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The financial case for existing landowners to plant woodland

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This project is supported by the European Agricultural Fund for Rural Development

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Report – December 2020

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The Challenge

From the TV presenters of Countryfile to the ever-escalating claims of political parties in the last UK elections, it seems everyone wants to plant more trees. Reasons vary from carbon capture, amenity, and biodiversity to production of usable timber, as do levels of ambition.

Amongst the most widely quoted targets, The Committee on Climate Change (CCC) say that UK needs 30K Ha of new woodland a year to 2050 as part of a suite of land use changes to meet the UKs commitment to become Zero Carbon (Appendix 1) This afforestation is predicted to account for the largest share of the forecast £39 Bn cost, the majority of that being spent on land acquisition. This presumes that either we expand the public estate or encourage land acquisition by external investors.

Experience from solar and wind farms suggests that this will be expensive, slow, and unpopular with some existing landowners, particularly farmers. Nonetheless there is considerable pressure on farmers from Brexit and existing financial challenges particularly of upland farming are severe in Wales.

Based upon the above, our approach is to solve two problems together. Woodland creation for a range of benefits, providing the means for farm transformation, while avoiding the expense and social disruption of land acquisition.

Promising lower costs of delivered woodland and a wide range of associated benefits, the approach has much to recommend it, subject to its financial viability.

Need for more woodland

The perceived carbon benefits of additional woodland are twofold, both within the project and more widely. Trees capture carbon when growing, and the provision of sustainable building material, displacing high emission alternatives such as concrete and steel, provides a continuing storage of carbon in the timber elements of buildings. The Home-Grown Homes project has done a great deal on the role of harvested wood products in storing carbon long term and its use in progressing to the type of systems required to further reduce building emissions.

This is not the place to explore the details of these benefits, but their delivery will clearly depend upon security of timber supply, and ideally an improvement in levels of self-sufficiency from the current 80% dependence upon imports. The environmental and reputational risks of this degree of import reliance have been recently highlighted by the French environmental group Envol Vert, who have raised the spectre of "imported deforestation". While this currently places timber imports low on the list of impacts, it is clear that both the global demand for timber and restrictions upon the manner of its supply are likely to rise.

Against this backdrop, current forecasts suggest that supply of timber from existing Welsh Woodlands is likely to fall below recent demand levels from the end of the decade to beyond 2050. A high proportion of forest management is tied into the current cycle of harvesting for existing processing and re-planting. With six times as much re-planting as new planting, there is inevitably a tendency to the status quo rather than new models of planting or supply. This implies further increase in the level of imports for the next thirty years just to maintain the current levels of Welsh wood use.

Changing this supply dependency, to a positive one, supporting Welsh woodland and associated processing industries, is therefore going to require a step change in the level of productive woodland, and the use to which it is put. Shifting the value of domestic timber from its current base of packaging and fencing, to higher percentages of construction use (currently dominated by imports) will require a reliable supply base.

Creating this additional productive woodland must be part of an approach that recognises other elements of woodland services, such as amenity and biodiversity. This will be achieved both by the inclusion of mixed woods within the productive estate and by the creation of discrete amenity woodlands through public support and discrete natural capital finance models.

What is clear to date, is that the recent expansion of woodland based purely upon public support for planting has been slow, expensive, and left a declining base of production alongside overall woodland creation levels well below publicly stated targets.

The encouragement of wider public goods from the land is under extensive investigation as part of the re-design of future land and farming support, widely referred to as Environmental Land Management Schemes (ELMS). It seems unlikely that the outright level of support from these schemes, or their interaction with commercial payments for ecosystem services alone will support the levels of establishment envisaged by the CCC and Governments, nor create the productive base required for construction use or reduced imports.

In order to investigate how the requisite step change in woodland establishment might be achieved, we have tried to bring commercial funding and risk appetite, to bridge the gap to future schemes and to work in harmony with them. Recent statements around transitional support for land-owners post Brexit, suggest that much uncertainty remains around both the timing and nature of future schemes.

It is also important to focus on the appropriate land for woodland creation, and to who our model, and any future incentives might appeal. We hope that this might be the basis of a third major benefit, in addition to extra woodland and building materials, if, as we propose, much of that activity is focused on farms and farmers.

Farms and Farmers

Access to land is clearly one of the key elements, in woodland creation or indeed other rural endeavours, and it would make sense to check that the land is available for the scale of woodland creation we envisage.

If we look at the high level UK requirement of 30K Ha a year of new woodland from the CCC, which is mid-range amongst various ambitions and was recently re-confirmed in Boris Johnson's ten point plan, 152k Ha of this is expected to be established in Wales.

A study done for Welsh Government shows that sufficient land is available whether planting Oak or Sitka (see appendix 2). More recently, work between Woodknowledge Wales and Bangor University has focused upon the type of land that might be suitable for woodland creation, including the changes in appropriate cropping when confronted by climate change. In both cases, a significant proportion of the identified land is rough grazing and unimproved or low- grade improved grassland, currently under the stewardship of Welsh farmers.

But if we wish to pursue conversion of this land to woodland, how do we avoid the slow process that afflicted solar and wind farms, which took a long time to demonstrate their financial model and to convince farmers and landowners to take a different path for even small parts of their land? In the case of woodland this might be even slower in abeyance of new support schemes and given the historic antagonism often promoted between farming and forestry.

It is evident from our conversations with farmers and farming organisations that “pride in provision” is a strong motivator, and creating a strong link with growing timber for housing, as envisaged by this project might go some way to allaying fears of a move to just land custodians rather than providers of food.

It is also clear that for most, they are looking for schemes which will contribute to, rather than replace, their increasingly diverse farm businesses, which they wish to maintain ownership and management of.

As a financial contribution forestry made an encouraging start. As many will recall, the 2015 report commissioned for Confor and presented at that year’s Welsh Show showed that there was more underlying income in woodland than upland sheep. This was before the pressures on lamb exports from the subsequent Brexit vote had become part of the agenda.

Nor is this a minority issue amongst Welsh farmers, where 80% of farmed land is in Less Favoured Areas (LFAs) compared with 17% in England. Figures from the most recent Farm Business Survey for Wales show that the type of farms analysed in the Confor work would now lose £16,000 per year without their annual Basic Payment Scheme grants.

Nor is this just a potential financial problem for farmers. The environmental impact of their current activities is also coming under increasing scrutiny, and changed farming practices, alongside woodland creation, and increased use of wood in buildings is the third key ask of the CCC land use report.

To date conversion to woodland has been slow amongst this target group. From the outset, there were objections that the Confor analysis did not take account of cash flow or value of money, in the long wait for timber from woodlands. And whether pursued by farmers or subsequent owners of the land, the new establishment still relied heavily on grants.

In 2019 only 80 hectares of new woodland was established in Wales and although this is due to improve markedly over the next two years, not least due to a step change in grant availability, indications are that this level of grant support through GWC cannot continue and that planting will still fall short of event the existing 2000 Ha per year Government target.

A secondary problem of the current interest in woodland creation is the potential lack of long-term outcomes. There is some evidence that many farmers who have expressed interest in woodland through GWC are predominantly interested in short term positive cashflow, not in eventual timber production. This is not in anyone's long term interests as it is expensive for the Government, funding higher grant rates for productive mixed woodlands, without producing reliable outcomes for either party at the end of the process.

So how might we change this outlook. Addressing the need for new options for those existing farmers, who do not want to sell their land, but who do not always have the financial means or risk for appetite that long term investment in woodlands implies, particularly where access to up front grants may again become more limited.

A new role for investors

In trying to balance the books for new woodlands, the good news is not just that forestry can help Farmers and Governments, but that it has increasingly become the focus of attention to investors.

Historically these have been large institutional investors whose model has centred around land acquisition, planting, with the aid of Government grants, and managing large productive forests for annual yield and capital appreciation.

Their current view is that wood supply will be increasingly constrained by climate impacts and by the responses to it in the form of stricter conditions for harvesting. At the same time forecast demand, both for timber and benefits of standing woodland will increase, led by demand for renewable materials and the corresponding desire to offset and control emissions. In the UK this has led to consolidation of a number of advisory organisations for investors, and indirectly woodland managers on the ground.

Alongside the positive outlook for wood and woodlands, there is also a, slightly less public, expectation amongst some. That is the prospects for a traditional forestry investment model will be improved by falling land values, as existing agricultural support systems are reformed or removed.

While some investors see falling land values, tied to grant changes as an opportunity, others see it as a risk whether investing in farming or woodland. Given our experience of few farmers wanting to sell, despite current financial pressures, we hope to create an alternative to selling farms that will accommodate both farmers and investors.

Our objective is to bring these investors to the table to partner with existing landowners, to solve their short-term problems by creating and funding an alternative element to the farm business, through planting woodland. To ensure that this can repay the investors involvement and reward the farmers longer term, we will need to ensure that woodland is managed correctly and ultimately used, to ensure maximum collective benefit.

Needs to address cash flow, risk (future value of wood), management burden of establishment and management, and fragmented nature of eventual outputs.

How?

Early in this process, like many others, we looked at the model that has been successfully applied in Ireland. Coillte is an independent state-owned organisation that partners with the farmer once woodland has been established, to ensure its management, harvesting processing and sale for end use.

This is in effect a hybrid of the existing grant system and our objectives. In Ireland, the farmer takes the risk on planting woodland, backed by state grants. These grants, for establishment and initial maintenance, are more generous than in Wales, both in value (Euro 12,000 v £9000 per Ha) and longevity (15 rather than 12 years), largely accounting for the high establishment rates there. Once the trees are established Coillte picks up the payment of annual cash flow to the farmer in return for rights to the crop and responsibility to re-plant. 3 problems (as mentioned by FE team and at seminars)

This approach has many potential benefits, but as the authors of "Serious about Green", we and most probably Coillte themselves, have concluded cannot be simply adopted in all situations.

Amongst its benefits are the coordination of large elements of public and private timber and co-product supply, with transparent pricing, economies of scale, and certainty for its counterparties.

On the downside woodland establishment is expensive, with no certainty of being accepted for subsequent partnership with Coillte, and for most jurisdictions, including Wales, there is currently no suitable organisation to take on the Coillte role.

We believe that it is best for the same organisation to work with the farmer both at establishment and in the subsequent phases of management and use, with similar coordination benefits to those realised by Coillte. This removes the "mind the gap" issues, as well as allowing the farmer to offset the initial costs and risks of establishment and reap the benefits of a coordinated approach here too.

This approach also potentially addresses the transition across grant systems, subject the partner being prepared to share the risk and reward of any future regime. This is made more likely by the longer-term outlook of timber, the emerging market values for some of the public goods, and in this case, by the significant avoidance of up-front land acquisition costs.

But, in spite of shared risks and coordination benefits of a partnership approach, there is no escaping the requirement for an economic partnership model to stack up. In effect, domestic forestry can be planted, managed and some of it harvested, processed and used, in a way that gives return to landowners, investors and contributes to economic supply and public benefits for Wales.

This is not currently the case without significant grants and is complicated looking forward by several barriers and uncertainties. Uncertainty around grants and the terms of environmental service markets risks an "uneven playing field" even where the economic model does not rely upon them. The market for carbon is in part decoupled from the market for timber, creating on occasion, separate woodlands for each, rather than optimising both. This may improve in the event of embodied carbon being recognised as a factor in future buildings, but currently creates a "two speed" market, with carbon finance disproportionately funding non-productive woodlands.

Most importantly, today, the market for timber is dysfunctional, particularly for smaller producers. Without the type of coordination seen in Ireland, and major timber economies such as Finland and Austria, reliable and transparent value is difficult to establish. In addition, when coming to market, timber faces potential competition from that supplied by the public estate.

It is ironic that an added benefit of the Coillte model, is that it reduces the likelihood of it selling public timber (which still represents over 60% of their sales) "below market", a risk which NRW included in their recent marketing consultation. Unlike Ireland, price indices for timber sales in Wales (and throughout the UK) are based solely upon public sales, and risk being de-coupled from the real costs (including land) of production. If the public purse cannot afford to finance woodland creation (as envisaged by the CCC) at current rates, by implication new woodland must “stand on its own feet”. This is possible, but only if public woodlands are held to the same standards.

Public woodland operates under a range of competing pressures as the voices around the NRW audit issues have shown. It is also right that their role has evolved to go beyond supply of timber. But if woodland creation is to happen and to deliver similar balance, it will require private investment and the deployment of private land. This will not happen if the resulting outputs are required to compete with subsidised public outputs. Both the timber and the public goods have a value and there is an expectation that some of these will require support from the public purse, at least in the short term. What it cannot do, and should not do, is to fund the whole thing.

Our approach

As outlined above we have worked with investors on the basis that they will partner with farmers and existing landowners to establish woodland, sharing risk end to end. This would involve:

- Finance to plant, and manage, sharing the risk and cash flow including any grants.
- Providing an income to the landowner, equivalent or greater to their current options – long term, without gaps
- Management of the trees for life, ensuring optimum outcomes against plan including:
  - Carbon
  - Timber
  - Biodiversity
  - Other public goods
  - Fit with the other land use objectives
- Sharing the benefits of carbon timber and grant income with the landowner.

This can be better achieved on a portfolio basis where the right tree right place approach can be harmonised with differing landowner aspirations and economies of scale. It can equally be applied to community groups, where the balance of costs and outcomes will be significantly different.

In addition to the benefit of collective action in jointly procuring inputs or marketing outputs, this coordinated approach will produce a market value for timber rather than the currently published index which is only on public sales. To the extent that this overcomes the perception of the same trees being cheaper in Wales, it comes with a responsibility to deliver equal or better value to the wider Welsh market, not put up prices for the same product to the same people.

This can be achieved in a number of ways (including collectively operating and harmonising biomass, timber, and carbon delivery,) but must also be reflected in the delivered quality of Welsh timber. It is not enough to keep saying that we can grow quality, we must prove it. This is best done, not by re-visiting the discussions around C16 or C24, but by physically supplying products that the high value sectors of the Welsh market require. Much work has been undertaken by the project on what can be done with Welsh wood. We hope that a coordinated approach to the funding and supply of timber from both new and existing Welsh Woodlands will help to supply this affordably and reliably in the long run, in conjunction with a reinvigorated and extended processing sector. This aligns closely with the purpose of the consolidator referenced in output 13 or alternative coordination models.

Detail of Offer

A new organisation (NewCo), currently in design and negotiation will be required to deliver the new woodland creation partnership offer to landowners. This organisation must be able to practically commit to contracts across the supply chain while maintaining strict standards of governance and transparency. In the latter, it will need to demonstrate that it serves the interests of several counterparties in an effective, balanced, and equitable fashion. These counterparties will include the landowners, investors (who will fund the venture, but on the basis of a range of pre-agreed benefits and outcomes), and Government whether directly or indirectly through regulation or support of land use.

The key relationship is with the landowner, and probably best envisaged as the offer to a "typical" upland sheep farmer across the kitchen table. A scenario that we have extensively tested both across such tables and with farming and landowner organisations across Wales.

Land

As with existing approaches to woodland establishment, or farm diversification, the conversation typically starts with identification of suitable land. This will include a variety of factors ranging from suitability for woodland, to fit within the ongoing farm business. We envisage that most landowners will only want to put a proportion of their land into woodland and that this woodland will be required to make an economic contribution to their wider business. Each case will be different, including the balance between economic return and wider objectives. As with existing GWC options, a range of woodland types will be available, with the added benefit that the outcomes can be consolidated/balanced across a number of properties, to greater effect.

Once an understanding of options and a suitable woodland plan has been agreed, the landowner will be offered a long-term contract (similar to a lease) on the woodland element of his land.

Contract

The central element of the contract (in addition to the rights and responsibilities, below) is a series of payments to the landowner for the use of the land. This will take the form of an annual “lease” payment, with an up-front “premium” in year one. In addition to these payments (which will be agreed amounts from the outset), the landowner will also receive a final “dividend” payment based upon the value of the resulting outputs at the end of the contract.

The level of these payments will clearly be determined by the type of woodland, in each case, with higher annual payments likely from productive softwood stands than from pure broadleaf “amenity” woodlands. This does not imply that the latter will not benefit from the proposition, for instance:

> *A community group with a combination of gifted, private, and common land might wish to establish a woodland. Their interest is in avoiding the cash flow challenges and risks in funding the project through grants and carbon payments and they are not seeking significant income from the land. In this case, NewCo would fund the establishment of the woodland, taking risk on future grant programmes and carbon payments. NewCo would manage these risks on a combined basis with other schemes, paying a dividend (or dividends) to the community group in addition to a more modest “lease” element.*

The use of the land will be explicitly for woodland creation and management, with a “repairing” responsibility upon NewCo in return for access and protection from the landowner.

One obstacle often quoted in relation to woodland establishment on farmland, is the loss of agricultural designation, with attendant access to agricultural support. This is a very uncertain area in relation to both Brexit, and the forthcoming focus of land management outcomes and support. This, and the complication of entitlements on leased land, are areas where NewCo, and its potential investors, are ready to share and manage resulting risks.

Management - Woodland

In all cases New Co will be responsible for the planning (in agreement with the landowner) costs and organisation of woodland establishment, subsequent management, harvesting (where applicable) and sale of outputs. It will work with existing woodland planning companies and contractors, including collective groups.

A variety of management options, including continuous cover, will be employed, and where the contractual agreement is based upon a clear-fell rotation, it will include an option to sign up for a new contract at the end of the rotation.

If we are to meet woodland creation targets through a large number of small projects this will require a high degree of coordination not least as small schemes have a disproportionately high level of planning/management/compliance burden when compared to large schemes. It is no surprise that some operators should expect that this pattern will be repeated in future. Working closely with (in some cases owned by) mills and taking a large proportion of the current harvesting and re-planting they are unsurprisingly keen to support continued levels of support for new planting.

Where new planting, on small schemes is concerned, presence of smaller players and independents is more widely valued. Our challenge, through franchised/distributed models, is to bring the benefits of a common central model with portfolio benefits to smaller schemes via these trusted advisors and the supply chains with which they work.

Management - Outcomes

The basis of the underlying "lease" payments will of necessity depend upon the currently predictable outcomes such as timber, carbon and possibly cost mitigation through grants. The emergence of ELMS and public goods payments, both commercially and publicly funded is in its infancy and is likely to increasingly contribute to future schemes. For early schemes, these benefits will again be managed on a portfolio basis, as they become accessible, and will be shared with landowners through the dividend mechanism. In future, once more predictable, these income streams will be increasingly incorporated into the core payments.

Again, the portfolio effect of a common partner across multiple schemes should be helpful in marketing woodland outputs. In addition to seeking processing and stock relationships as described above, there are a few immediate optimisations that can be undertaken. Trials have already been conducted on consolidation of qualities across multiple operations, including sawlogs as a co-product of biomass. Typically biomass is seen as a co-product for sawlogs, but this is clearly inappropriate where the predominant motivation of management is access to biomass quality material, or where that is largely what arises from activities such as road clearances.

In this respect, it is important that NewCo also engages with existing woodlands to address current issues with cash flow and coordination, in addition to rehearsing and developing a number of its potential logistics roles.

Viability – Outlook

There are two main points to make here:

Firstly, extensive discussions with both Farmers and Investors have shown a considerable, and growing, appetite for the approach described above. Real contracts could be made available early next year if required.

Secondly, no two woodlands will look the same, so the objective has been to take an approach which will deal with this variety, while creating economies of scale on both inputs and outputs.

As a result, we believe that there is a partnership model which is viable, and delivers a wide range of benefits across a range of scenarios, from the existing grant funded establishment model, to a fully market funded model based upon a range of products and public goods.

In the same way that the price of carbon has been rendered transparent and reliable via a contract for differences model in England, each element of woodland output must find a reliable, and fair, basis for price discovery, allowing best value delivery of woodland creation, timber supply and wider ELMs policy. Subject a limited number of policy conversations, this can be delivered.