

Leading the way from tree to home

At this week's From Trees to Timber Homes conference, delegates reported growth all round. **David Lee** reports

Scotland has the opportunity to lead the way in building more warm, attractive and high-quality homes if positive collaboration between foresters, wood processors, architects and house builders continues to gather pace, according to a senior industry figure. Stuart Goodall, chief executive of forestry and timber trade body Confor (the Confederation of Forest Industries (UK), said the conference From Trees to Timber Homes showed that forestry and wood was right at the heart of future policy discussions about land use, climate change, housebuilding and much more. Fergus Ewing MSP, the Scottish government's cabinet secretary for the rural economy and connectivity, told the conference that people loved wood, wanted to see more wooden homes – and it was time to give them what they wanted.

The Scottish government has increased planting targets from the current 10,000 hectares per year to 15,000 hectares per year by 2025, linking the targets to specific policy objectives – tackling climate change and using more home-grown timber; the ambition is to use 3 million cubic metres of domestic timber annually by 2023 (from 2.2 million cubic metres now). Goodall welcomed this, saying that although 76 per cent of homes were built with timber frames in Scotland (against 22 per cent in England), only about one-third were built using Scottish timber. Dr Robert Hairstans, an offsite construction and innovation expert at Edinburgh Napier University, made a similar point about cross-laminated timber (CLT), which is being used by the construction and manufacturing group CCG Scotland to build a seven-storey block of flats in Yoker, Glasgow – the



highest wooden flats in Scotland. "The scheme uses imported product, but it is about stimulating the market and looking at home-grown timber rather than importing in future," Hairstans said. Calum Murray, director of CCG Scotland, said the firm had gone ahead with the Yoker flats to prove CLT could work in Scotland: "We wanted to show the construction industry and colleagues a better way to do business. We will try it, learn from it and everyone will benefit." Murray said that CLT could compete with steel and concrete. "It has great environmental performance," he said. "It's lightweight, more efficient and gives a quicker build." Murray also highlighted the strength in offsite timber construction in Scotland, now worth around £250m per year, with an ambition to grow to £650m by 2025. "Scotland is a market leader and there is a tremendous opportunity for our industry," he said. "However, it's not just about high-quality offsite construction, it's also about landing it on the site at exactly the right time. You have to align factory thinking to on-site management." Murray gave a recent example of successful offsite construction where 185 flats were wind- and waterproof on-site within 26 weeks. This "remarkable achievement" would have taken at least a year longer 10-15 years ago, Murray said.

Conference bites

The timber construction industry faces a skills challenge, two conference speakers warned. "The shortage is right here and now," said Calum Murray of CCG Scotland. "We employ 650 people but struggle to get kids, skilled tradesmen and good sub-contractors." Robert Hairstans, of Edinburgh Napier University, said any graduates coming into the industry had to be "technical, accelerated and international".

Stuart Goodall pointed to a number of policies regarding the use of timber in construction. Quebec has a Wood Equal policy, which means any development has to show it has given full consideration to the use of timber. Another Canadian province, British Columbia, has a Wood First policy, which means developers had to give good reasons for not using timber, while Powys Council in Wales has an "encouragement policy" favouring modern, high-performance homes made from local timber.



Despite barriers to growth, including a "prehistoric construction culture" and a painfully slow planning system, Murray said Scotland had the "skills and capability" to develop a mass offsite timber construction base – and there was no need to "look east" to China. Andy Leitch, a timber innovation expert with Forestry Commission Scotland, said a £25m investment would be needed and extra demand had to be created.

Murray said businesses in Scotland were collaborating well and should share R&D and business knowledge, as well as aligning technology and training needs. Hairstans said collaboration was working well with Offsite Solutions Scotland, a group of nine timber-using construction businesses, including CCG, Makar Construction and Carbon Dynamic. "We are moving away from an adversarial approach to business and

“It's time to give people who love wood homes what they want

looking at collaboration; these firms work across Scotland and there is a huge market share to take advantage of." The conference also discussed where the raw material was coming from to provide the material for timber construction. Ewing said the forestry sector had momentum, with the timber harvest set to increase from 6.8 million to 10.5 million tonnes by 2027. He said more productive planting was needed to

Blueprint for the future

Neil Sutherland of Makar Ecological Homes – which employs 35 people near Inverness and has plans to double its £3.5m turnover – highlights the ten words that sum up timber construction in Scotland in 2017.

MOVEMENT
"We are building a movement to give expression to what we are trying to do about health and wellbeing."

DISRUPTION
"We are ripe for new solutions; 75 per cent of people would rather not live in a standard, volume-built house."

QUALITY
"Why should buildings that are well-loved and looked after not last for 200 years?"

PROCESS
"At one end is 'craft production', which is slow and on-site. At the other end is mass production. The custom-built space in the middle is what we should be talking about."

SCALE
"The tendency is to think bigger is always better, but smaller can be more agile and flexible."

CARBON
"Timber construction is the only form of construction that can deliver on the climate-change agenda."

PEOPLE
"We can create beautiful, healthy homes for people to live out their lives."

SKILLS
"We need multiskilled teams to work across organisations, not traditional tradesmen."

BLOCKAGES
"We need to tackle perceptions about the longevity, robustness and durability of timber."

SYMBOLIC
"We are trying to build a better Scotland with renewable methods, skills and processes."

These ten words add up to ambition, says Sutherland. Max Garcia, of Carbon Dynamic, argues a modular approach could be taken which need never be boring. "Standardisation has no shape," he says.

maintain momentum: "We have revised our approach to new woodland creation. I expect to achieve our 10,000 hectare annual target soon and we have increased that to 15,000 hectares by 2025. There is cross-party support in the Scottish parliament for more planting [confirmed by a political panel at the end of the conference] so people making investment decisions know there is not going to be an abrupt shift in policy. "We are implementing all recommendations in the Mackinnon report [to speed up planting approvals] and a new Forestry Bill, which will include a new forestry strategy. I'm really excited about using more high-quality, home-grown timber in construction and offsite construction is on an upward curve. People love wood, they want wooden homes and we should be overcoming the barriers and challenges." Goodall said forestry was now in mainstream policy thinking. "We heard Fergus Ewing confirm the Scottish government's strong political support for forestry and for enhanced tree planting. We aren't meeting the current 10,000 hectare target but might do next year, with a strong productive element." Goodall said the market was there for more home-grown timber: "We heard from pioneers such as CCG Scotland and Makar, who have proved we can push boundaries and it's about making that mainstream – creating more warm, beautiful, high-quality and sustainable homes where people really want to live. "As forestry becomes more attractive and collaboration grows, we can put more domestic timber into higher-value areas, such as construction – and build more of those homes." Given the raised tree-planting targets, event chair Muriel Gray asked Ewing if the new Forestry Bill should include a commitment to expand the forest area in Scotland (currently 18 per cent, around half the EU average, with an ambition to increase it to 21 per cent by 2032). The cabinet secretary replied: "We are totally committed to growing the forest area. There are lots of opportunities for more plantations in Scotland." Ewing insisted the planning system was becoming more amenable to using timber: "Officials are giving clear direction about where we want to go. There are difficulties in persuading planners that houses of timber construction are acceptable in some areas; it's a work in progress." The cabinet secretary said he had spoken directly to planners in areas where new forests are most likely to be sited, including Dumfries and Galloway, Scottish Borders, South Lanarkshire and East Ayrshire. "There needs to be a partnership approach – the councils have democratic responsibility but we have to get on with it and we have to see more forests," said Ewing. "Planting applications are up in all five Forestry Commission regions and productive applications are up, too. We are working closely with the industry, especially Confor." Goodall said it was important planting targets were met – and that the productive component of around 60 per cent was hit, too. He noted the importance of ensuring productive forests were restocked after trees are harvested: "If we use the analogy of the leaky bucket, it's no good topping it up if water is coming out at the other end due to a lack of re-stocking. We have to do both."

Forestry must be part of the broader rural community

Why a joined-up land-use policy is what's needed to take Scotland forward to a sustainable future

The time is right to ditch the traditional hostility between forestry and farming and realise that the two sectors can work together positively, according to the Conservative MSP Peter Chapman. Chapman, a farmer for 40 years in northeast Scotland, said: "In Scandinavia, if you are a farmer, you are probably also a forester. In Scotland, if you plant trees on your land, it is somehow seen as a 'failure' – we have to change that mindset and I think we can do it. "It's not about planting whole farms, just a portion to create a microclimate – less wind, the grass growing earlier, a longer growing season and a long-term

asset in the woodland. The farmer keeps the same number of sheep but has that extra woodland asset too in 20 to 30 years' time. My focus is to help change the mindset of the farming community – to see forestry as an asset, not a failure of the business model." Davy McCracken, professor of agricultural ecology at SRUC, Scotland's rural college, agreed that there was a perception about woodland and forestry among hill farmers which had to be addressed: "Farmers and crofters are very conservative and do not know how to manage woodland effectively. You need to lead them by the hand and let them dip their toe in the water."

“Farmers need to see forestry as an asset, not a failure

Stuart Goodall, left, presents Fergus Ewing with a copy of Confor's new report, 'A Common Countryside Policy'



Stuart Goodall, chief executive of Confor, said Brexit represented a massive opportunity to start afresh: "The Common Agricultural Policy has been a straitjacket and we have an opportunity to design an integrated land-use policy that is not just about agriculture." Goodall presented Fergus Ewing (and all delegates) with Confor's new document, "A Common Countryside Policy". He said: "The big opportunity comes if we look at forestry as part of the broader rural community in terms of how it benefits the economy, delivers on climate-change targets and provides other benefits such as increased biodiversity and enhanced flood management."

McCracken warned that Brexit would make a huge difference in rural Scotland: "There are lots of heads in the sand thinking everything is going to be OK – it's not. Some farmers are getting 40-50 per cent of their income from the Common Agricultural Policy and integrated land management producing multiple benefits has to be the way forward." McCracken said Scotland still had a way to go to achieve a joined-up land-use strategy: "There is a disjoin; different land uses are pulling against each other. We need to see more integration. Can we create a joined-up strategy? Scotland is closer than the rest of the UK because we already have more joined-up thinking."

'Wood can solve the housing crisis'

Christiane Lellig on the opportunities ahead

We are on a journey, to understand that wood really can help solve the housing crisis, in Scotland and beyond. Put simply, we are not building enough homes for people to live in. We need at least 250,000 every year in England, while Scotland has set a target of 50,000 new affordable homes by 2021. These are tough targets, there is a shortage of skilled workers and we have to achieve the target without impacting badly on the environment. Yet rather than focusing on the limitations, let's look at the positives: building with wood can be quicker and more cost-effective than the alternatives.

It can help meet climate-change targets by storing carbon, and it can create jobs. The big market opportunities are in custom-built homes and social housing. The custom-built home market is still relatively young, with just 12,000 UK homes built this way, with a target of up to 25,000 by 2020. The estimated market value is £3.6bn, with significant growth potential. The biggest opportunity is in England, where the government is pushing quotas for local authorities to build specific numbers of custom-built homes. Social housing is a major opportunity, in England and Scotland. The market is under severe pressure and construction

with wood can really help. It's quicker and cheaper than the alternatives and has real benefits for people's health and wellbeing. On top of that, timber is lovely to smell, to touch and to look at – it has beautiful qualities. If people have the choice of a material to build their home, most opt for timber. As Fergus Ewing said at the conference, people in Scotland want more timber homes and people love timber homes – and he wants to, and is in a position to, give people what they want. This is the moment for building with wood. Everyone is talking about sustainability and wood is an infinitely sustainable material – and it takes far less energy to process than alternative construction materials. But real sustainability is building local homes with timber sourced from nearby forests, supporting and creating local jobs. This is happening across Scotland as forestry and wood-supply chains develop thanks to strong supplies of timber. There is a real opportunity for Scotland to step up and use more wood, if it can create an industry based around local forests and feed that through into manufacturing. That will create happy communities where people want to live. Scotland can get there – if foresters, wood processors, architects, house builders and politicians choose to go on the journey. The From Trees to Timber Homes conference showed ample evidence of a desire to do just that.



Christiane Lellig insists that, 'This is the moment for building with wood'

Christiane Lellig is campaign director of Wood for Good, which promotes the use of wood in design and construction

