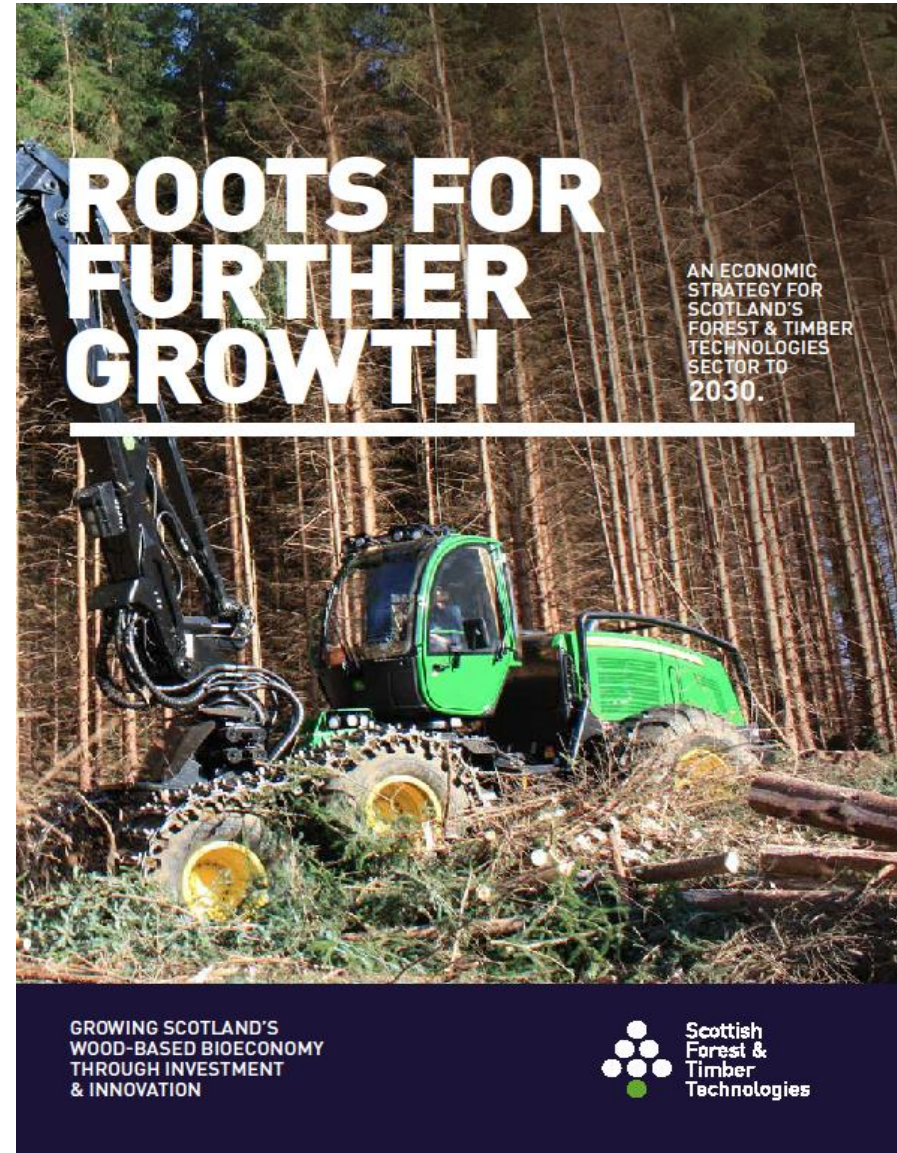


Autumn 2019 Update:

Roots for Further Growth:

Andy Leitch



Industry Leadership Group

Martin Gale, Chair and BSW/Tilhill

Fergus Ewing MSP, Cab Sec

Guy Watt, John Clegg Consulting

David Leslie, James Jones and sons

Stuart McKill, Saint Gobain

David Symons, Euroforest

Hugh Montgomery, Land Energy

Prof Sean Smith, Edinburgh Napier

David Sulman, Confor

Ian Archer, Industrial Biotech

George Webb, Norbord

Ralland Browne, Scottish Woodlands

Caroline Gordon, Tulloch Timber

John Paterson, Egger UK

Neil Sutherland, Makar Construction

Scott Shiells, Glennnon Brothers

John Dye, TIMCON

Peter Whitfield, Tilhill

Gordon McLean, UPM

Trefor Owen, Forestry and Land
Scotland

Liz Barron-Majerik, Lantra

Andy Leitch

Steven Hutcheon, HIE

Jason Hubert, SF

Alistair McKinnon, SE

Elaine Ellis, SDS

Greg Walker, SG

Tbc, south Scotland agency

Industry Leadership Group

- Refreshed ILG Met in May
 - Agreed to continue funding regional events.
 - Commissioned short review of the website.
- Currently working on priority actions from strategy for next 2 years.
- Due to meet in late October, Mr Ewing will attend to discuss and agree priorities.

Current R&D: Forest Research Programmes

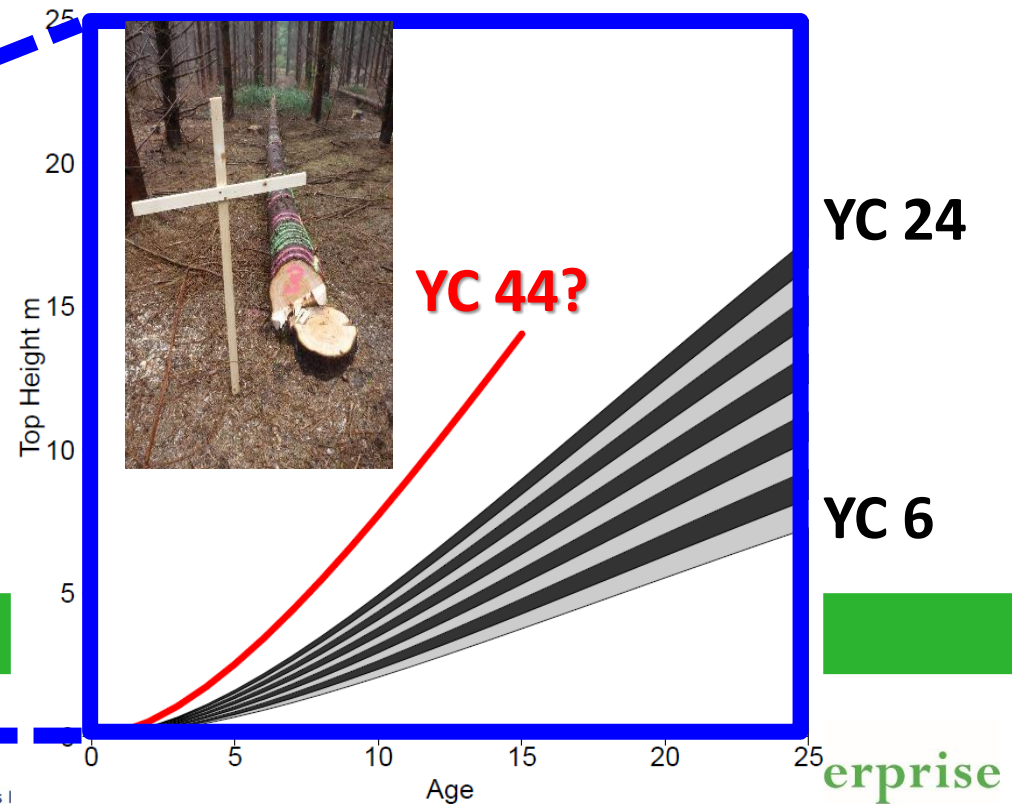
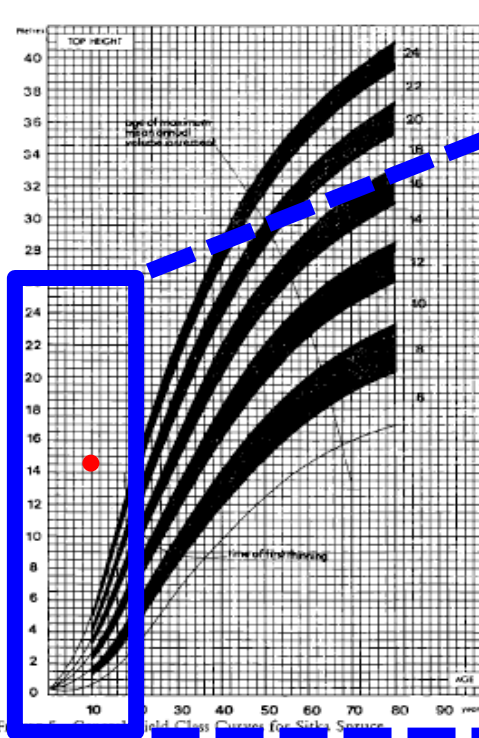
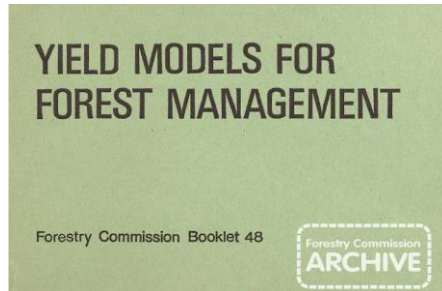
Forest Research Programme 5: Tree Breeding

- Now led by Dr Gustavo Andres Lopez.
- DNA marker aided selection in Sitka; focussing on improving stiffness and yield
- Further developing Breeding Plans for Alternative Species.
- Tissue culture – larch

Timber Properties

- Led by Dr Paul Mclean
- Structural characteristics of alternative species, including birch and sycamore.
- Measuring and Modelling Timber Properties.
 - Timber Quality Decision Support System. <https://www.forestry.gov.uk/fr/bee-h-aegjme>
 - Genomics : Measurements from improved SS sites for new yield models.

Improved Sitka spruce and improved wood availability forecasts



Future Tree Breeding approaches



Sitka Spruced

Sitka Spruced. <https://sitkaspruced.web.ox.ac.uk/home>

Project overview: The Sitka Spruced project aims to create novel capacity to increase the rates of genetic gain in the UK's breeding programme. Selective breeding is effective for increasing yields in Sitka spruce but it takes 30 years to select and propagate improved planting stock. Sitka Spruced will develop **Genomic Selection methods aiming to shorten the breeding process and increase the rate of yield gains more than two-fold**. The proposed research will develop large-scale genotyping capacity, a genetic linkage map for Sitka spruce, and large training set for predictive genomics model development. We will use this platform to investigate issues of **genomic prediction accuracy, models for both yield and wood quality traits, genotype imputation, resistance to damaging insects**.

Sitka Spruced is a collaboration of the University of Oxford, the University of Edinburgh (Roslin Institute) and Forest Research (an Agency of the Forestry Commission). It is funded by BBSRC and a group of forest and wood processing industries.

The industrial partners for Sitka Spruced are BSW Timber Ltd., Maelor Forest Nurseries Ltd., Forestart Ltd., The Conifer Breeding Cooperative Ltd., and Scottish Woodlands Ltd.

Working with International Partners ForestValue

ForestValue - Innovating forest-based bioeconomy

ForestValue Joint Call 2017

Topic A

Innovative sustainable management of multifunctional forests

18 countries

Topic B

Innovative industrial production and processing technologies, products, concepts and services

29 funding organisations



114

submitted pre-proposals



49

submitted full proposals



17

selected projects



6 projects



11 projects

€3.8 m
EU contribution

€17.7 m
national commitment

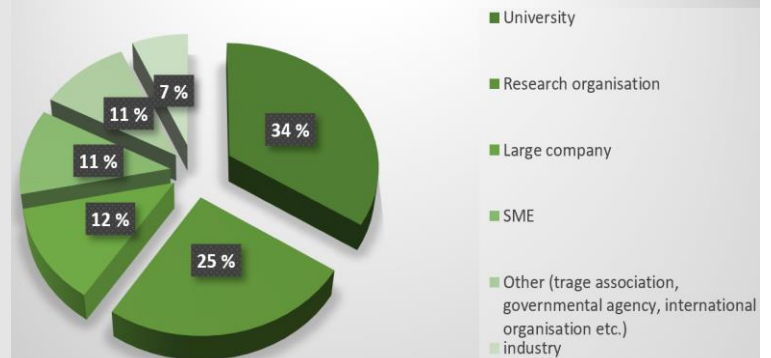


€26.1 m
total projects costs

€21.5 m
requested funding

€4.6 m
own contribution

Type of organisation



Projects per country



no. of industrial partners per project



WP1. Coordination and management

RISE, NUIG, Aalto, Napier, TUM, Ljubljana, UPM, UCD

Industry partners

Codes & standards

WP2. Design of timber structures for the future

RISE, NUIG, Aalto, Napier, UCD

New wood

Recovered wood

WP3. Product design using recovered timber

NUIG, RISE, Aalto, Napier, TUM, Ljubljana, UPM, UCD

Recovered wood

New wood

WP5. Properties of the recovered wood

Napier, NUIG, Ljubljana, UPM

WP4. Inventory, deconstruction and quality of recovered wood

Aalto, RISE, NUIG, Napier, TUM, Ljubljana, UPM, UCD

Current practice

WP6. Environmental and economic assessment of design for recycling in building construction

TUM, Aalto, Napier

WP7. Dissemination and engagement

RISE, NUIG, Aalto, Napier, TUM, Ljubljana, UPM, UCD



Kiruna

Forest Value: Further UK participation

- **Click Design: BRE** – to develop a performance-based protocol to provide a software tool for service life performance of wood for architects and planners. **25 partners, 11 countries. Approx 1.5M Euros.**
- **Dyna TBB** “Dynamic Response of Tall Timber Buildings under Service Load”: **Exeter University** - oscillation time and damping of high-rise buildings that are susceptible to resonance with wind vibration. **12 partners, 8 countries, Approx 1.7M Euros.**

Timber in Construction

Wood Product Innovation (ENU) (£60k): The purpose of this proposed research is to deliver timber product and process innovation whilst developing human capital. 4 thematic areas of research have been identified for exploration:

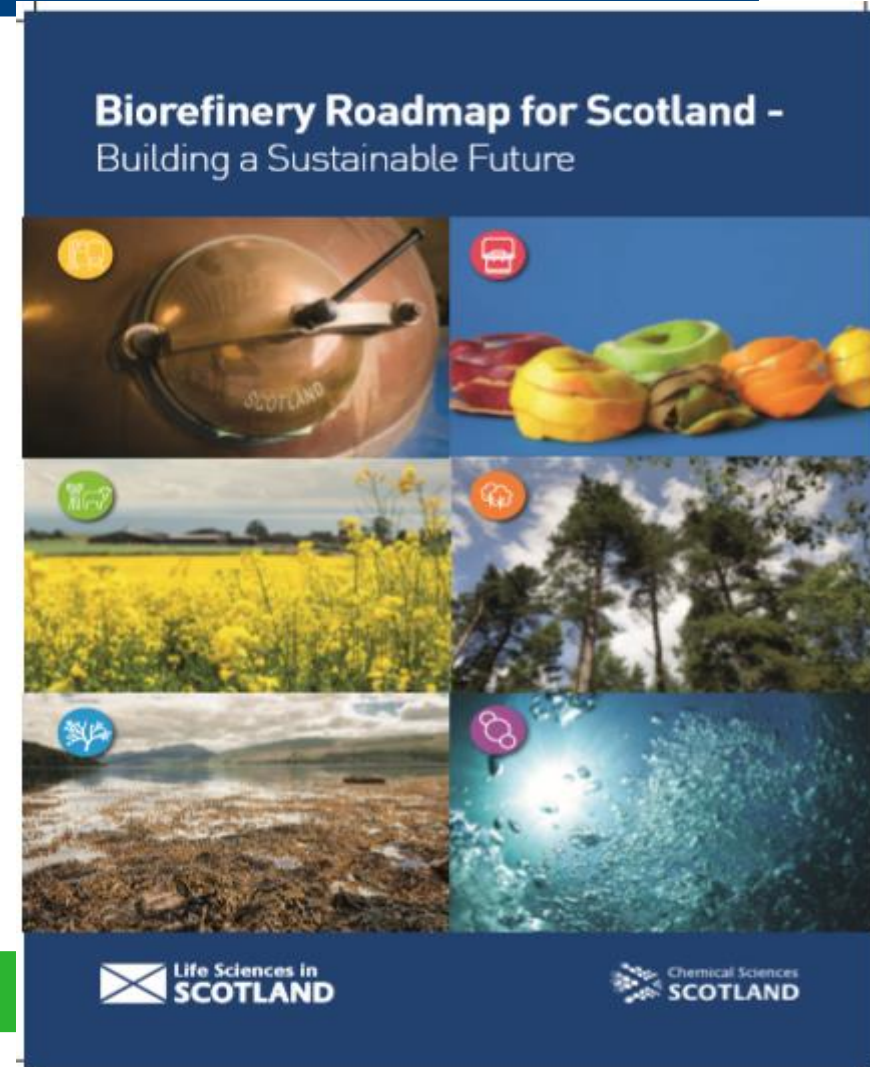
- **Digitisation of Timber Offsite:** Maximising the use of C16+ graded HG timber and updated carbon calculations.
- **Solid Laminated Timber Systems:** Gap analysis of R&D in use of HG for SLTS.
- **Timber Retrofit Solutions:** Identification of opportunities for HG timber and manufacture.
- **Sustainable Communities Pre-manufactured from offsite timber construction:** Analysis of current and future communities. SG timber offsite review.

Commercialisation of Solid Laminate Wood Products in Scotland (£150k):
Partners: CSIC, SF, ENU and Industry

Structural Timber Association and TTF (£130k) : Fire tests for in-use timber constructions- positive results to date.

Emerging Markets: Proposal for wood fibre as a feedstock for a biorefinery in Scotland

- 4-year PhD: Development of a process to valorise lignin (**Ed Uni**)
- 4-year PhD in Improved pre-treatments and fractionation of soft and hardwoods to access feedstock chemicals. (**St Andrews Uni**)
- Two companies in UK currently working on new processes for breaking down wood fibre:
<https://www.novapangaea.com/> and <http://bio-sepltd.com/>,
 - Now interest from the UK wood based industries.
 - Potential for a learning journey to Finland to bioethanol plant
<https://www.youtube.com/watch?v=ncQV8Qc7H9E> <https://www.st1.eu/about-st1/company-information/areas-operations/renewable-energy> .
 - Other websites that may be of interest
<https://borregaard.com/Products-Solutions> and <https://arbiom.com/>



Local Skills Activity

- SRUC Barony to set-up a Forestry Advisory Panel to support team ensure that their offering matches with Industry demand.
- SRUC has secured funding until March 2021 for a post to essentially work between the industry, employers, training providers and schools to help create / reinforce career pathways from schools into the industry. Lots of leg work ahead getting into schools and out and about talking to employers.
 - Will be directed by steering group.

Promotion: Publications and Events

- Recently published “**Wood properties and uses of Scots pine in Great Britain**” Paul McLean, FR
- Larch version due in early in 2020, then DF 2021.
- Exhibition at Lighthouse from 24th October: *“4 Projects: Sustainable Communities Pre-manufactured from wood”*
- **French Architects** learning journey- Wood for Good led.

 Forestry Commission



Research Report

Wood properties and uses
of Scots pine in Great Britain

 Forest Research



Thanks for Listening