

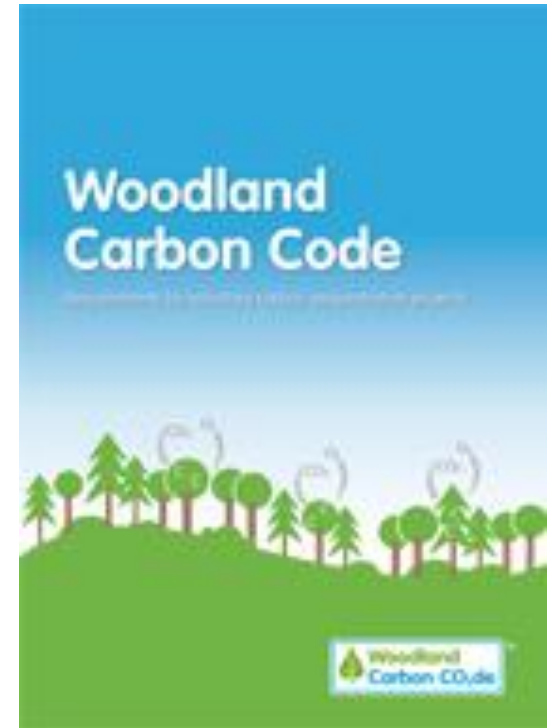
UK Woodland Carbon Code & Agroforestry

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Forestry Commission

**Presentation at Farm Woodland Forum,
Cranfield University on 23 June 2017**

- The UK Woodland Carbon Code
 - Background
 - Elements of a carbon standard
 - Application & Group schemes
- WCC Progress
 - Projects/landowners
 - Buyers
- Costs and potential income
 - Woodlands
 - Low density planting and hedgerows

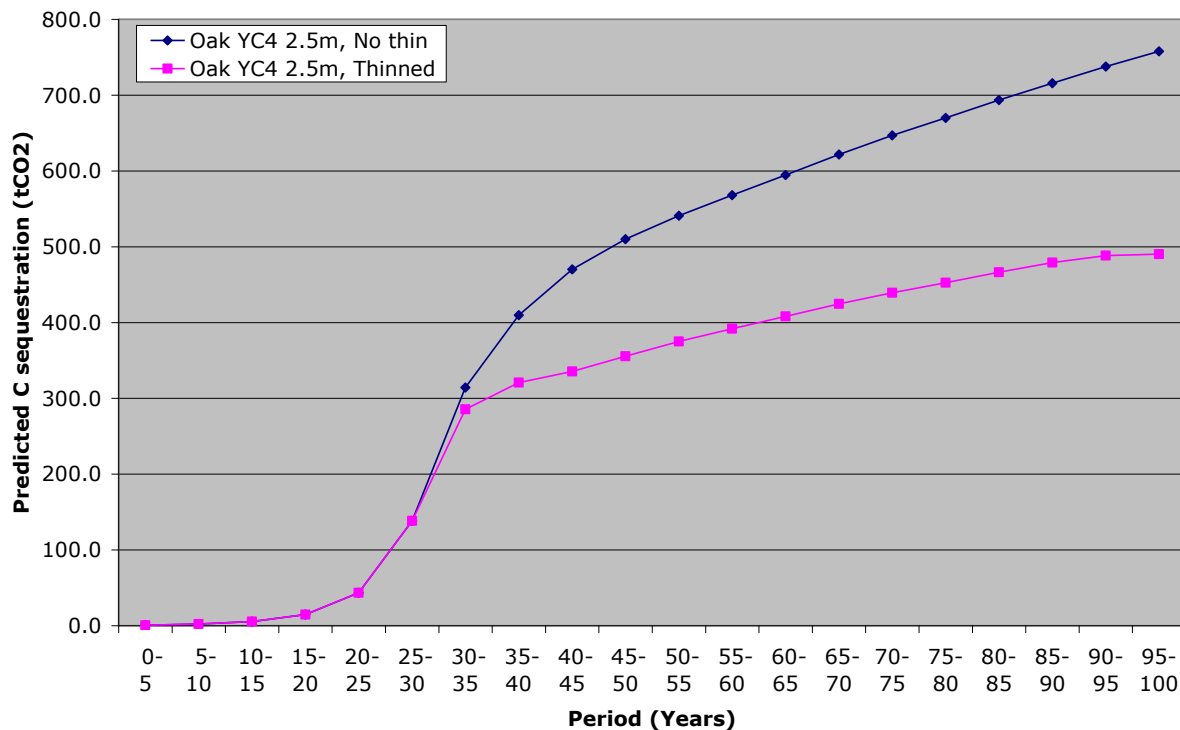
- Launched in 2011
- Woodland creation only
- Account for biomass, soil and management emissions
- **High Standards**
 - > **Robust science**
 - > **Transparent Registry**
 - > **Independent Validation/Verification**
- Launched standard 2015
- Restoration of degraded peatlands



PEATLAND CODE

The Peatland Code logo consists of three square icons: a white sun-like symbol on a grey background, a white swan on a yellow background, and a white leaf on a green background.

- UK Forestry Standard +
- Additionality
 - Legal : Financial : Barrier
- Permanence
 - Forestry Act, EIA regs,
 - Risk assessment, Buffer (15-40% of project C)
 - Requirement to restock if losses to wind, fire, pest & disease, development
- Predict and monitor carbon sequestration
 - Baseline : Leakage : Project benefit
 - Conservative methodology developed with Forest Research
- Carbon Statements & Reporting
- Social and Environmental benefits: Optional to monitor



- Predict Carbon sequestration:
 - 'C Lookup Tables' based on Forest Research models
- Measure carbon sequestration as trees grow:
 - 'Carbon Assessment Protocol' sets out monitoring methods

Registry - Public View



Clear

Search: moorside

Registry:

UK Woodland Carbon Code

All Units

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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	View
2055 - 2065	Moorside Wood	The Green Insurance Company	UK Woodland Carbon Code	No thinning or clearfell	SFQC	1,307	WCU	PIU	View
2095 - 2105	Moorside Wood	The Green Insurance Company	UK Woodland Carbon Code	No thinning or clearfell	SFQC	783	WCU	PIU	View
2075 - 2085	Moorside Wood	The Green Insurance Company	UK Woodland Carbon Code	No thinning or clearfell	SFQC	930	WCU	PIU	View
2017 - 2025	Moorside Wood	The Green Insurance Company	UK Woodland Carbon Code	No thinning or clearfell	SFQC	827	WCU	PIU	View
2045 - 2055	Moorside Wood	The Green Insurance Company	UK Woodland Carbon Code	No thinning or clearfell	SFQC	1,636	WCU	PIU	View
2010 - 2017	Moorside Wood	The Green Insurance Company	UK Woodland Carbon Code	No thinning or clearfell	SFQC	80	WCU	PIU	View
2105 - 2110	Moorside Wood	The Green Insurance Company	UK Woodland Carbon Code	No thinning or clearfell	SFQC	317	WCU	PIU	View
2035 - 2045	Moorside Wood	The Green Insurance Company	UK Woodland Carbon Code	No thinning or clearfell	SFQC	3,779	WCU	PIU	View
2025 -	Moorside Wood	The Green Insurance	UK Woodland	No thinning or	SFQC	4,759	WCU	PIU	View

Validation

- At the outset
- Meets the standard (incl UKFS)
- Validate carbon prediction
- ~ £750 / project
- £ Savings for group validation

Monitoring

- After year 5 and every 10 years
- Field survey (except small woods)
- Assess actual sequestration

Verification

- After year 5 and every 10 years up to 100 years/project length
- Meets the standard (incl UKFS)
- Verify actual carbon sequestration
- ~ £750/project
- £ Savings for group verification

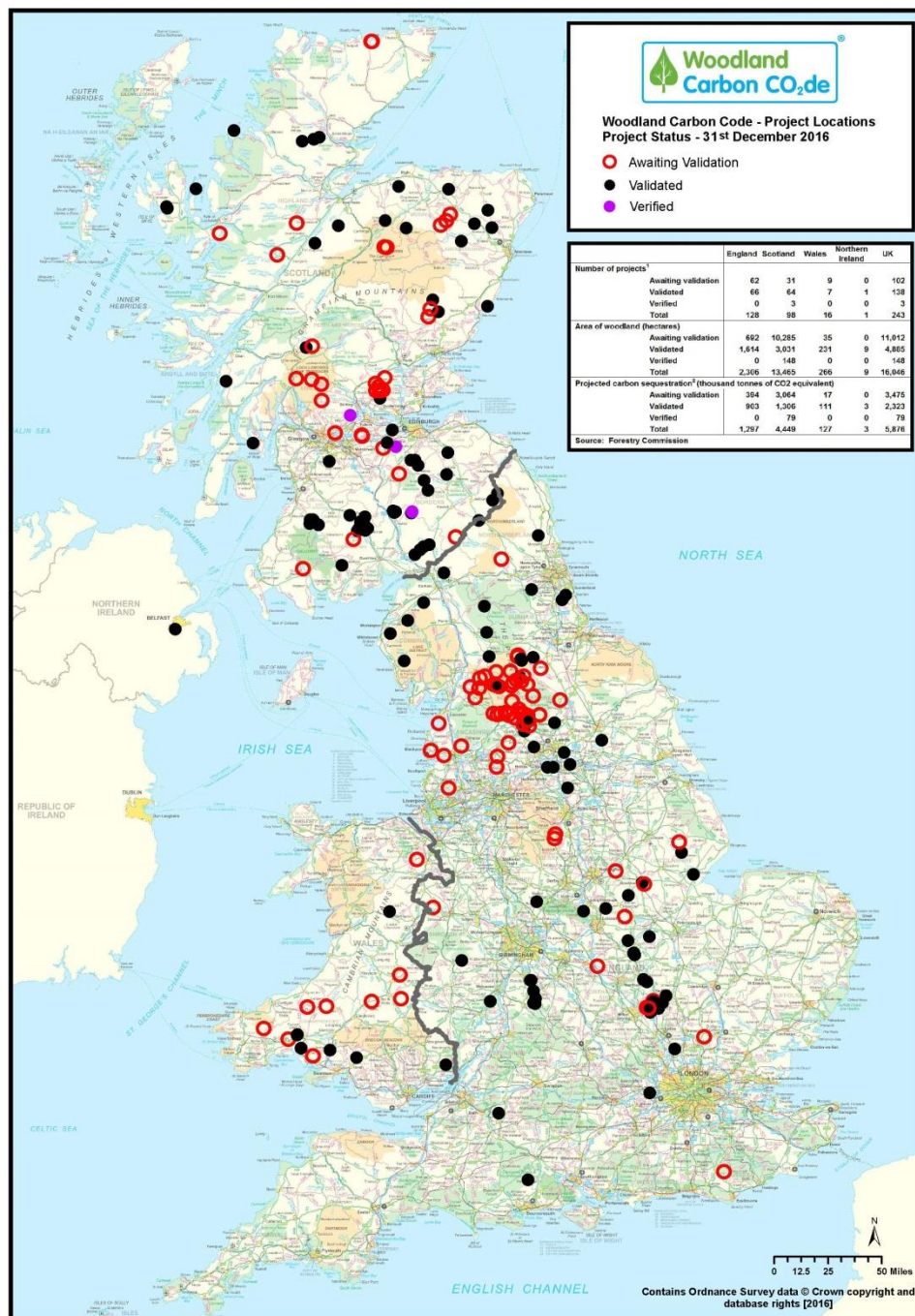
UKAS-accredited bodies:
(ISO14065, ISO14064/3 & UKWAS)



- Single project (normally viable if $> 10\text{ha}$)
- Group of projects (any size)
 - Requires 'group manager'
 - Works well for projects in same ownership/ same project developer or working together in same valley etc.
 - $\sim 40\%$ saving / project on validation/verification cost
- Small woods (projects with net area $< 5\text{ha}$)
 - Requires 'group manager'
 - Time-saving: Simplified carbon prediction, fixed-rate buffer
 - Time-saving: Streamlined process with less admin
 - Time/cost-saving: No field survey at verification after year 5
 - $\sim 40\text{-}50\%$ saving / project on validation/verification cost
 - More conservative C estimate / slightly less C to sell.

UK as of 31 Mar 2017:

- **250 Projects registered**
- 16,153 ha woodland
- 5.9 MtCO₂ over lifetime
- **140 projects validated**
- 5,000 ha woodland
- 2.4 MtCO₂ over lifetime
- **3 projects verified (yr 5)**
- 150 ha woodland
- 79,000 tCO₂ over lifetime
- **40 Project Developer accounts**
- **14 Project Developers with validated projects**
- **70 Corporate Buyers**



- 'Standard' Group of 5 projects, 2-13 hectares
- Project Developer: YDMT
- Will sequester 15,000 tCO₂ over 100 years
 - 13,000 tCO₂ for sale
 - 2,000 tCO₂ to buffer
- On small upland farms, previously grazed (sheep)
- Increase biodiversity/connectivity → low wood cover



- James Lonsdale's group, planted 12/13 and 13/14
- 4 sites, 1.5-5.5 ha, 13.5 ha total.
- Mostly formerly pasture, planting native woods
- Mostly near towns
- 6,511 tCO₂ total (5,209 tCO₂ to sell, 1,302 tCO₂ to buffer)
- 'Small woods' group
- Simpler, conservative carbon prediction
- No field survey@ verification
 - assume prediction right
- Less work and cash cost
- Conservative and small % of total carbon in WCC



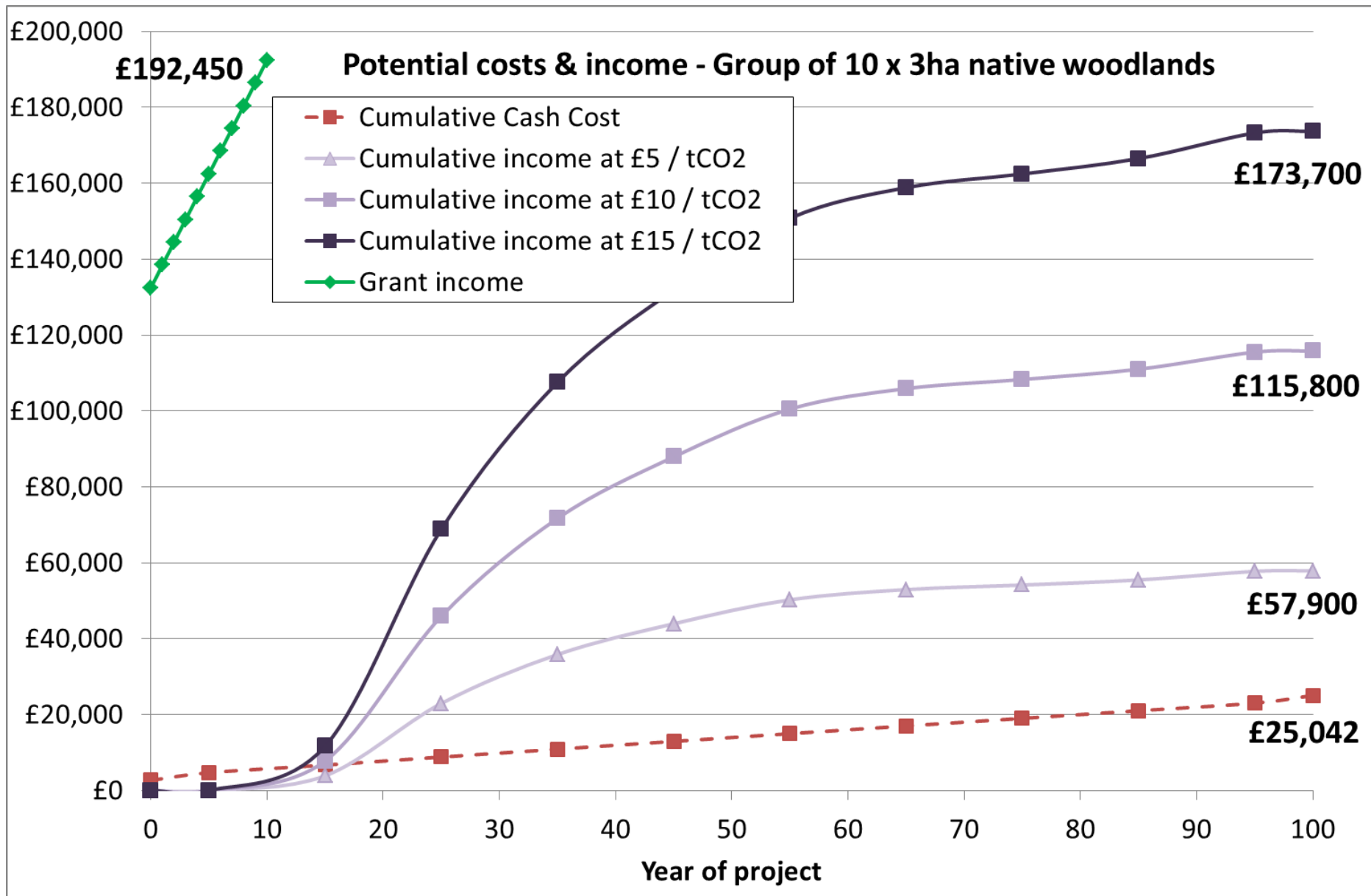
- Since 2015 with Forest Carbon
- To compensate for the emissions of fuel card users over time.
- Card users pay a per-vehicle contribution to buy carbon units
- Bought carbon from 8 projects +



Why?

- aware that vehicle emissions account for a significant proportion of the nation's carbon footprint;
- large customer base → help many smaller businesses take action
- collective buying power of customer base → a cost effective mechanism
- Like multiple and local benefits from UK woodland creation





Country	Grant Detail	Capital Grant Rate	Annual Payment	Notes
Scotland	Agroforestry 400/ha	£3,600/ha	£84/ha 5 yrs	Continue grazing & Basic Farm Payment
	Agroforestry 200/ha	£1,800/ha	£48/ha 5 yrs	
Wales	Agroforestry 80/ha	£1,600/ha	£30/ha 5 yrs	Continue grazing & Basic Farm Payment
England	Low density woodland creation – from 400/ha	From £1152/ha (tree+shelter) plus fencing	Up to £200/ha 10 yrs	Exclude stock as 'woodland'?

- Silvo-arable – Tree planting on current grazed pasture

Stems/ha	Average spacing (m)	Claimable Sequestn (tCO ₂ /ha)	C income at £5/tCO ₂ (£/ha)	C income at £10/tCO ₂ (£/ha)
1,100	3.0	386	£ 1,930	£ 3,860
400	5.0	140	£ 700	£ 1,400
200	7.0	70	£ 350	£ 700

- Mixed Broadleaved woodland, No thinning
- Growing at Yield Class 4 (conservative)
- Carbon sequestered in tree biomass
- 20% put aside in WCC buffer
- Conservative estimate of growth
- 100 year project

Hedge height (m)	Hedge width (m)	Claimable Sequestn (tCO ₂ /km)	C income at £5/tCO ₂ (£/km)	C income at £10/tCO ₂ (£/km)
2.0	1.5	30.8	£ 191	£ 308

- Hedge carbon estimate from Matthew Axe PhD (2015) – 20% buffer

www.forestry.gov.uk/carboncode

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LinkedIn: 'Woodland Carbon' group

WCC Mailing list