught with problems.

parts of the grant aid programme at risk of not being launched at all despite the fact we are already two years into the new programme.

That sounds like I will be voting to come out. The UK gives a lot more than it receives back and the funds we do get are strangled by inappropriate rules and regulations. Well, maybe the alternative is also fraught

with problems. Laying aside the issues of renegotiating endless trade deals and all the other spinoffs which would flow from Brexit there could also be important implications for the rural economy. Wales as yet does not have tax raising powers and, although this may change, currently it has to negotiate its settlement with Westminster. It may well be that the UK government will not be inclined to continue with the EU strategy to target aid at the less successful regions or support loss making farmers wherever they are in the UK. The money saved by not having to contribute to Europe could end up paying for George Osborne's dream of the Northern Powerhouse rather than the Welsh Valleys and it is very hard to see how any government will want to pour money endlessly into the upland farming sector.

Even if Cardiff does arrive at a decent financial settlement what would the Welsh politicians do with the money? It is probably safe to assume they will continue to pump money into the Valleys and with the NHS taking 48% of the Welsh budget we know this is a bottomless pit. Would it be a bad thing if the farmers received less? Clearly for them it could be a disaster but for the forestry sector it might be a very different story. There is no doubt that agricultural subsidies have not benefitted the forest industry. They have supported many uneconomic farms and kept land prices artificially high. Without these subsidies it is possible more land will become available for commercial planting and with



How will you vote in the EU referendum?

Share how you plan to vote ahead of the official referendum. Results from our online poll will be presented to the All Party Parliamentary Group on Forestry (APPGF) meeting in Westminster on 19th April. You can access the poll from the Confor website, follow the printed QR code or simply enter the link into your web browser:

📄 <http://conforuk.polladdy.com/s/europe>



some pump priming public investment we could see productive conifers across much of the marginal Welsh uplands.

Would coming out of Europe relieve us of the crippling bureaucracy we complain of? I wouldn't be so sure. We have seen in Wales over the last few years an enthusiastic surge of new, aspirational primary legislation and an ever widening gap between vision and effective implementation. I fear that in or out of Europe we will be feeling the heavy hand of the State and a focus on strict regulation rather than enabling the rural sector to deliver a sustainable and economically independent economy. I hope I am wrong but in Wales we have the political dominance of a single party – Labour, which is rarely challenged or questioned and we know that this position is likely to continue. The problem with this, and it would be the same regardless of the colour of the dominant party, is that political dominance leads to complacency and a belief in the party mantra which is neither healthy nor constructive. I wonder if the Scots will be experiencing the same problem in years to come if the SNP remain the dominant party.

So do we stay or do we go? Goodness knows, neither option fills me with joy. I will just dream of an impartial, competent government which is efficient and uses public money well. I can dream, that hasn't been banned – yet.

Andrew Bronwin is Forest Manager,
Andrew Bronwin & Co Ltd

COMMUNICATING OUR SECTOR



Confor animation connects forestry and wood in our homes

A short animated film has been released by Confor to demonstrate the link between forests and the wood products we all take for granted in our lives.

Animating Forestry is the latest in a range of materials produced by Confor to better explain the sector to a wider audience. It shows a typical household with a range of wooden domestic items – like chairs, desks, sheds and fences – and links them to the forest and to the benefits that managed forests provide for society.

The film, which is just under two minutes long, goes on to demonstrate that wood is the most sustainable building material and why we should be using more of it, and planting more trees.

Confor launched the animation at its conference in Edinburgh on 22 March, *Forestry and Timber: Scotland's Hidden Success Story*. It was produced by creative agency Cravens and Confor chief executive Stuart Goodall said he was very happy with the results.

"*Animating Forestry* gets across some very simple and direct messages which make it clear that wood and wood products are all around us," said Mr Goodall. "It illustrates the link between planting and growing trees and the wood products we use in our everyday lives – as well as the fact that wood is the world's most sustainable building material. As the film says, 'If wood didn't exist, we'd invent it'.

"We hope the animation will help build on the success of the Confor film, *Our Forests, Our People*."

Released at the end of January, *Our Forests, Our People* shows how the sector works and its economic, social and environmental importance to communities and the UK as a whole. It had already received almost 2500 views by the time FTN went to press.

Stuart Goodall added: "Wood is an intrinsic part of all our lives, and a truly sustainable material. However, the connection to well-managed forests is rarely made. We need to plant

and manage more forests to secure the long-term future of the forestry and timber sector and the increasing number of rural communities that rely on the industry. Until now, we have lacked engaging materials to tell our story – but the video and now the animation are helping us to explain things clearly to a much wider audience.

"Confor continues to take the lead in ensuring the forestry and timber sector communicates its achievements – through political engagement, media coverage, events, high-quality publications and now video material. And again, we encourage our members to share the animation as widely as possible to tell the very positive forestry and timber story."

Melanie Schouw, business director at Cravens, said: "We were delighted to produce the animation for Confor and to tell the compelling story of the connection between tree planting and the wood products in our homes."

The animation can be viewed on the Confor website. Go to 📄 www.confor.org.uk and click on the link to the story in the top right-hand corner.



Falling pound and increased activity levels improve sentiment

Euroforest market report,
by Ashley Williams

The uncertainty produced by the EU referendum in June is casting a shadow over business sentiment as the referendum date draws closer. Most arguments surrounding the debate are emotional and not business related; indeed the potential double whammy of a no vote is that it would almost certainly trigger a further referendum on the integrity of the UK. Whatever the pros and cons of the arguments, the inescapable fact is that uncertainty would ensue. With a fragile recovery in the fortunes of the home grown sawmilling trade underway, it will be good to put the referendum behind us and know with some certainty where the direction of travel for UK plc is.

Away from politics and sentiment, a drop in the value of Sterling and increasing demand have relieved some of the pressure on the home grown timber trade. With an early Easter and drying ground conditions, the expectation is that fencing damage caused by flooding and storm force winds will significantly increase demand for sawn fencing products. Couple this with the significant quantities of repair and maintenance work on flood damaged housing stock and new construction starts and the picture begins to look a little brighter. However life is never unbalanced and the negative outlook shows that there is plenty of cheap imported timber sitting on quaysides around the UK. The ability of home grown sawmillers to increase sawn prices is therefore severely restricted. In summary activity levels are improving but profitability is constrained. There are regional variations in the overall outlook, the fencing orientated sawmills in the south whilst not immune to the difficulties experienced by the larger carcassing mills further north have not experi-

enced the same level of pain as their northerly neighbours. Most fencing merchants and stockists have been strong buyers since the start of the year in anticipation of strong sales and most mills are optimistic that fencing will remain strong in the coming months. Consequently log prices in the south have not suffered the same steep decline witnessed further north, the hope is that, although lower, the log price is still at a level to encourage timber onto the market. Indeed with many mills anxious about their log supplies, prices are beginning to recover some of the ground lost in the second half of last year.

In the small roundwood market many mills still have high demand for raw material and this is being reflected in some of the high prices paid for standing parcels in all areas of the UK. The panel board market is stable with chipboard selling well but MDF is still struggling to make headway. The large variety of other small roundwood markets, from shavings to biomass is still buoyant and looking for supplies. The slowdown in saw mill activity in some areas in the second half of last year and the consequent reduction in sawmill chip availability did result in more demand for small roundwood and this has been maintained so far this year. However as saw mill activity has recovered there is some expectation that supplies will get back into balance. The recent announcement by Norbord of a £95m investment in their OSB plant at Inverness is a significant vote of confidence in the UK wood sector. The new investment will almost double production at Inverness, providing a growing market for small roundwood in the north of Scotland.

In the small roundwood fencing sector demand has been very slow partly due to very poor weather conditions this spring and a slow resolution of farming grant payments in many parts of the UK.

In summary the round timber market is slow-



ly recovering from the slowdown in the second half of 2015. Demand and prices are improving for most round timber products and as ground conditions improve following a very wet start to the year, harvesting activity is beginning to pick up significantly.

Genetics helping to select the best trees

Steve Lee, who heads up tree breeding in Forest Research, is working with Joan Cottrell on pioneering work using DNA markers for genetically selecting the best trees without having to grow them beyond the seedling stage.

The funding for this work is coming to an end and there is a chance to continue the work with Oxford University via a four-year contract with BBSRC. To progress the work they need contributions from industry towards the £1.6m budget so any help would be appreciated.

✉ steve.lee@forestry.gsi.gov.uk



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The Coilte Graduate Development Programme is offering talented individuals who have drive, energy and ambition an opportunity to be part of the future of Coilte. We are offering recently qualified graduates a placement for three years. We are looking specifically for graduates within forestry. Students currently participating in their final year or who are awaiting results are also welcome to apply. Successful applicants will be taken into the Graduate Development Programme during August 2016.

Commercial Graduate will:

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Experience two to three work placements in a management, frontline supervisory or business support role within the Coilte Forest Division. Placements may be in the areas of Resource Optimisation Analysis & Planning, Harvesting & Operations Management, Customer Supply Management or Financial Planning & Analysis and locations of each will vary.

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PEOPLE

ICF announces two awards for forestry excellence

The Institute of Chartered Foresters (ICF) has announced two awards for excellence in forestry. Ian Ross OBE FICFor has been awarded the prestigious Institute's Medal, while long-standing Confor member James Hepburne Scott has been awarded an Honorary Fellowship of the Institute.

Ian Ross is recipient of ICF's highest award, the Institute Medal, for his commitment to professional excellence in forestry. Ian, known to many as Willie, is currently chairman of Scottish Natural Heritage, in addition to chairing Forestry Commission Scotland's National Forest Land Scheme Assessment Panel. As a Highland Councillor for 13 years, he was active on sustainability, renewable energy and community engagement issues.

James Hepburne Scott has been awarded an Honorary Fellowship of the Institute, which honours outstanding services to the forestry sector. This is an exclusive award, with only 14 previous recipients, and entitles the use of the post-nominals "FICFor (Hon)".

James Hepburne Scott is director of Forest Carbon Ltd, chairman of the River Tweed Forum and Vice-President of the Royal Scottish Forestry Society. He was formerly Sales Director of Alba Trees nursery and Scotland chairman of the Forestry and Timber Association prior to the formation of Confor. He has a small farm in the Scottish Borders where he has been an enthusiastic planter of productive woods.

Dr Terry Mabbett wins James Cup for second time

Dr Terry Mabbett has won the RFS James Cup for a second time after an article on the restoration of peri-urban hazel coppice woodlands was voted number one by a panel of RFS members.

His article appeared in the *Quarterly Journal of Forestry* in October 2015 and was up against stiff competition from a number of other articles. Judges praised it as "a very thorough and well structured report with a high level of detail".

Also popular and highly regarded by the judges were Nadia Barsoum's article "Mixed provenance and mixed species trials", Ted Green's article "Big trees need small organisms" and Joe Alsop's article on ash dieback.

PLANTING

Red tape holds up broadleaf planting



The season 2015/16 will live long in the memories of all UK forest nurseries. A very warm and wet autumn created problems for lifting plants and it wasn't really until after December that most nurseries got going at anywhere near full speed. Most conifers are now sold out as the demand on restocking sites remained steady, but by early February it became clear that there was a huge problem developing in the broadleaved market. And we are pointing our fingers squarely at the longwinded and technically difficult process of applying for the new Woodland Creation Grants both in England and Scotland.

Casting back a year, in England the application window slid very quietly open on 1 March with no fanfare at all (strange for a brand new scheme, already overdue) and then slammed shut on 31 March. During that time frame potential applicants had to read the new rules, potentially register land, apply for and receive maps that the Rural Payments Agency (RPA) was often incapable of providing and then fill in and submit applications. Only 185 valid applications were received many of which have since collapsed because of "dual use" regulations e.g. there was an existing Stewardship scheme on the same land that Natural England were not willing to lift. The UK Government has an aspiration of 5,000ha per annum of new planting, directly funds Forestry Commission for 2,000ha and will have achieved something under 800ha this year.

In Scotland, the application process seemed

to work better than in England but the issue has been in the processing of the applications. Poorly trained staff and a risk averse culture has meant delays that became so long that it was no longer possible to get trees planted even if the go ahead was given. A culture of "reject unless perfect" has meant that several experienced forestry professionals have had schemes rejected, one because he failed to include his Ordnance Survey licence number on one of the maps.

The outcome of this is serious. Nurseries will be burning well in excess of 10m broadleaves this year creating a loss for the sector around £2m and the poor planters, who are mostly self-employed, will suffer a loss much greater than that. Some will undoubtedly decide to look elsewhere for regular employment.

And what has Forestry Commission learnt from all this? This year, in England, the application process started two weeks earlier, but there were no guidance or application documents available until just a few days before. By 10 March only 50 applications for maps had been received and officials were starting to admit that this was not very promising! And did Forestry Commission have any comment about the problems from last year? "There was a shortage of high quality applications". Thanks guys, we are glad you understand the problems!



Please do not hesitate to contact us as a group on npg@confor.org.uk; comments, questions and advice all welcome! For more info about the Confor Nursery Producers' Group, read 'About us' on www.confor.org.uk

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Does home-grown make the grade?

Dan Ridley-Ellis reports on research into the qualities of UK-grown timber



Some of the factors that affect timber properties are familiar to anyone who has worked with wood. They include density, knots, and character of grain. It is easy to imagine that density equates to the amount of strength-giving material. Similarly, it is easy to imagine that wide growth rings equate to fast growth and, as a result, low density. However, like many things in life, the truth is a bit more complicated than what is immediately obvious. Most notably, density does not tell the whole picture, as it depends how the strength-giving material is arranged and composed.

It is often said that UK plantations grow too quickly, compared to the colder forests of Scandinavia, and that the result is low density timber. Years of work at Edinburgh Napier University on the UK's main commercial species, Sitka spruce (*Picea sitchensis*), has categorically shown that density is, in fact, the least limiting property. It is true that Sitka reaches saw log size rather quickly, which is an advantage in a country prone to damaging storms. The downside is that a high proportion of a short rotation conifer log is made up of juvenile wood, which is generally less stiff. Some of what we associate as rate of growth is actually just the annual rings getting narrower with increasing diameter. Timbers with apparent slower rate of growth may just be from the stiffer mature wood, further from the pith, when the tree was actually growing, in total volume terms, faster.

The properties of structural timber can be conveniently compared using the system of C classes in the European Standard EN338. Strength classes are defined by three main properties: bending strength, bending stiffness and density, and are named according to the strength requirement. The class that timber can be assigned to in grading is governed by whichever of the three properties is limiting. We have seen that UK-grown Sitka spruce fits to C16 by its stiffness, having the strength required of C18 and density of C20. These are grades for near 100% yield (for simplicity, I shall refer to this here as the 'basic grade') and there are higher grades within the resource as a whole. Indeed it is possible, with existing grading technology, to grade small yields of C27, and there are some stands that could, with compatible technology and standards, be graded entirely to C24. Regional variation of properties means the situation for individual mills varies. This is because stiffness is evaluated by mean value, and small variations in mean stiffness from site-to-site require relatively larger shifts in the grading threshold than would grade limiting shifts in

strength and density, which are evaluated by lower 5th percentile.

We recently also carried out work to establish machine grading settings for UK grown larch (*Larix decidua/x eurolepis/kaempferi*). As with Sitka, the main limiting factor is the stiffness, although strength is also close to limiting. The basic grade is C22, but it achieves the density required for C35. Small yields of C35 could indeed be graded but it is probably better to go for C27 with a yield of around 30-40% and the majority of what remains grading to C16. While this is not quite in the same league as European larch from the Alps, or Siberian larch from Russia (both basic grade C24) it is a pretty good showing for UK timber.

The reason we undertook the work on larch was, of course, *Phytophthora ramorum*, and this also raises the question as to what we can do to diversify UK forestry to protect against the threats of pests, diseases and climate change.

Tom Drewett recently completed his PhD thesis on UK grown Douglas-fir (*Pseudotsuga menziesii*). Our data is less extensive, and grading indications more tentative, but it looks as though this is also stiffness limited with, perhaps, a basic grade of C18 or C20. As with larch, strength is close to limiting and density is not critical (meeting the C27 requirement).

PhD student David Gil-Moreno is close to finishing his study of Noble fir (*Abies procera*), Western hemlock (*Tsuga heterophylla*), Norway spruce (*Picea abies*) and Western red cedar (*Thuja plicata*). With these minor species, a big challenge has been getting stands that are comparable to commercial Sitka stands, and the data that follows has been adjusted in an

attempt to predict likely properties for a 45 year rotation. The number of samples is relatively small, and results must therefore be treated with caution.

Norway spruce is already processed and sold alongside Sitka spruce as 'British spruce'. It has long been known that the properties are similar, but suspected that Norway is slightly better. This appears to be the case (basic grade C18, stiffness and strength limiting with density meeting C22). Western Hemlock and Noble fir also appear similar to Sitka, although Noble fir appears to be strength limited. Western red cedar is stiffness limited to a greater extent, but is probably still capable of producing high yields of C16.

Work is currently underway on other candidate species, and we now have Serbian spruce (*Picea omorika*) and Pacific silver fir (*Abies amabilis*) in our laboratory awaiting testing, Japanese incense cedar (*Cryptomeria Japonica*) awaiting kiln drying, and logs of Grand fir (*Abies grandis*) and European silver fir (*Abies alba*) awaiting sawing. The other species in our sights are sycamore (*Acer pseudoplatanus*) and birch (*Betula*).

We gratefully acknowledge the assistance of funders and collaborators too numerous to list here, but particular thanks are extended to Forest Research, without whose help we would have very little.

Dan Ridley-Ellis BEng MRes PhD FIMMM is Associate Professor and Head, Centre for Wood Science and Technology, Institute for Sustainable Construction, Edinburgh Napier University
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PhD student David Gil-Moreno is studying Noble fir (*Abies procera*)

Why are Carbon Footprints and Environmental Product Declarations missing the real benefits of timber?

by Dr Andrew Norton and Prof Callum Hill, Renuables.co.uk

Recent press has cast doubt over how effective forestry is as a useful tool to mitigate climate change. They have concentrated on one article in *Science* (Naudts et al. 2016) that reports on the albedo effect of the trees and the harvesting techniques used in recent times in Europe. The results are summarised by Monahan (2016):

"The conifers are worse for the climate because they absorb more light with their dark color, trapping heat that would otherwise be reflected back into space. They also release less cooling water into the atmosphere through evaporation. Together, these two factors were to blame for 0.08°C of the region's warming. Foresters removing trees for wood products contributed another 0.02°C by releasing carbon that would otherwise be stored in forest debris and soil."

The results from this model-based study (like all models) depend upon the assumptions made and how realistic they are. Other models can give very different results and there are many studies which state the opposite and show the huge benefits that arise from well-managed plantation forests and from the use of harvested wood in long-life products (e.g., Ni et al. 2016). It is unfortunate that the media picked up on the Naudts paper and made no reference whatsoever of the next paper in the journal written by the European Commission Joint Research Commission which shows the net cooling effect of forest area increase based upon satellite observations (Alkama and Cescatti et al. 2016).

However, the Naudts paper and its reporting does at least highlight the importance of meas-



uring the carbon footprint of forest products.

The Naudts paper looks at the effect of change from "natural" to plantation forestry, using a model to do so. From a Life Cycle Assessment (LCA) point of view this could create interesting additional factors that fall under the existing heading of Land Use Change (LUC). These are essentially additional environmental burdens that are applied to products that come from an area where there has been a shift in the land management. A good example is the much publicised conversion of rainforest to oil palm plantations in Malaysia, where an impact of Global Warming (as well as loss of diversity) can be applied to the palm oil produced.

A large omission from the article and more so from the unbalanced reporting, is in assigning a value to the benefits of the forest products that are derived from these forests. The benefits come from two main factors: 1) the consequential effect of using forest products with lower environmental impacts than fossil/mineral derived alternatives and 2) the reduction of atmospheric CO₂ due to the carbon locked in the products themselves over a period of time. Storing carbon in wood products is a sensible carbon capture and storage option that does not require huge investments in new technology and is happening right now. It is estimated that with correct

management of global forests, 11.5 gigatonnes of carbon could be captured per year in long-life timber products (Ni et al. 2016).

Sequestered atmospheric CO₂, as a result of stored carbon in wood, is often overlooked in carbon footprinting because it is deemed too complex. This is partly due to the element of time involved, i.e. the longer the carbon is stored, there is consequently a reduction in atmospheric CO₂ and hence a reduction in radiative forcing for that time period. As carbon footprinting is mostly concerned with only an input or output of CO₂ there is often not a mechanism to apply a time scale to a long term or temporary removal of it in the more simplistic models used. But time of storage is important and there needs to be a way of recognising this.

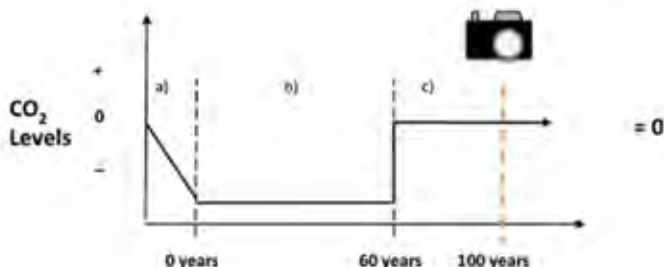
There are currently six well documented methods for assessing the benefits associated with biogenic carbon storage but they are mostly concerned with providing a formula to apply to the quantity of CO₂ sequestered and the length of time it occurs. (Brandao et al. 2013)

The simplest (and most common) approach however does not apply such a formula but instead uses a **snapshot approach**. This simply looks at the quantity of CO₂ still sequestered at the end of an assessment period. Usually

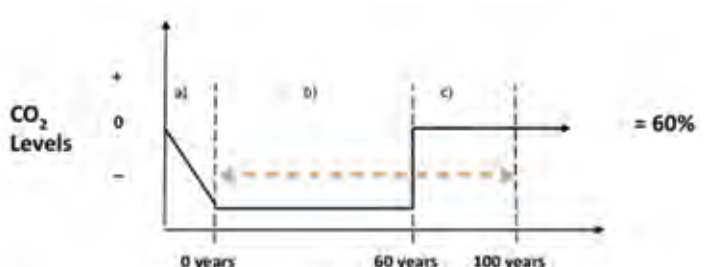
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Two methods for assessing the benefits associated with biogenic carbon storage

Snap shot



Weighted average



CLIMATE CHANGE

Continued from previous page

this equates to no net gain, as the material is assumed to be disposed of in a way where the carbon is oxidised (burned, rotted etc.) and the CO₂ is returned to the atmosphere.

The other relatively common way of considering the effect of sequestered CO₂ is that of a **weighted average**, which considers the quantity of CO₂ effectively removed from the atmosphere (generally around 1.5 tonnes of CO₂ per tonne of timber) and divides this by the proportion of time the carbon is stored over the period of time the assessment is concerned with (usually 100 years).

By way of illustration, consider the use of one tonne of timber in a building for 60 years. Using a weighted average method, the carbon storage benefit over a 100 year assessment period would be (60/100) x one tonne. However, if the timber is burnt within the 100 year period, a snapshot at the 100 year time period would not indicate any benefit from storing the carbon for 60 years.

It is worth noting that if cement or lime-based materials are considered using a snapshot approach then the direct emission of CO₂ from their production is not included if the assumption that all of the emitted CO₂ is re-absorbed over its life cycle is used. This is what is assumed by many product databases including the data used in BREEAM. As such, only the indirect CO₂ emissions (from the energy used to make the material) will be presented. Because of this, less than half of the total CO₂ emissions associated with the cement-based product are actually reported.

Conclusions

It is particularly important for the forest industry to find a common standpoint on this, as it is potentially a phenomenal marketing tool. The data presented in published EPDs and carbon footprints is already finding its way into BIM tools. If such a weighted average method was backed by the forest industry and there was effective lobbying for this to be included in EPDs and the European standards that back them up, then specifiers would preferentially choose timber as a means to reduce the impacts of their building projects. The benefits would be there for everyone to see and promote.

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PEATLAND RESTORATION

Restoring afforested deep peat in Wales

by Dr Helen Cariss

Foresters understand that woodlands are not just about timber and recreation, but deliver many ecosystem services, such as water management, biodiversity gain, carbon storage and sequestration. It is through this, the “ecosystem services approach”, that we can demonstrate the principles of Sustainable Natural Resource Management, to the people of Wales.

So where does afforested deep peat and restoration to bog habitat fit in? Active bog systems provide carbon storage and sequestration, with the quantities of carbon stored below ground exceeding that which could be locked up in timber above ground. Conversely, degraded bog releases carbon to the atmosphere. Blanket bog, fen, flush and lowland raised bog are Biodiversity Action Plan priority habitats. Restored peat provides hydrological benefits: with a functioning bog system in the upper catchment, river systems benefit from attenuation of flows, becoming less flashy in high rainfall events and sustaining base flows during dry periods. Degraded peat tends to be drying out, causing cracking and impairing the peat's capacity for water storage. Furthermore, artificial drainage within the peat can cause rapid run-off. Nutrient regulation and retention are also improved by the restoration of afforested deep peat.

The conflict we have is that conifer plantations can lead to drying of the peat, as well as forestry ditches speeding up the degradation and carbon loss. However forests also lock up carbon and deliver many other ecosystem services, particularly timber. So we have to make balanced decisions for afforested deep peat. If the trees are removed and the site is not successfully restored to active bog, we would fail to deliver the benefits of either option. We need to ensure that sites are capable of restoration to a level that delivers the stated benefits.

In its strategy, *Woodlands for Wales*, Welsh Government has made a commitment to increasing tree cover in Wales with a presumption against permanent removal of woodland except for restoration of high priority open habitats. It states that we should “Continue to restore priority open habitats ... where there is a clear ecosystem service benefit ...”

The need to identify these benefits led to the commissioning of work by Forest Research outlined in the report, *A strategic assessment of the*

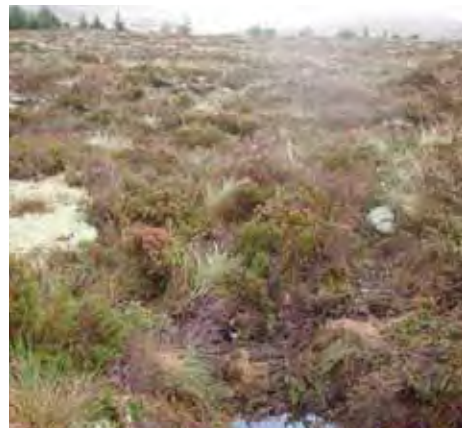


Carn Pflur, in the Tywi Forest, where, in 2013, 800m of drains were blocked following the removal of trees.

afforested peat resource in Wales and the biodiversity, greenhouse gas flux and hydrological implications of various management approaches for targeting peatland restoration.

The National Assessment identified criteria to score a site's potential for restoration. Sites with good potential to become peat forming habitats have higher scores than those which are merely retaining the existing peat. This led to a map of the areas considered likely to be most viable, those least viable and also identified the “top ten” sites, three of which are in private woodland. The National Assessment is the best available mapped data about peat although it does not include all sites of interest to stakeholders.

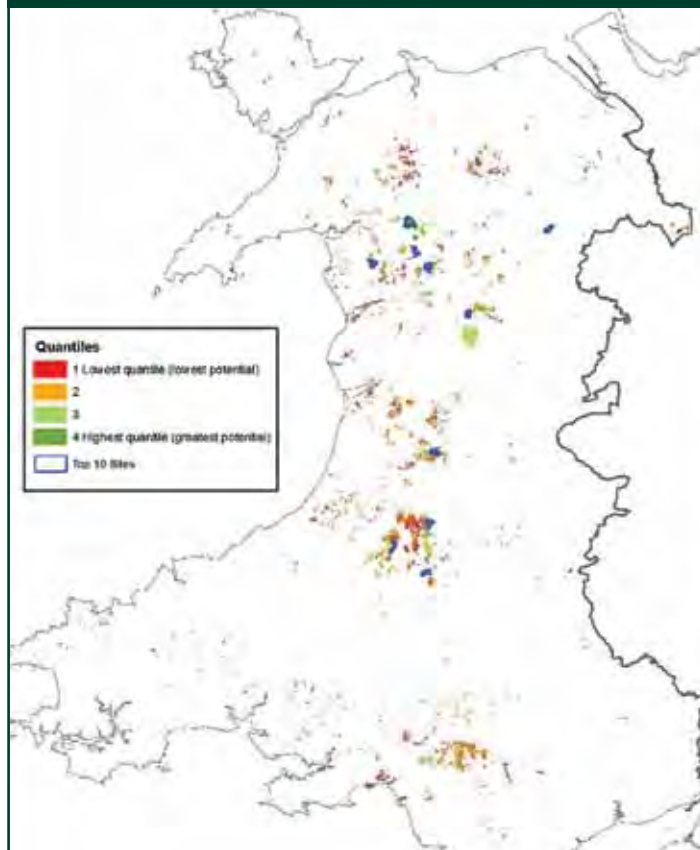
The policy in Wales requires areas of deep peat to be assessed for viability of successful restoration and have a positive plan for bringing the



Penaran, Snowdonia, where 225 ha was restored as part of a LIFE Project



Top ten sites and the quantiles from a national assessment of sites



habitat into favourable condition. A programme of restoration is required for the “top ten” sites on the Welsh Government Woodlands Estate. Staff are trained to use the “field assessment tool” developed to evaluate the feasibility of restoring a site to active bog habitat.

We prioritise sites that fall within the Water Framework Directive, failing catchments; drain to drinking water supply areas; drain to a designated site; provide connectivity to other peatland sites; or where there is urgency due to a site degrading.

There is no requirement for private forestry to carry out restoration, however, in order to determine whether the felling licence should be conditional on the site being restocked, or unconditional to allow for bog restoration to be carried out, it is still important to assess areas of deep peat. There is a Peatland Code, however, at the present time this does not fund afforested peatland restoration projects and development of any “payment for ecosystem services” is in its infancy.

So... how are we getting on with the “top ten” sites?

In Llandovery area, approximately 13% of one peat site have been restored – 52 ha. A further 34ha in Cwm Berwyn is underway.

In 2014 conifers were removed and ditches blocked over 211ha in Ceredigion. In the Cambrian mountain’s area, 50ha are due for felling in 2017, and 155ha of 400ha across two “top ten” sites is due to be felled and restored in the next five years.

Elsewhere extensive peat survey work has also been undertaken. In Snowdonia, 225ha have

been cleared of scattered, self-seeded conifers and ditch-blocked as part of a LIFE Project and a further 90ha is felled and being ditch-blocked in partnership with the National Park LIFE project for the freshwater pearl mussel. Ditch blocking has been carried out on 4.5ha of peatland adjacent to the Rhinog SAC on 1m+ peat depth. Within the Cadair Idris SSSI 1.7km of ditches have been blocked in Dyfi forest. In Ceredigion 1,000ha of bog restoration is planned for restoration by removing regeneration and blocking ditches, again on 1m+ peat.

In South Wales water monitoring has started (installation of v-notch weir, piezometers and rain gauge) on a pilot site at Nant Cregan. In the next five years there is planned restoration of 45ha across three sites, with a further 320ha across six sites after that. Further east conifers have been removed from 194ha with ditch blocking. A further 50ha is planned over the next five years and 160ha planned beyond that.

In Mid Wales there has been 154ha of restoration, which includes drain-blocking in the Tywi Wildwood and clearing hydrological source areas in North Tywi in partnership with a rivers’ trust. Approximately 800 ha of afforested deep peat is planned for restoration in the next five years, with a future estimate of 100-150ha annually for assessment and possible restoration.

There are further projects that are part of wind energy developments.

Precise reporting is challenging as there are various stages towards restoration, some sites have been surveyed and earmarked for restoration, other sites may have the trees felled, some will have drains blocked but no bog vegetation

established, and other sites are a few years down the line and have ongoing works to remove regeneration.

Progress can appear slow because the timescales are very long in the process of deep peat restoration. It can be detrimental to the environment to carry out works too quickly, for example, in acid sensitive catchments it is necessary to reduce the risk of causing a nitrate pulse after felling, by limiting felling to less than 20% of the sub-catchment in any three year period.

Sites should be carefully planned, so that restored areas do not constrain access to other sites. Wider impacts on landscape, crop exposure and stability also need to be considered.

Connectivity issues must be addressed, for example in Tywi forest, removing the trees would negatively impact the red squirrel population. So work cannot start until alternative habitat connections are created.

The cost of restoration is estimated at an average of £1,600 per hectare (excluding ongoing site management costs), so resources need to be secured for the restoration works prior to felling. This is, in part, due to risks that with no trees and without the ditches being blocked, the area could contribute to increased flows of water, potential increases in dissolved organic carbon release and establishment of inappropriate vegetation.

Each year we provide Welsh Government with the area of forest which has been restored through bog restoration projects so that they can keep track of the impact on targets for increasing woodland cover.

Dr Helen Cariss is Forests and Water Officer, Natural Resources Wales

Exploding whales at transport conference

by **Roland Stiven**,
Timber Transport Forum

A record 120 people attended the Timber Transport Conference at Battleby on 10 March 2016. While the Minister Dr Aileen McLeod had to give her last minute apologies (apparently we were upstaged by the UN Climate Change secretary), Jo O'Hara (Head of Forestry Commission Scotland) stepped in and gave an informed and challenging keynote speech highlighting the importance of engaging with people, our theme for the morning. Jo also announced that the Scottish Government is continuing the Strategic Timber Transport Fund for 2016-17 with a welcome £2.85m. In practice this means around £2m is available for the Timber Transport Scheme, which can support investment in public and private roads where the works help to reduce the impact of timber haulage on society and the environment and 'modal shift' to rail or sea haulage.

It was society that was our focus however

and Amanda Bryan's presentation highlighted why we need to engage with communities and society at large if we want to retain public support and goodwill to our sector in the longer term. The forest industry may see consultation and public engagement as a cost, but we can't afford not to do it.

The Timber Transport Forum also launched its latest guidance *Loading from Roadside Forests* which sets out the legislation covering stacking timber along roads and loading lorries on the public road (available from our website, see below). The main message is that this should not normally be done and where there are real constraints that require it, stacking and loading should be done with the relevant permissions from the roads and other authorities, with appropriate safety measures in place to protect operators and the public.

The afternoon concentrated on opportunities to share rural access infrastructure with other industries such as renewables and the power grid, minimising the impact on the environment and maximising opportunities and value for money for all sectors. Jim Walker CBE gave a super talk on his experience of building shared access, with a memorable aside relating to hauling an exploding whale carcass through Ayrshire. The conference also covered the FISA haulage working group, forest exit/access points, rail haulage from the flow country (maybe, one day), using a 700t landing craft for moving timber from forests on the west coast and the future of forest roads. All capably managed by Forum chair Alistair Speedie. Presentations are available for download from our website.

www.timbertransportforum.org.uk



Jo O'Hara in a D&W Agri timber wagon at the Forum conference

FISA update

by **Gillian Clark**, CEO, FISA
& **Colin Mann**, Chair, FISA



The FISA AGM took place on 19 March 2016. The event was well attended by 35 members, including a strong representation from contractors.

Colin Mann, Chair, opened the meeting and explained the importance of the Agenda which hinged around the adoption of new Articles of Association because the original ones were drawn up, as is often the case with new organisations, on an 'off the shelf basis' when FISA was first incorporated. These original Articles were never intended to be the definitive fit for purpose Articles which would form the platform to take FISA forward into its essential future work. The proposed new Articles and Rules were the product of many months of hard work including significant consultation, particularly with the FCA.

Of the people present at the AGM, when the vote was taken to adopt the new Articles, 33 voted in favour, two voted against and there were no abstentions. However, when proxy votes were included, the vote was 66 in favour of the adoption and 58 against. Since this was a Special Resolution, a majority of 75% or more was required and so the adoption of the new Articles could not be carried.

In the run up to the AGM, FCA had corralled its members to complete proxy forms, nominating its chairman Donald Maclean. Donald spoke against the new articles at the AGM and these proxy votes led to the threshold for approval not being reached. This is frustrating as the new document is considered by virtually all, other than the FCA, to be infinitely more fit for purpose than the ones they were intended to replace. FISA had worked hard to liaise with the FCA in the drafting of the new Articles, a position which Donald Maclean acknowledged at the AGM, which makes it even harder to reconcile the stance which FCA finally adopted.

On a more positive front, we are grateful for the very strong support being given to FISA by HSE. Iain Sutherland's introductory address at the AGM recorded HSE's view that FISA has made impressive progress since Judith Hackett CBE, Chair of HSE, laid down the challenge to the agricultural and forestry sectors some four years ago. We all acknowledge that FISA isn't the perfect article but our progress compares extremely favourably with that of the English, Scottish and Welsh Farm Safety Partnerships. We and the FISA Steering Group are grateful to HSE for the endorsement of their support to keep driving the progress forward. FISA remains committed to this process, despite the extreme disappointment in the stance adopted by the FCA. Our resolve to stop deaths and injuries in our industry is undiminished and the work is continuing with full vigour to meet successfully with the objectives of the safety Accord.

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Report highlights gender and diversity 'paradox'

Confor has published a new report which examines the "apparent paradox" around gender and diversity in the forestry sector in Scotland.

The 20-page document, written by academic Dr Eleanor Harris, was presented to Dr Aileen McLeod, the Scottish Government's Forestry Minister, at a Confor industry dinner in Edinburgh.

Gender and Diversity in Forestry in Scotland was published on International Women's Day (8 March) and is intended to stimulate further debate on diversity in the forestry and timber sector.

Confor Chief Executive Stuart Goodall said: "Aileen McLeod had shown a real interest in this subject and we thought the time was right to do some baseline research. Listening to the views of women - and men - in the forestry and timber sector seemed a good place to start."

Dr Harris interviewed five men and five women for the report and also reviewed relevant literature on the subject.

In his foreword to the report, Mr Goodall wrote: "There is an apparent paradox around diversity in the forestry sector in Scotland. It offers much for people from many different backgrounds, but it is often viewed as 'pale, male and stale' because of the lack of diversity of participants."

He goes on to note that women hold several of the most significant posts in the sector. As well

as the Minister Dr McLeod, the Head of Forestry Commission Scotland is Jo O'Hara, while Amanda Bryan is Chair of FCS National Committee and Bridget Campbell heads the Scottish Government's Environment and Forestry Directorate.

The foreword concludes: "The interviewees were in broad agreement that the sector is improving in terms of its inclusion of women but that the greater challenges are perhaps around diversity more generally and how to reconnect young people with the outdoors. The recommendations are intended to open up further discussion rather than lay down a specific blueprint for action."

Dr McLeod said: "The Scottish Government has put gender and diversity right at the heart of its agenda and I welcome this report as helping us towards a better understanding of how diversity issues are viewed by real people working in one of our key rural sectors."

"The report suggests that diversity is the real challenge for the forestry and timber sector in Scotland and that reconnecting young people with the outdoors is another major issue."

"Confor has demonstrated its commitment to improving the diversity of the forest sector by commissioning and publishing this report, and I look forward to seeing how the issues raised are



taken forward in future."

Dr Harris said: "This was a very interesting project which has opened up a wide range of issues not only around gender and diversity, but also about education, recruitment, our increasingly indoor culture and much more. I look forward to these issues being taken forward by the sector."

Gender and Diversity in Forestry in Scotland can be found in the Publications section of the Confor website: www.confor.org.uk

Forestry management grows at Harper Adams

Forestry management courses at Harper Adams University in Shropshire are attracting both full-time and part-time postgraduate students. "Our central UK location and week-long block mode of course delivery are both working well for students", says principal lecturer and subject co-ordinator Jim Waterson MICFor.

"Our strong and broad industrial links are also fundamental to course structure and delivery, helping to ensure the currency of our curriculum and provide real insight into the applied forestry and forest products sectors" he said.

As part of a recent harvesting, marketing and utilisation module, for example, students worked with Tilhill Forestry in mid-Wales looking at commercial spruce harvesting, with ETC Sawmills on commercial milling systems and were hosted by Sylva at their new Oxford-based Wood Centre. The Sylva visit allowed students to meet wood-using entrepreneurs and small businesses and explore technology and innovation in wood products.

"These essential links and partnerships are immensely valuable and constructive" added Mr Waterson. "They create excellent opportu-



nities for professional knowledge exchange and sharing of experience with our forestry management students.

"The courses are fully-accredited by the ICF and many of our students find that our modular week-long block delivery allows them to

combine and plan their forestry studies effectively around their day jobs and other commitments."

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Initially established by Chris and Anne Hughes in 1986 as Woodland Skills Training Centre, mwmac Ltd itself was formed in the early 2000s and has quickly become highly-regarded throughout the UK and Europe. With a head office in Rhayader, Powys, and staff with collectively 200 years’ of practical experience within the industry, mwmac Ltd is in a prime position to cover both Wales and the wider UK. As one of only a handful of registered Centres to offer both training and assessment to its customers; they are able to provide certification which complies with current legislation, guidance and best practice.

Across Wales, the UK and Europe, mwmac Ltd works with instructors to increase their range of skills and support their Continual Professional Development by providing practical skills courses and

advising on best practice. They also work with a variety of other Training Providers to enable them to access assessments for trainees; this service includes providing quality assurance to meet the requirements of regulatory bodies.

In 2010, Anne Hughes, Director, designed and developed the original, innovative and highly successful Focus on Forestry First project in collaboration with the Welsh Government. The project, which ended in 2015, enabled 511 businesses,

1890 trainees, to access training and workshops to enhance their businesses and the skills capacity of their employees.

Due to the high risk nature of the Land-based industries; the prime aim of mwmac Ltd is to enhance the quality of skills and to boost the health and safety knowledge of practitioners to make the industry, and associated industries, a safer place to work.

For further information about mwmac Ltd, visit them on Facebook, twitter or their website www.mwmac.co.uk.



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Scottish group to produce Skills Action Plan

Scottish Forest & Timber Technologies Skills Task Group met recently in Edinburgh to review progress towards the production of a Skills Action Plan for the sector. The Skills Group, which operates under the auspices of the SF&TT Industry Leadership Group, plays the lead role in identifying the key skills gaps in the sector and has the remit to facilitate collaboration between industry, further and higher education and key public agencies to address the sector's needs.

Members of the group are drawn from a wide range of backgrounds and organisations, including Forestry Commission Scotland, ConFor, ICF, UKFPA, LANTRA, educational institutions like UHI, SRUC, and Edinburgh Napier

University. Scottish Enterprise and Skills Development Scotland are actively engaged in the work too and there is collaboration with those involved in skills agenda south of the Border.

The group aim is to agree collective action across the sector on priority skills issues. The Skills Action Plan is currently being developed around five key themes:

- talent attraction
- new entrants
- workforce development
- forest machine operator training
- curriculum review

Each theme has a working group exploring priority actions which are being drawn together and distilled to shape the Skills Action Plan.

The first step was the completion of the SFTT Skills & Training Scoping Study prepared by Inverness College UHI on behalf of Skills Development Scotland, which was carried out to highlight current issues for our industry and initiated further consultations that will feed into the creation of the Action Plan.

A good start has been made, but no-one is under any illusion about the scale of the challenge. A high level of collaboration is already apparent and it is hoped that this will bring focus to the issues, address opportunities and barriers and identify opportunities for action and improvement.

📄 www.forestryscotland.com/about-us/sftt-leadership-group/ilg-skills-group

Transforming forestry students into forestry professionals

by **Dr James Walmsley**

As any forestry professional will tell you, it is one thing to have knowledge, expertise and experience in areas such as silviculture, GIS, mensuration, management planning and ecology, yet it is another thing to succeed in getting a great job in forestry requiring such skills. To land such a job, a rather different skill set is required; a skill set that traditionally has not been taught as part of a university degree.

Acknowledging this, the forestry degrees at Bangor University now include a final year module called 'The Forestry Profession' which is designed to help students gain the skills and abilities they require to a) secure an interview and b) succeed at interviews. Firstly, students explore what the forestry profession is, who it is and where they fit into it. What few of them recognise at first is where they fit, as final year students, into the profession. It comes as a surprise to many of them that they in fact can define the future quality and standard of the forestry profession.

Much of the module is taught in small groups, ideal for exploring many of the realities of the job application process, such as:

- which CVs end up in the bin and which end up on the shortlist? Why?
- what personal characteristics are particular employers looking for?
- what is a good answer to an interview question?
- how should I behave in an interview?



Students gain insight into the forestry profession and where they might 'fit'

(Body language, eye contact, projection, confidence, appearance)

- what are the power dynamics of an interview? How might I use them to my advantage?

As part of the assessment, students have to research current job opportunities and prepare an application (such as a covering letter and professional CV) for their preferred job. They are then interviewed for that job by staff at Bangor, who tailor the interview according to the job concerned.

This is an unusual module in many ways, including the way students receive feedback. Students are informed within a day of their interview how they performed – in person – when the experience is still fresh in their minds. Shortcomings are highlighted and suggestions given for how to improve. They have to share

with their fellow students one thing they would do differently the next time they are in an interview, requiring self-reflection and professionalism. As most readers will know from their own experiences, the likelihood of failure in the job application/interview process is high; coping with failure and recognising how to learn from it is a skill which is vital for future success.

I would be delighted to hear from any ConFor members their 'do's' and 'don't's' for interviews that we could feed into future versions of this module, or indeed any horror stories that we could share with our students to demonstrate important lessons.

Dr James Walmsley is lecturer in forestry at Bangor University.

📧 j.walmsley@bangor.ac.uk

🌐 www.forestry.bangor.ac.uk

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The central UK location of Harper Adams in Shropshire enables access to a wide range of forest resource types for teaching and study.

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Inverness opens new forestry facility

Inverness College UHI has unveiled its new Scottish School of Forestry facility at Balloch.

Ian Ross OBE FICFor, chairman of Scottish Natural Heritage and Forestry Commission Scotland's National Forest Land Scheme Assessment Panel, declared the building open. A former lecturer at the facility, he led the development of its first degree course which launched in 1996.

During the afternoon, guests received tours of the facility built by Morrison Construction, before enjoying a special lecture from Professor James Pendlebury, chief executive of Forest Research and member of the Forestry Commission Executive Board.

Inverness College says the opening of the new facility, which receives over 150 students annually, will be "welcome news" for the growing forestry industry.

Speaking at the event, Diane Rawlinson, principal and chief executive at Inverness College UHI, said: "Inverness College UHI is one of the UK's leading providers of forestry training and education, so it is only fitting that we should have a first class building and learning environment in which to develop the next generation of specialists.

"This industry is of growing importance to the Scottish economy and will generate new business opportunities and jobs for the future."

Established in the 1970s, the Scottish School of Forestry is the principal institution for forestry and arboriculture training and education in Scotland. Qualifications offered range from certificate to degree level, providing training and research opportunities in areas such as arboriculture and urban forestry, conservation skills, land-based engineering and sustainable forest management.

www.inverness.uhi.ac.uk

THE SHARP END

FTN contractor columnist **Norman Hall-Gardiner** has a cautionary tale



Pause for thought

I consider it a privilege to be a forester. It wasn't a difficult decision when, in the late 1970s, I decided to abandon a promising career in banking and set off on a path that took me through two years of cutting windblow at Craik Forest, three years at Newton Rigg, three years with the FC at Grizedale, and more years than I care to remember as a harvesting and establishment contractor. It is only as a result of another recent shift in direction that I realise how much I had lost touch with the very things that drew me in all those years ago. I suspect a great many foresters would, if given the opportunity, experience a similar realisation.

Last winter, I was involved in planting over 100ha of Sitka spruce; every day brought the same battle against the elements, against ground conditions, against fatigue. Every break was measured in the number of trees that weren't being planted, and in the financial implications at the end of the week. Admittedly, I took pleasure in overcoming the obstacles to achieve a good score. But this was not the kind of fulfilment I was seeking when I made that decision.

This winter, I have been surveying forests for the National Forest Inventory under an FC contract. I have often walked several miles cross-country in the Western Highlands to reach a remote woodland of Scots pine or birch, and then revelled in the sense that I was totally alone in a vast, wild landscape. On another day, I could be stumbling over a Sitka restock site, with a harvesting operation going on close by. Piecework still applies, but the nature of the work is such that rushing will make



very little difference; output depends on the nature of the woodland rather than speed. And as I walk or work, I can now take the time to reconnect with my chosen vocation, and the physical environment in which it operates.

So I suppose this is a cautionary tale. Most of us have to make a living from forestry, and this involves achieving a wide range of objectives. More often than not, a financial imperative will force us to compromise, or at least blur our perception of what is really important to us; to use an apt idiom – to not see the wood for the trees. Every now and then, take the time to step off the output treadmill, and indulge in the nature and the landscapes that our profession makes available to us.

First aid courses tailored for high risk workers

St John Ambulance is launching new first aid training across England, specially designed for the forestry and farming industry.

The charity and training provider has tailored its Emergency First Aid at Work course to the sector and added 'severe harm' content, to reflect the serious risks workers face on a daily basis.

Recent figures from the Health and Safety Executive (HSE)* revealed that 144,000 injuries are reported in the industry each year, and there were 160 fatalities from 2010-2015. A higher proportion of people working in agriculture (4%) sustain work-related injuries than any other sector in the UK.

St John Ambulance workplace training director, John Cavanagh said: "The nature of their

work means that farming and forestry workers face high and severe risk levels; sadly that's reflected in the large volume of injuries reported every year.

"These are people frequently using big, powerful machines and vehicles, often working in remote locations, so it's vital to know what to do when accidents happen – particularly as injuries can be significant and life-threatening.

"Our expert trainers will equip people with first aid skills to help them how to deal with a range of incidents in the countryside and be the difference between a life lost and a life saved in an emergency." The aim of the training is to increase safeguards for workers in the sector – particularly where an employer's risk assessment indicates that extra measures must be

Additional, specialised content on the new one-day course includes:

- Managing severe bleeding sustained with cutting tools such as chainsaws
- Treatment of amputations
- Crush injuries
- Casualties suffering from extremes of heat and cold
- Lyme disease

taken to manage potential severe injuries.

Training is delivered on site at a business's premises, or can be hosted at one of St John Ambulance's training centres across the region.

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Raising the bar on outdoor wood quality

The Wood Protection Association has a three part strategy to build confidence in treated wood performance, says director **Steve Young**

If there is one question that characterises the UK market for fencing, decking and ground contact wood it's service life performance. Just how long will treated wood last? No product will flourish if buyers lack confidence in its performance so the Wood Protection Association (WPA), the UK technical and advisory organisation on timber pre-treatment, has invested in a number of strategic initiatives to help industry raise the bar on treatment quality and performance.

The WPA strategy has three key interconnected elements:

- a quality assurance scheme for treated wood
- an approval scheme for preservatives that establishes the preservative retention required to protect timber in ground contact
- establishing a long term field trial of softwood deck and fence posts to assess durability performance.

Building market confidence in treated wood performance is at the top of the WPA's agenda.

Spruce, pine, Douglas fir and larch are the dominant softwoods for outdoor wood applications in the UK. Each species has its own natural qualities that affect how the durability performance conferred by preservative treatment is achieved. For example, the biological structure of spruce makes it more difficult to treat whereas pine is more readily penetrated. Service life performance of treated softwoods is determined by the characteristics of a species, its conditioning prior to treatment as well as the preservative solution strength and the process pressure cycles used to achieve the penetration and retention necessary for any given end use. This combination of factors is known in wood preservation speak as the 'safe relationship'. Getting the safe relationship right is essential to ensure treated wood is fit for purpose outdoors.

Making sure the safe relationship is correctly

established, monitored and formally verified by an expert third-party lies at the heart of the WPA quality scheme. Known as the WPA Benchmark, the scheme was developed in consultation with representatives from timber treaters, the WPA and BRE. It provides a credible way for treaters to gain buyer confidence in both the quality of the wood treating process and the ability of a specific component such as a deck or fence post to perform for the minimum 15 years required in British Standards.

The safe relationship is specific to an individual treatment plant and requires extensive analytical work to establish in collaboration with the preservative supplier. It is time consuming work but necessary to achieve the quality consistency required to satisfy customers.

Those treaters who have embraced the WPA Benchmark scheme are enthusiastic about its benefit to their business by improving their in-house expertise and control of treated wood quality and raising customer satisfaction levels. A number of treaters producing wood to the WPA Benchmark quality standard are now homing in on achieving WPA verification of the production of components to meet the BS8417 30 years desired service life specification. Several treaters are now on the verge of this distinction and the first certificate has been issued. Bond Timber was awarded WPA Benchmark certification for round pine posts meeting the 30 years specification on 8 March 2016.

The WPA's approval scheme establishes the minimum retention of a copper/organic biocide preservative necessary to deliver either the 15 or 30 desired service life in BS8417. This scheme is specifically for wood preservatives used for species in direct ground or freshwater contact. It is part and parcel of the WPA Benchmark strategy and brings the UK treatment industry closely in line with the quality schemes of other major treated wood using countries. Although preservative manufacturers participate voluntarily in this scheme, it is pleasing to see that all the major preservative suppliers have submitted product data for scrutiny by the WPA's independent panel of experts.

Field trial

Last year the biggest field trial of commercial softwood posts treated with a WPA approved preservative was established. The field trial is being managed for WPA by BRE and includes two sites with differing soil conditions, one in Scotland and one in England. The trial comprises 1400 75 x 75mm treated sawn spruce, pine, Douglas fir and larch posts, 600 of which have been mechanically incised, and 160 untreated controls, across both sites. The preservatives, loadings and treatment processes used are in accordance with WPA standards and independently audited by BRE. The trial will run for 15 years and provide the data essential to informing improvement in treatment quality and British Standards.

There will always be several sectors with different price points in any market and the decking, landscaping and fencing market is no different. The price of a component will almost always have a direct relationship to its quality. And often the buyer/user has no means of knowing if the product they are about to buy can be expected to meet their service life expectations.

The WPA Benchmark scheme, preservative approval scheme and field trial is providing UK timber treaters with a credible and commercially relevant platform on which to raise treatment quality and customer satisfaction ratings. If the momentum started by the early adoption and support for these initiatives can be maintained then the long-term prospects for growth in demand for treated wood for ground contact applications are good. There is no room for complacency though; there is a real and present threat to the use of treated wood for ground contact applications from man-made materials which makes the need for an effective and consistent industry wide response to performance all the more vital.

The WPA remains totally committed to helping wood treaters meet this objective.

www.wood-protection.org

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Trees, water storage and flooding in upland agricultural landscapes: why do we need to know more?

by Hilary Ford, Andy Smith, Tim Pagella and John Healey, Bangor University

Trees and flooding: it's obvious isn't it?

The potential use of trees to mitigate floods has been recognised for over 100 years¹, but has come to the fore in recent months following the extreme rainfall and associated flooding across the north of England and parts of Wales, during December 2015. It is increasingly acknowledged that hard-engineered flood barriers have largely reached their capacity to cope with the volume of water reaching the lowlands, so attention is switching to more natural methods of flood mitigation across the whole river catchment. The assertion that trees should be planted in uplands, riparian zones or on other marginal agricultural land in order to enhance water retention and reduce flooding downstream has recently been given serious consideration. But how good is the evidence that this will actually be effective? It would be a mistake for forestry to claim benefits that will not actually be delivered. Firstly, it is important to note that different forms of forestry vary greatly in their hydrological effects. Traditionally, planting conifer forests often involved extensive ground preparation. Whilst they provide an evergreen canopy cover for 12 months of the year (except for larch), open conditions are created at the end of the cycle through large-scale clear felling. In this article, we will focus on the other end of the spectrum: integration of small-scale tree planting, such as hedgerows and shelterbelts (Figure 1), into the existing agricultural landscape. We review the scientific evidence of their impacts on water storage and flood prevention.

Some groups advocating tree planting to reduce flood risk have often supported their arguments by reference to experimental work that links deciduous trees planted in pasture land to enhanced water movement through the topsoil in summer. These studies, carried out in the Pontbren catchment of mid-Wales do show that soil water infiltration rates were up to 67 times greater in fenced-off land under trees than in adjacent pasture, and that surface run-off was reduced following tree planting^{2,3,4}. However, those quoting this work have often extrapolated too far from its results by using it as evidence that trees of any species have the capacity to minimise water run-off and increase water storage in all seasons, thereby preventing winter flooding. Instead we recommend giving far more consideration to the impact of soil properties, land drainage, landscape topography, differences between tree species (e.g. in

rooting depth and morphology) and the need to distinguish the effects of trees from the exclusion of livestock by fencing. In comparison, recently published work^{5,6}, showing much smaller changes in infiltration rates between land under trees and adjacent pasture has been largely ignored. This work, conducted on hill slopes in the Scottish borders, showed that infiltration rates[#] were 5-8 times greater in mature broad-leaved or mixed woodlands than in adjacent intensely-grazed pasture. Subsequent work in the Cairngorms showed that soil infiltration rates were greater in mature Scots pine plantations (48 and 300 years old) than in either a younger plantation (6 years old) or neighbouring grazed pasture⁶. However, in another study they found no significant difference in soil infiltration rates between a Scots pine plantation and adjacent pasture⁵.

How do trees modify water use and storage?

Trees modify water use by several mechanisms, including interception of rainfall, increased water infiltration into the soil matrix via channels created by roots, and evaporation of water via the root-stem-leaf pathway (Figure 2). The trees' litter can also make an important contribution to soil organic matter and structure, especially if it increases the abundance of burrowing

Continued on page 28



Fig 1. Examples of small-scale tree features, a hedgerow and shelterbelt at Pontbren, embedded in the agricultural landscape.

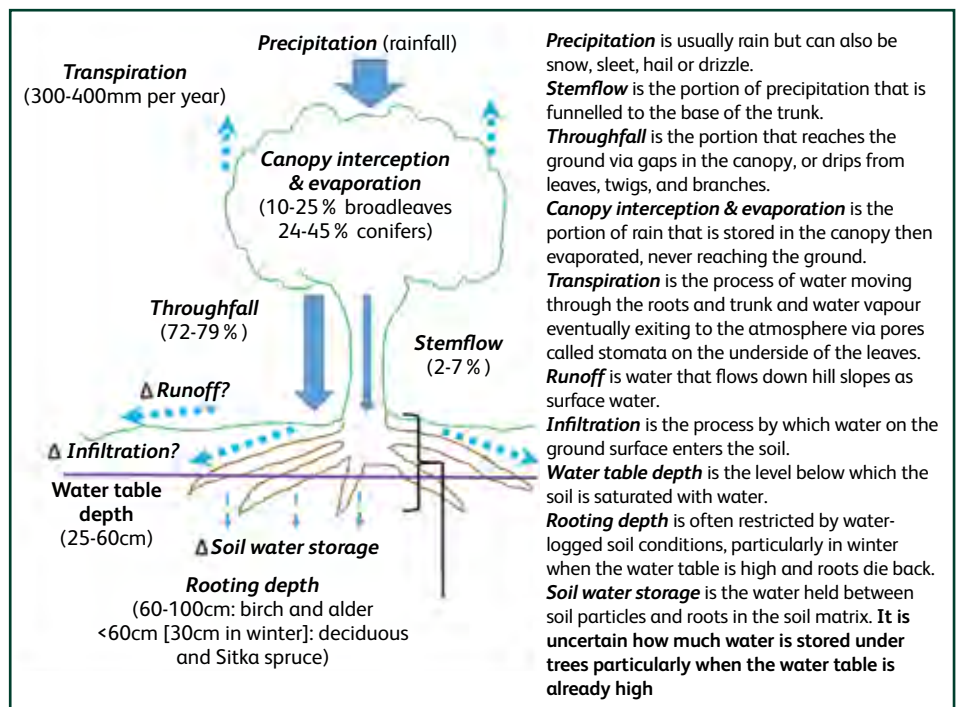


Fig 2. Effects of trees on the water cycle with implications for soil water storage. Quantification of canopy interception and evaporation, throughfall and stemflow^{7,8,9} transpiration rates¹⁰, water table depth^{11,12} and rooting depth^{13,14}.

FLOOD MITIGATION

Continued from page 27

earthworms that act to improve soil structure by altering soil particle aggregation and pore size. These mechanisms have been cited in support of the case for trees enhancing water storage and reducing flood risk. There will always be limits to the capacity of land to store water. Using the analogy of a sponge, prolonged rainfall will eventually completely saturate soil so that the rate of water flowing out equals the rate of water flowing in. Therefore, while tree planting can reduce the rate of water flow from the land into streams during short periods of rainfall, it does not necessarily mean that it will continue to do so during the long-duration rain events that can lead to the most serious floods.

How do soil properties and land use affect upland hydrology?

UK uplands have a high proportion of organic, podzol and gley soils. Land use can result in an O horizon of organic material at different states of decomposition which has a high water-holding capacity, an A horizon (topsoil), often compacted by sheep grazing (top 5 cm), or a plough pan at ~30 cm as a result of agricultural improvement, on top of a B horizon of variable depth, sitting on relatively impermeable bedrock. In addition, many upland areas contain field drains, designed to move water downstream as quickly as possible, reducing water holding capacity. These factors combine to increase the rate of water flow into streams under high rainfall leading to flash flood incidents.

It is possible that planting trees in the uplands where soil depth is sufficient could improve soil structure, water infiltration into deep soil, and water storage, but the gains achieved are likely to depend on interactions between a site's soil type and the rooting properties of the planted species. For example, tree roots have been shown to alter soil conditions in clay soils but may make little difference in sandier ones. In the un-enclosed uplands, data on soil depth is scarce, but in this heterogeneous landscape there will be areas of shallow soil adjacent to exposed rocky outcrops. Here it is not known how soil properties, such as depth, texture, bulk density* and porosity or slope, would interact with deciduous or coniferous afforestation to alter infiltration rates and water storage capacity. In order to see the benefits of increased infiltration rates under trees then the size of the riparian area, or the distance trees are planted away from the river's edge, are also likely to be key factors.

What about hydrological models?

Hydrological models are traditionally designed for flooding solutions downstream, therefore the parameters they include to characterise the upland part of the catchment are often broad, e.g. woodland is 'rougher' than grassland so will slow water more. However, Forest Research and the James Hutton Institute have been developing models that work at smaller scales and can incorporate natural flood management. Working at this scale would allow us to work out how trees of different types (position, age, species) influence water storage and flooding peaks.

Initial research seems to suggest that natural flood management, including tree planting, might decrease flash flood peaks at the local scale, but it is unknown how they relate to flooding at larger scales.

What is the evidence from Pontbren and why can't we extrapolate from it?

Evidence from the upper Pontbren catchment in mid-Wales showed that soil surface runoff was reduced by 78% in tree-planted plots after two years, compared with sheep-grazed pasture, by these kinds of mechanisms⁴. However, simply excluding livestock by fencing, without tree planting, caused a 48% reduction. In addition, near-surface bulk density was significantly reduced and soil infiltration rates were 60-67 times greater in fenced plots planted with trees compared with grazed pasture^{2,4}. Further work from a Pontbren hillslope reported significantly reduced runoff downslope under a 10-year-old shelterbelt compared with adjacent sheep-grazed pasture³.

The work at Pontbren did not test the effect of tree species or soil type, which will be key factors in determining root morphology and depth, in turn altering infiltration rates, run-off and potential water storage in the B soil horizon. In the recent study⁴ often quoted by those advocating afforestation of the uplands with production forests, plots were planted with a high diversity mix of native deciduous tree species that have a variety of contrasting rooting morphologies, whereas the shelterbelt study site used in the 2009 study³ comprised a mix of five deciduous and two coniferous species. Despite this initial evidence the extent to which tree roots are able to access a potentially un-saturated B horizon is still unknown.

What is the way forward?

The Multi-Land project, funded by Welsh Government with researchers from Bangor University, Centre for Ecology and Hydrology (CEH) and Aberystwyth University, and involving the Woodland Trust, Coed Cymru, National Trust, Natural Resources Wales, Snowdonia National Park Authority and RSPB, aims to build on this preliminary evidence base and examine the link between upland tree features, water storage and flooding in more detail. We will consider: i) the impact of small-scale tree features in farmland on water movement; ii) whether this evidence can be linked to water storage and flooding and iii) best practice for the future.

Footnotes

infiltration rates were measured by field-saturated hydraulic conductivity in both Archer studies^{5,6}. Hydraulic conductivity is a property of soils that describes the ease with which a fluid (usually water) can move through pore spaces or fractures.

* bulk density is defined as the dry weight of soil per unit volume of soil e.g. 1.5 g / cm³.

For more information on the Multi-Land project please see www.nrn-icee.ac.uk/multi-land/ or contact Dr. Hilary Ford, hilary.ford@bangor.ac.uk

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ENGLAND

Caroline Harrison, Confor national manager for England
01837 82222/07500 927482
caroline.harrison@confor.org.uk



Dates for your diary

South West region member's day and AGM – 24 May 2016 at Hooke Park, Dorset
East of England grey squirrel control training day – 12 May 2016 at Sandringham Estate, Norfolk

New timetable for Countryside Stewardship

The scheme now embraces the various Woodland Management Grants. See www.gov.uk/government/uploads/system/uploads/attachment_data/file/499459/cs-application-timetable-2016.pdf

Opening soon in the National Forest

The National Forest's Woodland Management Grant re-opens for applications on 1 April 2016. See www.nationalforest.org/woodlands/woodlandmanagement/grant.php

Woodland improvement open for applications

The Woodland Improvement element of Countryside Stewardship opens today. Woodland covered by an approved Woodland Management Plan could be eligible to receive grants of up to £100/ha as part of a five-year agreement. Deadline for applications is 31 May 2016. More information at www.gov.uk/countryside-stewardship-grants/woodland-improvement-wd2

Thermally modified British hardwoods

The first ever range of thermally modified British hardwoods suitable for hardwearing external applications such as cladding, decking and joinery, was launched at Ecobuild (8–10 March). The super-heated poplar, sycamore and ash varieties are sourced exclusively from English and Welsh woodlands, providing a more sustainable alternative to importing equivalent products from abroad.

WALES

Martin Bishop, Confor national manager for Wales
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RDP and Glastir update of schemes

Glastir Woodland Restoration EOI window opens 30 March 2016, closes 29 April 2016 for works to be completed by 31 March 2017. If you have larch, clean or infected this is applicable even if you have already done the felling.

Glastir Woodland Creation EOI window opens 30 March 2016, closes 29 April 2016 for Capital Works to be completed by 31 March 2017.

The Timber Business Investment Scheme provides funding for capital investments that add value to. Eligible activities could include timber harvesting or timber processing equipment, land purchase, buildings, groundworks and infrastructure but not roads. EOI window opened 29 February 2016, closes 23 May 2016.

The Sustainable Management Scheme will provide financial support for a range of activities that will improve the management of our natural resources and in doing so contribute to the well-being of our rural communities. The scheme offers grants to collaborative groups looking to; improve our natural resources and the benefits they provide, take action to reduce greenhouse gas emissions and improve business and community resilience to the impacts of climate change.

This has many references to forestry and it could be an opportunity for our sector. I wondered if it would be possible for forestry managers to be the cooperative agents and apply to fund work to create a woodland management plan that worked across multiple owners, encompassing both existing woodlands and new woodland creation. Any woodland creation works under the plan being eligible for funding under Glastir woodland creation, especially if the objectives includes flood and water management and timber production as both of these are strategically important across wider areas. Speak to your woodland manager, it is worth a go. EOI windows opened on 29

February 2016 and closes on 07 May 2016.

Full details for all RDP schemes is available at <http://gov.wales/topics/environmentcountryside/farmingandcountryside/cap/ruraldevelopment/wales-rural-development-programme-2014-2020/?lang=en>

Vice chair Confor Wales

Your Confor Wales committee works hard on behalf of members in Wales, it is astonishing how many meetings they attend and consultations they respond to. They provide immense support to me in my role and is one of the main reasons why Confor in Wales is seen as the go to organisation for forestry. To try and spread the workload for our chair, Mike Harvey (who like all members of the committee has a day job to do), Andrew Bronwin has kindly taken on the role of vice chair of Confor Wales. We thank Andrew very much for his work and support and welcome him as the new vice chair.

Felling licences and permissions

Work is underway by members of the Confor Wales committee, NRW officers and myself to try and update, reduce and even simplify the felling permissions and licence process to make the whole process less onerous and quicker.

2016 Welsh Assembly elections

Confor has recently been campaigning to influence all the political parties in Wales to get forestry onto their election manifestos. Our submission to them – *Delivering Green Growth – a Forestry Manifesto for Wales* – is available at <http://confor.org.uk/InYourRegion/Default.aspx?pid=15>

Welsh election information handout

We will shortly be putting together a one page handout which will be sent to all Confor members in Wales. Please give it to every prospective candidate or election worker that knocks on your door and use this opportunity to reinforce the benefits of forestry to politicians.

Royal Welsh Show

July 18-21 2016. Forestry day is Tuesday 19. There will be a programme of speakers and the usual forest buffet, not to be missed. Entry forms for both the RWS Woodlands competition and the RWS tree felling competition are available anyone can enter so please get involved.

RWS Woodland Competition 2016

Now open for entries. Details will be sent by email, are on the Confor website or from Mrs Bethan Davies, RWAS Ltd, 01982 554 411, bethan@rwas.co.uk Closing date for entries 8 April 2016.

Tree felling competition

The Royal Welsh Show tree felling competition will be held on 14-15 May 2016 at Llandrindod Wells, Powys. By kind permission of NRW and MWMAC Ltd. Details will be sent by email, are on the Confor website or from Mrs Bethan Davies, RWAS Ltd, 01982 554 411, bethan@

Continued on p32



Confor
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KEY EVENTS in 2016

ICF National Conference 2016

The Timber Supply Chain – Dynamics and Opportunities
27 April 2016, Newcastle

APF 2016

15 September 2016, Ragley Estate
www.apfexhibition.co.uk

Grown in Britain week 2016

10-16 October 2016, various locations
www.growninbritain.org

More info on www.confor.org (news and events)

NEW MEMBERS

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Chip Chip Ltd, London
Dowdeswell Forestry, Gloucestershire
Llais y Goedwig, Powys
O Frost Arboriculture, Somerset
Robert Douglas, London
Rosina Hardy, Devon
Peter Honan, Cumbria
Conor McGee-Simpson
Michael Wilson, County Durham
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rwas.co.uk Closing date for entries: 29 April 2016. Come and have a go.

Meeting with NRW chair

Confor has a meeting planned with the new chair of Natural Resources Wales (NRW) Diane McCrea in March. We welcome Diane's appointment and look forward to a productive working relationship with her. High on our agenda will be strengthening the links between public and private forestry sectors, implementing the recommendations of the Environment & Sustainability committee enquiry into NRW and publishing data on NRW activities.

- The NRW board meets in public six times a year and the business sessions of these board meetings are open to the public.

The next meeting will be held in Coed Y Brenin Visitor Centre, Dolgellau on 17 March and we would like to offer the opportunity for you to attend the meeting and to meet the Board after to discuss any items on the agenda.

To attend any of the business sessions please contact, NRWBoardSecretariat@cyfoethnaturiolcymru.gov.uk

- NRW Annual Customer Liaison Day takes place on Thursday 17 March 2016. The venue will be the International Pavilion at the Royal Welsh Showground in Builth Wells. Contact Glenys Jones, 0300 065 4670
- Natural Resources Wales Timber Marketing Strategy has been published, full details at http://confor.org.uk/Upload/Documents/24_NRWmarketingplanupdatejan2016.pdf

Terry O'Keefe to retire

Terry O'Keefe, the head of Welsh Government Forestry Policy is retiring on 29 April after over 40 years of dedicated forestry service. He started with the Forestry Commission in 1972 at Margam Forest and subsequently went to Africa to work with the VSO. On his return, he joined the Forestry Commission as a trainee forester in Tywi forest and went on to work in various locations across Wales – Brechfa, Corris, Dolgellau and Coed y Mynydd. He spent two years at Forest Research in Alice Holt working as an entomology forester during this period. His varied roles eventually led him to become Forest District Manager at Dolgellau in 1999 where he worked until 2003 when he went to work in the Welsh Government office in Cardiff as the Forestry Commission's secretariat and communications lead. This role provided a vital link for the recognition of the multi-dimensional benefits of forestry and Terry worked tirelessly to ensure that forestry was included in many areas of the policy development work that is undertaken in the Welsh Government which he continued even more directly when he became the Head of Forestry Policy in 2013. Terry has an established reputation as being a very approachable, dedicated and enthusiastic official and has been a mentor and friend to those who work with him. Although latterly office-based, Terry has never lost his love of the great outdoors and still speaks fondly of his days out in the field which can be set off just by the distant sound of a chainsaw! A lot has happened during his career and Terry has

been instrumental in ensuring that forestry has retained a high profile in many of the changes. He is widely respected throughout the sector and we wish him a long and happy retirement.

Directory of Welsh Businesses

The directory publishers are inviting businesses in Wales to advertise in it to promote their goods, services and credentials to other businesses and to consumers. I have added Confor's details to it. You can also use the directory to do a search for Welsh businesses by name or goods.

<https://businesswales.gov.wales/business-directory>

Forest Product Fair

The Forest Product Fair (27 May 2016 near Bangor) will bring together small to medium enterprises from across Wales to showcase the diversity of businesses whose products and services stem from materials harvested from Wales' forests. Contact adam.thorogood@llaisgoedwig.org.uk

Farming Connect Scheme

The Farming Connect Scheme in Wales is an RDP funded programme of support for farming and forestry businesses which is aiming to push transformation change in the land based sector.

Skills and Training Farmers and foresters registered with the new programme can apply for up to 80% funding for short, accredited training courses.

Venture, is a new joint opportunities platform that will identify and match established landowners who wish to reduce their involvement in the day to day running of their business, or to explore new joint venture opportunities, with new entrants seeking a route into the industry.

European Innovation Partnership Its role is to pool expertise and resources and trial new approaches which will be of value to the agricultural or forestry industry.

Mentoring Farming Connect is searching for farmers and foresters with experience of running a farm or forestry business in Wales and who have the skills and expertise to act as one-to-one mentors.

Agri Lab Forum A new initiative to bring together forward-thinking individuals from the farming and forestry sectors in a forum whose remit will be to identify, recognise and review new technologies and innovative practices that could benefit Welsh farmers and foresters.

The Agri Academy is accepting applications for the Rural Leadership programme to inspire a new generation of rural leaders.

- The Business and Innovation programme to provide information on agricultural issues at a local, regional and national level, support personal development and offer opportunities to meet industry experts and business leaders.
- The Junior Programme to provide young participants with work experience with key players in the industry and provide training for effective communications.

Full details for any of the above programmes at www.gov.wales/farmingconnect

SCOTLAND

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Meeting with forestry minister

On 23 February we met Dr Aileen McLeod MSP and despite a truncated meeting due to her being held up by other business and having to attend unscheduled parliamentary divisions, we concentrated on the need for more new woodland creation – of productive conifer in particular. We welcomed her assurance that Scottish Government remains committed to their climate change targets and expectation that new woodland creation will play a significant part in that.

We also discussed the urgent need to support forest nurseries that have been left with significant stock levels of potentially unusable plants, due to the lack of contracts being issued – caused by the failure of RPID's IT system. We have asked government to consider some form of financial assistance for those businesses, similar to the loan scheme on offer to farmers who have not received their basic payments.

We briefed her on the industry's thinking on the importance of retaining a meaningful Forest Research facility, as Forestry Commission GB is dismantled, and how we believe that continuing some sort of cross-border forum for the respective forestry ministers would be necessary.

Later that evening the Minister addressed those attending the annual Confor dinner and awards event, and it was encouraging that she mentioned virtually everything we had covered in the earlier meeting.

Annual award for dedicated service to the forest industry

At Confor's annual dinner at The New Club, Edinburgh, Confor chairman Athole McKillop presented the 2016 award to Colin Mann, who is stepping down this year after a decade as managing director of Scottish Woodlands Ltd.

Colin joined Scottish Woodlands as a trainee assistant forest manager straight from university in 1977. He worked in the North of Scotland and the South-West (based in Castle Douglas), latterly as regional investment manager. He moved to head up the company's investment division in Edinburgh in 1992.

After a successful management buy-out of the business in 2005, Colin became managing director of Scottish Woodlands Ltd. He steps down on 31 March this year, but will remain as part-time deputy chairman, with a range of responsibilities, including heading up the firm's 50th anniversary celebrations in 2017.

Colin has taken a significant leadership role in the sector as a board member (and past chair) of Confor and chair of the Forest Industry Safety Accord. He also led a period of significant growth at SWL.

Confor chief executive Stuart Goodall said: "Colin has been an absolute stalwart of the

Continued on p35



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COUNTRY NEWS

forestry sector in Scotland for a very long time. He is an excellent forester, a very talented businessman and also one of the nicest men you are ever likely to meet."

New woodland creation under the SRDP Forestry Grant Scheme (FGS)

As predicted 2015 was a disappointing year for new planting, with only 3,733ha approved for that claim year, of which 32% were for the two conifer options. So the trend continued of falling even further behind with our planting targets. Confor has pointed out to Scottish Government that those targets now need to be raised to about 13,000ha per annum if we are to get anywhere near creating 100,000ha of new woodland in the decade to 2022. And at least 9,000 need to be of productive conifer.

Despite the IT system being unable to accommodate applications to FGS until recently, there are now signs of agents working up schemes, and as of last month conservators were aware of 6,350ha of woodland proposals at a pre-submitted stage, in addition to the 1785ha already approved for 2016. Schemes for conifers are nearer 60% of the total.

Sheep and Trees

The National Sheep Association launched their Sheep & Trees initiative at Lymiecleugh in the Scottish Borders on 9 March. This is a welcome move to alert farmers to the opportunities that some of their marginal land offers for woodland creation, and we will be following this through in the coming months. I presented a paper prepared by Andrew Heald at the recent SEPA / SRUC conference which highlighted the raw facts of creating new productive woodland to diversify upland farm businesses, and the immediate income and long term fiscal benefits that should accrue. It was well received by a predominantly farming audience.

Forest roads – prior notification

Despite my exhortations to many of you, there was a disappointingly small number of responses from the industry to the independent review (carried out by Ironside Farrar) into the prior notification / prior approval procedure introduced last year. However it is hoped that we have presented enough evidence that the



new process is wholly unnecessary for forest roads, and that common sense will prevail and forestry will be removed from this new legal obligation, which does little other than duplicate existing forestry consultation processes, and deliver nothing additional – other than costing both applicants and administrators more time and therefore cost.

Forest Plans guidance

A sub-group of the Customer Reps Group has been working on a refresh of the guidance on preparation of forest plans, and FCS has now signed off the new document, which will be explained in more detail in workshops to be run later this year. At the same time FCS has carried out a review of consultation and scoping procedures, with a view to making these smarter and even more robust than they are already.

2016 SAF window now open

Members are reminded that the annual SAF (Single Application Form) window is open, but closes on 16 May. RPID has issued the following timetable for 2016:

15 March – the day that the online SAF 2016 submission window opened

16 May – deadline to submit SAF 2016 and

Syd House has retired!

It was a happy / sad day at Dunkeld House Hotel on 19 February when a large crowd of friends and colleagues from all parts of the industry gathered to wish Syd a happy retirement. Syd joined FC in 1978 and was conservator for Perth and Argyll for 23 years before handing over to Cameron Maxwell.

Syd led the way with an amusing and informative afternoon tour of the magnificent trees in the grounds of Dunkeld House, demonstrating his encyclopaedic knowledge of history and silviculture. After the tour, appreciations were given by his best man Fenning Welstead and his long-term work colleague Charlie Taylor. Syd's response was typical of the man – forthright, honest and hilarious at times – and no one there will forget his parting song – wellie boots and sitka spruce. Lang may yer lum reek Syd!

supporting documentation (if applicable) by this date to avoid late submission penalties. This is also the final deadline for receipt of Land Managers Options (LMO) continuing commitments applications

31 May – deadline to submit amendments/additions to SAF 2016 received on or before 16 May without reducing payments

10 June – final deadline to submit SAF 2016 and supporting documentation (if applicable).

£2.8m for timber transport funding

We were delighted with the announcement at the Timber Transport Forum's conference at Battleby on 10 March of new funding of £2.85m for the Scottish Strategic Timber Transport Scheme. This scheme has been a long-term tenet of Confor lobbying, and the scheme has delivered enormous benefits to both the industry and to communities. Potentially landlocked timber has been secured for harvest, weak rural roads infrastructure has been strengthened, or avoided by creating in-forest haul routes, and local communities have been by-passed. The scheme also includes support for Timberlink – the service to subsidise timber transport by sea from Argyll to processing in Ayrshire, removing about 1m lorry miles a year around the coast.

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Controlling the great spruce bark beetle

Utilising its specific predator has proved effective in the control of *Dendroctonus micans*

The great spruce bark beetle (*Dendroctonus micans*) is found in forests throughout much of Eurasia, from eastern Siberia to the west of Europe, in fact practically everywhere that spruce trees are grown. The beetle breeds under the bark of trees causing damage to the cambium, which debilitates and, eventually, causes the death of the tree. It was first discovered in Britain in 1982, although attacks dating back to 1973 have since been identified.

The beetle attacks and breeds in all species of spruce grown in Britain, although forest managers are concerned mainly with Sitka spruce (*Picea sitchensis*) and Norway spruce (*P. abies*). The probability of a successful attack and the consequent tree mortality varies between spruce species. Although the ultimate destructive capability of the beetle is greater on Sitka spruce, adult beetles prefer to attack Norway spruce, even when planted in mixtures. The rate and extent of damage to individual trees and forests is variable. Neither the beetle nor its larvae burrow into the wood itself and, consequently, provided the wood is salvaged before the tree is completely dead, the timber is not spoiled in any way. Trees are killed by being completely girdled, at one or more points along the stem, although this may take several years of sustained attack. However, large breeding populations may be being built up long before individual trees are killed, creating a risk of spread to adjacent and nearby trees.

The beetle is among the largest of the bark beetles found in the UK. Adult beetles are 6-8mm long and 2.5-3mm wide. They are black when mature with a covering of orange hairs. The large size of the beetle enables the females to withstand the resin flow produced when they bore into the bark of trees. A single female beetle can colonise a tree, without the necessity of the 'mass attack' typical of most bark beetles. It has a long life cycle, ranging from 12-18 months under UK conditions. This results in extensive overlap of generations so that it is possible to find any stage at any time of year. However, there are periods, particularly in the winter, where most may be at the same stage. Eggs are laid within a small egg chamber in the cambium of the tree. Each female can produce up to 300 eggs, laid in groups of 50-80, in interconnecting chambers. Eggs are normally laid on one side of the chamber.

There are five larval stages which each become progressively larger. All larval stages feed under the bark in a similar manner: larvae feed side-by-side packing powdery wood debris (or 'frass') and diseased or dead larvae behind them into islands away from the main feeding site. The mixture of resin and frass forms a distinctive quilted pattern. Pupae are the immobile resting stage of beetle development before larvae can moult to the adult stage. Pupae are found in pupal cells among the larval frass. They are often found in close proximity and give rise, upon emergence, to aggregations of adults under the bark. These stages may be prolonged over sev-



Dendroctonus micans (top) and, above, its specific predator *Rhizophagus grandis* which will reduce populations by 80-90%.

eral weeks or months depending on temperature. The newly emerged adults are light brown in colour. As they mature the colour darkens to brown and black. Adult beetles move within and between trees mainly by crawling (at temperatures of 12°C or greater), but they occasionally fly (at temperatures of 22.5°C or greater).

The entry of female beetles into the bark of trees gives rise to characteristic 'resin tubes' on the trunk. Resin tubes and granular resin at the base of the tree are reliable signs of stem or root attack. Resin tubes vary in colour from white and cream, to shades of purple and brown. They may be accompanied by copious resin bleeds. Loose bark with exposed beetle galleries usually indicates older infestations that have been attacked by woodpeckers.

In 1984, the specific predator of the great spruce bark beetle *Rhizophagus grandis*, found naturally within the beetle's range, was introduced and released into infested sites under licence from the UK statutory conservation agencies. *R. grandis* has proved very efficient at controlling beetle populations, and has been more effective than the system of surveys, sanitation

and controls on the movement of wood and bark residues that were initially put in place to reduce populations of the beetle. Breeding *R. grandis* for release was initially a difficult, time consuming and expensive process; however, considerable progress has been made in improving the rearing system. In addition, because *R. grandis* has an extremely well-developed ability to find its prey, together with a rapid reproductive rate, only small numbers of individuals are needed to control each new outbreak – typically around 100 adults per site. While *R. grandis* will never entirely eliminate all great spruce bark beetle populations, they will reduce them by between 80% and 90%. Research into the populations of the bark beetle in the original infested forests in Wales and the Marches has provided clear evidence that populations of the pest were reduced to virtually undetectable levels within five to seven years of release of *R. grandis*. Tree mortality is now less than 1% and can be as low as 0.25%. Nevertheless, there are still small populations of the bark beetle present, which ensures the continuing survival of this efficient predator.

This article is taken from: "Minimising the impact of the great spruce bark beetle", Forestry Commission Practice Note 17, available from www.forestry.gov.uk/greatsprucebeetle

Dendroctonus campaign update

The *Rhizophagus grandis* breeding campaign has reached its first year target of £5,000. However there is still a further £20,000 to raise to help establish landscape scale inoculation over a five-year period. Confor has agreed a Service Level Agreement with Forest Research to maintain a unit capable of producing sufficient numbers of the predator beetle to treat infected woodlands as these become identified. Confor thanks all members who have contributed to this important campaign to date. For members who have not yet pledged support and wish to do so please contact Ann Stewart at ann.stewart@confor.org.uk.

Sirococcus on cedar and Western Hemlock

Forest Research scientists are investigating reports of suspected cases of *Sirococcus* blight on cedar and Western hemlock trees. The blight can be caused by the fungus *Sirococcus tsugae*, which until recently had only been reported in north-western parts of North America. However, several cases have been confirmed at a number of locations in Britain since 2014, when two cases were also reported on Atlas cedar in Germany.

Forestry Commission are keen to understand the distribution, dynamics and potential

impacts of this disease so that they can prepare appropriate advice for owners. Therefore, please keep an eye on cedar and Western hemlock trees for the symptoms, and report suspected cases via Tree Alert. The symptoms on cedar include shoot and needle dieback (the dying needles turning a characteristic pink in the early stages before becoming brown), and lesions on the branches which can exude resinous fluid. On hemlock only shoot and needle dieback has been observed. More information at

www.forestry.gov.uk/fr/sirococcus



Conference delegates hear the UK perspective from Chief Plant Health Officer Nicola Spence

Global conference discusses pest and disease control

Peter Crow reports from a global conference on tree health

Kew Gardens was the setting for a conference (23-24 February 2016) on tree health early warning systems. In other words, how can we as a global community spot foreign tree pests and diseases of concern before they take hold in our respective countries?

The conference was hosted by the UK-based Observatree project and the International Plant Sentinel Network (ISPN), which monitors trees and plants around the world for their response to pests and diseases. It attracted some key professionals in tree health from the UK and across the world – 150 delegates from 20 countries including the USA, Russia and New Zealand.

Nearly 30 presentations covered the role of citizen science in early threat detection and identification, scientific presentations on individual pests and diseases and methods of surveillance, implications for policy-makers and thoughts from funders, and a review of ongoing projects.

The presentations covered potential threats

such as the Emerald Ash Borer beetle, which has wreaked havoc on American ash species in 25 states with economic costs of dead trees to date of \$850m.

It also highlighted a number of positive developments such as plant health featuring on the GCSE curriculum for the first time, a company attempting to use ‘hyperspectral sensing’ to identify different species of trees from the air and even pick out sick ash trees and the collaboration of the ISPN to use botanic gardens and arboreta across the world to identify potential pests and diseases of future concern before they cross borders.

There were some good news stories too; the eradication of the Great White butterfly in New Zealand that was threatening their rare wild cabbage populations, plus the story of the rapid action against Oriental Chestnut Gall Wasp in the UK, which I’m delighted to say Observatree volunteers played a pivotal role in.

It’s fair to say all attendees left with a strong sense that everyone has a responsibility to help, whether through better personal biosecurity, reporting pests and disease of concern or taking part in different citizen science projects on offer. Find out more at www.observatree.org.uk
Peter Crow is Observatree’s project manager

EU adopts emergency measures against *Xylella fastidiosa*

Emergency European Union legislation has been introduced to help protect Member States against the introduction of the *Xylella fastidiosa* bacterium (Phony peach disease).

This pathogen has devastated olive groves in southern Italy, and caused widespread outbreaks on milkwort and Spanish broom in Corsica. The sub-species in Corsica, *X. fastidiosa* ssp. multiplex, affects broadleaved trees in North America, including oak, plane, elm and maple trees, so it is of concern to the forestry and woodland sector.

The legislation includes requirements to protect against introductions from non-EU coun-

tries, and from those parts of the EU where it has been detected.

Movements of ‘specified plants’ (which include the confirmed hosts of *X. fastidiosa* in the EU and further afield) are only possible from areas in the EU where the pathogen is present if stringent conditions are met. In practice, no nurseries in these areas have been authorised to move specified plants.

The plant health authorities in the UK and elsewhere are also carrying out surveillance for the pathogen, and Forestry Commission have published information about it at www.forestry.gov.uk/xylella

IN BRIEF

Keep an eye on the Forestry Commission website for developments on the top tree pests and diseases

www.forestry.gov.uk/pestsanddiseases

Updated *Chalara* leaflets

Updated *Chalara* leaflets are available now from the Forestry Commission website

[www.forestry.gov.uk/pdf/Managing-Chalara-Chalara-Ash-Dieback-in-England_Feb2016.pdf/\\$FILE/Managing-Chalara-Ash-Dieback-in-England_Feb2016.pdf](http://www.forestry.gov.uk/pdf/Managing-Chalara-Chalara-Ash-Dieback-in-England_Feb2016.pdf/$FILE/Managing-Chalara-Ash-Dieback-in-England_Feb2016.pdf)

Archive publications now digitised and available online

A valuable selection of past publications can now be accessed online for the first time. Recent additions include *Forest Insects*, published in 1987; take a look and test yourself – do you know your larvae?

www.forestry.gov.uk/website/publications.nsf/pubsbycategorynew?Openview&count=999&restricttocategory=Handbook

New pest alerts

The Forestry Commission has released a new pest alert for *Pine Processionary Moth*. Download a copy

<http://us6.campaign-archive2.com/?u=afd35b6fdeb59743bbe9a9404&id=ef90914366&e=fb37967b82>

The UK Plant Health Service has recently published a new risk assessment for *Candidatus Phytoplasma fragariae*, an organism which could potentially pose a risk to strawberry production in the UK and to the natural environment, in particular hazel in woodland, coppice and orchard settings.

Pest Risk Analysis

The UK Plant Health Service publishes risk assessments for organisms which could potentially pose a risk to the natural environment, forestry, woodland and ornamental sectors.

<https://secure.fera.defra.gov.uk/phiw/riskRegister/plant-health/pest-risk-analysis-consultations.cfm>

Contingency plan response

Confor has recently responded to the draft Contingency Plans for the Oriental Chestnut Gall Wasp (*Dryocosmus kuriphilus*) and the Siberian Coniferous Silk Moth (*Dendrolimus sibiricus*). Final Contingency Plans for specific pests and diseases can be found at

www.forestry.gov.uk/pestsanddiseases

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Complete Guide to Small Scale Spraying

I have only just encountered this very useful full colour A5 sized 60 page booklet from the British Crop Production Council (BCPC) which is certainly worthy of reference in the forestry sector, and well worth the investment of a tenner.

Although it was published back in 2009 replacing the earlier knapsack spraying guide, the information on best spraying practice is timeless and remains very relevant despite the many recent legislative changes introduced from Brussels.

In many ways it condenses the information available in the soon to be replaced Defra Pesticide Code of Practice - and in a very retrievable and understandable format.

Throughout the book, items of particular note are highlighted in green, while precautionary comments are highlighted in pink.

The booklet is presented in nine chapters:

1. Sprayer types (6 pages)

Includes lever and compression sprayers, mist-blowers, spinning disc applicators, pedestrian wheeled and ATV sprayers demonstrating how they work and hints on how to use them efficiently. However spot guns and weedwipers are noticeable by their absence.

2. Nozzles, lances and filtration (6 pages)

This is a useful section, illustrating the differences between deflector (anvil) nozzles - the ones most widely used in forestry, hollow & solid cone nozzles and flat fan including evenspray nozzles. The latter are particularly useful for spraying transplants stems for hylobius control. Charts are provided relating to the various spray qualities (very fine to coarse) and their uses, plus one outlining the most popular nozzle codes. Unfortunately only the AN series of deflector nozzles were included, with no mention of the similar Dft nozzles. It would have been useful to have added two columns providing information on spray quality at 1, 2 & 3 bars.

3. Preparing for spraying (4 pages)

While the practical advice in this section remains valid, the legislation which underscores it is no longer accurate in that UK legislation has now been largely replaced by EC rules. So the Food & Environment Protection Act (FEPA) and associated Control of Pesticide Regulations (COPR) have been replaced by the Plant Protection Product Regulations (PPPR). One of the more obvious repercussions of this has been the abolishing of grandfather spraying rights, the removal of the Statutory Box on the label, and in addition the replacement of the EC hazard symbols with the global Hazard system.

However, there is a very useful chart outlin-

ing PPE advice for situations not covered on the product label which is very much valid.

4. Calibration (5 pages)

The heavy reliance of the industry on the use of glyphosate which permits application as a standard dilution rate (normally 20ml/litre water) has meant that calibration skills in the industry are often severely tested when using a product such as Kerb or Laser which have a rate per ha recommendation only. Although the calibration system advocated in these pages will produce a highly accurate result, many will struggle to follow the procedure to a successful conclusion. It could be argued therefore that a simpler system more suited to the vagaries of the typical forest situation could be more appropriate for our industry.

5. Spraying practice (9 pages)

The first few pages provide a reminder of best practice in terms of suitable windspeed supplemented by a cautionary artists impression of seven hazards for the amenity operator to be aware of. Also included is a helpful checklist for procedures to be followed when mixing and filling then knapsack, and a section on the rules regulating reduced volume spraying - although currently no forestry product volume rates are likely to be affected by these rules.

For those who do not have access to a standard format for recording spraying operations, the chapter concludes with a simple but adequate chart which may be photocopied and retained as required by law.

6. After spraying & disposal (2 pages)

Guidance is provided over sprayer maintenance, plus details of daily and annual cleaning of the sprayer, together with procedures for disposing of unwanted concentrates and surplus diluted pesticides. Dealing with that half sprayer load of glyphosate when the rainfall forecast proves inaccurate, is not specifically addressed, although warnings against storing diluted product in the knapsack are correctly highlighted, leaving the only practical legal option to continue spraying despite the rain. This solution would not, of course be a problem if applying a soil residual herbicide such as Kerb.

7. Fault finding & equipment choice (1 page)

A helpful chart highlighting the likely causes of sprayer failure.

Blocked nozzles are a regular hazard if filling procedures fail to prevent small particles entering the tank, with blocked filters also noted. Blocked filters are often associated with the use of suspension concentrate, wettable powder

and soluble granule pesticide formulations, so it would have been helpful if guidance on filter cleaning during the working day had been provided as part of the previous sprayer maintenance section.

8. Emergency procedures (1 page)

This section notes that operators should be trained in emergency procedures and have immediate access to emergency action plans, which should include appropriate environmental and medical contact phone numbers - as well as knowledge of the location of the nearest medical centres if any required ambulance service is not likely to be a timely or practicable option.

The importance of having the product Safety Data Sheet (MSDS) is stressed on several occasions, as this document is likely to be the best source of information to answer questions posed by the practitioner on the other end of the telephone line.

9. References (1 page)

A number of other £10 BCPC publications are listed, including "Using Pesticides", "Field Scale Spraying", "Safety Equipment Handbook" and "Spreading Fertilisers and Applying Slug Pellets" which have also kindly been provided by BCPC for review. All of these are useful for those wanting more detailed information - but "Small Scale Spraying" does provide most of the basic information required by the forestry spray operator.

A number of HSE documents are also listed, together with the standard government guidance, the Defra (or Scottish Executive version of) 2006 "Code of Practice for Using Plant Protection Products". This has been fully revised and is about to become available online. It will be the subject of a future FTN review once published.

So, a useful glove compartment sized booklet which, although some of the regulatory information has now become dated, is nevertheless, an inexpensive aid memoire for the spray operator with all of the advisory guidance continuing to be relevant to current best practice. Available from www.bcpc.org/shop/Small-Scale-Spraying.html

Roundup ProBio

The popular forestry herbicide Roundup ProBio has been renamed as Roundup ProActive and will be found in distributors stores as soon as ProBio stocks are sold.

This is purely a name change - the forestry recommendations remain identical.

MEMBER SERVICES PESTICIDES HELPLINE



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: forestry@branchline.demon.co.uk



Woodland history

My sister gave us an interesting book for Christmas – *The Biggest Estate on Earth* by Bill Gammage. The subtitle reads, ‘How aborigines made Australia’. Neither title quite explains what you are in for because Gammage’s thesis is that pre-colonial Australia was not undisturbed and largely closed canopy forest and woodland, but parkland deliberately created and maintained by aboriginal people who used controlled fires to create a patchwork of grassland to attract ‘wild’ game. His evidence is compelling and diverse, not least that early visitors from Europe all report park-like countryside which today is closed woodland and in a number of places old trees emerge above younger cohorts a bit like long neglected coppice-with-standards in Britain. Both paintings from the period and written accounts reveal this surprising feature. It is a fascinating and well researched book, and it got me thinking about how we learn about the history of the woods we own or manage.

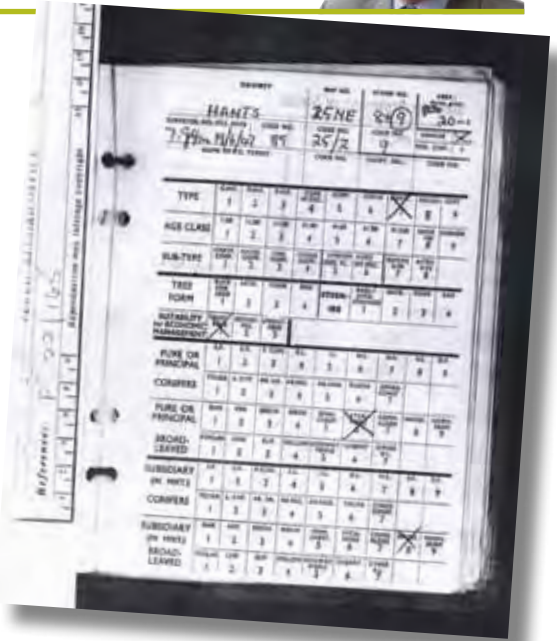
While there are many paintings of our countryside we are more likely to turn to old writings such as Evelyn’s famous *Sylva* written in the early 1660s, but apart from some engravings in later editions not a lot is site or location specific. We have, of course, the Domesday records from 600 years earlier, and we are blessed with a rich heritage of plans and maps going back several centuries. They really began to bring survey quality precision from the late 18th century or, more especially, in the Victorian times. For me nothing rivals the Ordnance Survey second edition 1:25,000 series published in the 1870s. The accuracy and detail are impressive and in

my case, reveal no sign of most of my wood, which we surmise was planted in the great agricultural depression of the 1880s. Our wood makes its cartographical debut in the 1911 OS 6” edition.

Two other Victorian initiatives help the woodland historian. Early on, in the 1830s and 1840s, tithe records and maps were produced as land owners switched their means of support for the church from in-kind to cash. If you are good at roods, poles, perches and other measure of land, then there is much of interest. In the late Victorian times there was great impetus to write county histories, often running to many, many volumes, which record histories estate by estate, as well as much else.

If one’s own photographic evidence is missing, occasionally old postcards can reveal a thing or two and, of course, aerial surveys became readily available from after the Second World War. And it was at this time that the most exhaustive survey of Britain’s forests and woodlands was carried. The 1947 Forestry Commission census surveyed every woodland over 2ha (5 acres) and its condition crudely recorded. The original records are all held in archive at the Kew Public Record Office. Via catalogues and then microfiche of counties surveyed you search for your entry and then give the unique reference number to the archivist who initiates the search. This can take around half-an-hour, but it is very satisfying to hold in one’s hand the actual census record that decades earlier the surveyor of your wood had held and filled in!

I haven’t mentioned much about the legal



title and deeds to a property simply because they are often disappointing sources of historical information. When we acquired our wood from the Forestry Commission in 1985 there was not even mention of Network Rail’s long-standing right of way through the property!

I have also not said anything about archaeology, medieval earthworks, examination of flora, contacting local historians, and numerous other ways of learning about a woodland’s past. Most importantly, the nature and character of the woodland itself reveals much about how it has been managed; the key is to look for the clues. As the late David Fourt would ever remind the Wessex Silviculture Group, “Investigate both the soil and what the trees are telling you”.

Stories that need to be heard

BOOK REVIEW

Will Anderson reviews *Voices of the Forest* by Mairi Stewart

The jacket text of this book rightly notes that while the environmental and landscape effects of forestry in Scotland have been comprehensively debated and recorded the impacts on Scottish culture and society have been very much overlooked.

The author recognises the help and assistance in producing the book, not least those who had the vision to support the 2007 Touchwood History project which spawned the excellent Forestry Memories website www.forestry-memories.org.uk and the four

regional publications capturing the lives of those who created and worked in the forests.

This book, however, takes this a stage further and looks at the policy and social history of Scotland as a whole from the early 20th century but reflects it through the stories and experiences of those who were directly involved in the hard graft of creating the resource we have the privilege of managing today.

While it, necessarily, makes much reference to the Forestry Commission, it recognises the crucial part played by the contractors, management companies and private estates. It is a comprehensive history that fills an important gap in the recording of the impacts of forestry on the lives of the people in Scotland.

From my own perspective as a third generation forester and one who considers they have a more than passing knowledge of the history of forestry policy and issues, I found the book well written, interesting and informative. It captures the essence of the individuals and characters I have had the pleasure of meeting through my work. It is also surprising how many of the names mentioned, and the

opinions voiced, I recognised.

We are continually told that forestry is all about people; the inference is that we as foresters should engage with society and be inclusive with our drive for rural employment, community involvement, consultation and social inclusion. On reading the book I was struck, again, by the fact that many of the social issues in the current land use debate are remarkably similar to those that the 20th century forest policymakers struggled with.

Given the current land use debate, perhaps the publication of *Voices of the Forest* should be seen as timely and as well as being an important record of social history it should be considered a vital text for students of land management and social policy.

It might do no harm if our Ministers were given a copy, after all, as Churchill was reputed to have said: “Those who fail to learn from history are doomed to repeat it” – but perhaps that is naïve as, more often than not, those who do study history are doomed to stand by helplessly while everyone else repeats it!

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COST EFFECTIVELY CUT & HANDLE TREES UP TO 11.8" DIAMETER

EXCAVATORS FITTED WITH A JAK CAN QUICKLY AND EASILY THIN OR CLEAR STANDING TIMBER! ONCE CUT, THE SAME MACHINE CAN THEN LIFT AND HANDLE THE TIMBER. THIS ALLOWS THE OPERATOR TO STACK THE TIMBER IN ONE AREA OR FEED A CHIPPER OR OTHER MACHINERY.



Models available to fit excavators from 2.5t to 21t.



EASY TO CHANGE EXTRA TOUGH BLADE!

LASCO THE ORIGINAL CONE SPLITTER

THIS SCREW TYPE SPLITTER IS A GREAT TOOL FOR QUICKLY BREAKING TIMBER DOWN IN SIZE TO FIT A FIREWOOD PROCESSOR OR WOOD CHIPPER! DESIGNED TO FIT EXCAVATORS, TELE-HANDLERS AND FRONT END LOADERS.



1 Screw the LASCO in to the timber

2 Easily follow the grain of the timber

3 This split timber can then easily produce **QUALITY** wood chip or logs



← BIGFOOT

OUR LARGEST & HIGHEST SPEC TRAILER TO DATE, LARGE WHEELS, INCREASED BOGIE TRAVEL AND A 12-14T MAX LOAD!

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NEW HOOKLIFT TRAILER ALSO AVAILABLE, OUR MOST VERSATILE TRAILER EVER! A 12T TRAILER WITH AN 8T LOAD CAPACITY ON THE HOOK. MANY BODY OPTIONS.

JAS P WILSON
FOREST MACHINES

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