

# The UK Woodland Carbon Code

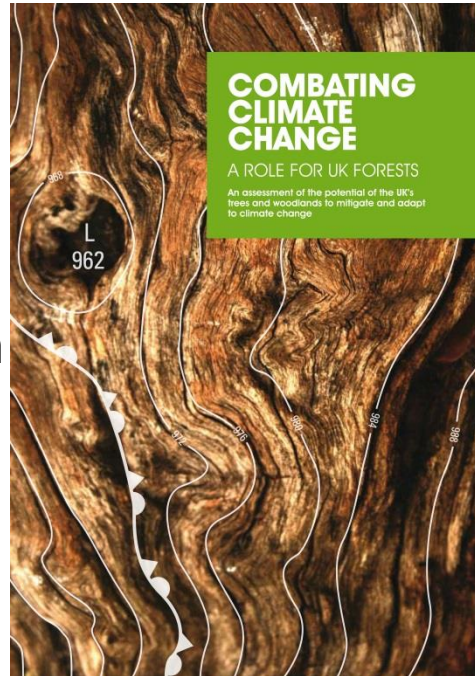
***LES ENJEUX DE LA CERTIFICATION CARBONE  
AGRICOLE ET FORESTIERE EN EUROPE  
Espace Génération Climat, Paris Le Bourget  
10 December 2015***

**Dr. Pat Snowdon  
Forestry Commission  
Edinburgh, UK**

## Research

sound science

- Forestry Commission commissioned an assessment of the role of trees and forests (2009)



## Policy - finance for woodland creation

new business models & mechanisms

- payments for ecosystem services
- financial instruments
- new business models
- valuing & accounting for natural capital

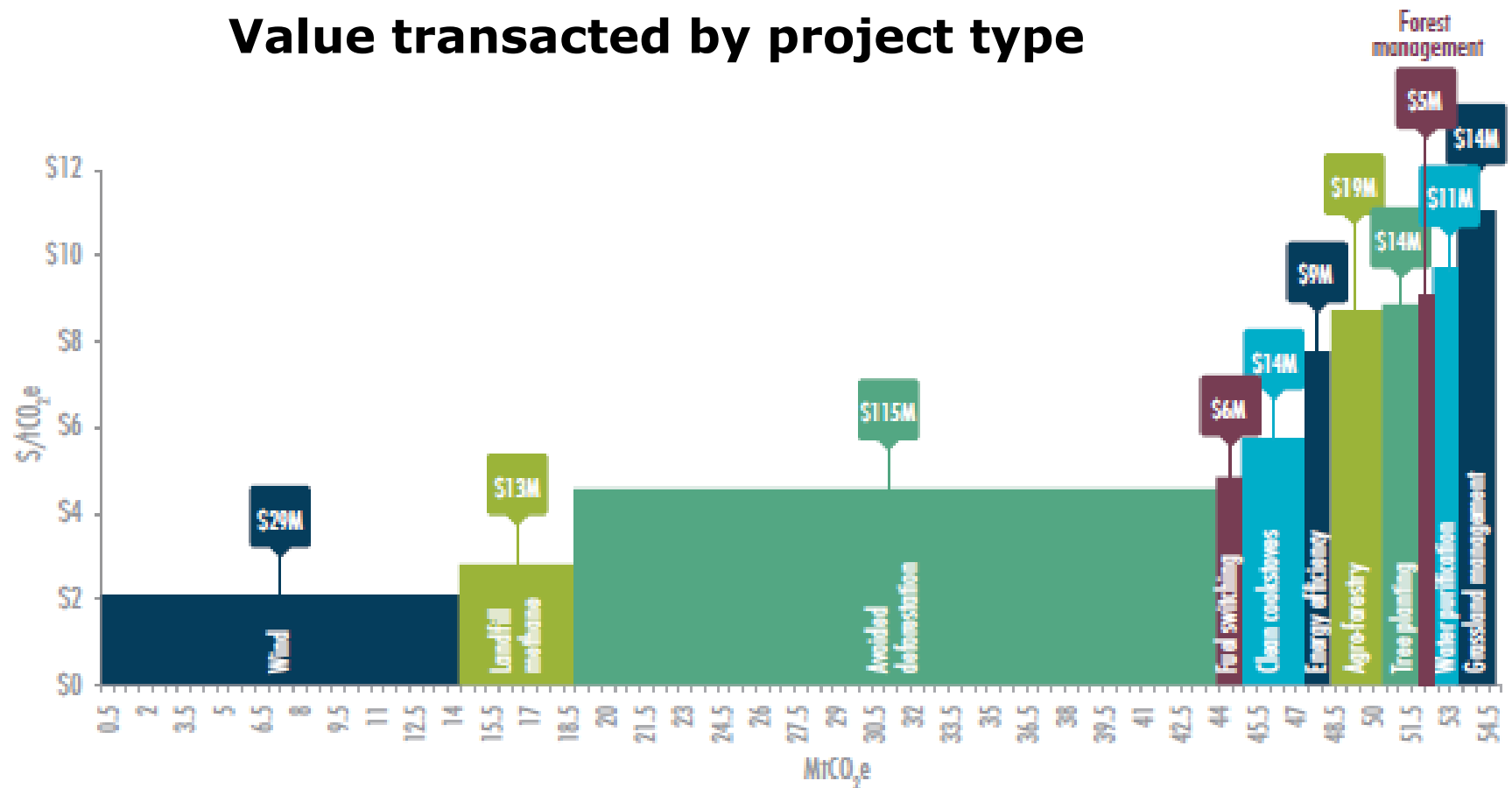


## Business

new outlooks & motivations

*"Instead of measuring the destruction of nature as a economic gain, we need to address its stewardship as an economic opportunity"*  
(Aldersgate Group)

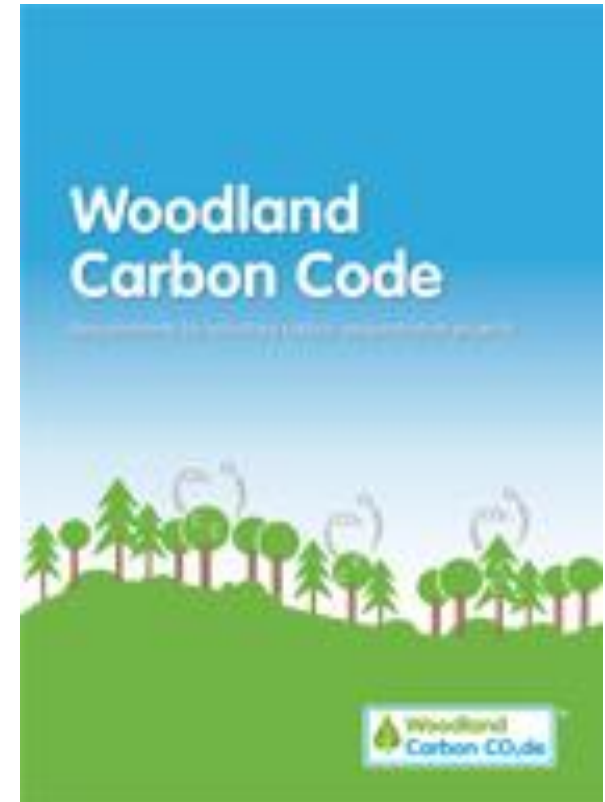
## Value transacted by project type



Notes:: Based on 764 transactions representing 61.7 MtCO<sub>2</sub>e. The area of each project type rectangle reflects market value with the vertical axis representing projects by average price transacted and the horizontal axis representing the total volume transacted.

Source: Forest Trends' Ecosystem Marketplace. *State of the Voluntary Carbon Markets 2015*.

- Ensure high standards in UK forest carbon market
- Clarity and transparency to bolster market confidence
- Rigorous scientific basis
- increase private investment in woodland creation
- similar principles to VCS, GS...





**WOODLAND  
TRUST**



**iema**

Institute of Environmental  
Management & Assessment

 **Institute of  
Chartered Foresters**

 **Confor**  
Promoting forestry and wood

 **Forest Research**



**FOREST  
CARBON**



UNIVERSITY OF EDINBURGH  
**Business School**



Department  
for Environment  
Food & Rural Affairs

**UKWAS**  
UK Woodland Assurance Standard

 **Forestry Commission**

 **Forestry Commission**

 **Forestry Commission  
England**

 **Forestry Commission Scotland**  
Coimisean na Coilltearachd Alba



Llywodraeth Cymru  
Welsh Government

2007 - 2011

Design

2010 -2011

Pilot

July 2011

Launch Woodland  
Carbon Code

2013

Launch group  
certification

2013

Launch carbon  
registry @ Markit

2014

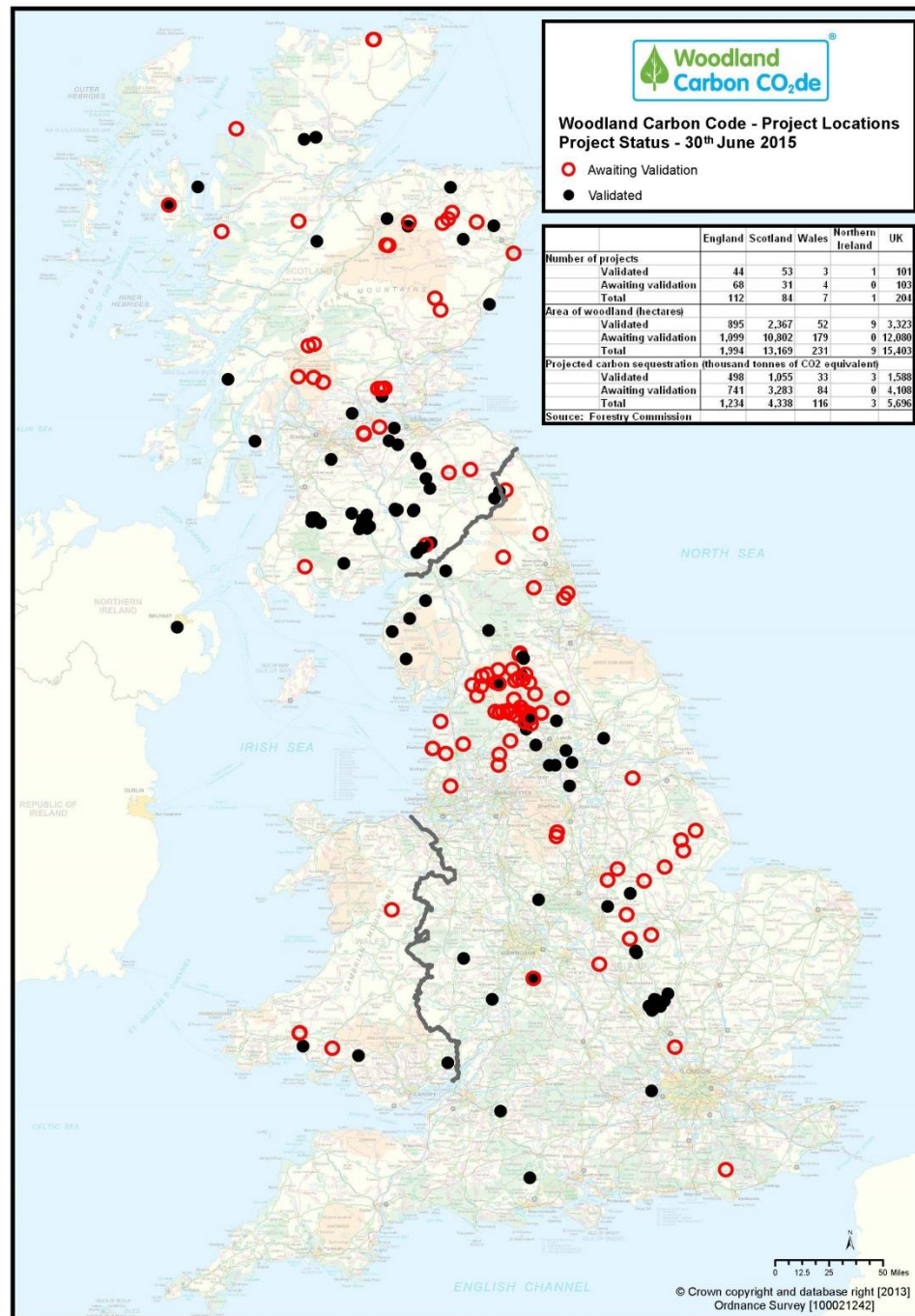
Units available for  
sale

*Still developing...*



## UK as of 30 June 2015:

- **204 Projects registered**
  - 15,400 ha woodland
  - 5.7 MtCO<sub>2</sub> over lifetime
  - **101 projects validated**
  - 3,320 ha woodland
  - 1.6 MtCO<sub>2</sub> over lifetime
- First '**Pending Issuance Units**' listed 2013
- First verified '**Woodland Carbon Units**' due 2016



## **Includes:**

- Woodland creation
- Carbon sequestration and emissions within a woodland

## **Doesn't include:**

- Changes to management of existing woodlands
- Carbon stored in forest products
- Substitution effects (wood products or fuel)
- Avoided emissions from previous landuse





- UK Forestry Standard +
- Additionality
  - Legal : Financial : Barrier
- Permanence
  - Forestry Act, Buffer (15-40% of project carbon)
- Predict and monitor carbon sequestration
  - Baseline : Leakage : Project benefit
- Certification
  - Validation
  - Verification + 5 and then every 10 years

## Registry - Public View



Clear

Search: moorside

Registry:

UK Woodland Carbon Code

All Units

Page 1

Account Holders		Projects	Issuances / Listings		Holdings	Retired Credits			
Vintage	Project	Account	Standard	Project Type	Verifier	Units	Measurement	Type	
2065 - 2075	Moorside Wood	The Green Insurance Company	UK Woodland Carbon Code	No thinning or clearfell	SFQC	1,048	WCU	PIU	<a href="#">View</a>
2055 - 2065	Moorside Wood	The Green Insurance Company	UK Woodland Carbon Code	No thinning or clearfell	SFQC	1,307	WCU	PIU	<a href="#">View</a>
2095 - 2105	Moorside Wood	The Green Insurance Company	UK Woodland Carbon Code	No thinning or clearfell	SFQC	783	WCU	PIU	<a href="#">View</a>
2075 - 2085	Moorside Wood	The Green Insurance Company	UK Woodland Carbon Code	No thinning or clearfell	SFQC	930	WCU	PIU	<a href="#">View</a>
2017 - 2025	Moorside Wood	The Green Insurance Company	UK Woodland Carbon Code	No thinning or clearfell	SFQC	827	WCU	PIU	<a href="#">View</a>
2045 - 2055	Moorside Wood	The Green Insurance Company	UK Woodland Carbon Code	No thinning or clearfell	SFQC	1,636	WCU	PIU	<a href="#">View</a>
2010 - 2017	Moorside Wood	The Green Insurance Company	UK Woodland Carbon Code	No thinning or clearfell	SFQC	80	WCU	PIU	<a href="#">View</a>
2105 - 2110	Moorside Wood	The Green Insurance Company	UK Woodland Carbon Code	No thinning or clearfell	SFQC	317	WCU	PIU	<a href="#">View</a>
2035 - 2045	Moorside Wood	The Green Insurance Company	UK Woodland Carbon Code	No thinning or clearfell	SFQC	3,779	WCU	PIU	<a href="#">View</a>
2025 -	Moorside Wood	The Green Insurance	UK Woodland	No thinning or	SFQC	4,759	WCU	PIU	<a href="#">View</a>



## Land managers

Why?

- Income stream



## Intermediaries

Who?

- Project developers/agents
- Certification bodies
- UKAS
- Markit
- Carbon offset cos.
- Forestry Commission



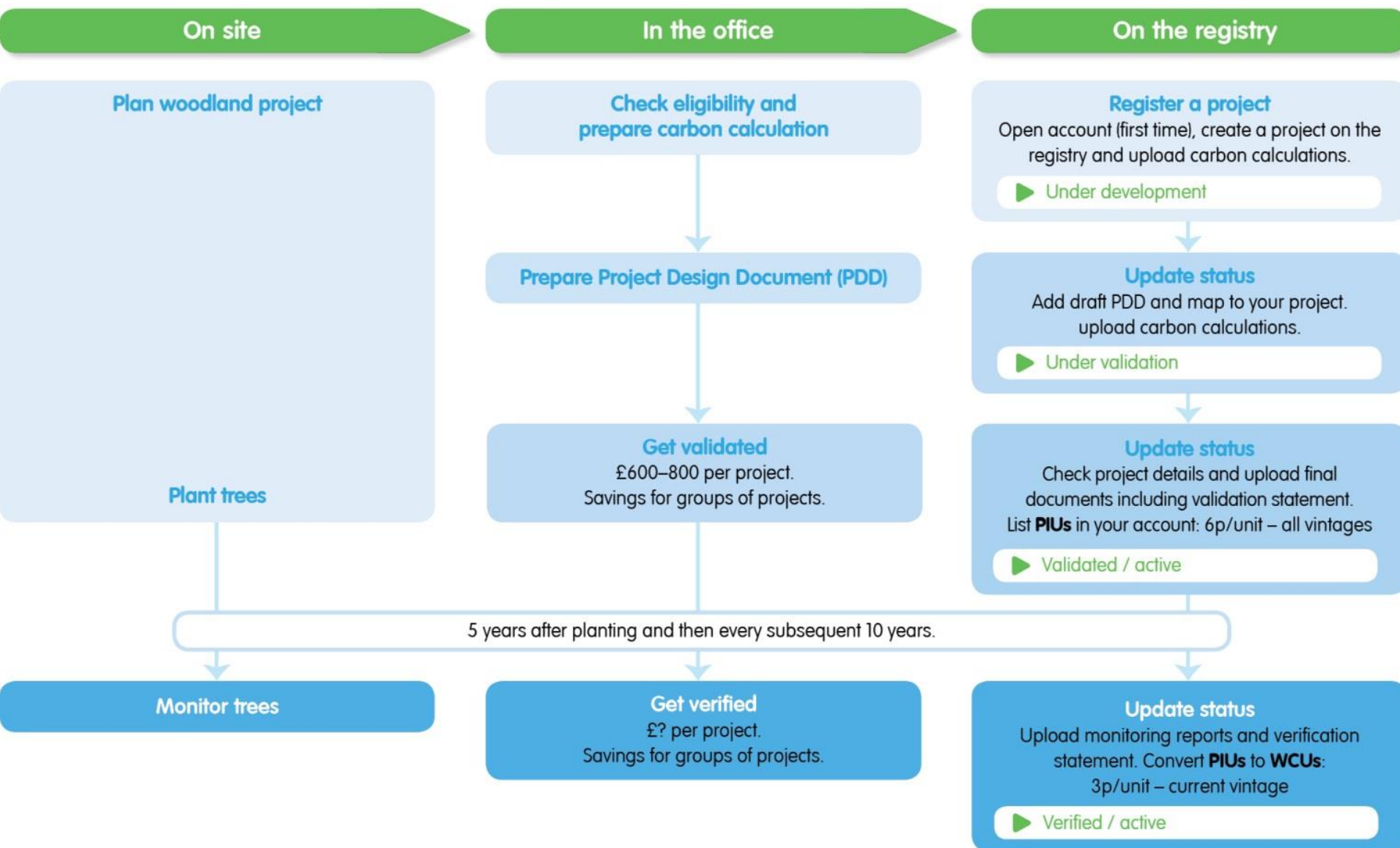
## Investors

Why?

- CSR
- compliance with regulations
- ecosystem impacts on business (cost saving, risk, opportunity)

1. Employ a project developer or DIY?
2. Register your project / group
3. Design your project / group  
PDD: Carbon calculation : Finances : Risk : Other evidence
4. Get certified (=*Validated*' .. Within 3 yrs registering)
5. Stay certified (=*Verified*' .. + 5 and every 10 years)

## Summary of WCC project registration and carbon unit issuance process





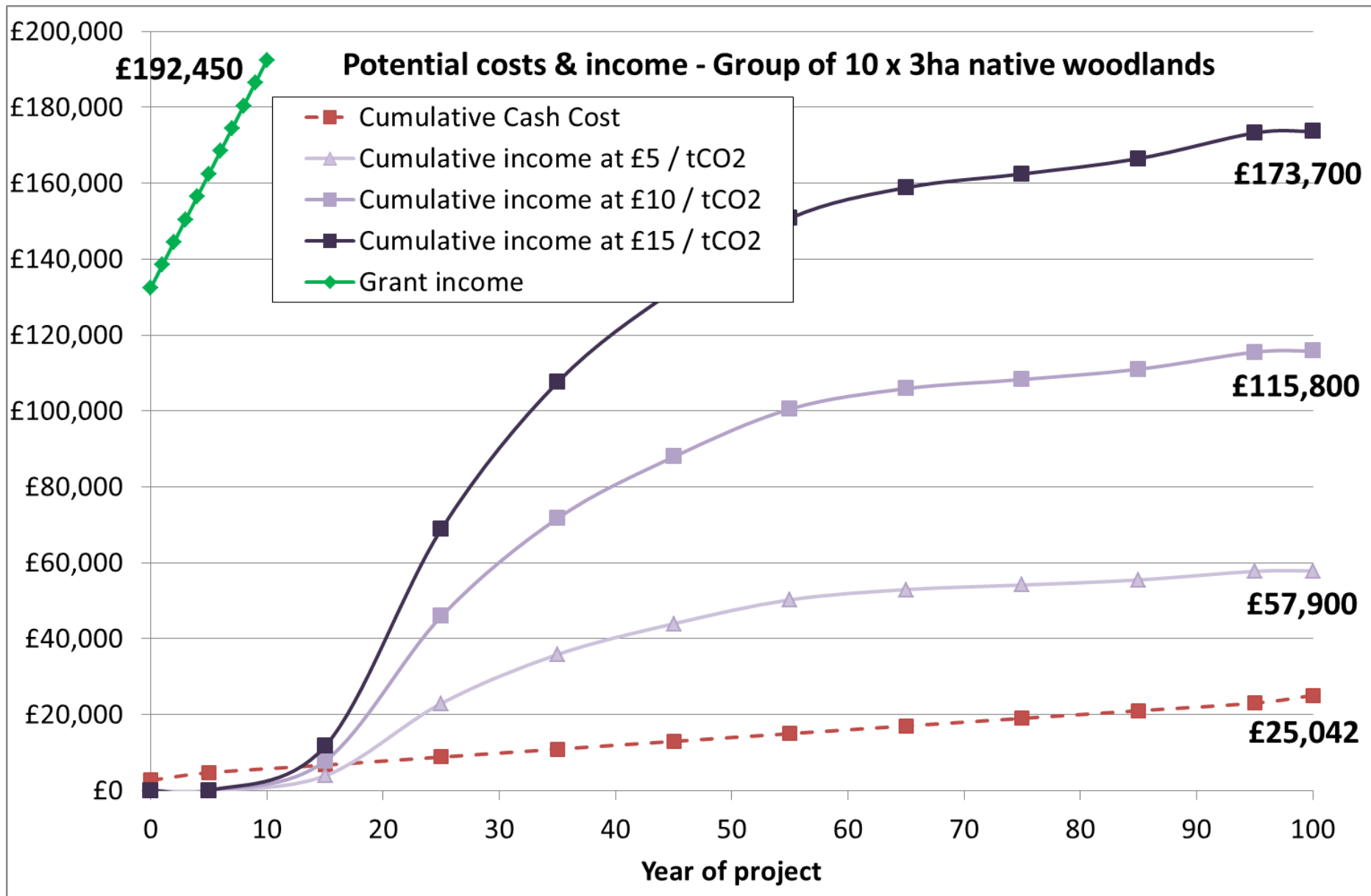
- **Carbon income in advance** = a one off payment at outset.
  - + Helps landowner with establishment cost
  - + Traditional forestry products as future income.
  - Carbon Buyer has to wait to 'use' credits
- **Invest for the future** = sell carbon as its sequestered at each verification.
  - + Regular future income from carbon as well as forestry products
  - ? Carbon price could be higher in future
  - + Carbon Buyer can 'use' credits immediately

Current UK WCC market prices: £ 3-15 / tCO<sub>2</sub>

Global Average 'forestry' price: £ 6 / tCO<sub>2</sub>

Scenario	Saleable/Claimable Carbon Sequestration by year 50	Saleable/Claimable Carbon Sequestration by year 100
Sitka Spruce, 2.0m spacing, Yield Class 16, mounding on organo-mineral soil. Thinned to standard regimes, but no clearfell. 15% risk of non-permanence buffer.	340 tCO <sub>2</sub> /ha.	470 tCO <sub>2</sub> /ha.
Sitka Spruce, 2.0m spacing, Yield Class 16, mounding on organo-mineral soil. No thinning. Clearfell at 40 years. 15% risk of non-permanence buffer.	135 tCO <sub>2</sub> /ha. This would be achieved by year 40, but no further carbon can be claimed.	135 tCO <sub>2</sub> /ha. This would be achieved by year 40, but no further carbon can be claimed.
Mixed native woodland, 2.5m spacing, Yield Class 4-8, mounding on organo-mineral soil. No thin or clearfell. 20% risk of non-permanence buffer.	375 tCO <sub>2</sub> /ha.	470 tCO <sub>2</sub> /ha.

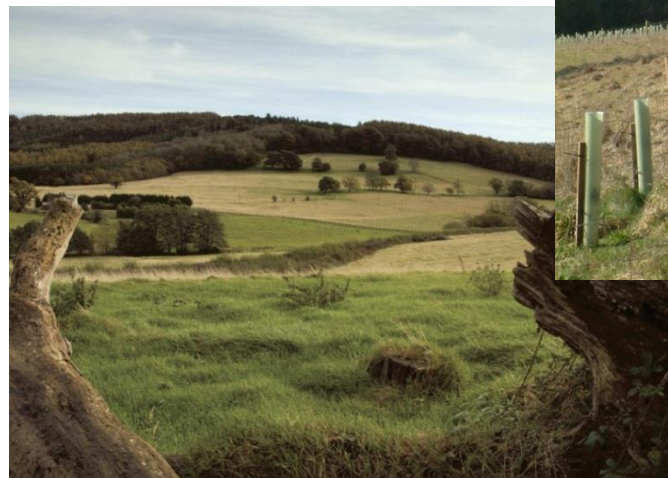
	Productive Upland Forest in Northern Britain	Native Lowland Woodland in Southern Britain
NPV without carbon finance	£1,138/ha	£-2,905/ha
NPV with carbon finance	£1,487/ha	£-1,363/ha
Comments	50 year single rotation conifer, thinning revenues from year 18, felling revenues at year 50	Thinning revenues from year 40
Assumptions	Carbon price = £3/tCO <sub>2</sub> Conifers: YC12 Broadleaves: YC6 Discount rate: 3.5% Exclude income foregone & farmland premium	



- 29ha mixed woodland (native & productive conifer)
- Planted on ex-grazing land in Monmouthshire
- Connects isolated areas of ASNW
- Project Developer: Pryor & Rickett Silviculture
- Will sequester 18,102 tCO<sub>2</sub> over 100 years
  - 15,387 tCO<sub>2</sub> for sale
  - 2,715 tCO<sub>2</sub> to buffer

Thorlux Lighting:

Own & customer  
emissions





# Warcop, Cumbria – 160 has, varied objectives!



Successes	Challenges
Science	Cost vs. robustness
Leadership	Marketing (to investors, landowners & others)
Resources (staff, policy)	Carbon accounting practices & perceptions
A clear and measurable product	Carbon market prices
Partnership (expertise)	Acceptance (landowners, carbon sector, investors)
Infrastructure (e.g. carbon registry, FR carbon models, metrics)	Adaptability

- Verified credits available from 2016
- Complete small woods scheme pilot
- Evidence on wider social and environmental benefits
- Broader scope
  - changes to management of existing woodlands?
  - Harvested wood products?
  - Other payments for ecosystem services?
- International reporting arrangements
- Potential collaboration in the land-use and/or carbon sectors

## Make the case

- Sound evidence (science)
- Business & economic case
- Promotion

## Careful design

- Supporting infrastructure (metrics, registry, verification etc)
- Develop networks
- Engage 'new' expertise

## Carry out pilots

- Partnerships
- Evaluate

## Develop and adapt

- Market developments and trends
- Best practice

## Confidence

- Transparency
- Clear accounting and reporting

[www.forestry.gov.uk/carboncode](http://www.forestry.gov.uk/carboncode)

LinkedIn: 'Woodland Carbon' group

WCC Mailing List

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