SCOTLAND NEEDS TO BUILD MORE AFFORDABLE HOMES USING LOCAL TIMBER

Five Recommendations

SEDA Land gathered 13 experts from the forestry and construction sectors at BE-ST on 13 February to discuss how more affordable homes might be built in rural Scotland using local value timber chains using a Community Wealth Building approach. This event develops the proposals that emerged from "Which Trees for Homes?" an event sponsored by the Scottish Government's Climate Change Engagement Programme and could help shape the Scottish Government's recently released Timber in Construction Roadmap,

Participants:

Mark Councill, *founder, Logie Timber*
Dainis Dauksta, *Woodscience Ltd. & Wood Knowledge Wales*
David Fleetwood, *director of policy, John Muir Trust*
Gail Halvorsen, *chair SEDA Land*
Jonathan Hines, *managing director, Archetype*
Andy Leitch, *deputy chief executive, Confor*
David Leslie, *joint managing director, James Jones & Sons*
Toby Maclean, *Alt Environmental Structural Engineers & Wood Knowledge Wales*
Kevin Reid, *forest sector development advisor, Scottish Forestry*
Dan Ridley-Ellis, *head, Centre Wood Science and Technology, Edinburgh Napier University*
Louise Rogers, *impact manager – Housing and Manufacturing, BE-ST*
Matt Stevenson, *managing director, Ecosystems Technologies*
Neil Sutherland, *founder, Makar Ltd.*

Background

- **Scotland is in a housing emergency.**
- **A lack of affordable homes is preventing economic development in rural Scotland**
- **Depopulation is still a big issue in rural Scotland.**
- **Only 5% of Scottish timber is used in new build construction**
- **70% of timber used in construction is imported**
- **Delays in building standards approval are crippling SMEs**
- **The public increasingly want locally procured houses**
- **Housing supply is dominated by six large entities who do not provide rural homes**
- **Net zero target will only be met with necessary improvements in the built-environment which is responsible for 40% of our carbon emissions.**

This paper calls for a revolution in the affordable homes sector, turning an extractive economy into a regenerative one. The following recommendations involve making better use of the currently under-utilised conifers that dominate Scotland's commercial forests (71%). Currently far too much softwood is going into pallets (31%), packaging and fencing (23%) that should be going into construction. We import 70% of our timber for construction in Scotland. This is due to a lack of understanding of tree species and and a lack of imagination in methods of construction.

We have a unique forestry resource that, with more careful specification of appropriate timbers selected for their specialist and complimentary roles, could supply 70% of our construction timber. With more imaginative design, Sitka spruce, our most common species, can even be turned into passive house homes.

National Planning Framework 4 (NPF4) states that “there is a clear need for affordable housing” that is “affordable and meets local needs”.

These proposals provide a road map of how we can speed up the use of standard grade Scottish timber in construction and provide more affordable rural homes in a low-waste, carbon efficient, circular economy. We have the technical knowhow, we just need the implementation.

Recommendations

Off-site pre-manufactured hubs

Roll out pre-manufactured hubs across Scotland, helping to reverse depopulation by providing homes for key workers and local industry and bringing high-skilled jobs to locations both rural and urban,.

Each hub would provide facilities for low-tech construction using local timber. Training could be provided in timber technology, material grading, manufacture and assembly. Some skills and processes could be provided locally; others would be mobile (such as drying kilns and acoustic grading); and some elements would be transferred from larger existing facilities.

We propose two pilot hubs in places where there is a need for a skilled workforce (such as by SSEN); a ready supply of local timber; and an established community organisation. In each case exemplary affordable homes would act as showcases, illustrating that standard-grade timber can be turned into well-designed, quality homes. Public bodies would release land for this purpose in a public / private collaboration.

Digitally-enabled offsite production accelerates building process, while increasing built performance and consitant quality. By reducing delays and onsite programmes, capex costs can be reduced. With energy demand reduced for comfort and longevity, operational costs can be cut dramatically.

Importantly, the skills and facilities would be transferable to retrofit and building maintenance. This will help tackle the serious skills shortage in the timber sector. This would be an attractive alternative discipline that combines theory and practice – a resurgent movement in the regenerative built-environment. *NPF4: “The future sustainability of the area will depend on the creation of high quality and green jobs for local people”.*

A “pattern book”

Compile a “pattern book” of a range of replicable pre-manufactured house models derived from locally-sourced Scottish timber. Individual built-environment organisations would be pre-certified, and therefore able to roll out new homes with a recognised ‘Type approval’, thus saving local authority building-standards departments time and money. Self-certification of modular homes using standard grade C16 timber could work along similar lines to the existing UK Passivhaus accreditation.

The Canadian Government released its
Housing Design Catalogue **in March 2025**

Featuring 50 standard housing designs that are adaptable, accessible, energy efficient, affordable
it uses regional construction methods and materials, and complies with regulations.
Aimed at SMEs, it will help streamline the building process, cutting costs and speeding up delivery.

Better use of Scottish timber

Current lazy, or ill-informed, specification by structural engineers and the whole design and supply chain leads to shocking amounts of waste. Too much construction quality Scottish timber, suitable for sustainable homes, is being used for pallets, packaging and fencing. As well as the structural requirements of new homes, opportunities for the use of local materials in fit-out, both internal and external, are considerable.

- Target investment into a Scottish future timber product road map that would work hand-in-hand with government climate change targets.

The new demand for wood products created by the UK Government's Timber in Construction Roadmap 2025 represents an opportunity for investment in processing and manufacturing Scottish wood products. Scotland has two-thirds of the UK's standing timber resource. Due to the Scottish government's woodland expansion policies we also establish far more woodland per annum than other devolved nations. A more imaginative approach to these existing resources will lead to economic opportunities and new products such as insulation, external and internal finishes, components and sub-assemblies, such as doors and windows.

- Invest in understanding the characteristics of Scotland's unique standing softwoods, so they can be used as efficiently as possible for construction. This will facilitate more visual grading, suitable for smaller timber processors. It will also mean that more types of timber (including recycled) will be used, and used most appropriately and efficiently – either as whole timbers, or as part of panel construction.
- Fund strength grading to keep pace with the introduction of new tree species that are more resilient to a changing climate and related pests and diseases. A quick response from timber scientists will be needed to keep abreast of the most resilient and best-performing new species.
- Promote the use of more waste softwood into locally-produced insulation, replacing more carbon-intensive imported forms of insulation derived from fossil sources, giving it a higher added value.
- Introduce clearer labelling for timber "Grown in Scotland" to drive demand for homegrown timber use and support the UK Woodland Standard.

Introduce Building Regulations Part Z

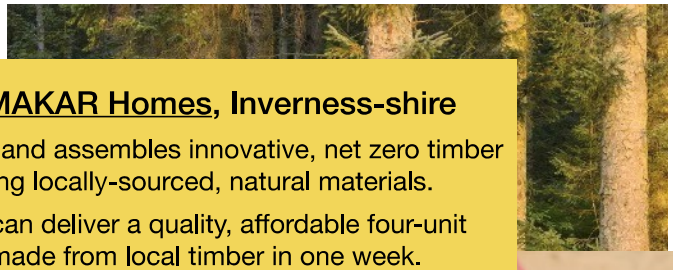
- Introduce two targets to limit embodied and operational carbon in order to meet Net Zero targets. We can only build more efficiently and increase the carbon stored in timber buildings necessary if we set a maximum target for embodied carbon or "upfront" CO2 emissions (caused during the growing, processing, transport and utilisation of materials) calculated ignoring stored biogenic carbon, *and* a minimum target for sequestered biogenic (stored) carbon.

A certification scheme to do this could be easily set up, along similar lines to the Scottish Government's Structural Engineers Registration (SER).

Procurement

Public procurement holds a critical role in allocating public funds for multiple economic, social and environmental benefits.

- Introduce legislation requiring local authority procurement to use an agreed percentage of local timber or other natural materials in all new and refurbished public buildings (similar to the French law introduced in 2022).



CASE STUDY: MAKAR Homes, Inverness-shire

Designs, manufactures and assembles innovative, net zero timber frame homes, using locally-sourced, natural materials.

Its 25-person team can deliver a quality, affordable four-unit terraced house made from local timber in one week.