



Supporting innovation in the industry

Timber in construction from roadmap to reality.

Nature for Climate Fund

Woods into Management Forestry Innovation Funds (WiM)

Most of our woodlands have been managed in the past to provide timber and fuel. This management has shaped and maintained the habitats that support the plants and animals enjoyed and valued by society today. Presently around 41% of our woodlands are not actively managed and this can have a negative impact on the biodiversity they contain.

Through the Woods into Management (WiM) Forestry Innovation Funds, grant funding will be made available to stimulate the development and testing of new ideas that can help improve the ecological condition of woodlands, and their resilience to climate change, via increased demand for wood and increased levels of woodland management.

- £7.6million awarded
- 67 projects funded
- Timber in Construction
- Ash Timber routes to market
- Temporary infrastructure
- Regional funds

Building from England's woodlands

The project

Predicted timber shortages and widespread unmanaged woodlands in England, prompted NMITE and partners to launch a project identifying native hardwoods suitable for construction.



Building from England's woodlands



Aims

1. Demonstrate that timber from English broadleaf woodland can be used as a resource for structural timber systems.
2. Develop scalable solutions.
3. Stress test the compatibility of these solutions using a sustainable Modern Methods of Construction (MMC) approach.

Building from England's woodlands



Output

The characterisation and grading of UK hardwood species has been used to inform a series of optimised engineered timber solutions.

These have been combined into a prototype which has formed part of a portfolio of 'Living Lab' projects used to educate modern construction professionals.



“The funding created the enabling conditions for industry and academia to collaborate effectively on strategic research, that converges England's forest resource with design, manufacturing, and construction capability to drive increased adoption.”

**Professor Robert Hairstans, Director
Centre for Advance Timber Technologies, NMITE**

BE-ST

Built
Environment
—
Smarter
Transformation



ECO SYSTEMS
TECHNOLOGIES


**Edinburgh Napier
UNIVERSITY**



**NEW MODEL INSTITUTE FOR
TECHNOLOGY & ENGINEERING**

Skylon campus

Be inspired by sustainable biophilic design. Skylon has been purposely built for you

Welcome to Skylon, a campus built with sustainability at its heart. It's home to both our Centre for Advanced Timber Technology (CATT) and our Centre for Automated Manufacturing (CAM); two impressive 700m² workshops.

The perfect setting for practical learning, make the most of opportunities for testing, prototyping and manufacture. Simulating a real-world industrial environment, learning here is all about 'doing' - part of our unique NMITE approach.



**NEW MODEL INSTITUTE FOR
TECHNOLOGY & ENGINEERING**



Forestry Commission

Product testing and GenZero Schools



Bio-adhesive for local hardwood construction materials

The project

Toxic, formaldehyde-based glue has historically been used to manufacture engineered wood.

BindEthics Ltd were looking to produce a sustainable and recyclable alternative, which could still meet consumer demand.



Bio-adhesive for local hardwood construction materials



Aim

To develop an innovative bio-adhesive made from food waste, that could be used in the production of UK hardwood boards.

Bio-adhesive for local hardwood construction materials



Output

A bio-adhesive, particularly suitable for structural hardwoods like oak and ash, has been developed and tested at an industrial scale.

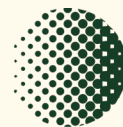
A commercialisation plan is underway, including licensing and manufacturer trials.



“This grant provides more than funding, it strengthens networks that drive essential green innovation.

The Forestry Commission’s support has pushed bio-adhesives closer to market by enabling collaboration across the supply chain.”

**Victoria Garcia, Founder & CEO
BindEthics**



BindEthics

3 Ply Timber Boards

The project

Grown in Britain, Highland Heritage Woodworks and Agile Homes partnered on the design and delivery of a thin 3 ply board to replace imported plywood for the furniture and construction sectors.



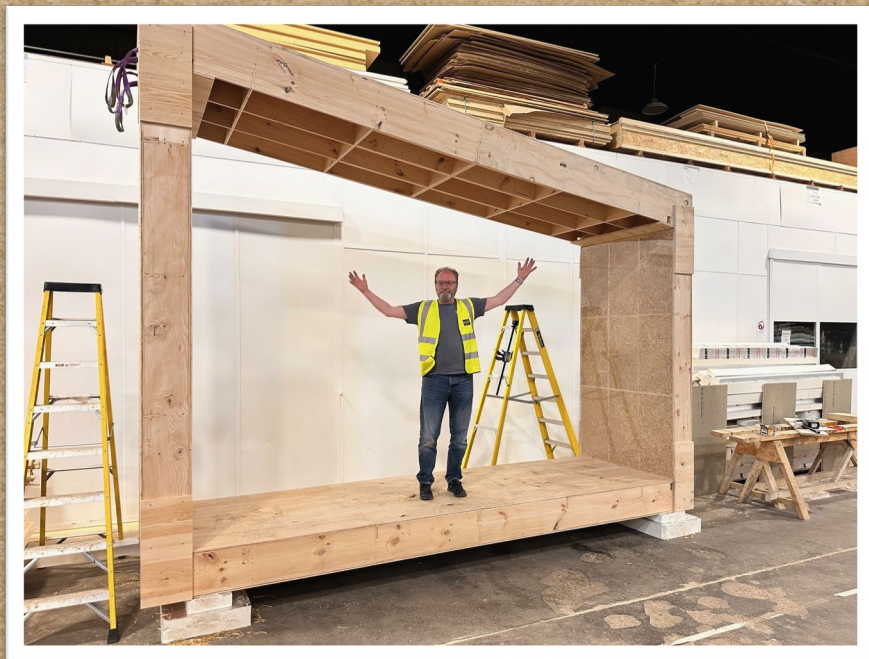
3 Ply Timber Boards



Aims

1. Develop a homegrown substitute to replace imported plywood.
2. Divert high quality logs from biomass.
3. Produce a low carbon board that showcases the beauty of homegrown timber.

3 Ply Timber Boards

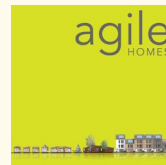


Outputs

1. 3 ply board produced, tested & manufacturing scaled up to meet demand.
2. Design and production of low carbon, monocoque MMC frame.
3. Fit out and furniture commissioned for Energy Transition Zone (ETZ) building, Aberdeen.

“Grown in Britain’s mission to create the best outcomes for under-utilised and undervalued UK timber – to drive innovation and create jobs in the sector – meant we were fully aligned from day one. They were the natural folks for us to work with to develop our 3 Ply product.”

Will Inglis
Highland Heritage Woodworks



Conclusions

- Appetite for innovation is huge
- But hampered by the demands of day job
- Funding generated collaboration, tech transfer, energy!
- Still working out what the overall impact of the funds has been
- How do we now commercialise the most promising products?
- How do we keep momentum, build on the new collaborations and partnerships?