

Carbon capture

Following the government's 25-Year Environment Plan, which mentions stronger domestic carbon 'offset' mechanisms, and the BEIS (Department for Business, Energy and Industrial Strategy) consultation on merging disparate carbon policies, some believe (and have stated publicly) that it is currently hard to mitigate carbon in the UK. Steve Prior of Forest Carbon has agreed to appear in 'A Day in the Working Life', one of a series of occasional features on roles within forestry, in part to set the record straight. Carolyne Locher reports.

IN 2009, as part of a panel of experts, Forest Carbon helped the Forestry Commission (FC), Forest Research (FR, carbon modeling) and Defra to develop the Woodland Carbon Code (WCC). While you may have heard of Doddington North Woodland, the largest new woodland planting scheme to be approved in decades, you may not know that Forest Carbon will be providing an amount of 'critical funding' (the financial gap between the grant funding available and future timber revenues) to the project, via the sale of carbon credits to partner businesses wanting to support new woodland planting schemes that otherwise would not have got off the ground.

Forest Carbon, formed by Steve and business partner James Hepburne Scott in 2006, develops carbon woodland projects and offers mitigation and advisory services to a range of clients. Forming the company was a no-brainer, the logical next step on the road to facilitating the development of a domestic carbon market, a subject first suggested by James as an MBA dissertation topic, subsequently snapped up and researched by Steve.

Through his MBA dissertation on environmental economics and the opportunity for UK forestry to benefit from the carbon market, he met James and was invited by the FC to deliver his findings on the possibility of developing a domestic carbon market during the UN Conference COP 11 in Montreal in 2005.

Forest Carbon planted their first carbon woodland project in 2006, at College Valley in the Northumberland National Park, on behalf of Marks and Spencer. Since then, they have provided critical funding for 130 woodlands within the UK, in the majority of cases (75%) the carbon being purchased from whole projects by single businesses. Covering an area of approximately 4,500 ha, and containing seven million trees (25% conifer/75% broadleaf of which 1/3 is birch), these 130 woodlands will capture or mitigate 1.5 million tonnes of CO².

"We are not 'trading carbon'," says Steve. "That's a common misunderstanding. We are using investment from businesses, in recognition of their carbon footprints, to get sub-economic woodland creation projects off the ground. There's a very real output here - new woodlands in the UK offer multiple local benefits alongside the

A KEY REQUIREMENT FOR THE WORK STEVE DOES IS AN ENQUIRING MIND.

sequestration of carbon dioxide."

Many of Forest Carbon's early projects have reached Growth Year 5 and require their first verification for continued certification under the Woodland Carbon Code (in accordance with WCC rules and occurring at Year 5, Year 15, Year 25 and so on). George Hepburne Scott joined Forest Carbon (from Savills) last year, in part to help carry out this work, as well as to develop new partnerships with businesses and project hosts.

Working remotely, the team meet frequently in locations across the north of England and in Scotland and have verified 24 of their 130 carbon woodlands so far. For business strategy meetings, they meet every couple of months in city locations or at one another's homes.

Steve divides his time between consultancy (writing reports, advice and responses to various policies, developing economic modelling and carbon mitigation scenarios) and getting out and about,

attending and speaking at conferences, meeting potential partners and suppliers and managing relationships with existing partners and suppliers. He also manages the business - dealing with accountants, designers, web developers and more.

Last week, he was in Dublin with Irish government forestry officials and Natural Capital Committee members, sharing Forest Carbon's experiences in the UK. The day before our meeting, he was in Edinburgh (with James and George) meeting with Confor on the potential for the carbon market to contribute to productive forestry in the UK.

He elaborates, "The size of the UK's carbon footprint versus the potential supply of woodland carbon credits means there is potentially significantly more demand than supply in the market. The Read Report (2009) suggests that increasing planting levels to 23,000 ha per annum - from somewhere in the range 7,000 to 10,000 ha - from 2010 to 2050 would be feasible, taking forest cover from 12% to 16%. This would include productive planting. We



Left: Steve Prior pictured at the Business Design Centre in Islington, London, during the Edie Sustainability Leaders Forum conference.

Below: James Hepburne Scott on site verifying a woodland in growth-year 5.

need to talk to organisations like Confor to get them more used to including carbon in conversations."

A key requirement for the work Steve does is an enquiring mind. We meet briefly for this feature during a lunch break on the two-day Edie Sustainability Leaders Forum conference. His attendance at this conference, to gauge the latest in sustainability thinking, is sandwiched between two meetings with potential critical funding project partners.

"We generally have carbon credits readily available in different sizes and locations. The smallest project we have developed is a 2-ha woodland in Staffordshire, capturing

nearly 1,000 tonnes of carbon. Our largest, before Doddington, was a 270-ha woodland capturing 81,000 tonnes of carbon near Inverness, and including a productive element across one third."

Potential funding partners come from a variety of sectors - retail, financial services, business services and transport. All are mitigating voluntarily. "Our funding partners want to mitigate locally (UK), over and above any mandatory requirements. They are not 'trading' carbon, they are buying the credits and cancelling them in recognition of the environmental impact of their business activities."

Partners provide funding for a variety

A DAY IN THE WORKING LIFE

of reasons, perhaps to mitigate business vehicle delivery emissions or, as in the Republic of Ireland (Forest Carbon's first project abroad), Microsoft are investing in 130 ha of afforestation (over two years) in recognition of the impact (energy consumed) of their data centres.

The amount of critical funding sought or offered is project specific. "Our partners, from small, five-man businesses to FTSE-100 listed companies, like investing in woodlands. Investing in woodland carbon not only allows you to make some sort of contribution to mitigating your carbon footprint, it also offers a host of other benefits locally or nationally, for example flood mitigation, biodiversity, and social (health, economic) benefits. With productive woodland we will eventually get a contribution to reducing imports of timber (the UK is currently the second largest importer of timber globally). Each new woodland is different and has its own story. I think the businesses we work with enjoy the variety that different projects offer beyond carbon capture."

Project hosts (suppliers) have included farmers, smallholders, estates, local authorities, the government (Crown Estate), environmental charities and National Parks. Potential suppliers are identified at conferences or respond to the small notices that Forest Carbon place in the forestry press, explaining how mitigation works. "Consultants and forest managers come to us early on in the woodland design and application process."

As with any new woodland planting application, supply-side variables include location, land values, soil type, the size of the proposal and species planted, the lifespan required and whether or not part of the woodland may be productive. "We identify where grant funding (and if productive, future timber income) falls short and whether carbon funding can fill the gap. We then work through their woodland plan, responding to local needs and detailing the carbon consequences of the decisions taken throughout."

For example, "Flood mitigation involves a lot of long plantings up the sides of water courses. This can be more costly than planting a large flat area." To date, most plantings are in northern England and Scotland, "where it makes economic sense to convert land to woodland if there is some carbon funding attached."

A significant proportion of Forest Carbon's woodlands contain a productive timber element. "A buyer does not discern between the CO₂ values of conifer versus broadleaf. In all woods - especially productive ones - they are investing in carbon from a woodland rather than from individual trees, as all will eventually be



George Hepburne Scott and James Hepburne Scott.

replaced by death and natural regeneration or felling and replanting. Under WCC models, productive woodlands produce slightly less carbon capture per hectare. We count the long-term 'average' stored at a site, which will be approximately half the 'peak'."

Carbon mitigation values are based on management plans. Scenarios are adaptable to reflect thinning, CCF or clearfell forestry. "Productive woodlands have great carbon credentials, because much of the timber will end up storing carbon down the chain and new trees growing on the same sites capture more carbon. We are currently working with the FC, trying to quantify any downstream carbon benefits and add it back to the project. WCC modelling also allows for 40% buffering across a project (taking into account losses caused by pests and disease or climate change as stipulated by the WCC), making carbon capture estimates fairly conservative."

Carbon (critical) funding is paid in phases, as and when plantings are complete. This can help with a project's liquidity. "Stage 1 WCC-certification, called validation, comes when the planting is completed. Electronic credits, called pending issuance units (PIUs), are then issued via the Markit Registry. These are, in effect, promissory notes saying, 'Conservatively, we expect this woodland

to capture this amount of carbon over its lifetime, so here is the equivalent number of credits'. As projects are recertified these credits are converted to Woodland Carbon Units (WCUs) in recognition of the woodland growing as expected. The high degree of conservatism in the projections makes it likely this will be the case."

Ownership of PIUs is transferred to buyers (partners) on the Registry as and when investments are made. Once transferred to the buyer, these credits cannot be transferred onwards, preventing trading and reuse. "For project hosts, we do initial feasibility studies, validate and certify the project, sell the carbon, manage relations with the buyer, manage the carbon credit registry and keep the project certified. For buyers, we manage the sales contracts, site visits, and carbon credit registry; help with copywriting, marketing and PR, keeping wording within government guidelines; and, in the long term, maintain the certification of the projects."

Certifying 24 carbon woodlands at Growth Year 5, Forest Carbon is actually helping to develop the WCC verification methodology during these site visits.

There is a certain irony in that, during the course of his work, a car is Steve's most important piece of equipment. To mitigate these emissions, Forest Carbon invests in its own carbon. Looking to the future, the

company is also maintaining a separate investment fund that will cover the costs of long-term verification liabilities. "One of the reasons George joined us was about taking the business into the future, maintaining continuity."

On the consultancy side, Steve has worked for Defra on the carbon economics of a new Peatland (Carbon) Code (organised by the International Union for the Conservation of Nature (IUCN)) to be run along the lines of the WCC. "There are more mitigation opportunities with peat. Peat bogs are emitters (10 million tonnes of CO₂ annually in the UK). Restoring one is an instant prevention of these emissions, whereas forests represent future capture. Costing roughly the same financially, we are still testing the economics." On a project developed by George, Forest Carbon has just finished involvement in the UK's first peatland rewetting project validated under the Code, 77 ha in the Scottish borders, avoiding emissions of 6,000 tonnes of CO₂.

INVESTING IN
WOODLAND CARBON
OFFERS A HOST OF
OTHER BENEFITS,
LOCALLY OR
NATIONALLY

As a guest presenter, Steve recently returned to Durham University Business School to outline Forest Carbon's work to current students. The recent invitation to meet with Irish government forestry officials was extended after one official, attending the EU Committee of the Regions conference (Brussels, September 2017), saw Steve's presentation on the use of carbon markets to protect European old-growth forests: "In Europe, it might be persuading landowners that there is a better economic use for their old forests, selling the carbon credits rather than selling the trees."

Attending North East England Entrepreneur Forum events, recently hosted by Skyscanner in Edinburgh, he learns a lot about business. "Hearing motivated, innovative people talk about their ideas and the challenges they have faced is always interesting. For us, we are asking people to invest in something voluntarily. While

it is good thing, with multiple benefits for society, it costs money that a business then has to justify to themselves and to shareholders."

Forest Carbon currently has ten carbon woodland projects in the pipeline, including Doddington North Woodland (the recipient of grants accessed from the Woodland Carbon Fund). Has all the work been worth it?

Steve concludes, "You never know how influential you are. We started our business without a Woodland Carbon Code. With others, we lobbied the FC for some kind of quality assurance standard in this area, which was needed if carbon mitigation was ever going to become something. Eventually the code was formulated. We played a part in that and in the Peatland Code. I am glad to see that, in the UK at least, calls for nature protection and restoration are being heeded, coming together in things like the Natural Capital Committee, the new Environment Plan and the developing UK landscape carbon market."

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