Cyngor Abertawe Swansea Council

Llywodraeth Cymru Welsh Government

URBAN FOUNDRY

Developing a local carbon offsetting business

March 2019

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1. Introduction

Urban Foundry ('we') were commissioned by Swansea Council on behalf of the Rural Development Partnership Local Advisory Group ('RDP LAG') to explore the potential for developing a localised Carbon Offsetting project.

The findings of our work were presented to the meeting of the RDP LAG in February 2019. This report is a brief summary of the findings of the work to supplement that earlier presentation.

Background and context

This commission was initially focused on developing an exit strategy from funding for a small community tree planting initiative – Coeden Fach, which specialises in growing and planting local provenance trees, and in the process of doing so engages with schools and community groups to provide educational and community benefits.

Coeden Fach had discussed the idea of planting local provenance trees as a means of formally offsetting carbon with various parties locally. The focus was on smaller organisations able to make spending decisions locally to offset carbon, playing on the local provenance and hyper local aspect of the project and in so doing generating longer-term and sustainable earned income stream for an organisation currently heavily reliant on public funding. We were initially commissioned to explore this as a means of making Coeden Fach a more financially sustainable organisation.

The work commenced with analysis of Coeden Fach as an organisation, its strengths and weaknesses, its core aims (outcomes) and its capacity, before then beginning to explore the concept of how such an organisation could move into carbon offsetting.

It became swiftly apparent that to enter into the formal carbon offsetting market place, Coeden Fach would need to grow significantly, and take on a level of risk and development out of proportion to its current size and aspirations – there was a very real danger that the organisation's core mission (to plant local provenance trees) could be swamped or even lost entirely in the process and Coeden Fach agreed with our assessment. So, the project was halted, with a brief report to RDP LAG at that stage.

Our recommendation at that stage was for us to focus our efforts on alternative means of developing an exit strategy from funding for Coeden Fach. However, with other avenues of social enterprise support open to Coeden Fach, the decision was taken by the RDP LAG to allocate the remainder of the budget towards developing the scope for a carbon offsetting scheme (or some variant thereof) for the local area.

This report focuses on the latter, with write-ups of previous workshops held with Coeden Fach provided to them directly prior to the change in emphasis of the contract.

Approach

The remaining budget was around 7 days of our time (including report writing), and so we focused on a brief desk-based review of literature on the subject matter, plus a qualitative set of interviews with several local businesses to determine potential market interest in the idea, followed by consideration the feasibility of developing,

promoting and delivering a viable local initiative focused on carbon offsetting (or a variation on that theme) in the local area.

The focus of our research was smaller businesses located in the area, primarily Swansea with some from the wider City Region – review of literature and discussion with those knowledgeable in the carbon offset market indicated that larger businesses, national and internationals, were unlikely to focus on small scale localized schemes for the purposes of carbon offset, instead preferring accredited international carbon offset 'brands'.

Limitations

This report reflects a commission that was changed part-way through its duration. A brief summary of the early findings and the reason for the change in emphasis is provided herein, but the earlier phases that were principally focused on internal strengths and weaknesses analysis and the development of a theory of change for Coeden Fach (the original grant recipients for RDP funding), with associated action plans, were reported on separately directly to Coeden Fach and are not repeated here.

This study refocused the commission on the core concept of a (new) carbon offsetting organisation based locally and generating income by targeting local businesses and organisations (which by their nature will tend to be mostly SMEs and micro-businesses).

The study was conducted within the confines of the remaining original budget, using the remaining budget of days at that point. That dictated a qualitative approach to testing the concept, and a key constraint of this study is that it is not the result of detailed market research. Nevertheless, we are confident in our conclusions.

Report structure

Section 2 provides an overview of key issues drawn from a brief desk-based review to provide wider context, section 3 provides a summary of the qualitative research conducted with small businesses to test the idea, and section 4 provides summary conclusions.

Supporting materials are attached as appendices and cross referenced in the document.

2. Key principles and wider context

The principal audience for this report is the RDP LAG and key partners. The intended audience has a strong working knowledge of the environment sector, but on the basis that there may be third party interests in this topic with less knowledge, a brief overview of what carbon offsetting is and entails, is provided below.

What carbon offsetting is

Carbon offsetting initiatives have stemmed from the 1997 Kyoto protocol, an international agreement linked to the United Nations Framework Convention on Climate Change, which commits its Parties by setting internationally binding emission reduction targets. This protocol has targeted more developed countries as it recognises the high levels of emissions produced as a result of industrial booms in those countries over the past 150 years, placing greater responsibilities on such nations.

Since then, carbon offsetting schemes that allow individuals and companies to invest in environmental projects around the world in order to balance out their own carbon footprint have increased substantially. For individuals and businesses to engage it means weighing up costs of such initiatives: costs of inaction; direct costs; and cost of using land for trees rather than other purposes such as crops.

These projects/ schemes are predominantly run by well-established, large scale providers, charities or governmental partners and entering into this as a business will be challenging for any small organisation with immediate competition from well-established, well-resourced national and global providers and swift scaling (with the attendant costs) necessary in order to effectively compete.

Key drivers

It is useful to distinguish between two key drivers. The primary driver for this research was the notion of organisations (primarily private businesses) that produce carbon as polluters, and of introducing carbon offsetting as a means of those individual organisations offsetting their own carbon footprint. A similar process applies to individuals as consumers/citizens e.g. offsetting household carbon and/or activities that temporarily increase an individual's carbon footprint such as travel by plane.

The typical approach towards carbon offsetting is that first the carbon footprint of the organisation as a whole (or sometimes a specific action in the case of individuals) is calculated. There are numerous online free tools as well as some more sophisticated (and some less so) paid-for services. There are then multiple carbon offset websites that act effectively as a marketing interface/brokerage for the most part (many also contain online carbon offset calculators for an 'all under one roof' service).

The carbon level is matched to a financial value of investment that will fund one or more accredited schemes to then offset that level of carbon and a transaction is made, with varying levels of feedback afterwards. Costs vary dependent on the nature of the offset required but for small impacts can be quite modest, ranging to more significant costs for larger organisations involved in carbon intensive activities as part of their business practices.

Additionally, there are now many schemes where a product or service either includes a carbon offset payment as part of the purchase price or offers this as an optional extra to the consumer to purchase at the point of sale.

But there is also a wider driver of a collective carbon footprint as a nation, where carbon is produced by society as a whole, either in the places of residence and work, in transit (for work, domestic purposes and pleasure), through leisure, through the products that they purchase, and the behaviours that they encourage.

Further, beyond the principal focus of carbon sequestration are the broader benefits of trees as green infrastructure: erosion control and conservation of soil and water; wildlife habitats; conservation/enhancement of biodiversity; watershed protection; pollution control; reduction in temperatures; and an increasingly well-understood impact on health and wellbeing as well as local economics.

Currently, the UK is one of the least forested countries in Europe, with just 13% covered by woodland, compared with 31% of France. Wales and Scotland boast slightly higher coverage with 15% and 19% respectively, but Northern Ireland has the lowest levels of woodland at just 8%. Further, the UK was the second largest net importer of forest products in 2016, behind China (Forest Research, 2018). It has been suggested by the Climate Change Committee that tree planting must double in order to alter land use in the UK significantly (Committee on Climate Change, 2018). The UK country remains significantly behind the curve in terms of the tree planting required to meet climate goals.

So, means of planting more trees (at a large scale) in Wales is certainly required irrespective of whether doing so in order to offset carbon pollution from businesses/individuals to create a viable social enterprise proves viable. Furthermore, the development of green infrastructure in urban areas and its multiple benefits beyond carbon capture are also becoming increasingly well-understood and documented and are rising up the agenda.

Different forms of carbon offsetting

There are many and varied carbon offset schemes across the world – the basic premise is that they allow both organisations/companies and individuals to balance the carbon footprint that they create (sometimes for a specific action or activity such as catching a flight, or for the entirety of their lifestyle/business) by investing in accredited environmental projects.

The substance of this commission was to explore carbon offsetting through tree planting, but it should be noted that carbon offset schemes also take other forms, such as investing funds in promulgating clean energy technology and improving insulation in homes, thus ‘offsetting’ by reducing carbon produced elsewhere. Many schemes have moved away from tree planting as other means of reduction of carbon elsewhere have proved faster, easier to monitor and manage, and can also bring other benefits, for example a more fuel-efficient cooking appliance not only reduces energy usage but is cheaper to run for a family on low income, generating socio-economic as well as environmental benefits.

There are hundreds of companies running carbon offsetting schemes in which large businesses can invest. For example, Snowcarbon, Carbonfund, Carbonfootprint and Native Energy to name a few. Native energy has worked with global companies such

as eBay, Aveda, and Ben and Jerrys. Many large businesses are engaged in some form of carbon offsetting scheme: flight companies such as Easyjet and Virgin suggest that nearly 3% of their passengers offset the carbon from their flight, with Easyjet passengers alone contributing to 1% of the UN accredited offsets issued in the prior 12 month period (BBC, 2009).

In a report by Forest Trends' Ecosystem Marketplace in America, which engaged with nearly 2,000 companies that publicly disclosed data in 2015, 17% used offsetting as part of a carbon reduction strategy – including familiar household names such as L'Oréal, General Motors, and Delta Air Lines. There is, however, large variability in the type of carbon offsetting practices that these companies engage in. These large corporate companies often tailor their approaches to carbon offsetting in line with their company's product/service lines. L'Oréal, for instance, distributes cleaner burning stoves to workers in Burkina Faso who boil the shea nuts used in its cosmetics products. Similarly, JP Morgan's Climate Care pioneered energy efficient cooking stoves in Africa to reduce emissions.

There are also projects involving businesses that focus on tree planting schemes, for example Ovo energy have paired up with conservation volunteers since 2015 to encourage thousands of volunteers and community groups to 'join in, feel good' by planting native trees in community green spaces across the UK. This has subsequently led to the creation of the 'I Dig Trees' programme, providing free tree packs for community groups to plant in their local green space and opportunities for people to volunteer at organised tree planting events. To date, 728,000 trees have been distributed and planted across the UK.

Another example of tree planting as a form of carbon offsetting is Microsoft, who are investing in an Irish Forest Creation project. Working with natural capital partners, they aim to plant trees across 137 hectares over the next two years, helping Ireland meet national targets of greenhouse gas emission reduction. Additionally, carbon capture potential has been estimated at 35,600 tonnes of carbon over 40 years, equivalent to removing 7,500 passenger cars from the road for one year (The Irish Times, 2017).

Other angles not overtly focused on carbon offsetting are evident, especially incorporating education and aesthetic avenues. Universities are taking steps to reduce their carbon footprint and contribute to carbon offsetting. The University of East Anglia has offset events such as conferences by planting trees to cover the environmental impact of travelling attendees to events such as conferences. They calculated the environmental impact to total 0.57 tonnes, per conference with the addition of information packs boosting this figure to 0.6 tonnes. Combining carbon offsetting schemes into educational settings not only counteracts the carbon footprint produced but also enables increased awareness and transfer of knowledge about different environmental concerns and issues.

There are also numerous examples of small scale projects originating from school initiatives. The Boarding Orchard was launched by the Boarding School's Association in 2014. It aims to be the largest orchard in the UK and involves boarding schools joining the orchard by planting fruit trees in their grounds. The trees symbolise the 'tree of knowledge' and demonstrate each school's commitment to growth and caring for the environment. Since launch, schools across the UK - including Wales, Scotland and Northern Ireland - have joined The Boarding Orchard, and trees have also been planted at boarding schools in Switzerland and the USA; over 100 schools.

In Northern England #Treesforlearning project has been established by DEFRA with aims to plant 1 million trees with primary schools across England by 2020. This part of the Trees for Learning scheme is being coordinated by The Mersey Forest and delivered by Community Forests all over England, working with around 1,000 schools to plant 164,000 trees across the UK. The tree planting sessions give staff the opportunity to discuss biodiversity with the children, highlighting the additional benefits of such schemes. Although these small scale projects are limited in terms of direct impact on carbon offsetting, their impact can be significant in raising awareness to future generations.

But more broadly, there are other initiatives that essentially 'productise' giving for the environment, such as www.onepercentfortheplanet.org that offer alternative models for financially supporting the environment in a broader sense, not just restricted to carbon offsetting and, arguably, more progressive in their approach.

Business engagement with funding of ecosystem services

Although it is not particularly well-researched in general, a study in the US exploring business attitudes towards funding ecosystem services provided by urban forests (Science Direct, 2018) found that:

- there is relatively little data in academic literature focused on whether businesses would be willing to help fund tree planting (in this case specifically in an urban context as 'urban forests') and also a lack of research into whether payments specifically for ecosystem services in the urban realm could be viable;
- businesses surveyed supported the idea of private sector 'investment' into urban forests;
- the reasons were for a range of ecosystem services including air purification, flood alleviation and aesthetic enhancement;
- a system of voluntary payments (contrast with an offsetting transaction for example) was preferred;
- respondents to the study preferred the option of choosing from a list of location-specific, cost-effective and monitored projects to fund them directly;
- there was interest in this as a transaction with business benefit in terms of marketing/corporate social responsibility;
- business cases with examples of tangible benefits were necessary up front; and
- example projects needed to be trialled, analysed and publicised.

Research published in Sustainability (2018) exploring how companies could better engage in sustainable landscape management found that the relationship between business and the wider environment is not yet strongly recognized, but that there are examples of practice that show that many companies do value and recognise the added value provided by landscape services with some investing directly in landscape management. They conclude that further work is needed to 'sell' the added value in more direct terms, which echoes findings from the businesses we engaged with for this study (see Section 3).

Key issues with the approach of carbon offsetting

Carbon offsetting rose significantly in popularity in the decade following the turn of the century, but also increasingly generated controversy. The world has moved on considerably since the concept of carbon offsetting was at its peak. It has become an increasingly controversial concept, whether it is focused on tree planting, energy projects or other means of carbon capture/reduction. There is a view amongst many sources that it is an 'easy way out' for too many polluters, and does little if anything to drive behavior change, when the real issues are about reducing pollution in the first place:

"Carbon offsetting is deeply controversial on a number of levels … we don't endorse it…"

EthicalConsumer.org

Additionally, there are questions concerning the reliability and validity of tree planting claims made by businesses, which are often overestimated with variability in the reported carbon catching power of trees in the literature. Carbon Managers makes significant claims for the carbon-catching power of its trees, which stand at around one ton per tree, depending on which item of literature one reads. In 2008 it was reported that among 100 trees planted for Andara at Alladale, the company had "allotted one tree to BP to offset carbon emissions of 0.75 tons per tree". Compare this with another recent tree planting carbon offset project in Scotland by Stagecoach, which says it is operating "Scotland's first carbon-neutral bus route," from Fife to Edinburgh. After offsetting five years of emissions with 140,000 trees that will eventually soak up more than 20,000 tons of CO2. This project has suggested that almost seven trees would be needed to soak up a ton of CO2 (Stage Coach group, 2008). Even UN-certified projects have been criticised for failing to prove they provided emissions reductions which would not have happened anyway.

Further, technological innovation has pushed the reduction of carbon impact in the first place (rather than its offset) up the agenda both domestically and commercially, with improved insulation, micro-renewables and batter storage amongst other rapidly developing innovations. coupling with a greater supply and better marketing/sales of renewable energy suppliers and backed by (admittedly slower and full of weaknesses, but nevertheless increasingly evident) political and legislative change and incentives to encourage use of more energy efficient products. Related changes in terms of an explosion in mental health and wellbeing issues and the rise in terms of the prominence of wellbeing in the health sector is beginning to fuel social prescribing (with a strong 'green' emphasis to such prescribing for wellbeing) as an approach that might not yet be considered 'mainstream' but that is nevertheless gaining in prominence.

Key criteria for establishing a carbon offset business

From discussion with stakeholders with industry knowledge, matched by desk-based research, for a scheme to be financially viable between 3 and 5 hectares would appear to be the minimum scale for a carbon offset business.

Schemes need to comply with a certain density of planting and then register with Natural Resources Wales (NRW) forestry, and they in turn have to verify that the project can enter the carbon trading scheme.

Once that is complete, the project then needs to go through a validation process to verify that it provides a genuine offset (the validation process creates a document that filters into organisational marketing).

Interviewees reported that there are only two independent accreditation organisations – one is the Soil Association and the other Accura. They will verify and show that woodland is on trajectory to meet offsetting targets.

A maximum of 70% of credits can be sold up front – credits are then sold by the planting scheme to a brokerage (not directly to consumers).

Quality assurance and management of trees is a key consideration and potentially onerous for a small organisation scaling up.

When discussing in relation to Coeden Fach, the above discussion indicated that to deliver this directly would be too large an undertaking, but that there could be opportunities for such a small scheme to become a supplier of trees to larger concerns, and this is something that was recommended to Coeden Fach prior to the change in emphasis of the project. It was anecdotally reported to us that in the past year or so there was insufficient supply of Rowan, Aspen and Silver Birch, and that it is particularly difficult finding people to plant trees.

Additionally, Coed Cymru officers are delivering Glastir woodland creation schemes but it was reported that most (if not all) the trees are coming from England. Ideally, the woodland schemes should plant local provenance but it is not a requirement. Coeden Fach is on the list of suppliers for that scheme and much of the focus on the marketing had the second stage of the commission not been refocused would have been on how they should develop their marketing to position themselves as the 'go to' supplier for such planting.

Furthermore, we spoke to several public sector bodies in the early phases of the work whilst still focusing on potential exit strategies from funding for Coeden Fach, and there was strong interest from the ABMU health board for 'greening' their sites, creating places for staff, patients and visitors to access for improved wellbeing at hospital sites, as well as contributing towards reducing their own carbon footprints.

There is also interest from Hywel Dda Health Board, currently partnering with NRW to explore greening of healthcare sites, principally with a wellbeing focus, but with clear additional scope for wider ecosystem services derived from that approach.

Strategic/policy context

At a strategic policy level, the Environment Act in Wales requires some representation of carbon offset (though it is presently a voluntary requirement) and the Wellbeing of Future Generations Act places a strong emphasis on a low carbon economy that is resilient to climate change.

The emerging Area Statements that NRW are currently producing will, amongst a range of other measures, seek to increase tree cover and enhance biodiversity and connectivity between green sites, which will create demand for tree planting. More generally, it has been well-publicised that Wales is considerably short of its tree planting targets.

Swansea's Public Service Board (PSB) has 'working with nature' as a core theme, and Swansea is currently developing a Green Infrastructure Strategy (a partnership

between NRW and Swansea Council) that is intended to impact on supplementary planning guidance. Existing Sustainable Urban Drainage (SUDs) legislation already adopted in Wales provides some impetus towards movement towards broader adoption of green infrastructure in urban areas particularly.

So, regardless of the demand at individual business level for tree planting for carbon offsetting, the policy and strategic case for the need to plant more trees is clear, and there is strong interest in tree planting as part of wider development of ecosystem services, including social prescribing from a number of avenues, from the health sector to urban planning.

The need for a strong entrepreneurial drive

In the absence of an existing organisation to drive this initiative, clearly there will need to be a strong entrepreneurial drive to establish such an enterprise. With the removal of the impetus of developing this concept to create an exit strategy for Coeden Fach, there is no clear avenue for developing this concept, which will require intensive work and specialist knowledge. Without that strong entrepreneurial drive, which will either require a significant loss-leading period and/or start-up funds (and which is likely to be very difficult to commission in our view) the idea will not progress. Though beyond the scope of this commission and requiring specialist advice, there may be State Aid issues to consider also.

3. Local interest in tree planting for carbon offset

The following section briefly summarises the consultation with a range of local businesses to explore knowledge of, and interest in, a local carbon offsetting project. In all instances respondents were the business owner or a senior manager in the organisation and interviews were conducted in a semi-structured format and on a one-to-one basis either face to face or by telephone.

General interest

The method of enquiry was qualitative with insufficient resources for a more detailed market research style study. Therefore, target numbers were intended to be small, but even with a small target number to test ideas, response rates to requests to engage with the study were particularly low and it was challenging to secure engagement with responses skewed towards those already engaged with the sustainability agenda.

Whilst we can only draw firm conclusions from those we spoke to, there was some evidence from those that declined to respond to suggest that, outside those already engaged broadly with the idea of environmental sustainability, the framing of the subject matter (carbon offsetting) did not play well.

As noted previously, the world appears to have moved on and developed a more sophisticated understanding of the issues around climate change and sustainability and the responses to it.

General knowledge and practice in terms of sustainability

The businesses that did respond were generous with their time and, whilst most were more interested in the subject matter and more on board with a sustainable approach, not all were, with one particularly suspicious of the approach and of the practice of carbon offsetting more generally.

The following outlines some of the broad characteristics of those responding, which frame the subsequent response data.

Familiarity with Carbon Offsetting as a concept

Businesses were asked how familiar they were with the term ‘carbon offsetting’. All respondents stated they were familiar with the concept, with some being more knowledgeable than others.

Some knew more about the term due to already adopting certain behaviours as individuals (e.g. being a non-meat eater, and volunteering with a tree planting farm) rather than through their work. Overall, the concept was understood.

Existing sustainability practices

All the businesses that we spoke to said that they had some form of a ‘green’ policy. However, few had formal documented sustainable workplace practices, with only one citing a formal written policy. Nevertheless, all were able to give examples of how they undertook some form of informal sustainability practices and, as such, all had some

(non-written) form of sustainable policy – things that they always aimed to do as a business to act sustainably.

Most businesses that we spoke to demonstrated good awareness and attitudes towards sustainability issues and a range of ethical behaviours were expressed which took various forms such as:

- using local suppliers (e.g. food businesses buying where possible from Swansea Market, and Gower butchers, which was about reducing food miles as well as supporting the local economy);
- minimising physical waste (e.g. hair dressers using careful measurements for hair colours, shampoo and conditioner to minimise wastage);
- reduction of waste from utilities (driven as much, if not more, by cost-savings for metred-supplies as it was from an environmental perspective) with several choosing to source their utilities from Bulb because it was a more environmentally-friendly supplier;
- ensuring that cleaning products were environmentally friendly;
- adopting recyclable packaging, using glass jars, PLA bottles, and brown paper packaging; and
- (in one instance) *s*ustainability built into day to day work with locally sourced timber for building projects.

Attitudes towards carbon offsetting

Responses were varied in terms of how much of a priority carbon offsetting and adopting more sustainable practices were. Most of the businesses that took part stated that they consider carbon offsetting to be important, but it was included along with a range of more sustainable working practices generally. Some phrased their interest as a form of 'alleviating social guilt', linked to their everyday practices of increasing carbon in the atmosphere (both as businesses and as individuals, which for many smaller businesses overlap).

Some saw more environmentally sustainable behavior as having brand value and considered that carbon offsetting could contribute to that but it was not a principal driver for that type of brand value, with much of the examples of sustainable behavior as well as intent that were cited focused on reducing impact in the first place rather than offsetting.

The majority of participants stated they were interested in getting involved with community tree planting as a form of carbon offsetting in principle. However, even though carbon offsetting and sustainable practices were cited as important factors, they were not necessarily a high priority due to resource constraints – both in terms of lack of available finance but also available time with busy small business owners.

Key issues

Cost

Unsurprisingly, given that respondents were all from smaller businesses, cost was the biggest factor with limited available budgets – it would clearly be seen as an 'add on' and externality by businesses.

Trust/credibility

Trust was also a key issue and that went beyond knowing that the trees had been planted, that they matured and were looked after to achieve a genuine carbon offset. As important was knowing whether it was the best investment to achieve the desired outcome of carbon reduction – is it better than investing in solar panels on a works building, for example? A lack of information and understanding (which is reflected in wider literature and commentary that has similar criticisms of carbon offsetting through tree planting – referred to earlier) is a major barrier in generating trust for a product/service line with existing uncertainties in the wider market.

Credibility of the tree planting provider was important, with many wanting to see the scheme formally registered, which brings with it all the regulation of formal offsetting.

Visibility

Some would be interested if they could identify the tree and access it – have a plaque or be able to point to where it is and for the surrounding site to reflect the aims of the project and to be well maintained and of ecological benefit. Such interest reflects that for most it was more akin to a donation than a formal offset.

In this instance, a local scheme had clear advantages over more impersonal national/international schemes – the ability to point to something locally and say 'I/we did that' was clearly of interest and this is clearly a 'selling point' for getting local businesses to buy into this kind of scheme.

Local focus

A local focus was clearly a 'selling point' – knowing that funding would go towards a tree being planted locally was a strong incentive for businesses to get involved and linking that with educational activities would further add attraction to funding it. Again, these conversations were more akin to a donation or purchase of something, rather than as a means of offsetting a negative impact on the environment in the formal carbon offsetting sense.

Recognition

Several of the businesses would want something in return for their payment of a fee for tree planting – offsetting the carbon they had produced was generally not considered enough to warrant the investment. For example, some would want a form of advertisement or acknowledgement showing that they/their business had been involved with the tree planting project and creating a marketing opportunity. Once again, it was expressed in ways that was more akin to a sponsorship-style transaction or donation, rather than to offset an existing negative impact from carbon produced as a result of their activities.

Respondents clearly saw a range of opportunities for marketing related to involvement in such a scheme, particularly where there are additional benefits beyond the planting

of the tree itself (e.g. doing so with a local school and generating educational benefit at the same time).

There was also a general sense from all businesses that if trees were planted in reasonably visible/accessible locations it would be an investment in the local environment more generally in the place where they are based and where they and their staff live, and several recognised the wellbeing benefit of this.

Tree felling locally

Finally, trees and particularly tree felling for development have become prominent and somewhat controversial in local discourse at the time of writing with the removal of many mature trees in local city centre development initiatives driven largely by the public sector, as well as well-publicised removal of ancient trees by developers recently.

That has led to some conflict but also some progression in the form of the development of an emerging Tree Forum locally. The first meeting of that Forum will take place beyond the conclusion of this commission, but it offers opportunities to further the demand and potential for increasing tree coverage in the local area – whilst it's genesis is urban, there is clearly potential for that to expand and link with the work of the RDP LAG.

4. Conclusions

The initial question that drove this study was: 'can Coeden Fach become more financially sustainable through carbon offsetting?'. It was swiftly concluded that the development of a formal carbon offsetting scheme would 'swamp' a small organisation such as Coeden Fach. The degree to which they would need to scale to operate, though in theory feasible, poses a significant danger of 'mission drift' from its core purpose as a small community-owned tree nursery growing and selling local provenance trees. The organisation does not have the required capacity to develop such a proposal and would have to significantly increase its organisational capacity on a scale that is unrealistic in our view, nor is it desirable.

A broader strategy of tree planting may yet provide some options for Coeden Fach as a supplier of trees to other parties, but not for the delivery of a carbon offsetting product in a formal sense themselves.

That was reported to the RDP LAG and it was decided that this commission should shift towards focusing on the potential to develop a stand-alone (new) enterprise to deliver carbon offsetting through tree planting locally.

The concept of carbon offsetting as a whole is quite controversial as an ecological tool for tackling climate change – there is an argument that it dissuades people from making better use of resources and instead just 'assuages guilt' rather than tackling the root causes of the problems of carbon pollution and so measures to encourage this, particularly state sponsored ones, could create as much harm as good (though this debate is by no means resolved).

There is an increased focus now (both at a policy/strategy level as well as at a business level) on reducing impact in the first place, rather than offsetting impact, albeit with some way to go and large geographical variations across the world in attitudes and actions.

Key issues to consider for any carbon offsetting business are:

- the need to achieve sufficient scale (which is quite significant) of planting to be able to meet requirements;
- acquiring the standards of proof necessary for formally trading in carbon credits through tree planting;
- the market place is dominated by very large firms and so, if a business can be established locally to deliver carbon offsetting, it will be entering into a market in competition with far larger and better resourced competitors – this is not in itself a non-starter (there are many 'disruptors' doing the same in other sectors) but it will require a strong entrepreneur to drive this – there is no obvious 'driver' currently;
- many of the large carbon off-setters have moved away from tree planting (or at least purely focused on that) to things like renewable energy/more efficient white goods and similar and so even if carbon offsetting is a key driver, there is the question of whether an initiative focused on tree planting is yesterday's answer to meeting the issue;
- to meet the required scale and standards to deliver a formal carbon offsetting business any organisation will have to hit large scale very swiftly to enter the market place, which brings significant initial capital and revenue costs and high risks – again this is not insurmountable with the right business plan, and a strong entrepreneurial drive but there are question marks over the former and no obvious person or entity to drive the latter. In theory, RDP could commission this rather than leave it to entrepreneur(s) to develop in

isolation at their own risk, but given the above there are question marks over whether that would be the best use of funds and potentially (this would require specialist advice) some State Aid issues;

- businesses we spoke to in interviews were generally positive about the idea of supporting tree growing and more generally 'giving back'/'doing good' (within their resource constraints) but it was phrased less in terms of offsetting negative impacts and more about creating positive impacts on the world in a broader way through planting of tress – none were actively seeking carbon offsetting services and it was not something that was a high priority for them;
- if they were to enter into such a transaction, cost and verification were the two key issues for businesses – the latter brings the issue back to scale and it will be very difficult for a smaller local organisation to meet the required standards;
- there was interest amongst consultees in supporting green infrastructure in a more general sense i.e. planting a tree because it was a good thing to do for a range of positive reasons, rather than offsetting the negative of the carbon produced though there was also a sense from those we spoke to that 'looking after the environment' in a more general sense is the job of the state and 'what we pay our taxes for';
- if they were to enter into some form of transaction then for those we spoke to it would be seen by most more as 'sponsorship' or small scale 'philanthropy' rather than as a transaction for the offsetting of negative impact they have made; and
- the local focus was clearly a 'selling point' with businesses, but this will only be a selling point for local businesses and to make the idea viable at the scale required will necessitate a wider customer base where the local aspect ceases to be a differentiator (there may be an option for a 'federated' type model with small operations across the country linked together to achieve scale, but for the reasons below that too is not considered worth pursuing).

Whilst developing a carbon offsetting business may be feasible in theory, and a business plan could be developed as a concept, our view is that it has a weak initial grounding, coupled with a lack of a clear entrepreneurial drive to push it forwards, and a range of more prominent matters that would be better suited for focusing finite local resources (in terms of time and effort as well as finance).

In our view, the efforts of the RDP LAG are best focused on addressing the needs identified in the recent Theory of Change exercise conducted and reported on separately. When identifying the range of local needs, desired outcomes, and potential solutions to achieving the outcomes and address the needs, establishing a locally owned carbon offsetting project is not the most effective means of achieving change.

When we reported this to the RDP LAG prior to writing up this report there was agreement that a hypothetical business planning exercise given the above conclusions was not worthwhile.

There are, however, lessons to draw from this study. There was specific interest amongst the businesses we spoke to in donating towards/sponsoring tree planting amongst local businesses – it would be a stretch to call this 'carbon offsetting' in a formal sense, but there appears a demand to materially contribute towards a 'greener' local area by several small businesses. Whilst this study did not have the resources to undertake full market research, there is sufficient interest from the small group identified to suggest that this is a worthwhile endeavor if costs can be kept modest – as an alternative income stream for generating greater planting e.g. 'sponsor a tree'. Certainly, Coeden Fach can take advantage of that approach, but it need not be limited

to them, nor indeed to tree planting and may offer an alternative route to effectively 'crowd sourcing/funding' more green infrastructure in the city and its hinterland.

Furthermore, there would likely be business/organisational interest in terms of materially supporting the development of green infrastructure more generally (though people we spoke to would not necessarily recognise it from that name). That may involve planting trees certainly, but could be expanded to supporting wider green infrastructure development, and with the focus on developing ecosystem services as a positive impact from businesses 'giving back', rather than conceived as offsetting a negative (even though they could ultimately amount to the same thing).

There would certainly seem to be scope to 'productise' green infrastructure in this way in a similar way that crowd funding sites do and that is worthy of further exploration and development as a means of supporting public sector planting initiatives. Effectively engaging the wider business community in materially supporting green infrastructure in this way is something that should be explored in more detail and pursued further by RDP LAG.

There also remains a need at the macro level to plant more trees across Wales, as well as a need to develop other forms of green infrastructure, from green walls and roofing, to widening biodiversity and connectivity routes. Carbon sequestration is one driver for that but with a range of other ecosystem service benefits beyond that. Further, current planting levels are falling behind targets.

So, there is a demand from the state level, with corresponding legislative drive from both the Environment Act and the Wellbeing of Future Generations Act. As a result, it would be worthwhile to further explore how businesses can be better engaged to help further that general requirement for installation/enhancement of green infrastructure and development/maintenance of ecosystem services (and as part of that tree planting will of course factor).

Locally, removal of trees has been prominent in recent city centre development and a Tree Forum is in the process of developing, which could be a useful vehicle through which to focus efforts to resource further tree planting, resourcing trees insofar as possible from Coeden Fach. More generally, the Swansea PSB has working with nature as a priority theme, and the emerging Green Infrastructure strategy that is in development through a partnership between NRW and Swansea Council could similarly develop a delivery mechanism to secure business investment in greening the city.

Finally, there is no reason why tree planting organisations like Coeden Fach and others cannot seek to enter the supply chain for other carbon offset providers, or to benefit from the 'productisation' of green infrastructure services above, but this is more a function of marketing and supply chain development for Coeden Fach (and others like them) than the development of a new business model.

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