

Pontbren



***Lessons learned 10 years on
...”and how it’s shaping the
role of woodlands in Wales”***

Mike Richards, Coed Cymru

23rd November 2017



CIWEM talk outline

- Pontbren project
- Significance of Pontbren
- How Pontbren has informed Coed Cymru's vision going forward
 - Pilot studies
 - Current research
- Your input on how we can build scale



Pontbren - farmer led



...”The project did NOT set out to change hydrological processes, but improve farm management by reducing costs and farming the land in a more sustainable way”

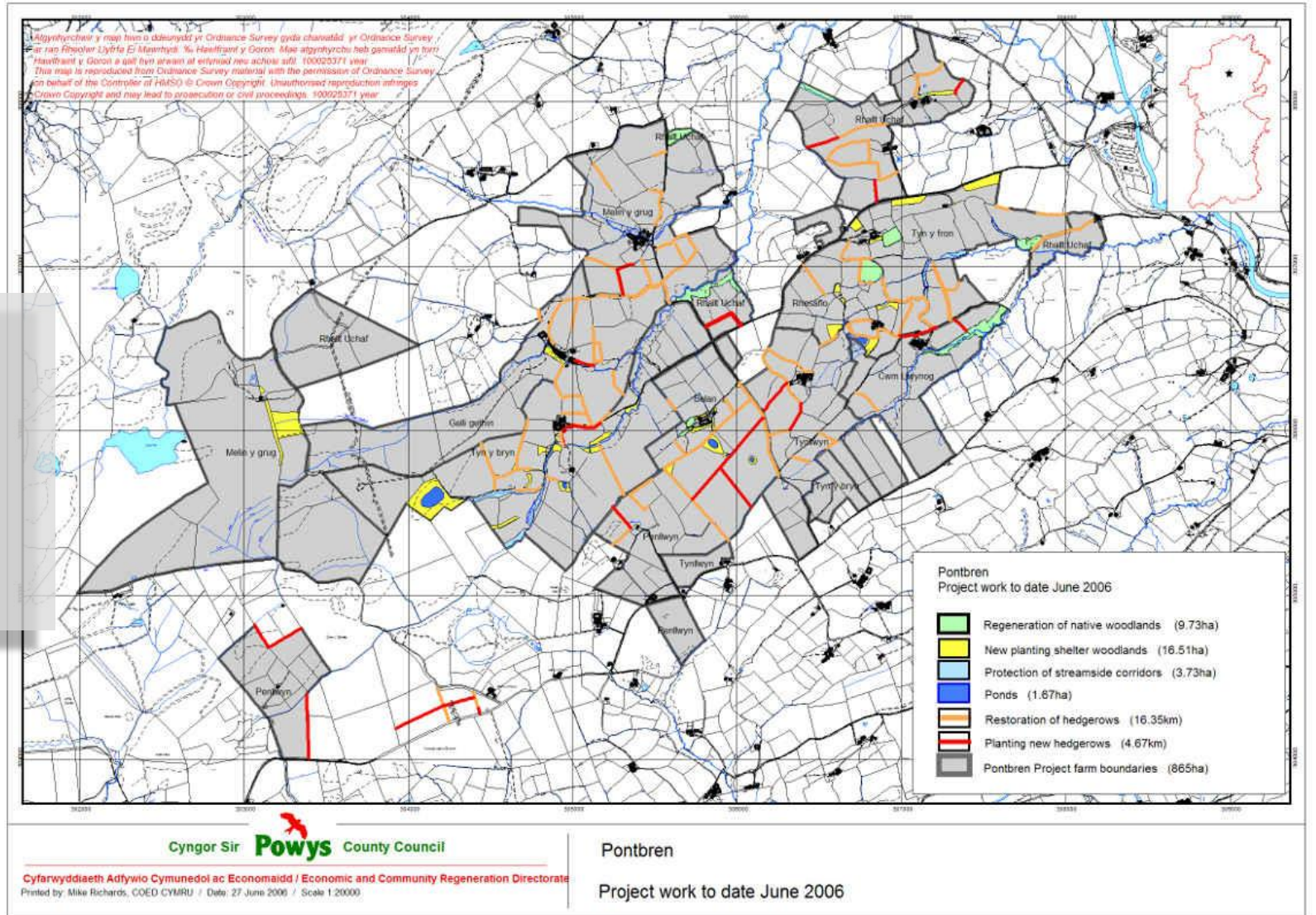


Pontbren – What did they achieve?

... “an ambitious capital works program aimed at restructuring their farms”

- 120K trees planted
- 16ha shelter belts
- 21km hedgerows
- 10ha regenerating woodland
- 1.7ha new water bodies
- Employed local contractors

...“ this was a bold attempt to take hold of their own destinies”



Pontbren Virtual tour 2016

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...“erosion risk modelling carried out after the work was completed supports the farmers decision making on where trees are best planted”

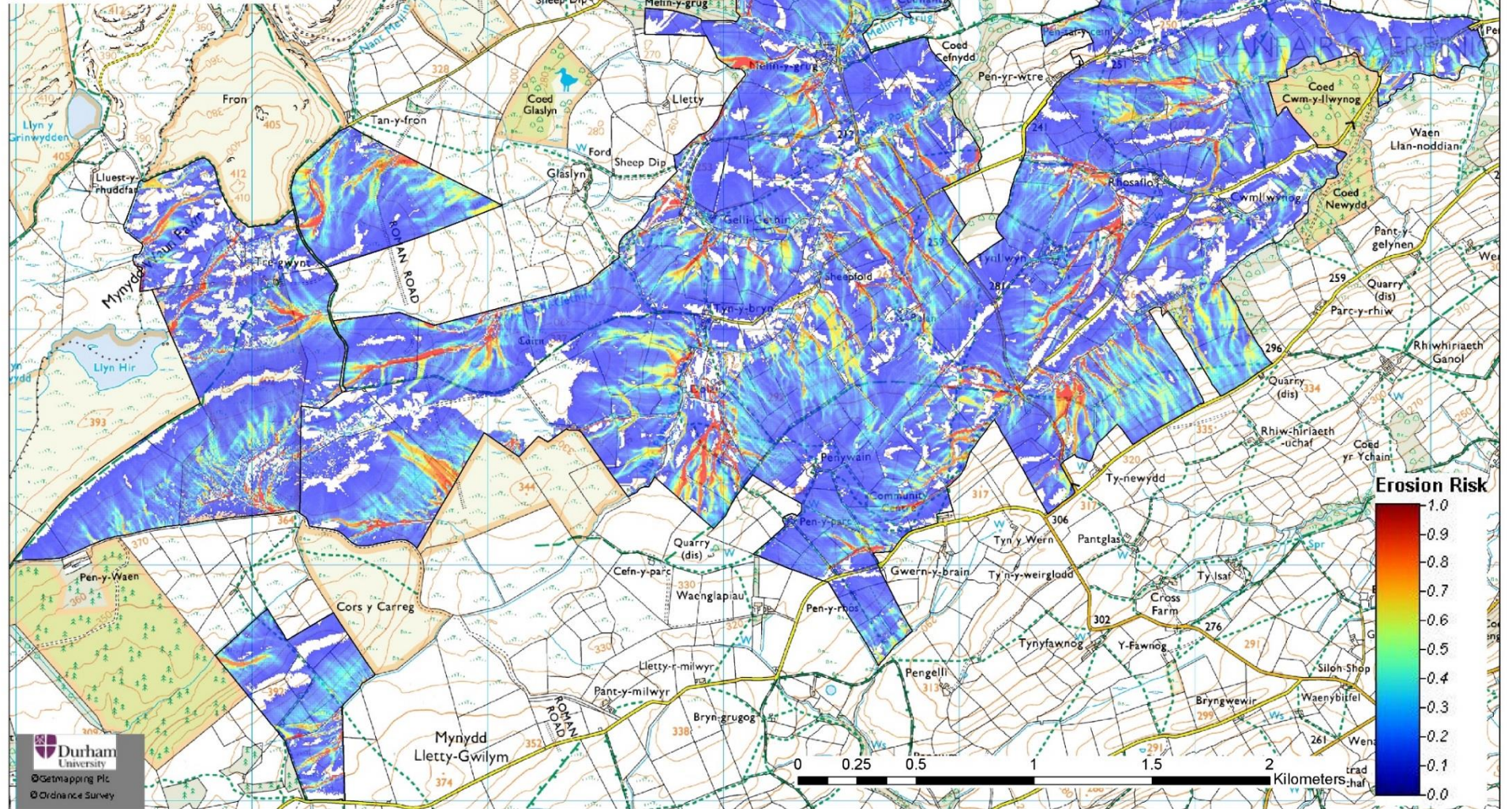


The Wye & Usk Foundation
ACTION FOR FISHERIES

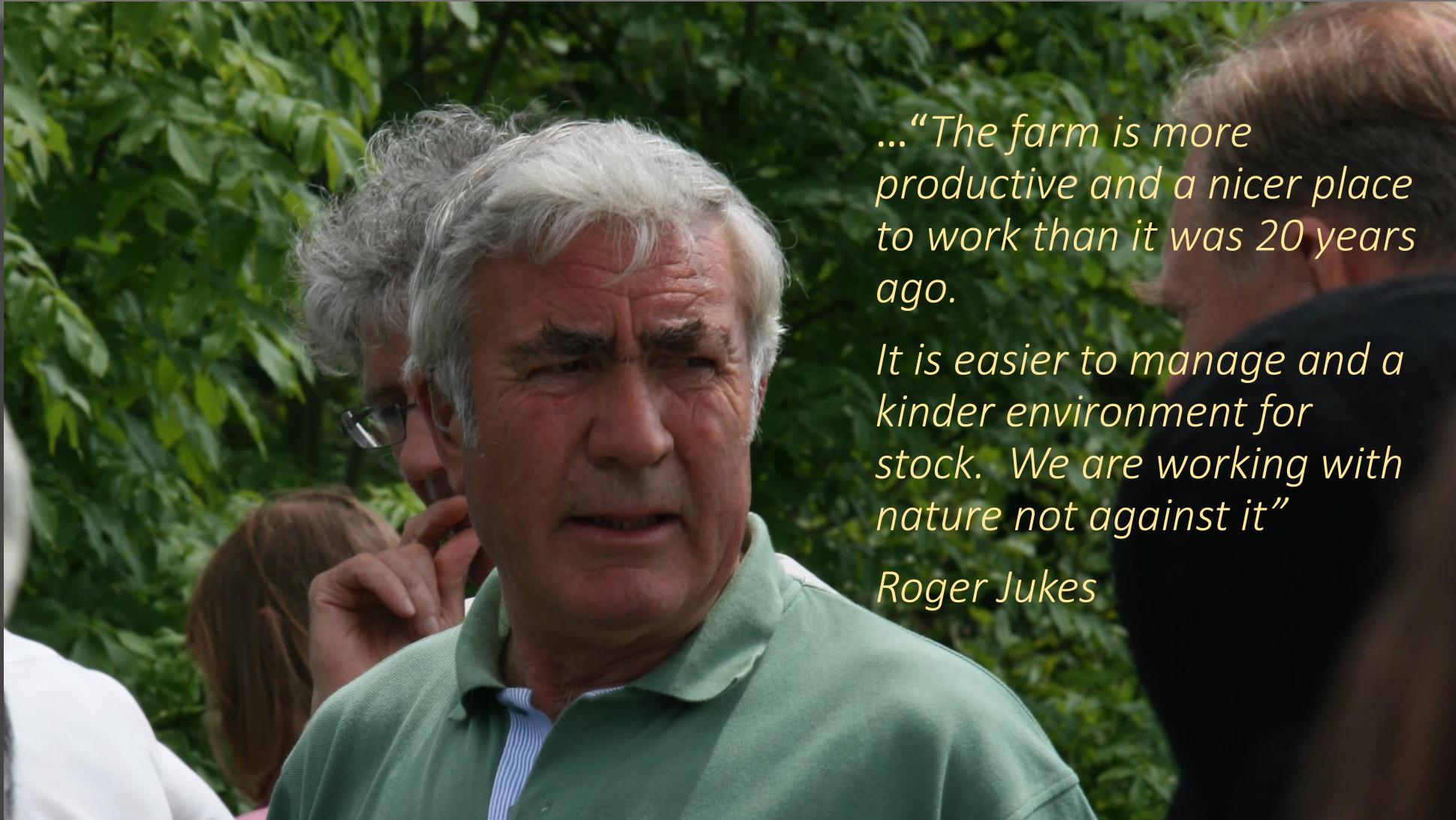
www.wyeuskfoundation.org Reg Charity No. 1080319

The Pontbren Project Erosion Risk (Worst Case Scenario)

The Wye and Usk Foundation
Unit 4
Talgarth Business Park
Trefecca Road
Talgarth
Brecon
LD3 0PQ
Tel: 01874 711 714



How landowners value the changes



...“The farm is more productive and a nicer place to work than it was 20 years ago.

It is easier to manage and a kinder environment for stock. We are working with nature not against it”

Roger Jukes



Pontbren outcomes

“Achieved more than just better farm management”



Research and development

Enhanced production



Branded co-operative marketing



HYDROLOGICAL PROCESSES
Water Process. 24, 3521–3534 (2010)
Published online 7 July 2010 in Wiley Online Library
[wileyonlinelibrary.com] DOI: 10.1002/hyp.7774

Identification of rural land management signals in runoff response
Neil McIntyre¹* and Miles Marshall^{1,2}
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HYDROLOGICAL PROCESSES
Water Process. 23, 404–415 (2009)
Published online 11 November 2009 in Wiley InterScience
[www.interscience.wiley.com] DOI: 10.1002/hyp.7537

The impact of upland land management on flooding: results from an improved pasture hillslope
Miles R. Marshall,^{1,2*} Oliver J. Francis,² Zoe L. Frogbrook,¹ Bethanna M. Jackson,^{2,3} Neil McIntyre,² Brian Reynolds,¹ Imogen Solloway,^{1,2} Howard S. Wheater¹ and Joanne Chell⁴
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³ School of Geography, Environment and Earth Sciences, Victoria University of Wellington, PO Box 600, Wellington, New Zealand
⁴ Johns Hopkins Center for Applied Earth System Science, Johns Hopkins University, Baltimore, MD 21218, USA

In response to growing concerns over the potential for land use change to increase flood risk, primary aims are to develop...

The potential for reducing flood risk through changes to rural land management: outcomes from the Flood Risk Management Research Consortium
Neil McIntyre¹*, Caroline Ballard¹, Nataliya Bulygina¹, Zoe Frogbrook¹, Ian Clackie¹, Stephen Dangerfield¹, John Ewen¹, Josie Geris¹, Alex Heushaw¹, Bethanna Jackson¹, Miles Marshall¹, Tim Pagella¹, Jong-Sook Park¹, Brian Reynolds¹, Eada O'Connell¹, Greg O'Donnell¹, Fergus Sinclair¹, Imogen Solloway¹, Colin Thorne¹ and Howard Wheater¹
¹ Imperial College London; ² Environment Agency; ³ Swansea University; ⁴ University of Nottingham; ⁵ Newcastle University; ⁶ Queen Mary University of London; ⁷ University of Exeter; ⁸ University of Bath; ⁹ University of Derby; ¹⁰ University of East Angles; ¹¹ University of Gloucestershire; ¹² University of Hull; ¹³ University of Lincoln; ¹⁴ University of Limerick; ¹⁵ University of Liverpool; ¹⁶ University of Manchester; ¹⁷ University of Newcastle; ¹⁸ University of Northumbria; ¹⁹ University of Oxford; ²⁰ University of Plymouth; ²¹ University of Reading; ²² University of Sheffield; ²³ University of Southampton; ²⁴ University of Stirling; ²⁵ University of Salford; ²⁶ University of Sussex; ²⁷ University of Warwick; ²⁸ University of West of England; ²⁹ University of York; ³⁰ University of York; ³¹ University of York; ³² University of York; ³³ University of York; ³⁴ University of York; ³⁵ University of York; ³⁶ University of York; ³⁷ University of York; ³⁸ University of York; ³⁹ University of York; ⁴⁰ University of York

Abstract
Changes to rural land management are widely perceived as an effective complement to, or even replacement for, traditional flood defence and flood-risk related sediment management actions. This

- High level research (FRMRC)- flooding, hydrology, soils and water, new studies on shelter and productivity
- Had a direct influence on government policy on environmental sustainability and flood mitigation



What have we learned from Pontbren?

- Demonstrated self reliance and validity of a 'bottom up' approach
- Strong leadership
- Farming businesses can become more resilient to change
- Knowledge sharing promotes best practice
- Wider environmental benefits gained without compromising productivity
- Raised awareness on flood mitigation
- Helps sustain local communities
- Informed our approach to catchment scale management



Building scale

How do we scale up
and replicate?



- Coed Cymru has a unique vision of how to integrate woodland into the farming landscape and culture

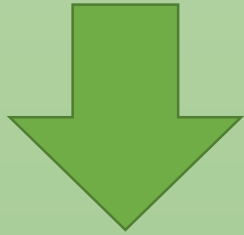
Working directly with landowners for economic, social and environmental benefits

- Environment Wales Act 2016 landscape-scale resilience.
 - Co-ordinated action across multiple land management units
 - Natural resource management



Coed Cymru strategy

Research + Pilot Projects



- Woodland management and creation
- Support for woodlands of all sizes by working with groups of landowners

AIM

- **Managing ecosystem services at a landscape scale**

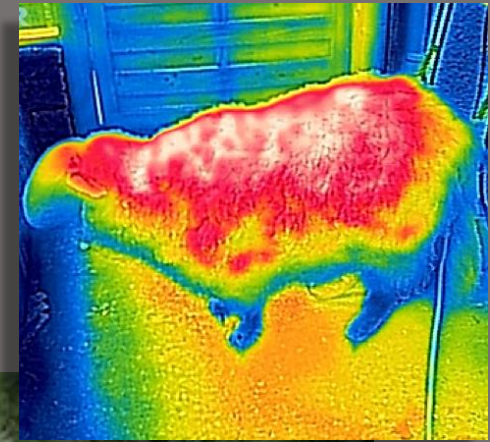
Coed Cymru is now focussing on...

- Bringing landowners together
- Accessing new markets as a group
- Developing better methods of certification
- Pilot projects across Wales focussing on woodland management and creation



Ongoing R & D..

- KESS PhD Student –
 - *Consequential life cycle assessment of management strategies for land potentially “spared” from agriculture in Wales*
- KESS PhD Student-
 - *Beyond single purpose land use – maximising ecosystem service provision in the Welsh uplands*
- Multiland project partner, Bangor University
 - *Enhancing Agricultural Productivity and Ecosystem Service Resilience in Multifunctional Landscapes*
- Lancaster University, NERC project partner.
 - *The Lancaster project specifically seeks to quantify the likely magnitude of nature-based flood mitigation effects across large catchments.*



Your input on Building scale?

- Any comments?
- Or questions?
- What tools are you using to inform land management decisions?

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