

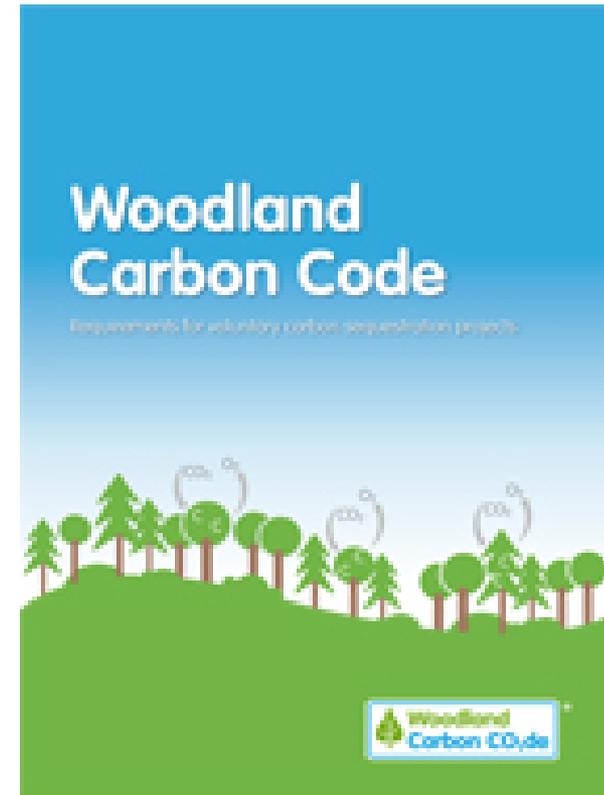
Woodland Carbon Code

Mike Jones

Forestry Commission

- Background
- The Code
- Applying - Practicalities
- Examples
- Future developments

- Ensure high standards in UK forest carbon market
- Clarity and transparency to bolster market confidence
- Rigorous scientific basis
- Increase private investment in woodland creation



- Set framework that could support mandatory market in future

All UK woodland creation contributes to the UK's emissions reduction target (Kyoto Protocol)

GHG emissions reporting is **mandatory** if company listed on stock exchange

DEFRA Environmental Reporting Guidelines allow companies to report verified Woodland Carbon Units

UK forests do not create C 'offsets' that can be traded in EU ETS or used in Carbon Reduction Commitment



Department
for Environment
Food & Rural Affairs

Environmental Reporting Guidelines:
Including mandatory greenhouse gas emissions
reporting guidance
June 2013

2007/2011

Design

2010/2011

Pilot

July 2011

Launch Woodland
Carbon Code

2012/2013

Pilot & launch
group scheme

2012/2013

Develop & launch
carbon registry

2014

Units available for
sale

Still developing...



Department
for Environment
Food & Rural Affairs



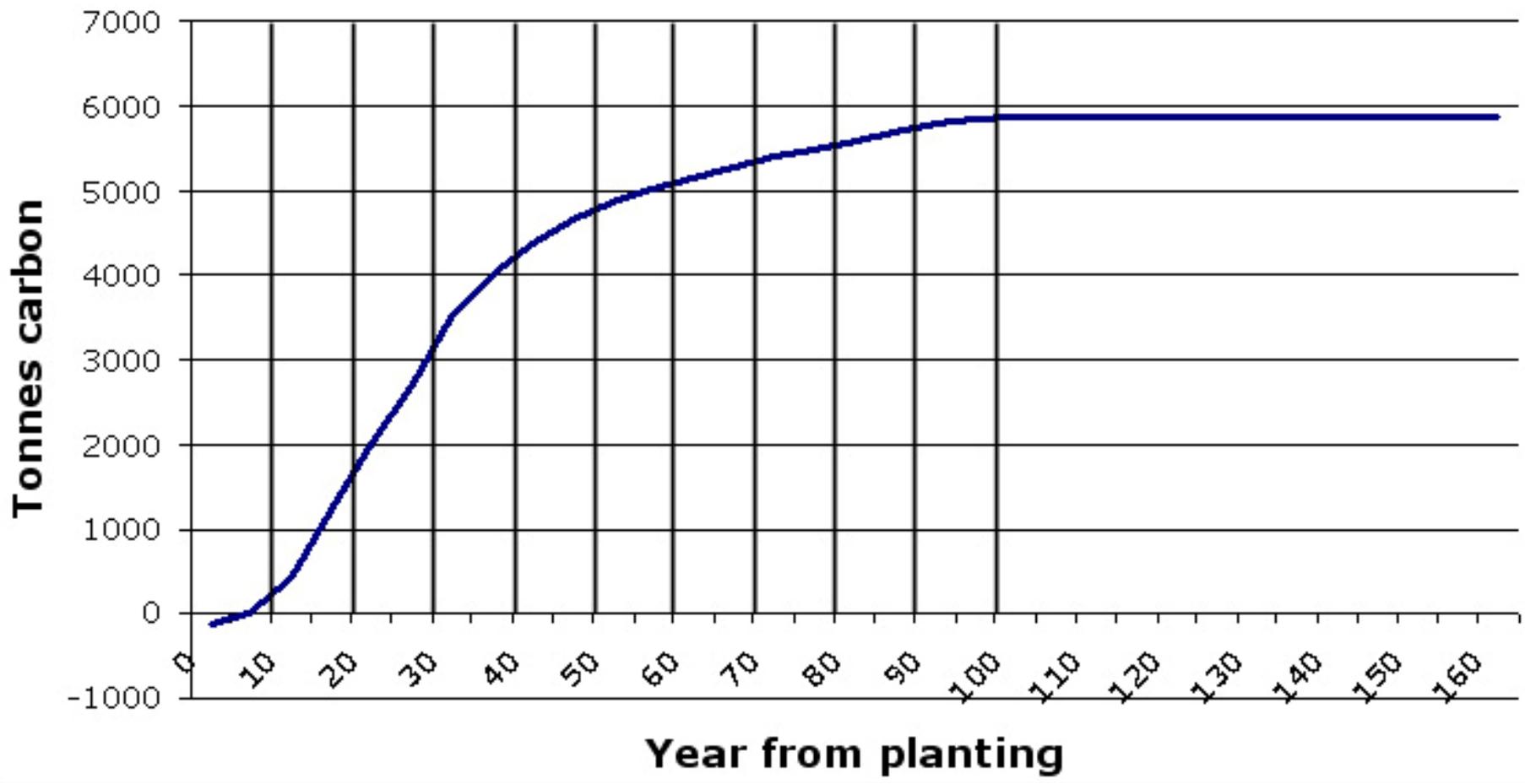
Forestry Commission

FC England

FC Scotland



Carbon sequestration



- PIUs and WCUs
- Pending Issuance Unit. Calculated at the beginning of the project – a promise to deliver a tonne of carbon at a future date.
- Woodland Carbon Unit. At each 1 yearly verification, PIUs are converted to WCUs
- Both PIUs and WCUs can be bought and sold but only WCUs can be used in carbon reporting

Registry - Public View


 Search: Registry:

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

- Employ a project developer or carbon broker?
- Design your project or group of projects
 - PDD: Carbon calculation : Finances : Risk : Other evidence
- Register your project or group (..within 2 yrs planting)
- Get certified (=*Validated*' .. Within 3 yrs registering)
 - SGS or SFQC
 - Single project or group
- Stay certified (=*Verified*' .. + 5 and every 10 years)

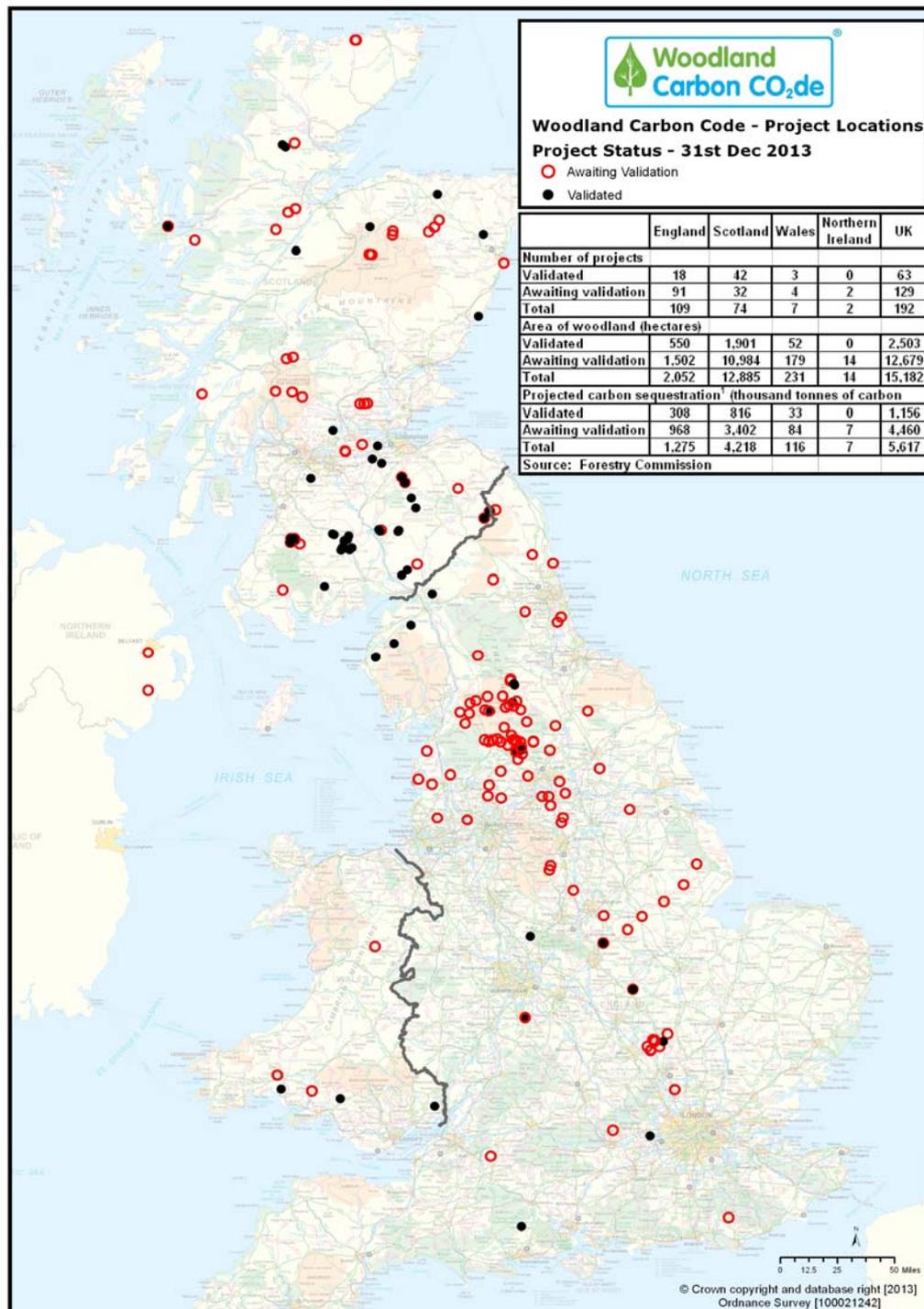
- **Carbon income in advance** = a one off payment at outset. (Selling your PIUs)
 - + Helps landowner with establishment cost
 - + Traditional forestry products as future income.
 - Carbon Buyer has to wait to 'use' credits
- **Invest for the future** = sell carbon as its sequestered at each verification.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

To date:

- >190 projects registered
Will create 15,000ha woodland
Will sequester > 5.6 MtCO₂
over lifetime (100 years)

- 63 projects validated
Will create 2,500 ha woodland
Will sequester 1.1MtCO₂
over lifetime (100 years)

- Verified credits will be available from 2016

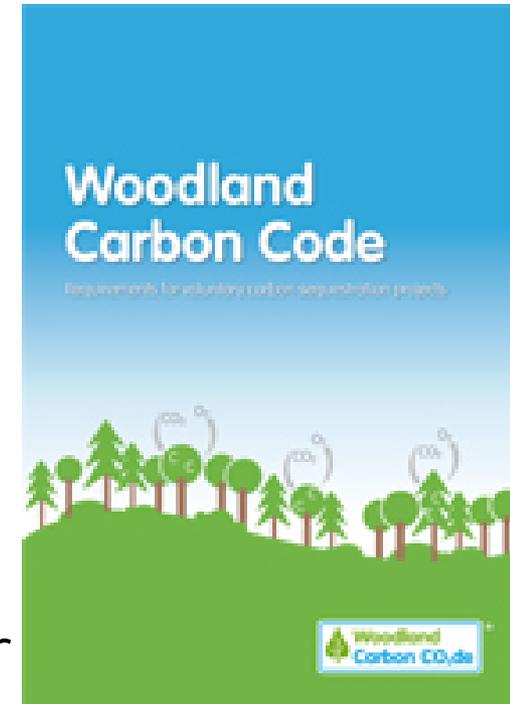


Includes:

- 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

Current UK prices: £ 3-15 / tCO₂

Global Average 'forestry' price: £ 6 / tCO₂

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 ₂ /ha.	470 tCO ₂ /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 ₂ /ha. This would be achieved by year 40, but no further carbon can be claimed.	135 tCO ₂ /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 ₂ /ha.	470 tCO ₂ /ha.

- 12ha native woodland planted on ex-grazing land on farm with arable/cattle/sheep.
- Project Developer & C broker: Forest Carbon
- Green Insurance Company bought most of CO₂
- Will sequester 5,700 tCO₂ over 100 years
 - 4,800 tCO₂ to sell, 900 tCO₂ to buffer



New planting at Reathwaite – June 2011



Reathwaite stakeholders assess the new woodland

- YDMT Group: 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
- Comply Direct marketing/selling carbon units

Lamberts Wood



Storthwaite



- White Rose Forest Group: 10 projects, 2ha – 40 ha
- LA + private-owned sites Leeds/Wakefield/Bradford
- Project Developer - White Rose Forest
- Will sequester 28,000 tCO₂ over 40 years
 - 23,000 tCO₂ for sale
 - 5,000 tCO₂ buffer



21 Acre Field

- BWOC have helped to fund four new woodlands in England and Scotland which will capture more than 20,000 tonnes of CO₂ for the company over the decades to come

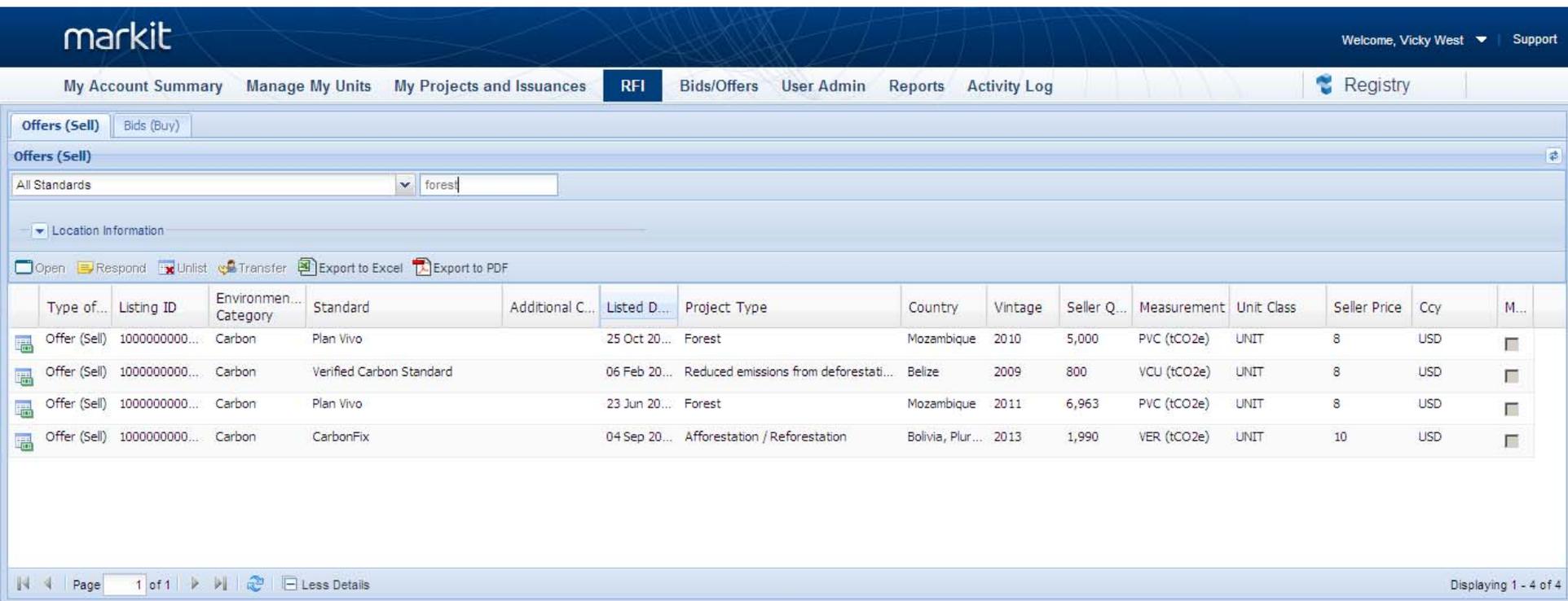


- Bought land at Cwm Fagor in Wales and created almost 30 hectares of native woodland.
- It now owns a resource which will sequester more than 15,000 tCO₂



- Via Markit Environmental Registry
 - Request for Information Platform: Sell Units
 - markit.com
- Via 'broker'
 - forestry.gov.uk/carboncompanies
- UK Carbon Reporting Framework
 - Advertise your project ukcarbonreporting.org
- Find a local business

- Markit's RFI platform = 'For Sale' & 'Wanted' board for carbon units
- Available for use by WCC projects by Oct/Nov 2013



The screenshot shows the Markit RFI platform interface. The top navigation bar includes 'markit' logo, user information 'Welcome, Vicky West', and 'Support'. Below the navigation bar are tabs for 'My Account Summary', 'Manage My Units', 'My Projects and Issuances', 'RFI' (selected), 'Bids/Offers', 'User Admin', 'Reports', and 'Activity Log'. A 'Registry' button is also visible.

The main content area is titled 'Offers (Sell)' and includes a search filter for 'All Standards' with a dropdown menu set to 'forest'. Below the search bar are tabs for 'Offers (Sell)' and 'Bids (Buy)'. A 'Location Information' dropdown is also present.

Below the search bar are icons for 'Open', 'Respond', 'Unlist', 'Transfer', 'Export to Excel', and 'Export to PDF'. The main table displays a list of offers for sale with the following columns: Type of..., Listing ID, Environment Category, Standard, Additional C..., Listed D..., Project Type, Country, Vintage, Seller Q..., Measurement, Unit Class, Seller Price, Ccy, and M... (More).

Type of...	Listing ID	Environment Category	Standard	Additional C...	Listed D...	Project Type	Country	Vintage	Seller Q...	Measurement	Unit Class	Seller Price	Ccy	M...
Offer (Sell)	10000000000...	Carbon	Plan Vivo		25 Oct 20...	Forest	Mozambique	2010	5,000	PVC (tCO2e)	UNIT	8	USD	<input type="checkbox"/>
Offer (Sell)	10000000000...	Carbon	Verified Carbon Standard		06 Feb 20...	Reduced emissions from deforestati...	Belize	2009	800	VCU (tCO2e)	UNIT	8	USD	<input type="checkbox"/>
Offer (Sell)	10000000000...	Carbon	Plan Vivo		23 Jun 20...	Forest	Mozambique	2011	6,963	PVC (tCO2e)	UNIT	8	USD	<input type="checkbox"/>
Offer (Sell)	10000000000...	Carbon	CarbonFix		04 Sep 20...	Afforestation / Reforestation	Bolivia, Plur...	2013	1,990	VER (tCO2e)	UNIT	10	USD	<input type="checkbox"/>

At the bottom of the table, there is a pagination control showing 'Page 1 of 1' and a 'Less Details' button. The status bar at the bottom right indicates 'Displaying 1 - 4 of 4'.

- Monitoring & Verification
- Scope
 - Changes to management of existing woodlands?
 - Harvested wood products?
- Social and environmental benefits
- International reporting arrangements
 - Review + Options?

PEATLANDC^oDE


Department for
Communities and
Local Government

Next steps to zero carbon homes
- Allowable Solutions
Consultation

August 2013

Department for Communities and Local Government

PAS 2060:2010
Specification for the demonstration
of carbon neutrality





www.forestry.gov.uk/carboncode

LinkedIn: 'Woodland Carbon' group
WCC Mailing List

climatechange@forestry.gov.uk