

The Credibility Gap for Green Finance

A paper by Jon Hollingdale on Scotland's interaction with private Green Finance and alternative approaches to funding the response to the climate crisis.

Jon Hollingdale

August 2023

Foreword by Ailsa Raeburn, Chair of Community Land Scotland and Willie McGhee, Non-Executive Director of the Forest Policy Group

Jon Hollingdale is an independent forestry and land use consultant and researcher who lives in Forres, Moray. After beginning his forestry career as a harvesting contractor in the South of England, Jon worked in Scottish community forestry from 1999 in a variety of roles, including 4 years as Community Forest Manager for Dunnet Forestry Trust and 15 years as the CEO of the Community Woodlands Association, which advises, supports and represents Scotland's 200 community woodland groups. Jon has written on forestry and land use issues and contributed to the land reform debate for many years: his discussion paper "Green Finance, land reform and a just transition to net zero" was published by Community Land Scotland in 2022.¹

Ailsa Raeburn, Chair of Community Land Scotland

Jon Hollingdale's paper came about due to his growing sense of unease at the widespread official acceptance of the Green Finance Institute (GFI) £20bn 'finance gap for Scottish nature' and the corresponding impact this is having upon the Scottish land market and our national response to the climate and biodiversity crises. In March 2023, the Scottish Government twice quoted the £20bn finance gap figure as justifying the need to 'leverage responsible private finance'.² We have seen how this rush for private finance is driving change in Scotland's land market.

Jon has critically analysed the report, published by GFI using commissioned analysis by etfec and Rayment Consulting, in the absence of any independent analysis and wider public debate about its credibility and intent. His main aim has been to promote understanding and much-needed discussion about how Scotland funds its response to the climate crisis and delivers its rightly ambitious climate targets.

The purpose of the GFI report seems clear. In their press release they state that 'having identified the scale of investment needed, and where it is needed, we must now focus on unlocking barriers to the mobilisation of private finance into nature-positive projects and businesses'.³ Jon Hollingdale's work now fundamentally questions a substantial part of the evidence provided in the report published by GFI.

¹ <https://www.communitylandscotland.org.uk/resources/green-finance-land-reform-and-a-just-transition-to-net-zero/>

² [Written question and answer: S6W-15869 | Scottish Parliament Website and https://www.parliament.scot/chamber-and-committees/official-report/search-what-was-said-in-parliament/NZET-14-03-2023?meeting=15208](https://www.parliament.scot/chamber-and-committees/official-report/search-what-was-said-in-parliament/NZET-14-03-2023?meeting=15208)

³ [Microsoft Word - EMBARGOED 97 billion of additional investment needed over next decade to meet UKs nature-related targets 12 October \[3\].docx \(greenfinanceinstitute.co.uk\)](#)

The GFI report and the supporting source documents qualify the figures used (and the £20bn total) in a number of important respects, and it would seem it was right they did so, as Jon's conclusions set out that they do not stand up to close scrutiny. For example, the largest single component of the Scottish finance gap is "*Climate mitigation through bio-carbon*" which accounts for £9bn of the Scottish gap. However the majority of costs involved relate to land acquisition and associated financing rather than woodland establishment and maintenance. The actual costs of delivering climate mitigation through bio carbon is much smaller than that, by perhaps a factor of 10.

Elsewhere, the GFI report uses the overall woodland creation target (which encompasses all types of woodland and is intended to deliver a range of objectives) as a proxy for a "nature restoration target". Similarly, the widely quoted figure of a £1.3billion 'finance gap' for woodland creation over ten years actually refers to the gross cost of delivering the full woodland creation targets, without any reflection of the support available through the Forestry Grant Scheme (currently ~£40m a year) or the existing income opportunities from carbon credits and timber sales. It also appears to consider there will be no residual land value at the end of the period.

Jon's paper also considers the carbon credit calculations which underpin the £2billion MoU between NatureScot and private financiers. It concludes these are also hugely overstated. Delivering the claimed sequestration requires that the entire 185,000ha is planted within a few years, which would entail a massive acceleration of industry capacity and land release, whilst returns on investment – at an undisclosed rate of interest - are apparently predicated on very significant inflation of the price of carbon units. All of this is extremely speculative and not borne out by experience to date.

Jon's paper therefore raises serious questions around both the calculations reported by GFI, and the use of these figures to move the impetus of Scotland's response to the climate crisis from the public to the private sector. Its concern is that privatising the response in this way will be ineffective in tackling climate change and have a further inflationary impact upon the Scottish land market, with potential negative effects on the delivery of Scottish Government commitments to ambitious land reform, a Just Transition to Net Zero and Community Wealth Building.

Community Land Scotland has expressed its own concern about the potential impacts of unregulated carbon trading where private finance is being encouraged to take a leading role. [Our developing policy position on these matters is on our website](#) and we have issued guidance on the issues to our members. In this context Jon's paper, which appears to be the first independent analysis of the GFI work, offers very different insights to future funding needs than those in the report GFI published. In the spirit of promoting transparency and encouraging new insights and a deeper debate about important land related policy issues

Community Land Scotland and the Forestry Policy Group are pleased to jointly publish the paper.

I hope Jon's paper helps to further shed new light on the ongoing public debate about how Scotland reaches its climate commitments, that we understand any upsides and the downsides to utilising large scale private finance and, in an unregulated environment, we guard against a rush to monetise Scotland's natural assets which risks leaving its people and communities behind. As that debate develops the Scottish Government and Nature Scot have a key role to play in furthering a well-informed debate about future land and climate policy and in Community Land Scotland, they will find a willing partner in transparently exploring the options and possibilities.

Community Land Scotland supports the need for radical land reform and has in recent years published occasional Discussion papers which can contribute to understanding, provoke and encourage discussion on issues relevant to the land question in Scotland. The research undertaken for any of these papers and any statements and views expressed in them as a result are the sole responsibility of the authors. Community Land Scotland is not obliged to publish any contributions it receives or responses to the papers it publishes.

Willie McGhee, non-executive Director with the Forest Policy Group (FPG)

Jon's paper highlights that a natural capital lens can depict Scotland's land and environment as a speculative opportunity, a means to attract significant private capital and to maximize returns from altering land and changing the environment. This financial perspective has resulted in inflated land prices, is attracting opportunist investors, and has resulted in more remote absentee forest ownership. The report published by the Green Finance Institute would appear not to consider natural capital creation or improvement as a gradual process involving local communities; rather, a purely financially focused 'big bang' gambit likely to miss the opportunity for more local control and management of land, which over time, could achieve a balance of social, economic, and environmental sustainability.

The GFI commissioned report is optimistic in its projections for filling the perceived natural capital funding gap; not unsurprising given the GFI mission to enable a greener future through accelerating private finance and catalysing investments in net zero and nature-positive outcomes. This GFI report overlooks the fact that sufficient funds and the tools for land management regulation are already within the Scottish Government's grasp, requiring only resolve, commitment, and imagination to apply them. Unfortunately, governments are often drawn to the idea of using private capital to solve problems without fully considering the long-term consequences.

FPG welcomes Jon's insights into some of the economic and climate change anomalies underlying what appear to be overly inflated projections for green finance and we applaud Jon's aspiration to inject a dose of reality into this complex and technocratic subject.

The Forest Policy Group supports more diverse, locally controlled forests that offer Scotland's people opportunities for sustainable growth and healthy wellbeing. Forest Policy Group produces Research, Blogs and Discussion papers and the views expressed in any of these outputs are the authors own.

Executive Summary

Land use is a major contributor to Scotland's emissions and radical change is needed to achieve the Scottish Government's net zero targets; however persuading private sector landowners to carry out woodland creation and other land use adaptations at the necessary rate has proved challenging. One response has been to embrace a "natural capital" approach, monetising environmental outcomes to encourage large-scale private investment in nature-based solutions, justified by reference to a "green finance gap" that only the private sector can fill.⁴

Whilst tackling the twin emergencies does need coordinated action by public and private sectors, there is widespread concern that reliance on private capital represents an abdication of responsibility by government and an invitation to unregulated exploitation. There are also important questions about the consequences of this approach for the Scottish Government's land reform and community wealth building agendas. Scotland's uniquely concentrated pattern of private rural land ownership has been sustained and strengthened by a range of historical and current tax exemptions and agricultural subsidies ostensibly designed to influence land use: there is clearly a risk that new capital flows to land will have similar effects. In particular, there are concerns that the focus on private investment solutions favours extractive relationships and dilutes opportunities to secure benefits for local communities, whilst distracting attention from alternative measures, including review and reform of existing mechanisms, which might better deliver land use change and advance broader community agendas.

This paper provides a critical analysis of attempts to quantify and address the green finance gap, and assesses some alternative mechanisms by which land use change might be facilitated.

It considers in turn:

- the "finance gap for UK nature" as estimated by the Green Finance Institute⁵;
- the Memorandum of Understanding (MoU) between NatureScot and three private sector financial organisations to mobilise £2 billion of investment in woodland creation;
- the extent of the finance gap for woodland creation in Scotland, and what alternative measures might help close it.

It concludes that:

- the extent of any finance gap, at least in respect of woodland creation, is greatly exaggerated by the Green Finance Institute report;

⁴ <https://www.nature.scot/funding-and-projects/firms-facility-investment-ready-nature-scotland>

⁵ For brevity the report being analysed is described as the 'GFI report', however it should be noted that the GFI published the report which was commissioned from Eftec and Rayment Consulting.

- demand for the private loan finance outlined in the NatureScot/Private Finance MoU is not clear; the finance will not obviously add significant value, whilst investment on the scale proposed seems unnecessary and unachievable in practice
- there are other potential mechanisms to incentivise and stimulate woodland creation, which might prove more effective in tackling climate change and would do more to deliver the Scottish Government's wider land reform and community wealth building agendas.

1 Introduction

Tackling the climate and biodiversity emergencies is one of, if not *the*, existential problems facing all Governments. The Scottish Government has set challenging targets for emissions reductions and made strong pledges to nature restoration, whilst also committing to a just transition; all of which is to be welcomed. To date, however, action at the scale required has been lacking.

The twin emergencies are in a large part land use issues, which means they are also land ownership⁶ and thus land reform issues. The Scottish Government's strong policy commitment to diversification of landownership is expressed in the Land Rights and Responsibilities Statement⁷ and has been demonstrated by the establishment of the Scottish Land Commission, the passage of legislation giving opportunities for communities to acquire land and built assets and the provision of financial backing through the Scottish Land Fund. However, there has been very limited progress on unpicking the financial mechanisms which underpin the existing pattern of landownership.

Agriculture and other land uses are very significant and apparently refractory contributors to GHG emissions, but have the potential for significant emissions reductions through removal of ruminants and restoration of peatland, whilst woodland creation can actively sequester carbon and produce a sustainable substitute material for steel and cement.

The urgent need for radical land use change has been clearly laid out by the Committee on Climate Change⁸ but there is little clarity as to how this will be delivered, and considerable resistance from those with vested interests in the current disposition. With little political appetite for large-scale land nationalisation, private sector land-use change must be achieved by direction through legislation or conditionality, encouraged by reducing the returns from alternate land uses or stimulated by financial incentives, with land managers and their lobbies typically favouring the latter.

Financial measures are a familiar means of securing public policy goals and correcting apparent "market failures", but they are not without disbenefits. Scotland's complex system of tax exemptions and agricultural subsidies has been criticised for promoting land speculation and tax avoidance, driving up land prices, restricting access to land and pricing communities out of the market. Whilst concerns over the impact of green finance and so-called "green lairds" are relatively new, the effect of tax exemptions and subsidies on land use

⁶ As the Land Reform Review Group noted: "Ownership is the key determinant of how land is used"
<https://www.gov.scot/publications/land-reform-review-group-final-report-land-scotland-common-good/p165>

⁷ <https://www.gov.scot/publications/scottish-land-rights-responsibilities-statement-2022/>

⁸ <https://www.theccc.org.uk/publication/land-use-reducing-emissions-and-preparing-for-climate-change/>

and land values has long been recognised and was analysed in detail by both the Land Reform Review Group⁹ and the Scottish Affairs Committee Inquiry on Land Reform in Scotland.¹⁰

Unless carefully managed, the introduction of new financial rewards accruing to land is likely to have similar negative impacts, especially if such monies are additional; overlaying rather than replacing existing fiscal mechanisms. It is important therefore that any proposed measures and initiatives are critically reviewed to assess not only whether they will actually deliver the desired land use changes, but also to analyse their impact on patterns of landownership and the distribution of benefits from land and land use: will they facilitate a just transition, or simply exacerbate existing inequalities?

A second area of concern is that this demand on public funding comes at a time when the Scottish Government is struggling with a legacy of austerity and a cost of living crisis exacerbated by the post-Brexit economic slump. It is understandably attractive, therefore, for governments to seek alternative sources of finance to complement or even replace public support, and there has been considerable attention on defining the scale of a “funding gap for nature”: defined essentially as the difference between the cost of what’s needed and the extent of government finance available.

The existence of a funding gap is not new: forestry grants have always been presented as a contribution to costs, in the expectation that landowners would be willing to invest in anticipation for longer term rewards, whether these are financial from timber, or less tangibly from environmental or amenity improvements to their property. There is also a long tradition of altruistic, green-motivated private investment, whether by wealthy individuals such as Anders Holch Povlsen or Environmental NGOs.

What’s new is the securitisation of climate and biodiversity action, the apparent expectation that land use change should be an inherently profitable decision, and the anticipation of a move away from the current model, where activity is funded by a mix of grants and landowner contributions, to one where land use change to tackle the climate and biodiversity crises is a locus for external, commercial investment with the state’s role reduced to that of a facilitator for private capital.

A key document in this process was “The Finance Gap for UK Nature”,¹¹ published in 2021 by the Green Finance Institute, a “forum for innovation in green finance” that is “backed by government, trusted by finance, and led by bankers” which uses their platform “to co-design financial instruments and mechanisms”.¹² The report’s key message was that “The finance gap to meet the UK’s nature related outcomes is at least between £44 billion and £97 billion over the next 10 years, with a central estimate of £56 billion”. Despite the very significant

⁹ <https://www.gov.scot/publications/land-reform-review-group-final-report-land-scotland-common-good/>

¹⁰ <https://committees.parliament.uk/work/4713/land-reform-in-scotland/publications/>

¹¹ <https://www.greenfinanceinstitute.co.uk/news-and-insights/finance-gap-for-uk-nature-report/>

¹² <https://www.greenfinanceinstitute.co.uk/about-us/>

levels of uncertainty of some of the estimates,¹³ these headline numbers have been rapidly adopted and enthusiastically quoted by politicians, and it has become an article of faith for some that external, commercial private finance is the only feasible solution.

This paper focuses on the scale of the finance gap (in particular with respect to woodland creation), potential mechanisms to address this, and the implications for the Scottish Government's wider policy agenda. There is no doubt that there are significant costs involved in delivering the land use changes required, but there are important questions about the scale of the issue and the proposed solutions,¹⁴ and concerns that embracing private finance distracts from the need to ensure that funding and other mechanisms are aligned to the delivery of wider commitments to land reform and community wealth building.

¹³ Reflected in the report itself, which is heavily caveated in places.

¹⁴ Space doesn't permit consideration here of other important questions, e.g. with respect to the ethics and efficacy of introducing extractive private capital into public service delivery, given the short but unhappy history of PFI in Scotland; and the impact of carbon trading, and the extent to which it encourages or disincentivises actual emission reductions.

2 The Finance Gap for UK Nature

The Green Finance Institute (GFI) report “The Finance Gap for UK Nature” defines a finance gap as “the difference between *required spending* and *committed/planned spending* associated with the delivery of a set of nature-related outcomes.”

There are issues arising from the definitions and specific numbers attributed to both “*required spending*” and “*committed/planned spending*”; but there are also fundamental problems with the equation itself, which implicitly assumes:

- Current spending and activity is optimised in terms of delivering nature related outcomes;
- The only way of delivering an increased quantity of nature-related outcomes is to do more of the same activity at the same cost.

Both of these assumptions are demonstrably flawed:

- Direct payments to farmers (which amount to over £500m annually and comprise the great majority of land-based funding) are not included in “*committed/planned spending*” because they are not considered to deliver nature-related outcomes: there is very significant scope to reconfigure these funding streams to ensure they deliver such benefits in future;¹⁵
- Woodland creation is currently almost entirely delivered by planting, however, there is potential (if deer & sheep numbers were reduced) for a much greater proportion to take place by natural regeneration, which would reduce both capital costs and emissions from establishment operations.

2.1 Overview of GFI report

The GFI report covers a wide range of sectors and outcomes, which are marshalled into seven “outcomes”, with the total nature gap for the UK estimated at £56bn (£60bn gross cost minus £4bn overlaps) over the next decade.

Category	UK	England	Wales	Scotland	N Ireland
Clean water	8	3	1	3	0.710
Protect and/or restore biodiversity	19	9	1	8	1
Reduce flood risk through natural flood management	0.354	0.347	0.007		
Improve bio-resource efficiency	4	3	0.035	0.476	0.437
Climate mitigation through bio-carbon	20	8	2	9	0.669
Enhance bio-security	.109				

¹⁵ The forthcoming Agriculture Bill provides an excellent opportunity to make all public subsidy dependent on delivery of public benefit, including enhancement of biodiversity and reduction of greenhouse gas emissions.

Improve access and engagement with natural environment	7	4	1	1	1
Overlap	4	1	0.220	2	0.272
Total	56	27	5	20	4

Table 1: Finance gap by outcome and location (2022-32) in £bn, from GFI report

(note that some totals don't add up exactly due to rounding)

The national total is disaggregated across four nations, which produces some curious effects and prompts some obvious questions:

- why is the cost for **Clean water** the same in Scotland as in England, given the discrepancy in population and the well-publicised water quality issues south of the border?¹⁶
- why are the costs for **Improve access and engagement** in Scotland, Wales and Northern Ireland each £1bn, and all much more expensive per capita than England, which has almost 85% of the total UK population?

Two of the seven outcomes: **Climate mitigation through bio-carbon** and **Protect and/or restore biodiversity**, each account for about a third of the gross total for the UK. They represent an even larger proportion of the disaggregated finance gap for Scotland, which is estimated as £20bn net (£22bn gross, with £2bn of overlaps), of which about £8bn is for biodiversity and £9bn for climate mitigation. The remainder of this section focuses on these two outcomes.

2.2 Outcome 5: Climate mitigation through bio-carbon

Climate mitigation through bio-carbon has the single largest finance gap (£20bn) of any outcome, with estimated costs of £21.912bn and only £1.58bn of confirmed spending. However, this cost estimate is based on a single reference: "Central estimate: estimated spending reported by the UK Climate Change Committee (CCC, 2020a) for each devolved administration for required spending on land use changes to achieve targets".

The £21.912bn figure does not however appear anywhere in the linked document¹⁷ which reports net private costs to 2050 of £17bn, comprising gross private costs of nearly £40bn and private benefits of £23bn, distributed across forestry, bioenergy, agroforestry, peatlands and agricultural practices and technology. Land managers in Scotland are estimated to incur £12 billion in private costs and £6 billion in private benefits.

Woodland creation accounts for the largest share of gross private costs, with conifer woodland representing 16% of the total costs and broadleaved woodland 24%, but this is primarily comprised of **land acquisition** and **financing** costs, with planting and management making up only a relatively small component of total capital costs, as show in table 2 below.

¹⁶ Additionally, Scottish Water's governance rules constrain the use of private finance

¹⁷ <https://www.theccc.org.uk/wp-content/uploads/2020/01/Economic-impacts-of-Net-Zero-land-use-scenarios-Vivid-Economics.pdf>

This raises several questions:

- It is unclear why land acquisition costs are included. Acquisition is not a prerequisite for woodland creation, the majority of which is being done by existing owners;
- Whilst there have been some high-profile land acquisition for afforestation, e.g. by forestry investment fund managers such as Gresham House, and companies such as Brewdog & Aviva, the land isn't "consumable" - it remains an asset which can be expected to appreciate in value;¹⁸
- Even if land acquisition costs were to be considered, they are not constant across the UK, with very significant variation from N Scotland to SE England.

Without land acquisition costs, most of the financing costs would disappear, given that a significant proportion of planting and establishment costs are covered by grants. For native broadleaved or mixed conifer woods the sale of woodland carbon credits will usually cover any budget gap; those planting commercial conifers can expect any temporary shortfall to be covered by future timber income.¹⁹

Cost type	UK low estimate (£/ha)	UK central estimate (£/ha)	UK high estimate (£/ha)
Coniferous land acquisition costs	£12,340	£12,340	£12,340
Coniferous planting and establishment costs	£3,000	£4,500	£6,000
Coniferous financing costs	£5,960	£6,550	£7,130
Total coniferous capex	£21,300	£23,390	£25,470
Broadleaved land acquisition costs	£12,340	£12,340	£12,340
Broadleaved planting and establishment costs	£4,000	£6,000	£8,000
Broadleaved financing costs	£6,350	£7,130	£7,900
Total broadleaved capex	£22,690	£25,470	£28,240

Table 2: Woodland Creation Capital Costs, from "Economic Impacts of Net Zero Land-use scenarios"

Three other land uses considered in the report also have very significant land acquisition and financing costs: miscanthus, short rotation coppice and short rotation forestry. The aggregate gross private cost of these five land use changes is estimated at £25.6bn, of which £17.88bn is accounted for by land acquisition and associated financing costs, a figure larger than the entire net private cost of all the proposed land use changes.

¹⁸ The Gresham House Forest Growth and Sustainability LP brochure specifically refers to appreciation in asset values as an important aspect of the investment opportunity

¹⁹ This point is discussed in more detail in section 3.

	Total costs £bn	A & F ²⁰ £/ha	P & M ²¹ £/ha	Total £/ha	A & F %	A & F cost £bn
Conifer woodland	6.1	18,890	7,080	25,970	73%	4.44
Broadleaf woodland	9.3	19,470	8,510	27,980	70%	6.47
Miscanthus	5.2	34,610	15,080	49,690	70%	3.62
Short rotation coppice	2.4	23,780	20,800	44,580	53%	1.28
Short rotation forestry	2.6	36,370	9,410	45,780	79%	2.07
Total	25.6					17.88

Table 3: Breakdown of cost for five land use changes costs, figures taken from “Economic Impacts of Net Zero Land-use scenarios”

It’s unclear why Vivid Economics felt the need to include land acquisition and financing costs (and why the Climate Change Committee reproduced them without comment) and it’s even less clear why GFI felt the need to rely on these figures, however, the apparent net finance gap for this outcome appears to be almost entirely accounted for by the inclusion of land acquisition and associated financing costs, which suggests that the Green Finance Institute estimate of a £20bn UK / £9bn Scotland net finance gap for *Climate mitigation through bio-carbon* is greatly over-estimated.

2.3 Outcome 2: Protect and/or restore biodiversity

The *Protect and/or restore biodiversity* outcome is subdivided into ten categories, covering both marine and terrestrial habitats.

The figures provided for this outcome are backed by calculations presented in a separate document: “Appendix 2 Financial needs to meet Biodiversity related targets and policy commitments in the UK”.²² Even so, some of the categories have large apparent gaps with very little in the way of supporting evidence for either the estimated costs or the policy commitments this spend is required to deliver, most notably the estimated £6bn gap for *Ensure seafloor habitats are healthy and sustainable*.

One of the ten categories is *Woodland creation and management*, for which a UK spending gap of £1.805bn (costs £2.523bn, committed spend £0.718bn) is estimated. However, there are a number of flaws in the supporting analysis.

²⁰ A & F = Acquisition and Financing

²¹ P & M = Planting and Management

²² <https://www.greenfinanceinstitute.co.uk/news-and-insights/finance-gap-for-uk-nature-report/>

a) The report conflates the overall woodland creation target with a nature restoration target

Scotland doesn't have a statutory "nature restoration target" for woodland, although this may be defined in the forthcoming Natural Environment Bill. There is currently an annual "native woodland creation target", which the Bute House agreement committed to increase from 3,000 to 4,000 hectares.²³

However, the calculations behind the GFI report use the entire woodland creation target (e.g. 12,000ha in 2020/21 rising to 18,000ha by 2024/25) as a proxy for a nature restoration target, although the overall target encompasses all types of woodland and is intended to deliver a range of objectives.

b) The report inflates the cost of woodland creation

The estimated costs per hectare used in this section (see table 4 below) are notably higher than used elsewhere in the GFI report: as detailed in section 2.2 above, the report uses on estimates ranging from £3,000 to £6,000/ha for planting and establishment of conifer woods, and £4,000 to £8,000 for broadleaved woods, with management costs bringing this up to an average of £7,080 for conifer woods and £8,510 for broadleaves.

Woodland creation and maintenance costs vary considerably across the UK and from site to site according to scale and specification, with larger projects benefitting significantly from economies of scale, so any estimates are heavily dependent on the expected average size of planting schemes.²⁴

	Planting ha	Cost £m	Cost £/ha
England	86,340	886	10,262
Northern Ireland	11,900	128	10,756
Scotland	142,000	1,306	9,197
Wales	22,000	202	9,182
Total	262,240	2,522	9,617

Table 4: Woodland creation cost estimates from GFI/Rayment Appendix 2

c) Income projections are incomplete

The tabulation of committed spend for this outcome includes the English Woodland Carbon Fund which closed in April 2021,²⁵ but does not take into account the Westminster Government's Woodland Carbon Guarantee which was announced in April 2018,²⁶ nor the

²³<https://www.gov.scot/publications/scottish-government-and-scottish-green-party-shared-policy-programme/documents/>

²⁴ Section 3.1 below has a more detailed analysis of woodland creation costs.

²⁵ <https://www.gov.uk/guidance/woodland-carbon-fund>

²⁶ <https://www.gov.uk/guidance/woodland-carbon-guarantee>

income available elsewhere to those creating new woodlands through the sale of woodland carbon credits.

There is also no consideration of timber income: this is admittedly limited from many native woodland schemes, but there is some scope for timber sales from Scots pine and productive broadleaves such as oak, beech and sycamore on better sites.

d) Additional section on tree losses due to climate change

Appendix 2 includes a section on tree losses due to climate change²⁷ which says “Further increases in rates of woodland creation are likely to be required to compensate for the losses of trees due to climate change. For example, the CCC Valuation Report has reported that there is likely to be a loss of 211,400 ha of pine trees in England by 2050 (assuming a constant level of loss) due to climate change. To compensate for these losses, it would be necessary to double the planned rates of tree planting above (which amount to 214,000ha of new woodland in England by 2050).”

There are some important issues with this section:

- The loss of specific tree species (whether through climate change or disease) may have biodiversity impacts (loss of dependent invertebrates etc.) but does not automatically mean that woodland cover will be lost at a site;
- On the previous page of Appendix 2 it is suggested that non-native conifers (e.g. pine trees in England) make no contribution to biodiversity - so even if these woods were lost there would be no biodiversity-related imperative to replace them;
- It seems highly improbable that climate change impacts in the next 30 years will be sufficient to eradicate several common species from the entire country when they currently grow well from Kent to Cumbria...
- ...and even if this was the case, Forest Research estimates that there is only 95,000ha of pine woodland in England.²⁸

²⁷ admittedly flagged as “*The following results have been highlighted as highly uncertain*”.

²⁸ <https://www.forestresearch.gov.uk/tools-and-resources/statistics/forestry-statistics/forestry-statistics-2022/>

Table on p32: Scots pine 55,000ha, Corsican pine 32,000ha, Lodgepole pine 8,000ha.

3 The NatureScot/Private Finance MoU

On 1 March 2023 NatureScot announced that a Memorandum of Understanding was in place with UK private bank Hampden & Co, Lombard Odier Investment Managers and “global impact firm” Palladium. The partnership was described as “a private finance investment pilot that could mobilise £2 billion in landscape scale restoration of native woodland, create new jobs and support rural communities across all parts of Scotland”.²⁹

Later that month, at the Net Zero, Energy and Transport Committee, the Minister for Green Skills, Circular Economy and Biodiversity characterised the proposal as a commercial loan scheme with returns based on future carbon income: “The investment model that is being looked at is based on a bridging loan provided by Hampden & Co to the landowner to create woodland, both through planting and through natural regeneration. That loan bridges the gap between the initial investment and the flow of carbon revenue.”³⁰

Some additional key points were addressed in an FAQ:³¹

- “This project is not about acquiring land, or changing ownership, it’s about working with existing owners”;
- “The project aims to plant mixed native woodlands but may include some productive commercial species depending on existing land use and the views of consultees”;
- “At the moment, most new woodlands in Scotland are funded through the Forest Grant Scheme (sic) which is paid for by the taxpayer. In this new model, we will use an increasing amount of responsible private investment to pay for new woodland, reducing the burden on public finances and increasing the amount of woodland that can be created”;
- “Our investors will also make a return on the investment from the sale of carbon credits”;
- “There is the option for investment to be a loan, but it could also be an equity agreement, or investors may simply buy the carbon”.

The press release claimed that “£2 billion of investment in woodland could create around 185,000 hectares of native woodland and sequester 28 million tCO₂e over the next 30 years.” It is, however, unclear as to what this money is for, why it is needed and how, where and by whom it will be spent: the numbers in the press release simply don’t add up:

- The total available is considerably more than is required to cover gross costs;
- Most landowners/managers will inevitably favour grants over loans or other extractive investments so the likely investment/ha demand is even lower;
- Some landowners/managers may choose to cover costs themselves rather than seek external investment;
- Carbon sequestration claims are dependent on an improbable planting rate;

²⁹ <https://www.nature.scot/ps2-billion-private-finance-pilot-potential-vital-step-restoring-scotlands-woodlands>

³⁰ <https://www.parliament.scot/chamber-and-committees/official-report/search-what-was-said-in-parliament/NZET-14-03-2023>

³¹ <https://www.nature.scot/doc/private-finance-pilot-nature-faqs>

- Return on investment for financiers is apparently dependent on inflated unit prices for carbon credits;
- The availability of land for woodland creation on this scale is unclear.

The remainder of this section looks at these points in more detail.

3.1 The cost of woodland creation

“£2bn of investment in woodland could create around 185,000ha of native woodland”

Woodland creation costs vary considerably by site (how remote / steep / difficult to access is it?), woodland design (what species, how many trees per hectare?) and in particular scale: large projects benefit from significant economies of scale both in material quantities (a 100ha square site needs only 10 times as much fencing as a 1ha plot), material prices (if you buy millions of trees you get them much cheaper than if you buy a few thousand) and time (the application bureaucracy is largely independent of scale).

Woodland creation (especially by planting) is undoubtedly expensive, and has become significantly more so in recent years³² with substantial increases in the costs of labour, fuel and in particular fencing materials: these have exacerbated the relative advantage of the very largest schemes, which typically involved the lowest ratio of fencing to planting area and are usually taken forward by forest management companies with the market power to obtain trees, labour and materials at the lowest unit costs.

Almost all private sector woodland creation³³ is supported by funding from the Forestry Grant Scheme (FGS), which is intended to provide a contribution to costs. FGS has 9 planting options (plus natural regeneration and agroforestry), each with their own grant rates, which vary considerably, reflecting the different specifications and scale involved.

To date,³⁴ total grant of £309.3m has been approved for 76,008ha, representing an average spend per hectare of £4,069. Scottish Forestry no longer publishes a breakdown of planting project by size category, but of a total of 1401 projects approved by July 2021, 396 (28%) were below 5ha and 1131 (80%) were below 50ha, whilst the 130 (9%) of projects over 100ha accounted for 53% of the total area and 43% of the total grant.

As the actual costs of woodland creation are very site-specific it is difficult to provide an average cost, and as noted previously the GFI report uses a wide range of estimates: £9,197/ha when discussing the biodiversity outcomes; and ranges centring on £4,500/ha for conifers and £6,000/ha for broadleaves for the bio-carbon outcome.

³² To some extent inflation has meant costs have caught up somewhat with the GFI figures.

³³ Forestry and Land Scotland is not eligible for FGS funding, but local authorities and other public bodies are eligible.

³⁴ Latest published figures from Scottish Forestry are to 30 June 2023.

<https://forestry.gov.scot/publications/support-and-regulations/forestry-grant-scheme/forestry-grant-scheme-statistics?layout=default>

A reasonable overall estimate for the current mix of woodland creation projects might be in the range £6-8,000/ha, noting that the smallest projects could cost double this and the largest considerably less. The total cost of 185,000 hectares of native woodland, is therefore more likely to be around £1.5bn, although a focus on large scale projects, using natural regeneration where possible and benefitting from better deer control nationally would reduce this substantially.

It is of course possible to increase costs by e.g. including additional recreation provision: this may be welcome and appropriate at some sites, although the greatest demand for this is in urban and peri-urban woods, and such investments are difficult to monetise (and thus pay back).

The proposed £2 billion investment opportunity, far from “filling a gap”, appears to be considerably more than is needed to cover all woodland creation costs for a decade.

3.2 Interaction with the Forestry Grant Scheme

The Forestry Grant Scheme is currently under review but all expectations are that it will continue to provide significant funding for woodland creation; indeed the Minister stated in response to a Parliamentary Question about the investment partnership that “we anticipate that land managers involved will also apply to existing grant schemes such as the Forestry Grant Scheme”.³⁵ Average FGS support for the four main native woodland options is £4,200/ha.³⁶ If this was available for 185,000ha it would equate to £777 million over ten years, which would represent a significant expansion of the FGS woodland creation budget.

It is possible and perhaps desirable that future FGS intervention rates will be reduced for some woodland types, such as predominantly Sitka spruce plantations, but this type of project is probably excluded from the scope of the partnership anyway: the MOU says it is intended for mixed/native broadleaved woods, and the income to repay loans (and provide profit for financiers) is expected to come from carbon credits, which commercial Sitka projects are now largely ineligible for.

It is also possible (and desirable) that the grant rates for larger schemes will be significantly reduced or capped, to account for economies of scale, but it seems a reasonable assumption that there will always be some grant aid available for native woodland creation.

It has been suggested that some land managers might forego grant aid in an attempt to avoid the environmental standards which are a condition of the FGS, however Environmental Impact Assessment rules require that Scottish Forestry has to give consent for schemes over certain thresholds³⁷ (see) regardless of whether a grant is being applied for / paid, so all planting must meet basic environmental standards.

³⁵ PQ S6W-15872 <https://www.parliament.scot/home/chamber-and-committees/questions-and-answers>

³⁶ <https://forestry.gov.scot/publications/1472-forestry-grant-scheme-statistics-january-2023/download>

³⁷ <https://forestry.gov.scot/support-regulations/environmental-impact-assessment>

There are other possibilities: FGS could become more competitive, with some schemes not receiving grant funding, although it would not be a good look for the partnership / NatureScot to be supporting the (presumably) lower quality schemes that Scottish Forestry had rejected. Alternatively, future eligibility for FGS could be means tested, with the biggest/wealthiest landowners/managers excluded. Some might see that as desirable, but it would no doubt be fiercely opposed and difficult to assess and implement in practice.

However, given the availability of grant funding it's difficult to understand why any rational land manager would **not** choose to apply: grants don't have to be repaid, whereas a loan from the partnership would have to be repaid with interest (at an as-yet undisclosed rate). Grants almost certainly won't cover the full cost, so there will inevitably be a gap and external finance is one way of bridging that, but many, including the biggest/wealthiest landowners/managers may simply choose to meet that cost out of their reserves (it's hard to imagine Mr Povlsen will be queueing up for a loan) rather than committing to paying interest or giving up an equity stake.

3.3 Carbon sequestration claims

“185,000ha of native woodland ... sequester 28mtCO₂e over the next 30 years”

Claims of potential carbon sequestration are underpinned by the Woodland Carbon Code (WCC) Calculator, which provides a robust and relatively conservative model for calculating likely net³⁸ sequestration from a range of species at a range of growth rates: the model suggests that a large scale native woodland project³⁹ would deliver net sequestration of ~194tCO₂e/ha and generate 156 carbon units/ha by year 30⁴⁰.

However, it also demonstrates that, due to emissions from establishment operations and slow growth in early years, only 46tCO₂e (net) will be sequestered and 37 units/ha generated by age 20; indeed, it takes around 17 years for a new native woodland to “get into credit” at all.

In order to achieve the promised sequestration within 30 years, all of the planting would have to take place within the next four or five years, and this seems highly improbable, given that the current annual planting rate is less than 10,000ha. Even if the regulatory processes could be expedited there simply isn't enough planting stock available from tree nurseries. The Scottish Government's planting target is rising annually, to 18,000ha by 2024-25, but even so 185,000ha represents more than 10 years' worth of the total planting target.

Given that commercial conifers (largely outwith the scope of the partnership, and largely excluded from future carbon credits) account for 52% of the FGS woodland creation area to

³⁸ i.e. after subtracting any losses from establishment operations.

³⁹ Based on WCC calculations for a 1000ha new woodland creation project: silver birch at YC4, fencing, moderate ground prep of organo-mineral soils.

⁴⁰ Total carbon units after 100 years is projected to be ~330/ha.

20% of projected sequestration goes into a “buffer”, only 80% is available for sale as carbon units.

date, and might reasonably be expected to continue to account for at least 50% of the total, 185,000ha of native broadleaves represents 20 years' worth of the current target.⁴¹

The reality that woodland creation at this scale would inevitably take place over many years significantly undermines the time-limited carbon sequestration claims.

3.4 Value of carbon credits

“£2 billion of investment ... 28 million tCO₂e over the next 30 years.”

Carbon credits are identified as the main means of generating income to repay the private investment, however there appears to be a mismatch between the value of the investment and the likely income. As discussed above, if all the woodland could be planted in a few years, it might sequester 28 million tCO₂e over the next 30 years, which equates to 22.4m saleable carbon units.

There isn't a single carbon market or price, as not all units are worth the same, with some buyers willing to pay a premium for carbon from “added value” projects that promise additional social, environmental or public relations benefits. Prices have risen in recent years and values of £20-£30/unit are widely quoted, and can be evidenced by the prices achieved through the (English) Woodland Carbon Guarantee Mechanism.⁴²

However, for 22.4 million credits to generate £2bn the unit price would need to be nearly £90. If the loans are long term, to allow growers to sell verified units once the carbon has actually been sequestered, the prices will have to be significantly higher to generate returns on investment: £2bn at the current⁴³ base rate of 5.25% interest⁴⁴ over 30 years is more than £8.8bn.

Future prices for carbon credits are difficult to estimate. If the credibility of the market can be maintained – by no means certain – then they may well continue to rise, however market prices will also be impacted by a rapid increase in the volume of units for sale of the sort suggested by this investment proposal.

The private investment covered in the MoU is projected to generate 22.4 million credits in 30 years, however, most native woodland schemes run for 100 years and the total number of credits generated over this period will be closer to 50 million. In comparison, as of 31 March

⁴¹ Of course the target is not a limit and it might well be desirable to plant new woods quicker, but it demonstrates the mismatch between these figures and current levels of activity. Nursery capacity is growing but it takes several years to bring new facilities into operation.

⁴² The woodland carbon guarantee provides a guaranteed price for units in England: details of average prices achieved are here: <https://woodlandcarboncode.org.uk/woodland-carbon-guarantee> whilst the maximum price for the next auction has been set at £30/unit. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1135797/Guide_to_the_seventh_auction.pdf

⁴³ as at 3 August 2023

⁴⁴ The anticipated rate of return to investors has not been revealed.

2023 the total projected lifetime sequestration of validated schemes in the UK was just 8.5mtCO₂e, equating to about 6.8 million saleable carbon units, whilst schemes currently under development have collective projected sequestration of 14.4 mtCO₂e and will generate an estimated 11.5m units.⁴⁵

3.5 Land release

Identifying and securing the release of land for woodland creation is a perennial issue in Scotland (and even more so in England and Wales) and has been the most significant factor in the repeated failure of all administrations to meet planting targets.

Land is not a *tabula rasa* and woodland creation does not happen in a vacuum: plantable land inevitably has other uses which are heavily subsidised by the state and defended by powerful lobbies. Very little if any arable land has been planted: new woodlands typically occupy land under grazing or sporting use, but change is often vigorously opposed, even when the status quo is demonstrably damaging to climate and biodiversity.⁴⁶

Historically, financial incentives for new woodland were required not only to help meet woodland creation costs but also to compensate farmers handsomely “for the loss of farming income”, however notional this income might have been in reality. The current iteration of FGS goes a step further and allows land managers to retain their agricultural subsidies. In recent years a number of factors have changed the balance between forestry and agriculture somewhat:

- Brexit has forced the realisation that the agricultural subsidy system might finally be reformed;
- The recent rise in timber prices (and the expectation that they will remain high in the long term) has improved the apparent viability of commercial conifer crops;
- The burgeoning market in carbon credits has created a new income stream to monetise native woodland creation.

Even so, it has not proved possible to meet planting targets. In the 22/23 year, despite 11,000 ha worth of approved applications, only 8,190 ha of new woodland was created as around 25% of approved projects were either delayed or not taken forward by landowners, with increased costs and a lack of capacity in the industry being cited as responsible.⁴⁷

Although incoming investors have been important contributors to woodland creation in recent years, for both native woodland and commercial forestry projects, the MoU and supporting documentation state that they will be working with existing owners.⁴⁸ Existing

⁴⁵ <https://woodlandcarboncode.org.uk/uk-land-carbon-registry/wcc-statistics>

⁴⁶ In the short term the greatest contribution of woodland creation to tackling climate change is in the removal of ruminant grazing and the cessation of muirburn.

⁴⁷ <https://forestry.gov.scot/news-releases/blog-new-woodland-stats-a-more-in-depth-look>

⁴⁸ Confirmed by the Minister in response to PQ S6W-15879: “This project will work with existing land owners and managers to restore native woodlands and other habitats, rather than acquiring land or changing land

landowners might be incentivised by more generous planting grants, or could be pushed into woodland creation by making future receipt of agricultural subsidy contingent on delivering action on climate and biodiversity, but it is far from clear whether they will be attracted by the availability of loan finance on commercial terms, especially if this represents an increasing proportion of total costs as FGS intervention rates are reduced.

ownership. Although the Memorandum of Understanding does not rule out the purchase of land, the only scenario in which the partnership would consider this is where there is an opportunity for a community to buy land and help deliver the project aims.”

4 Describing and quantifying the woodland creation finance gap

The preceding sections demonstrate that the scale of the finance gap for woodland creation has been greatly exaggerated. Indeed, the Minister recently conceded that the figure of £1.3 billion which has been widely quoted as the **finance gap** for nature restoration / woodland creation to 2031 is actually calculated as the **gross cost** of delivering the **full** woodland creation targets (i.e. including commercial conifers as well as native woodland) over ten years, the first two years of which have already passed.⁴⁹

Nonetheless, given that woodland creation is (as currently practiced) expensive, costs are rising, and the public purse, which has traditionally supported tree planting through grants, is increasingly under pressure; the nature and scale of any funding gap, and how best to close it, are important questions to be answered if planting targets are to be met.

4.1 The current gap

In practice, there are two discrete funding gaps, one short term, one longer, although both are chiefly about cash flow rather than an absolute deficit. Neither issue is new, and various means have been found to address them.

The **short term** cash flow issue arises because forestry grants are payable in arrears, so there is usually a gap between the purchase of materials and/or payment of contractors, and the receipt of grant, which can be difficult to manage for some landowners.

This is already recognised as a barrier to accessing the grant system for some potential applicants and Scottish Forestry has established a Small Woods Loan Scheme⁵⁰ to mitigate the issue. This loan scheme could be developed or extended this scheme, or the scheme payment rules amended to allow some “front-loading” of grants to smaller applicants.

Many landowners side-step short-term cash flow issues by contracting the entire project, from FGS application to tree planting (and increasingly, WCC registration and marketing of carbon credits), to private sector forest management companies (the Woodland Trust has also been active in this area in recent years). These companies have various competitive advantages, including:

- Professional expertise, and familiarity with FGS and WCC processes;
- Buying power, which reduces costs;
- Preferential access to contractors.

The **long term** gap is more fundamental and arises because FGS grant aid is designed to be a contribution to costs, rather than a means to fully fund woodland creation: the £40m annual pot is distributed among schemes with total costs probably exceeding £60m. Historically,

⁴⁹ <https://www.parliament.scot/chamber-and-committees/questions-and-answers/question?ref=S6W-18042>

⁵⁰ <https://forestry.gov.scot/support-regulations/forestry-grants/small-woodland-loan-scheme>

economies of scale have meant that larger schemes can generate a surplus, although recent inflation has increased the “break-even” point very significantly.

Many small, farm and community projects address this issue by using their own (or volunteer) labour to save costs in tree planting or fencing, whilst some landowners are happy to contribute financially to a project that will enhance the economic, environmental or amenity value of their landholding.

For those planting commercial crops, a contribution towards costs is an investment that will be repaid by long term timber income, whilst the Woodland Carbon Code was introduced precisely to help address this finance gap by providing an additional income stream for those planting non-commercial woodlands.⁵¹

4.2 The future gap

Increased levels of woodland creation (assuming sufficient land can be found) and rising unit costs are likely to increase the funding gap, especially if no additional funds can be found by Government to increase the FGS funding pot in line with planting targets.

If, as the Minister suggests, the ten year costs of planting and maintenance are £1.3bn, and the FGS contribution remains £40m a year, the gap will be £90m a year. However, the means to address this gap already largely exist, through carbon credits⁵² and timber sales. If, say, half of the 18,000ha is native broadleaves and half commercial conifers,⁵³ then 9,000ha of native broadleaves might be roughly estimated (at current prices) to generate £54m-£81m worth of credits,⁵⁴ whilst the likely timber harvest from the conifer stands has a net present value of somewhere between £30m and £80m, depending on yield and the discount rate chosen.⁵⁵

These are very basic calculations and it is certainly not the case that every woodland creation scheme is guaranteed to be “profitable” as costs and income are very site-specific: the smallest schemes will almost always run a deficit and be dependent on voluntary inputs. They do, however, suggest that any residual gap, and thus the potential role for additional commercial finance, is rather smaller than claimed.

As noted previously, land release is a critical limiting factor for woodland creation, and the financial prospects of projects, both in terms of their own viability, and vis-à-vis the viability of other activities on the same land is clearly a key element in landowners’ decision-making. The NatureScot MoU is predicated on the idea that large-scale private commercial investment will “unlock” land release for woodland creation, however there is little evidence that the

⁵¹ a key eligibility criterion is that the project should not be economically viable without income from carbon credits

⁵² This assumes that all landowners are comfortable to get involved in carbon trading: not all are

⁵³ This “binary” model is used for simplicity, it would preferable, for various reasons, to create a more diverse forest resource with a much wider range of species.

⁵⁴ Based on 300 units/ha at £20 - £30 each

⁵⁵ Timber harvest value £200 - £250m in 40 years, discounted at 3 or 5%

availability of commercial loan finance will be an effective incentive for landowners, especially if FGS intervention rates are reduced.

Under the MoU, returns to external investors will be based on the sale of carbon credits, but an active market in carbon credits already exists, however there are already a number of experienced market actors in the business of delivering forestry schemes and selling carbon credits. In this respect, the NatureScot/private finance MoU doesn't appear to bring any new funding to the table, merely seeks to change the intermediaries. It remains to be seen whether the external financiers can offer better terms to landowners than the existing market actors: private sector forest managers, traditional land management companies and the Woodland Trust, or whether those landowners and managers – notably conservative in temperament – are minded to embrace commercial finance.

4.3 Alternative approaches

The most straightforward method of securing land release is to provide increased support for woodland creation, or at least to increase its viability compared to alternative land uses. Large-scale private investment is often justified on the basis that the public funds available are insufficient to pay for the necessary changes, however as much as £10bn – equivalent to half of the GFI's over-estimate of the funding gap – could be found by the Scottish Government through the realignment of direct subsidies and changes to the taxation regime.

Currently, over £500m is paid annually in direct subsidy which is not tied to the delivery of specific public benefits. Access to these payments could be made dependent on recipients delivering woodland creation projects (or carrying out other land use changes), with funding directed away from non-food crops and environmentally damaging land uses such as sheep farming and towards an enhanced FGS pot.⁵⁶

At the very least, the overall total of funding available through FGS should keep pace with the planting targets and reflect increased unit costs. However, the balance of funding within the scheme should be revised, with more support for smaller and more mixed schemes, and lower rates for large schemes to better reflect actual unit costs.

Further savings could be made by removing or reforming the various tax exemptions: Capital Gains Tax, Inheritance Tax and non-domestic rates; from which large-scale landowners benefit. The first two are a longer term project, being currently reserved to Westminster, but this should not prevent the Scottish Government signalling the intention to reform a tax regime that builds and protects private wealth.

A longer term approach, which should be pursued alongside the fiscal reforms detailed above, is to move towards a much greater use of woodland creation through natural regeneration.

⁵⁶ Important to note it is not enough simply to put more money in woodland creation – as CCC report shows it's critical that this happens on better ground, in conjunction with significantly reduced agricultural use.

This will be helped by a reduction in sheep numbers, but requires significant intervention to reduce deer numbers to sustainable levels.⁵⁷

Natural regeneration offers lower cost (but by no means free) woodland creation, with minimal site disturbance (and emissions), but establishment tends to be slower, more variable, and is reliant on available seed sources. It can't deliver all the woodland types we need, but it can contribute to a much greater extent than at present, and should become the default model for upland native woods.

Where there is a real need for loan finance to bridge the period between establishment and the sale of carbon credits, this would seem to be the sort of role for which the Scottish National Investment Bank⁵⁸ (SNIB) was established. SNIB could be directed to provide ~£20m annually to Scottish Forestry to run a tiered loan scheme alongside the FGS grants, under which, for example, small schemes would receive grant aid as at present but larger schemes would be offered a mix of grant and loan finance, perhaps with the balance shifting towards loans as scheme size increased.

This would create a simple, integrated application process which would be easier for land managers and maintained government (through Scottish Forestry) control of scheme quality. If the loan finance were on relatively favourable terms (e.g. at or below bank base rate) this would be more attractive to land managers than commercial rates demanded by the private money lenders, and any interest generated would go back to SNIB to be recycled for other socially and environmentally beneficial projects. Critically, access to loan finance should be accessible to all scales and types of landowners: crofter and community landowners as well as large estates or investors.

Private sector capital should also be welcomed, but in appropriate partnership with local communities, and mediated through mechanisms such as the community shares issued by community benefit societies, offering fair but capped returns and with community control built-in, which have played an essential role in the development of the community energy sector.

⁵⁷ i.e. where they do not inhibit woodland regeneration

⁵⁸ <https://www.thebank.scot/> "The Bank will provide patient (long term) capital to businesses and projects throughout Scotland to support the development of a fairer, more sustainable economy."

5 Conclusions

The urgency of the climate and biodiversity emergencies, and the need for rapid and far-reaching land use change cannot be denied. It is vital, however, that the search for solutions to difficult political questions does not lead to the abandonment of other commitments to community wealth building, land reform and just transition: the role of government is to provide the correct balance of regulations and incentives to ensure that land use serves the public interest across a range of policy areas.

The great majority of Scotland's land is in private ownership, and it is clear that new or enhanced mechanisms to incentivise land use change will be necessary, alongside regulatory and conditionality measures, but these must be proportionate and carefully designed. Given the role that financial incentives have had in shaping and perpetuating existing patterns of land ownership, how these incentives are designed, who can access them, and how the benefits are shared, have huge implications for the land reform and community wealth building agendas.

Reform and review of existing mechanisms, in particular, alignment of the very substantial agricultural subsidy budget, must be the starting point: any finance gap can only be properly quantified once public spending is optimised. Scrutiny of the underlying assumptions in the Green Finance Institute report demonstrates that the scale of the finance gap, at least in respect of woodland creation, has been greatly exaggerated. Similarly, it is unclear whether there is demand for private loan finance on the scale envisaged by the NatureScot/Private Finance MoU.

There is a significant risk that an undue focus on extractive private investment solutions will further entrench the landownership status quo, whilst distracting attention from alternative measures, including review and reform of existing mechanisms, which might be more effective at both delivering land use change and advancing wider land reform and community wealth agendas.