CONSTRUCTION SCOTLAND INNOVATION CENTRE

How Scottish/ UK mechanically engineered timber can deliver a more sustainable built environment

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Summary

The use of Scottish and UK sourced, mechanically engineered timber products and mass timber construction methodologies, to deliver sustainable buildings and beneficial built environments in the commercial and public realm.

Background

How advanced timber engineering techniques can be used to develop domestically-produced timber products and a relevant supply chain to build better quality buildings in terms of occupier experience, sustainability, environmental impact, and lifecycle cost, in domestic, commercial and public realm buildings.

Challenges

A problem with UK-grown timber is that it is generally not considered mechanically consistent enough as a reliable product in large construction projects, whether for domestic, commercial or public realm use. As such, most timber used in construction in Scotland and the UK is imported from countries such as Sweden and Norway.

Benefits

By investigating alternative use of mass timber construction in commercial and public realm projects, Matt hopes his research could help inform decisions about construction typology choices, which in turn provide opportunity for growth in UK forestry and engineered timber product supply chain.

Using more home-grown timber in Scotland's homes and public buildings will help to develop healthier buildings for ends users. Studies have shown that people living and working in wood rich buildings experience less stress. This provides better environments for health care and education. Timber also has many inherent characteristics (e.g. acoustically absorbent, hydroscopic, embodies CO^2), in comparison with masonry, steel or synthetic alternatives, which are beneficial in the built environment.

Dr Robert Hairstans, Head of Centre for Offsite Construction + Innovative Structures said:

> *Via the Built Environment Exchange (beX), Matt is having the opportunity to get involved with the on-going research work of Edinburgh Napier University the objective of which is to open the door to a strong, new domestic industry which has the materials, means and expertise to deliver carbon neutral building systems.*

beX Built Environmental Exchange

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