The Home-Grown Homes Project

Event:
Forestry & Timber Knowledge Exchange

Presented by: Gary Newman
CEO
Woodknowledge Wales
13/06/23

woodknowledge WALES

Content

The trees and timber imperative
Introduction to Woodknowledge Wales
The Home-Grown Homes Project

The climate change imperative

"If all current political promises are kept we're on a pathway to 2.7C of warming by 2100 rendering 1/3 of the planet (home to 3 billion people) uninhabitable"

Prof. Hans Joachim Schellnhuber, WoodBUILD 2023
https://woodknowledge.wales/woodbuild-2023/

The climate change imperative

"In my view the best way to draw down carbon from the atmosphere is to use nature-based solutions (photosynthesis)…

…and then we need to convert biomass into long-term products."

Prof. Hans Joachim Schellnhuber, WoodBUILD 2023
https://woodknowledge.wales/woodbuild-2023/

About Woodknowledge Wales

Independent membership alliance

Charitable Community Benefits Society governed by a voluntary board

Our vision is for Wales as a socially equitable, zero carbon, high-value forest nation

Our mission is to support the development of Wales forest industries from tree to product to benefit the economy, the environment and the people of Wales

OUR BOARD:

SHAYNE HEMBROW (Chair)
Wales & West

DOUG HUGHES
Hughes Architects

JASPER MEADE
PYC Construction

RACHEL MOXEY
Pembrokeshire County Council

Prof. JOHN HEALEY
Bangor University

JULIE GODEFORY
Julie Godefroy Sustainability

Our Members
Innovation through collaboration

woodknowledge WALES

Facilitating collaboration

Interaction = Action

woodknowledge WALES

Wood BUILD 2024

Conference & Expo

Swansea 2nd / 3rd July

Our transdisciplinary team

GARY NEWMAN
Chief Executive

CHRISTIANE LELLIG
Independent Specialist Advisor
Regenerative Systems Change

DAVID HEDGES
Head of Housing

TOBY MACLEAN
Independent Specialist Advisor
Construction

DAINIS DAUKSTA
Independent Specialist Advisor
Forestry and wood science

JAMES MOXEY
Business Development & Project Manager

Dr DIANA WALDRON
Head of Built Environment

JOHN SWEENY
Project Manager
Small scale sawmilling

CHRIS JONES
Independent Specialist advisor
Forestry

SARAH LAWTON
Head of Communication

ANNA DAUKSTA
Project Manager
Forestry and Timber

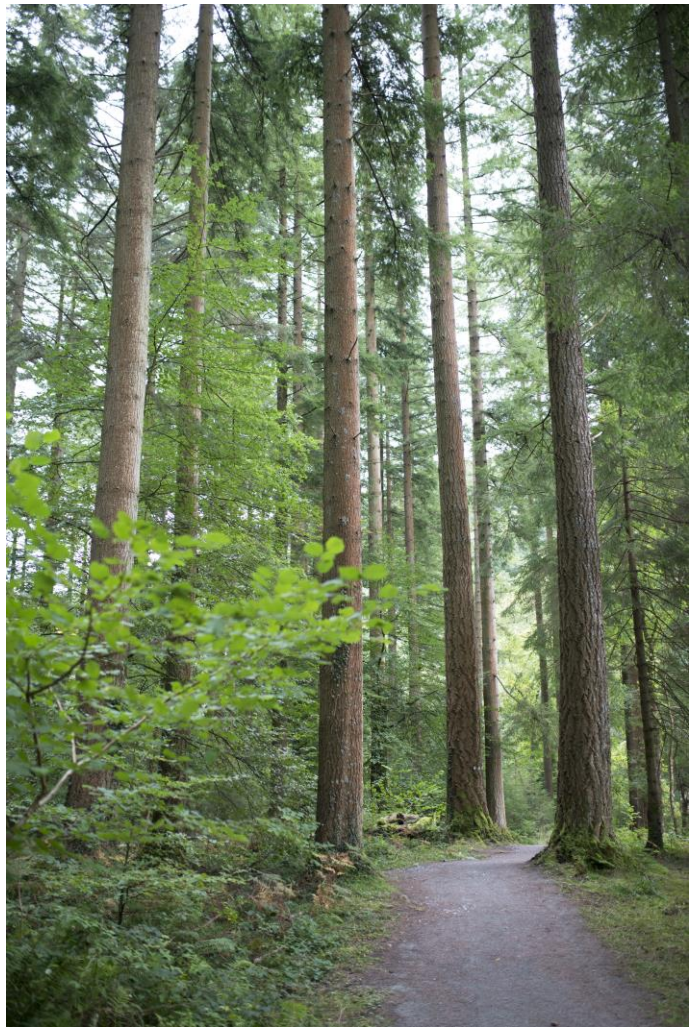
CERI LOXTON
University liaison & skills

RACHEL COOK
Head of Networks

HEDDWYN BYE
Masters by Research
Understanding the Value of farm forestry through the application of LiDAR

THOMAS HENDERSON
Masters by Research
Valuing farm forestry through the interface between Life Cycle Analysis and Ecosystem Service

Our system




REGENERATIVE
CONSTRUCTION
ADVANCED TIMBER
MANUFACTURING
THRIVING
FOREST
ECONOMY
OPTIMISED
RESOURCE
EFFICIENNCY
PURPOSEFUL
FORESTRY
ENABLING
WOOD CULTURE

The Home-Grown Homes Project

Creating a more climate resilient future for Wales by expanding the use of timber in social housing to accelerate decarbonisation of the natural and built environments

The Home-Grown Homes Project – Phase 1

Phase 1 (2018 - 21)

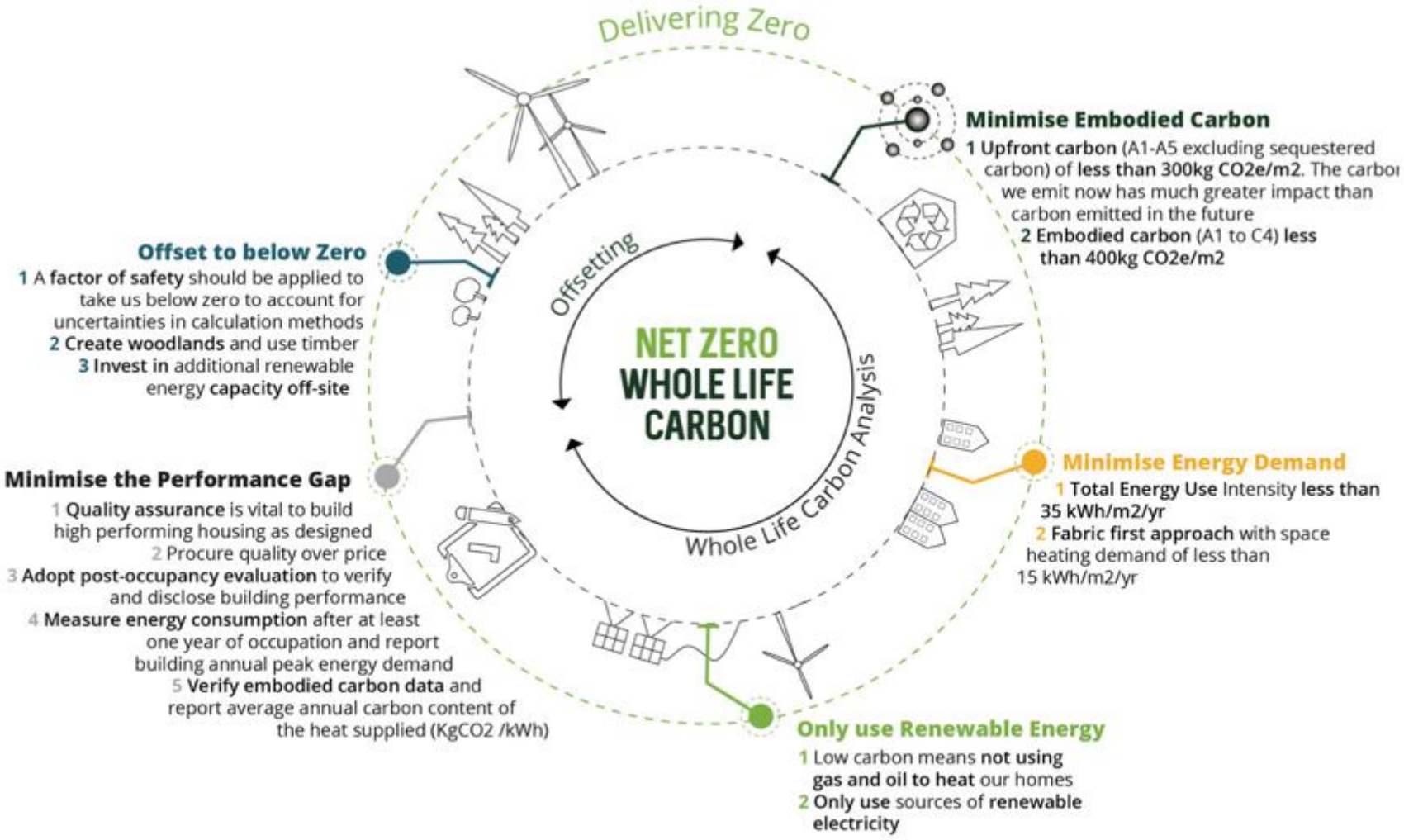
Apply knowledge gained from the delivery of high performance, low carbon, timber social housing to inspire the development of Wales' forest industries and identify policy opportunities

Llywodraeth Cymru
Welsh Government

Some Outputs

Delivering Net Zero Carbon Homes

PROSIECT CARTREFI O BREN LLEOL
THE HOME-GROWN HOMES PROJECT



The Home-Grown Homes Project – Phase 2

Phase 2 (2023 - 25)

Supporting implementation of new policies across decarbonisation, social housing, forestry and the circular and foundational economy to drive sector development and inform Wales first Timber Industrial Strategy

Llywodraeth Cymru
Welsh Government

Home-Grown Homes Project – Phase 2
Greenhouse Gas Removals

Options to pay for Greenhouse Gas Removals from wood in construction

State-of-the-art review with Case Studies exploring a range of public and private sector levers

In collaboration with the **Alliance for sustainable Building Products**

The Alliance for Sustainable Building Products

Negative emissions technology / Greenhouse Gas Removals (GGR)

Greenhouse Gas Removal mechanism	TRL	Cost (2030) £/tCO_2	Scale (2030) $MtCO_2$ / year
Natural GGR			
Peat Restoration	9	£34	0.4
Saltmarsh Restoration	7	£23	0.1
Soil Carbon	8	£12	3.1
Biochar	5	£72	0.3
Enhanced Rock Weathering	4	£300	0.3
Afforestation	9	£13	3.7
Engineered GGR			
DACCS	6	£300	0.5
BECCS (Power)	7	£120	8.0
Wood In Construction	9	Uncertain	0.4

Ref. Greenhouse gas removal methods and their potential UK deployment, 2021, BEIS
https://www.gov.uk/government/publications/greenhouse-gas-removal-methods-technology-assessment-report

Home-Grown Homes Project – Phase 2

Increase the supply of construction timber

Working with the timber processing sector to increase the supply of construction timber from the Welsh Forest

Large Sawmills – Case Study (NRW timber)
Medium Sawmills – Case Study (Installation of grading line)
Small Sawmills – Creating a collaborative community

Creation of a Life Cycle Analysis tool for sawmillers in collaboration with **Alliance for sustainable Building Products**

ASBP The Alliance for Sustainable Building Products

Home-Grown Homes Project – Phase 2

Increase the demand for home-grown timber products

Develop markets for timber-based construction products, such as wood fibre insulation, timber windows and engineered wood

Building performance evaluation tool

Timber product manufacturing: Investment prospectus / manufacturing plan

Evaluating home-grown timber in timber frame manufacturing

Creation of a non-numerical Embodied Carbon tool to support decision making in collaboration with the **Good Homes Alliance**

Home-Grown Homes Project – Phase 2

Training and Skills

Identify and address skills needs and recruitment gaps required to deliver a Thriving Wood Economy

Home-Grown Homes Project
Trees on Farms

PROSIECT CARTREFI O BREN LLEOL
THE HOME-GROWN HOMES PROJECT

THOMAS HENDERSON
Masters by Research
Valuing farm forestry through the interface between Life Cycle Analysis and Ecosystem Service

HEDDWYN BYE
Masters by Research
Understanding the Value of farm forestry through the application of LiDAR

LAFAN

Exploring rights-based market instrument to enable trading of the tree planting requirement

Support woodland creation on farms to:

- **help maintain farm viability**
- **meet afforestation targets**
- **and future resource needs**

In collaboration with
Bangor University

PRIFYSGOL BANGOR UNIVERSITY

Home-Grown Homes Project
TIMBER INDUSTRIAL STRATEGY

Supporting the development of
Wales
first
TIMBER INDUSTRIAL STRATEGY

Finally……

If you missed WoodBUILD 2023
- see all outputs here and summary video here

And don't miss WoodBUILD 2024
Swansea 2 / 3 July

Wood BUILD 2024
Conference & Expo
Swansea 2nd / 3rd July

Thank you
Please stay in touch

Woodknowledge Wales Limited
22 Cathedral Road, Cardiff, CF11 9LJ