Net Zero, Energy and Transport Committee

12th Meeting, 2024 (Session 6)

Tuesday, 26 March 2024

Evidence sessions on natural capital finance

Introduction

1. At its meeting on 6 February, the Net Zero, Energy and Transport Committee agreed to hold a one-off session on natural capital finance in Scotland.

2. 'Natural capital' refers to natural resources: environmental assets such as geology, soils, air and water. It is a term for the habitats and ecosystems that provide social, environmental and economic benefits to humans. Natural capital is recognised as type of 'infrastructure' by the Scottish Government and is a sector in Scotland's Infrastructure Investment Plan. It is also a National Indicator within Scotland's National Performance Framework.

3. 'Natural capital finance' refers to investment in natural capital. This can be public funding through revenue sources such as Government grants or capital investment. It can also be through private sector investment, such as in commercial forestry and woodland or peatland restoration. In cases of private investment, key current investment streams are through Woodland Carbon Code and Peatland Code projects, which market 'carbon credits' which can be used by buyers to offset emissions or trade further. There are often cases in which a mixture of public and private funding is used to finance nature projects.

4. There has been much discussion about the role of natural capital finance in helping to achieve Scotland's climate change ambitions. The Scottish Government and its agencies have been seeking to open up opportunities to leverage in more private investment in natural capital to supplement Government funding and drive progress in reducing carbon emissions and, through restoring damaged habitats, tackling biodiversity loss. Scotland's National Strategy for Economic Transformation includes a workstream to establish "a values-led, high-integrity market for responsible private investment in natural capital". This is repeated as a priority action in the Scottish Biodiversity Strategy.

5. There are considerations about how the Scottish Government manages and 'de-risks' the involvement of the private investment in this sector. There are also questions over how to enable investment that, on the one hand, is at the scale needed to tackle the climate change and biodiversity crises but which creates the

right incentives, avoids unintended outcomes, and is inclusive of rural communities and of the different land management sectors.

NZET Committee consideration of natural capital

6. The Committee has considered natural capital financing through its work in scrutinising the Memorandum of Understanding (MoU) signed in March 2023 between NatureScot and private equity firms to pilot activities to encourage investment in woodland and nature restoration. Signatories expect this to unlock up to £2 billion of private investment to regenerate native woodlands in Scotland.

7. The Committee first discussed the MoU as part of an evidence session on 14 March 2023 with the Minister for Green Skills, Circular Economy and Biodiversity regarding COP15. On 27 March, the Committee received a follow-up letter from the Minister which included further details on the MoU. She also requested NatureScot write to the Committee separately to provide additional information.

8. NatureScot wrote to the Committee on 17 April to share this information. The Committee then wrote to NatureScot on 30 May to seek further details about the short and long term objectives and investment plans and the associated risks and mitigations. NatureScot responded on 14 June.

Meeting on 26 March and next steps

9. On 26 March the Committee will hold two evidence sessions. Witnesses on both panels comprise academics, financial and legal experts and industry practitioners. The witness list is on the agenda for the meeting.

10. These witnesses have provided written evidence in advance of the session:

- Community Land Scotland (**Annexe A**)
- Scottish Land and Estates (**Annexe B**)
- Dr Lydia Cole (**Annexe C**)

11. The Committee also received a written submission from Future Economy Scotland.

12. This is a one-off evidence session on this topic. However, the Committee will review the evidence and discuss possible next steps near the end of the meeting. Evidence collected from these sessions will help to inform future work in on other matters the Committee will be considering later this year, such as the Land Reform (Scotland) Bill and the next draft Climate Change Plan.

Clerks
Net Zero, Energy and Transport Committee

Annexe A – written submission from Community Land Scotland

Summary

Community Land Scotland (CLS) considers the climate emergency and associated biodiversity decline as existential crises deserving of significant public policy development. Many CLS members are already active in addressing the issues and more communities should have the opportunity to be leaders in climate and bio-diversity action.

Community owners already utilise private sources of finance for investment purposes and CLS has no principled objection to the utilisation of private finance into nature and net zero activity. However that private finance must support the achievement of related public policy goals which build and retain wealth in communities and Scotland more widely.

Wider policy questions arise when public finance is required to enable or even underwrite a private market from which large private profits will be extracted by exploiting Scotland's natural heritage. This is the 'de-risking' of private investment by public finances.[1]

These concerns are only exacerbated by a lack of exploration of other policy mechanisms to achieve Scotland's nature targets.

Community Land Scotland has identified three essential considerations for policy development in this area:

1. **Overstated financial pressures**

- Publicly available research for the Scottish government reveals an ambition for £12.5 billion of investment over the remaining 8-year period to 2032, or £1.5 billion annually. Achieving this level of investment at best seems improbable when set against the achievement of current planting and peatland restoration being closer to £50 million of value annually.
- To achieve the ambition of securing £1.5 billion annually through to 2032 would require an immediate gearing-up of delivery by over 3,000% and does not seem in any way credible. Any job creation and wider economic benefits potential using these figures would be unrealistic.
- Much of this is driven by the £20bn figure from the 2021 report published by the Green Finance Institute. This figure has been discredited, as it was largely based on unnecessary land acquisitions – removing this the resulting figure is much smaller.[2] Future Economy Scotland has previously estimated that it could be as little as £118m per year, which amounts to around 0.2% of the

[1] Can private finance fix Scotland's nature crisis? | Future Economy Scotland
[2] The-Credibility-Gap-for-Green-Finance-Jon-Hollingdale-19.08.2023.pdf (communitylandscotland.org.uk)

Scottish Government's annual budget.[3] Whether the 'gap' is millions or billions has significant repercussions for the scale of private finance required.

2. Non-financial reasons for the lack of climate action

Whilst much of the current policy discourse focuses on leveraging in private finance to natural capital projects, the issue is not simply a financial one. The woodland and peatland grant schemes have been underspent by £30m and £20m respectively over the past two years.[4] The other considerations are:

- the necessary commitment to the land use involved (often involving standard security over land of up to 100 years duration)
- the immaturity of the policy approach and unknown risks – both financial and reputational- around carbon markets
- the current carbon price not being able to support viable investment propositions[5]
- a lack of availability of suitable tree saplings
- a lack of skills and labour supply to undertake all the necessary dimensions to the work
- the limitations crofting in particular place on progress (issues of ownership of trees and carbon credits)
- the uncertainty of what owners may need for their own in-setting over the longer term

3. Encouraging private finance does not reduce public spending

Due to these challenges the current system does not deliver commercially investable propositions with the returns necessary for private financiers.[6] Research commissioned by the Scottish Government has argued that public money needs to be used to 'de-risk' private finance through guaranteeing carbon prices, operating payments or 'first-loss' capital has potentially considerable costs for public expenditure.[7] These proposals have the potential to be a significant cost to public expenditure, and could end up being more expensive than direct public investment – while adding significant risk and uncertainty to Scotland's public finances.[8]

CLS believes that due to the ongoing pressure on public finances, any use of public money to incentive private finance will not be at the scale required for the foreseeable future. It will be politically challenging to use significant quantities of public money to incentivise private finance when areas of public capital funding such as housing have become heavily constrained in the recent Scottish budget.

CLS considers that public spending would be likely to deliver more long-term economic, social and cultural benefits if utilised for direct investment in land owned

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[3] Is the finance gap for nature really £20bn? | Future Economy Scotland
[4] Written question and answer: S6W-17412 | Scottish Parliament Website and Written question and answer: S6W-18571 | Scottish Parliament Website.
[5] Microsoft Word - Final report.docx (sefari.scot)
[6] Can private finance fix Scotland's nature crisis? | Future Economy Scotland
[7] Mobilising private investment in natural capital (www.gov.scot), a more thorough explanation of this is made in Can private finance fix Scotland's nature crisis? | Future Economy Scotland
[8] Can private finance fix Scotland's nature crisis? | Future Economy Scotland

and managed in the public interest in perpetuity, rather than to underwrite an emerging private market in carbon credits.

What are the complementary policy approaches?

The uncertainty about the scale of private finance required, the associated cost to the public finances and questions around the financial models for investment and carbon trading means that complementary policy approaches need to be considered:

Land use reform:

- Substantially reducing deer numbers as the single biggest measure needed to restore biodiversity
- The progressive re-alignment of agricultural support to deliver ever more nature friendly practises
- The regulation of greenhouse gas emitting land
- An enhanced role for local authorities in the identification and zoning of land for nature restoration
- Examination of the benefits of phasing out intensive grouse shooting as a significant land use

Fiscal measures:

- Reduce or end subsidy to commercial coniferous forestry in favour of supporting native woodland development for carbon sequestration, biodiversity purposes and recreation
- A refocussing of Scottish National Investment Bank activity
- The encouragement of increased government (UK and Scottish) led direct green investment
- The scope for a Biodiversity Bond Issue to raise peoples' investment in nature
- An increased role for the Scottish Government and its agencies and local authorities in the ownership and management of land for nature and for the insetting of national carbon credit needs
- Land valuation principles reformed

Ownership and joint ventures:

- An encouragement of new forms of joint venture between communities, public agencies, and the private sector for investment purposes
- Support for the targeting of philanthropic giving into Scotland for nature
- Communities holding and managing land on behalf of the national interest
- The scope for GB Energy to help lead and facilitate greater community owned action on net zero

The question for policy makers in Scotland is not whether in principle private finance may have a role to play, but to clearly define its place, realistic scale, the role where it engages public finance and wider policy goals, and ensure public interest safeguards against exploitation, excessive returns, and the leakage of wealth from communities and Scotland as a whole.

Appendix

Current policy context and approach

The current Scottish government policy toward investment in nature that helps deliver net zero and restore biodiversity has become closely aligned with progress being dependent on private finance and a functioning market for carbon credits.

That market would see Scottish carbon credits being generated in respect of tree planting and peatland restoration (and other emerging areas for nature investment, including blue/green carbon) and traded within the UK's voluntary carbon market. The income from the credits funding the investment and the return on that investment to external financiers.

It has published a Statement of Interim Principles to guide the development of this market and is currently working on developing a *Market Framework* due to be published in last quarter of 2024 to further shape and promote the market envisaged. Ministers have been driven by what they understand to be a multibillion-pound gap in the investment needed in nature. Together with the Forest Policy Group CLS has published an independently researched report by Jon Hollingdale which substantially questions that initial understanding.[9]
Ministers have made clear that, however viewed, there is likely to be a gap in investment that public spending alone cannot fill, and that private investment will be needed.

It is becoming clear that notwithstanding the positive signals from Ministers over the last three or so years, delivering significant private investment in nature is proving very challenging and there is as yet no investment at anything like the scale that would meet the aspirations to spend.

Currently there is little by way of new private finance being generated beyond that which is buying land, which has been the main attractor of private finance. It is public funds that is principally meeting the cost of the actual investment in nature.[10]

If targets cannot be met when there is generous public finance available, it makes using expensive private finance even more challenging.

Public risk and private profit

This has given rise to suggestions in Scottish government research papers that the availability of public grants `crowds out' private finance and that if re-structured to support private finance that could help `crowd in' private finance.[11] This appears as code for ending direct publicly funded grant support in favour of underwriting private

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[9] The-Credibility-Gap-for-Green-Finance-Jon-Hollingdale-19.08.2023.pdf (communitylandscotland.org.uk)
[10] BrewDog's Lost Forest at Kinrara - lost trees, lost carbon and lost finances - parkswatchscotland
[11] https://www.gov.scot/binaries/content/documents/govscot/publications/research-and-analysis/2023/04/mobilising-private-investment-natural-capital/documents/mobilising-private-investment-natural-capital/mobilising-private-investment-natural-capital/govscot%3Adocument/mobilising-private-investment-natural-capital.pdf

finance investment. There would be profound implications for the opportunities for communities and private owners of land from any such change of policy.

Public investment to underwrite private finance for nature impacts the opportunity for other public investment in other areas of spending and needs to be assessed for the relative benefits.

Scotland's land ownership patterns are significant in how any progress is likely to be shaped and who the beneficiaries of the policy will be.

Work undertaken for the Scottish government strongly suggests that private finance is looking for their investment risks to be underwritten by future public spending commitments or contingent liabilities over many years to come, in order to protect any private investments from carbon price uncertainty.[12]

Parliamentary Question answers reveal the Scottish government have not undertaken any:

- exploration of the dynamics of the carbon price and future carbon pricing
- economic analysis on the approach and who the principal beneficiaries will be over the whole investment cycle and where they are located
- assessment of the risks in pursuing this policy

Scottish government has recognised within the Statement of Interim Principles that the market needs to be a "values led high-integrity" market, though what that means in practise is not yet fully clear. High-integrity, it appears, is taken to mean the framework and assurance provided by the Carbon Codes for woodland and peatlands, though these could not be said to be complete in their consideration of what might constitute high-integrity.

The Interim Principles also reference other important policy that the development of the market needs to serve community wealth building, a just transition to net zero, and that communities should benefit from this market. How this would be achieved is not at all clear.

CLS sees a tension between developing a market attractive to investors with wider policy goals toward a just transition, community wealth building and achieving a greater diversity in ownership and it is not clear whether this this tension can be addressed satisfactorily.

CLS envisages external direct investment, while capable of delivering some jobs (many visiting contractors) and supporting other local economic activity across Scotland, is however likely, over time, to extract substantially more from the economic potential of localities and Scotland than it invests.

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[12] https://www.gov.scot/binaries/content/documents/govscot/publications/research-and-analysis/2023/04/mobilising-private-investment-natural-capital/documents/mobilising-private-investment-natural-capital/mobilising-private-investment-natural-capital/govscot%3Adocument/mobilising-private-investment-natural-capital.pdf

CLS considers the number of jobs stated in publicly available research documents on this issue relate to currently unachievable investment levels and as such are considerably over-stated.[13]

CLS considers that the approach to deriving community benefits from private investment such as seen historically in windfarm developments is no longer appropriate in its scale or approach and advocates a new approach in developing thriving community partnerships against gold, silver, and bronze standards.[14]

In short, the demands of private finance for as little regulation as possible collide with the public policy demands for alignment with other public policy goals.

Carbon market development and regulation

The crofting counties hold within them perhaps the bulk of the resource potential for Scotland's nature restoration and onshore net zero effort, but that potential is unlikely to be achieved without securing absolute clarity of ownership of the carbon credit potential in a way which favours crofter interests.[15]

CLS believes that Scotland's carbon sequestration potential is a shared community and public asset requiring strategic management, not principally a private commodity to be traded in a largely unregulated marketplace, and believes participation in carbon credit trading should be regulated to secure the public interest:

- Government support for peatland restoration and forest planting from which carbon credits will be traded should only be permitted through Scottish Government approved trading schemes that ensure sequestration of carbon does not allow a continuation of business as usual in causing emissions
- Preference in approved schemes should be given to those that prioritise the needs of the Scottish economy and public services and the potential need to offset residual emissions from Scotland's own economic activity
- Carbon traders in Scotland should require to be licensed by the Scottish Government
- Being licenced to trade in carbon credits will require:
    a) evidence of how communities in the area of land impacted by the trading will share significantly in the benefits of carbon credits traded
    b) that the principles of free, prior and informed consent are observed

Would progress be possible without private finance?

There is a long tradition of private sector involvement in land management and tree planting, alongside significant public incentives to private action.

Many community organisations and private owners already use private finance to capitalise projects they own.

Suggesting there is no role for the private sector would cut against current practise.

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[13] https://www.gov.scot/publications/assessing-cumulative-cross-sector-economic-benefits-investment-natural-capital-scotland/pages/2/

[14] Beyond-Community-Benefit-a-New-Deal-for-Thriving-Communities-Community-Land-Scotland-October-2023.pdf (communitylandscotland.org.uk)

[15] Public Papers for 6 December 2023 (scotland.gov.uk)

Where there is a private or community owner of land willing to enter a private finance deal that each party find mutually beneficial, that is a matter solely for them.

Where an established private market for investment, such as energy generation and distribution exist, that should be encouraged to keep delivering within overall energy policy.

Wider policy questions arise when public finance is required to enable or even underwrite a private market from which large private profits will be extracted by exploiting Scotland's natural heritage.

What has perhaps been understated in the current debate is discussion on what role the state necessarily must play in strategic delivery, the role local authorities and that which community ownership could play.

In principle, private finance could have a role to play, if the lessons of past engagement of significant private finance in achieving public goals has been learned. To do so could ensure that:

- risk is fairly shared by the private sector
- there were controlled returns to private investors
- absolute transparency in dealings was paramount
- an explicit outcome is the delivery of increased community wealth for the long-term
- a just transition can be shown to be being achieved
- land ownership diversity is advanced

In short, perhaps these `golden rules' for a new private investment market are needed to safeguard national interests.

There is a danger that in the absence of a policy discussion on alternative approaches to securing the desired nature outcomes, the debate on currently undeliverable large scale private finance is a distraction from a well-considered joined-up and long-term public policy.

Specific complementary policies to achieve nature goals

<u>Land use reform</u>

1. Progressively reduce deer numbers.

The biggest single action that could be taken to promote biodiversity and support emissions sequestration in Scotland is to significantly reduce and control deer numbers.

Recent Scottish government evidence suggests there are areas of Scotland where deer populations, of all four species, may be in excess of 20 deer per square

kilometre and will be causing significant damage.[16] They recognise that the successful establishment and sustained management of natural regeneration can require low to very low deer densities of 1-5 deer per square kilometre, and for many woodland and open ground habitats may need to be sustained at densities as low as 2-3 deer per square kilometre.

This would take time to achieve but is a relatively low-cost option which can be implemented principally by regulation of landowner behaviour.

2. The progressive re-alignment of agricultural support to deliver ever more nature friendly practises.

Agriculture remains a major contributor to greenhouse gas emissions and programmes of support for agriculture need to progressively incentivise the reduction of these emissions and the application of new technologies and approaches to land management.

3. The taxation and regulation of greenhouse gas emitting land.

Taxation of land which emits greenhouse gasses is a current proposal from the John Muir Trust with the Scottish government agreeing to examine the principle of this.

In addition, however, examining the role regulation could play in reducing emissions, just as would be the case in other forms of environmental pollution, should be examined too.

4. An enhanced role for local authorities in the identification and zoning of land for nature restoration.

Local authorities have a role to play in helping deliver climate action and bring democratic legitimacy to the process.

The key role of a local authority in land use planning should be examined to ensure land for priority climate and biodiversity use is recognised within the planning system.

5. Examination of the benefits of phasing out intensive grouse shooting as a significant land use.

It appears increasingly incongruous that so much of Scotland's land that could be utilised for climate management purposes is devoted instead to the intensive management of land for the rearing and shooting of grouse.

There is a need to explore the use of such land for these purposes into the future with the potential phasing out of grouse shooting giving way to better land uses for nature and the climate.

[16] PQ answer: S6W - 25649

Fiscal measures

6. **Reduce or end subsidy to commercial coniferous forestry in favour of supporting native woodland development for carbon sequestration, biodiversity purposes and recreation.**

The Royal Society of Edinburgh has recently reported on public spending support for forestry and concluded there is a case for ending subsidy to commercial coniferous forestry.[17]

Redirecting such support to grant aid for direct peatland and native tree planting, or to support the reduction of deer numbers should be considered.

7. **A refocussing of Scottish National Investment Bank activity**

The SNIB can be a significant funder of investment in Scotland designed to benefit the Scottish economy and people. Such investment needs to ensure the benefits stay local if it is to bring meaningful benefits to local economies and the nation.

The SNIB could be redirected by Ministers to specifically target achieving more locally owned investment in assets which support addressing the climate emergency, in conjunction with the UK Infrastructure Bank, as appropriate.

8. **The encouragement of increased government (UK and Scottish) led direct green investment.**

Government at the Scottish and UK level has a legitimate and potentially strong role to play in direct green investment.

As the scope for such investment expands over time it would be legitimate for governments to take a leading role in ensuring the stewardship of the nation's land in the interests of climate management and biodiversity. That may mean further direct investment in the national forest estate and/or in wider ownership of land and through direct investment in forestry and peatlands to achieve climate actions and secure the national interest through publicly owned carbon credits to meet national needs.

9. **The scope for a Biodiversity Bond Issue to raise peoples' investment in nature.**

It is known there is a public appetite to invest in nature and climate related causes.

Developing policy toward seeking to realise that potential through a biodiversity bond or some such financial instrument should be explored. Linking this to involvement of the SNIB and to the potential role of public pension funds in investment should be examined.

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[17] https://rse.org.uk/expert-advice/inquiries/tree-planting-inquiry/

10. Land valuation principles reformed

To bring land into more affordable reach of public agencies, communities and local residents, land valuation principles should be revisited to act against rapidly rising land values and using Scottish land for speculative gain.

11. Support for the targeting of philanthropic giving into Scotland for nature.

There is potential in securing as large a share as possible in the potential of philanthropic giving for climate, biodiversity and community benefit.

This should be given specific attention by the Scottish government and its agencies in actively seeking and facilitating such philanthropic giving within Scotland.

Ownership and joint ventures

12. An encouragement of new forms of joint venture between communities, public agencies, and the private sector for investment purposes.

Positive innovation and partnership arrangements need to be facilitated to ensure local communities can have a stake in their own futures and can play an active part in managing land for climate and biodiversity purposes.

Too often there are constraints on creating innovative partnership models and this needs to be addressed to make arrangements easier and have dynamic potential.

13. Communities holding and managing land on behalf of the national interest.

Communities have shown they have the capacity to own and manage land and contribute to climate and biodiversity goals.

Multiple public policy goals are delivered when communities manage land and with support, they can contribute more to the nation's need for land to be managed for the climate and biodiversity. Such investment has been shown to be transformational to economic, social, cultural, and environmental goals, bringing substantial long-term benefits.

A programme enabling more communities to own and deliver national policy goals would be good value for public expenditure.

Utilising 2020 changes to Treasury guidance on cost-benefit analysis when considering investment proposals to better in capture transformational changes to economic, social, cultural, and environmental benefits over time could be beneficial.[18]

[18] The Green Book (publishing.service.gov.uk), see p.122 setting out how 'transformational policies' should be appraised.

Local authorities and other public agencies could also be expected over time to use some of their resources to hold land for the national interest and for use in their own future offsetting needs.

14. Design GB Energy to help lead and facilitate greater community owned action on net zero.

If a change of UK government resulted in the creation of GB Energy, there would be merit in seeking to ensure in Scotland that its design built on the experience of Scottish communities in owning energy generation to ensure it could help facilitate many more communities to take a leading role in owning such assets.

The evidence is that where communities can own such assets the delivery of wider economic, social, cultural, and environmental goals is significantly enhanced.

It can be seen from the foregoing that there are many areas of policy that could be developed to lessen any dependence on external private capital and deliver greater long-term benefits and value for public spending.

Annexe B – written submission Scottish Land & Estates

About Scottish Land & Estates

At Scottish Land & Estates (SLE) our work helps to ensure that rural Scotland thrives. We are a membership organisation for landowners, rural businesses, and rural professionals. We promote the wide range of benefits land-based businesses provide: tourist attractions, leisure facilities and landscapes enjoyed by the public, as well as housing, employment, tourism & enterprise and farming opportunities. We represent the interests of our members and wider rural Scotland to the UK and Scottish Governments to help ensure that policy and legislation reflects the unique requirements of rural Scotland and its communities.

Introduction

Mid-March saw the introduction of the Land Reform (Scotland) Bill, which was preceded by the "Land Reform in a Net Zero Nation" consultation.

Scottish Government's policy rationale for the Bill is broadly summed up by the quote below:

> *"A Scotland with a strong and dynamic relationship between its land and people, where all land contributes to a modern, sustainable and successful country, supports a just transition to net zero, and where rights and responsibilities in relation to land and its natural capital are fully recognised and fulfilled"*.[19]

However, in reality the Bill as introduced has little content which will have a direct impact on Scotland's ability to reach Net Zero. Similarly, it will have little impact on our desire to simultaneously enhance biodiversity across Scotland. The main reason for this is simply that the bill focusses almost entirely on who owns land, rather than how they manage it, or their ability to implement changes to meet these requirements.

In terms of meeting the challenge of net zero, it is not important who owns the land as it is possible for private, public, community and corporate landowners to contribute towards this. It is however important that the level of investment is made, and that land is managed in the correct way to achieve this. Currently there seems to be confusion around what is actually happening and what is being asked of land managers.

With several bills currently under consideration of parliament, it is clear there is a need for clarity of thought and legislation to enable land managers to play their role in meeting the many challenges facing Scotland currently.

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[19] Policy Memorandum (parliament.scot)

The scale of the issues we face

"*The finance gap for nature in Scotland for the next decade has been estimated to be £20billion. Leveraging responsible private investment… will be vital to meeting our climate targets and restoring our natural environment*." Lorna Slater Minister for Green Skills, Circular Economy & Biodiversity [20]

The Scottish Fiscal Commission's recent also measured the cost to the public purse in meeting the Scottish Government's net zero targets. The report found that the Scottish Government would need to spend an average of £1.1bn per year to meet its net zero target – around 18% of its capital budget.[21] The Commission also notes that while the responsibility of achieving net zero is shared by the Scottish and UK Governments, "a greater share of the UK reduction in emissions relating to forestry and land use needs to take place in Scotland."[22]

This demonstrates not only the enormity of the challenge faced in financial terms, but also the requirement for private finance to meet this challenge. It is unfair and unrealistic for the public purse to carry this cost.

Care needs to be taken around these figures however. Often this is described as being potential income for landowners, however this is merely the cost of restoration, (including planting and habitat establishment) and not income or a profit margin. There can often be an assumption that landowners are making huge amounts of money from this, but SLE believes this is not the case and while there is potential for some profit to be derived from future sales of carbon and other credits, in the current situation very few land managers have seen any real income from this.

The £20 billion figure, estimated by the Green Finance Institute, does include the cost of land acquisition to undertake nature restoration projects at the required sale. If private finance is not involved then a degree of land acquisition would still need to take place at public expense (and this does happen i.e. Scottish Government acquisition of Glenprosen Estate for tree planting). However if land is already owned, there is an opportunity cost of changing its use on a permanent basis. In short there can be no other land use from that point onwards, which severely limits the economic capacity of the land.

Similarly, the true costs are actually unknown. While the £20bn figure relates to the next decade, nature restoration work often carries a contingent liability for many decades or in some cases in perpetuity. The risks and costs of this are net yet fully known, therefore it is extremely difficult to ascertain whether any money will be made directly from this.

The Scottish Government has ambitious targets for both tree planting and peatland restoration, which are key planks in climate change plans, with a target of 18,000ha of woodland created each year by 2024/25 and to restore 250,000ha of degraded

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[20] £2 billion private finance pilot potential 'vital step in restoring Scotland's woodlands' | NatureScot
[21] Scottish Fiscal Commission, *Fiscal Sustainability Perspectives: Climate Change*
[22] The Scottish Fiscal Commission, *Fisal Sustainability Perspectives: Climate Change* (2024)

peatland by 2030. While both of these targets are laudable, it looks increasingly likely they will not be achieved for a number of reasons. Looking at peatland restoration for example, restoration needs to increase by 300% if we are to meet that target. Therefore, it is crucial that they are not jeopardised further by excessive regulation and undue complication within markets which will be required to deliver for the benefits desired for the whole of Scotland. Figure 1 demonstrates how far behind target peatland restoration currently is and we expand on this and other land use types further below.

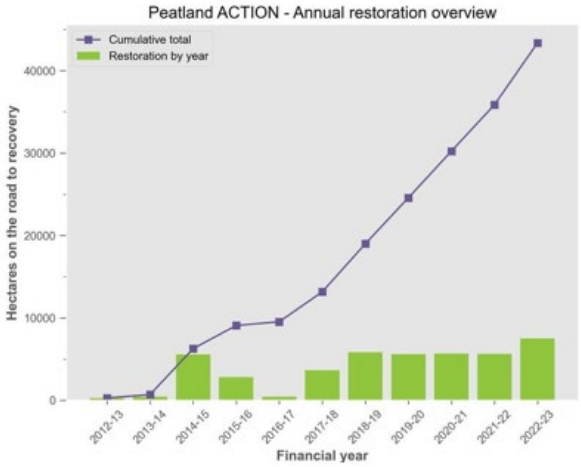


Fig. 1.

One specific area which the proposals do not address is the clear need for scale when seeking to use land management as a tool for enhancing biodiversity and sequestering carbon. It is widely accepted that scale of land management is the simplest and most effective way to achieve outcomes at pace and cost effectively.

In 2023 Scottish Land & Estates commissioned BiGGAR Economics to investigate the role of land management at scale in delivering a just transition. The key findings of the research are itemised below:

- Large projects have made a major contribution to moving Scotland toward a just transition and will become increasingly important in the future.
- At the current pace of delivery Scotland will not meet important targets for woodland creation, the rollout of renewables, peatland restoration or housing delivery. Increasing large-scale delivery offers the most realistic prospect for changing this.
- Delivering large-scale projects can enable multiple benefits that may be difficult or impossible to realise at a smaller scale, such as community benefits.
- The number of landowners involved in a project can be more important than the scale of the landholding on which it is delivered for some projects. That is to say, projects with fewer stakeholders involved in the project are often quicker to deliver and the results are truer to the original aims of the project. Working across highly fragmented holdings with several stakeholders can dilute the outcomes of projects and cause delays due to competing interests. There are many great examples of multi-stakeholder projects but given how behind we are in meeting various public policy targets relating to climate and nature, we must speed up the rate of delivery.

This also has benefits for biodiversity and wildlife, as landscape-scale conservation is the scale at which natural systems tend to work best and where there is often most opportunity to deliver real and lasting benefits. This gives the best chance to work with natural processes so we can sequester carbon.[23] Land management at scale also enhances economies of scale which is beneficial for food production and economic activity in general.

The ability to bring forward projects of this scale is far more likely when landholdings are of a large scale too. Simply, given land management is often about a balance of enterprises and land uses, having a single large landholding makes it easier to bring forward large-scale projects.

There are several steps that could be taken to enable the benefits of delivering large-scale projects to be realised, including:

- minimising bureaucratic complexity
- improving administrative efficiency
- integrating support for complementary land uses
- promoting the benefits of delivery – increasing availability of upfront funding[24]

Unfortunately, the measures published in the Land Reform (Scotland) Bill will only increase bureaucratic complexity, reduce administrative efficiency and set in motion the fragmentation of Scotland's land which is counter intuitive to meeting the challenges outlined above. It will also reduce certainty for investors which is counterintuitive given the scale of investment needed and the inability of the Scottish Government to meet the costs itself. This will result in private investment seeking projects elsewhere with fewer legislative hurdles. The Bill seems to be a push for the diversification of ownership for diversification's sake, without a clear rationale as to how this will help tackle the climate and nature crises.

"There is no doubt that land-based businesses can make significant contributions to achieving Scotland's public policy objectives, including woodland creation, peatland restoration and renewable energy. The delivery of these projects at scale is going to be absolutely critical if we are to achieve these targets at the required pace and quality of delivery." Kate Forbes MSP.

The need for scale: illustrative examples

As outlined above, the enormity of the challenge we face in tackling climate change cannot be underestimated. Below are some examples of where the shortfalls in meeting our own public policy targets with relation to net zero lie. However, there are numerous examples where much of the progress currently being made towards climate change targets is being achieved by the management of land at scale. A

[23] NatureScot, Nature Restoration at the Landscape Scale
[24] Land - the Role of Scale in Delivering a Just Transition.pdf (scottishlandandestates.co.uk)

larger scale landholding makes it possible to plant and restore larger areas of woodlands and peatlands, as well as larger scale projects for the delivery of renewable energy projects. Below are examples of the current role of large-scale projects in these areas.

Peatland Restoration

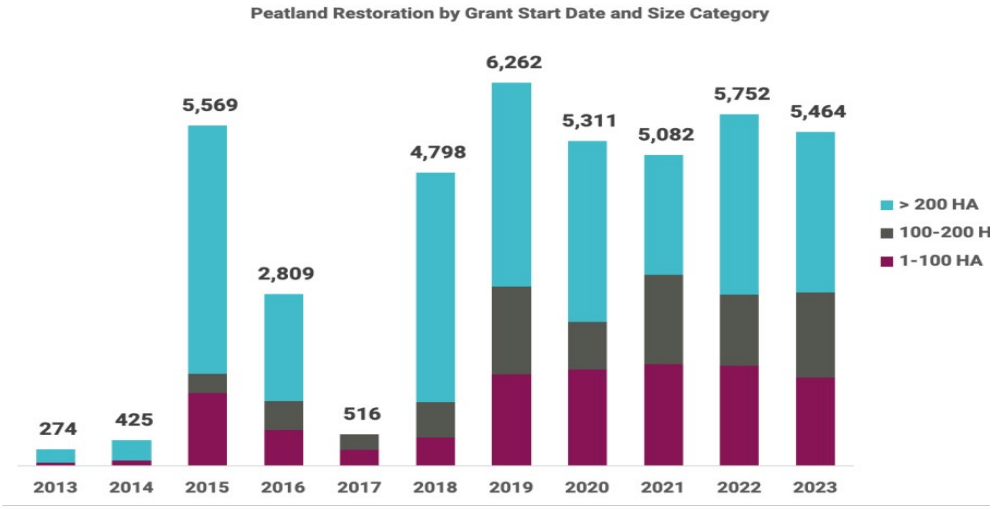
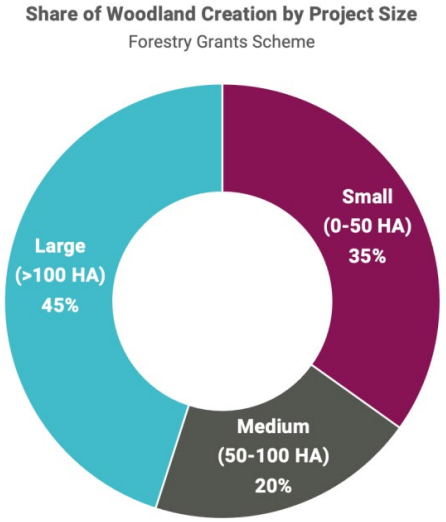


Fig. 2.

We need to restore 20,833ha of peatland per year to meet the Scottish Government's target of 250,000ha restored by 2030. Figure 2 clearly shows that the average hectarage of peatland restored over the last decade is only around a quarter of what is required. Each year this continues, the shortfall increases. At current rates, targets will not be met.

Of the peatland restored since 2013, 57% was restored through large projects of over 200ha. At current rates of delivery it would take more than 7 years to reach the target through only small-scale projects. Scale is therefore imperative to meeting our peatland restoration goals.

Woodland Creation



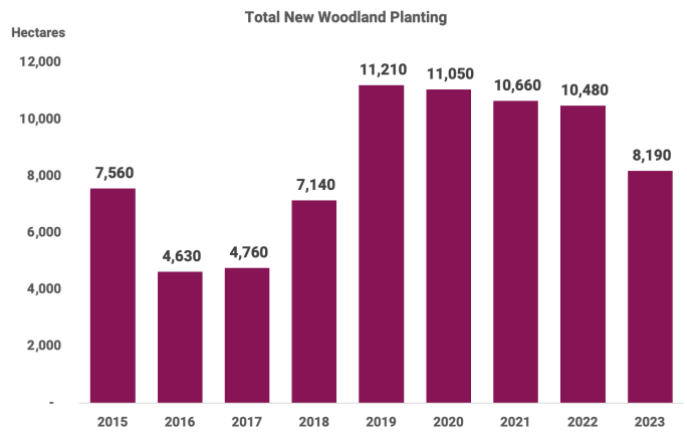
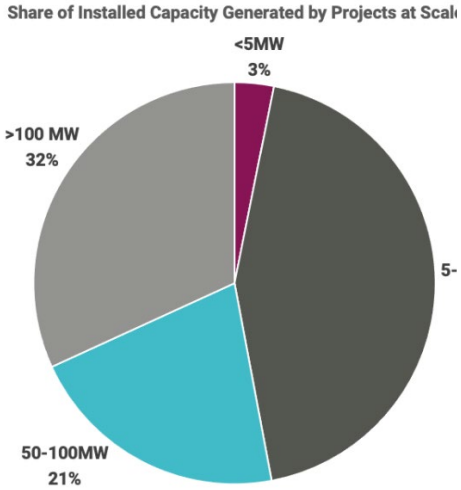


Fig. 3. Fig. 4.

The Scottish Government established a target of 18,000ha of woodland per year by 2032, meaning a total increase of 162,000ha between now and then. Again, the average hectarage planted per year is less than half of the annual target required. The BiGGAR Economics report found that new woodland creation needs to at least double to meet targets and at the current rate of delivery, it would take almost 48 years to reach the Government's target through only small-scale projects. Again, scale is essential for the delivery of new woodland creation and this is best delivered through large-scale projects which are best supported through large-scale land ownership.

Renewable Energy Development



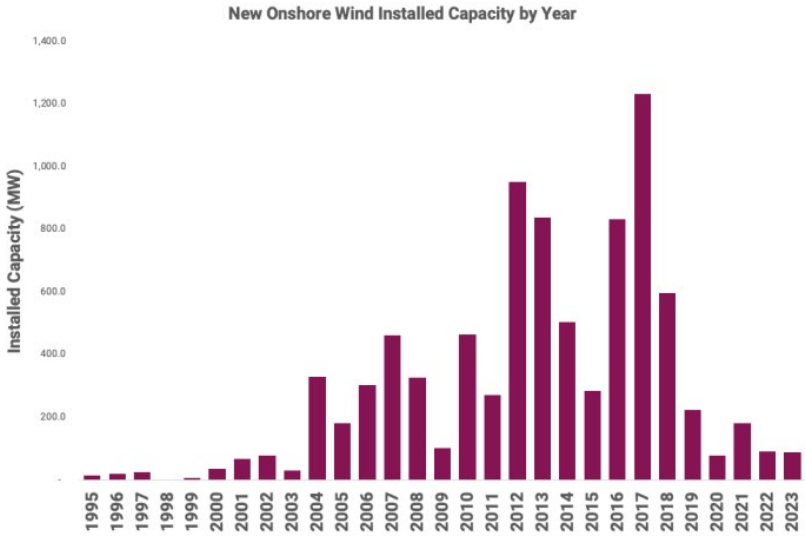
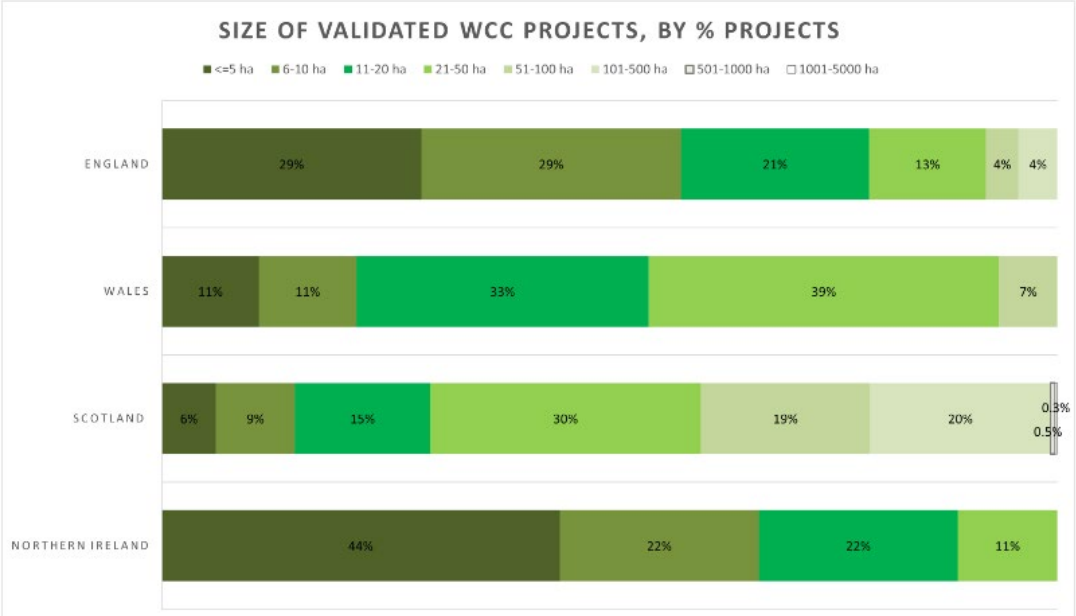


Fig. 5. Fig. 6.

The Scottish Government has set a target to increased installed capacity of onshore wind to over 20GW by 2030 – a 12GW increase from 2022 levels. Figure 6 shows that new installed capacity peaked in 2017 at 1.2GW, and progress has slowed since then. An average of 1.6GW of additional onshore wind capacity is required each year between now and 2030 to meet the target.

At current delivery rates, it would take 54 years to reach the target through only smaller scale projects of less than 50MW. The argument applies here too that large-scale projects are going to be essential for the delivery of onshore wind. Particularly with onshore wind due to the physical area required for turbine operation, large-scale land ownership is necessary to deliver these larger projects. This also makes it easier to accommodate considerations such as ecology, visual impact and greater flexibility in where to locate turbines.

[25] Land - the Role of Scale in Delivering a Just Transition.pdf (scottishlandandestates.co.uk)



[26]

The research by BiGGAR Economics clearly outlines the state of progress in meeting vital land use targets that contribute to net zero. At current rates, targets will not be met and we need to scale up the size of projects and the pace at which they are delivered. This will be more difficult with a more fragmented pattern of ownership and increased bureaucracy and lack of certainty for investors, created through the Land Reform (Scotland) Bill.

Land Market Changes

Over time land markets have ebbed and flowed both in terms of area of land brought to market, but also in terms of land value. However the trend has been generally upwards, which is often the case with tangible assets, and particularly in times of financial uncertainty where tangible assets (e.g. Gold) tend to perform well.
The Scottish Land Commission recently commissioned two annual summaries of changes in land markets, in 2022 and 2023. Some of the key findings are below. [27]

Key Findings in 2023:

- Farmers remained the most active group of actors in the rural land market.
- Land agents reported that the land market had slowed in 2022 and a degree of “caution” had entered the market.
- The changing macroeconomic climate caused uncertainty and re-evaluation among potential purchasers.
- There was an increased emphasis on due diligence within transactions, causing the market to slow.
- Institutional buyers with significant capital backing seeking land for investment were active, but their appetite had slowed.

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[26] Woodland Carbon Code statistics - UK Woodland Carbon Code
[27] SLC Rural Land Market Insights 2023 (landcommission.gov.scot)

- Commercial forestry buyers remained active in the market and demand for plantable land had extended to better quality farmland during 2022.
- Interest among lifestyle buyers was reduced.

When the land agent interviews were conducted (Dec 2022-Jan 2023), land agents suggested that institutional and corporate buyers had either exhausted their current annual land acquisition budgets or were taking a more considered (i.e. less hasty) approach to their land investments.

While there has been much rhetoric around changes in market dynamics and new buyers entering the market, it seems clear that while some new buyers have entered the market this is not on a wholesale level and does not appear to be a long-term trend.

However, those who have bought land are required to meet the same responsibilities as any other landowner and will be subject to the same legislation. It must also be recognised however that they also often bring with them the private finance which is clearly required to meet our twin climate and nature crises, outlined above. Work is ongoing to understand how community benefits can be delivered from large-scale private investment projects and how communities can be involved while retaining the optimal viability of projects.

Annexe C – written submission from Dr Lydia Cole

Dr Lydia Cole, presenting evidence on behalf of collaborative project "Community priorities in peatland restoration" with Dr Cornelia Helmcke and Ewan Jenkins (all based at the University of St Andrews). Dr Cole is a peatland (palaeo)ecologist and environmental geographer, carrying out research on peatland ecosystem dynamics and human-peatland interactions in temperate (Scotland) and tropical (Malaysia, Peru) climates.

Further details on our research, carried out in crofting communities in rural Scotland, of relevance to this committee and session, can be found here, which includes our key output: Peatland Restoration Guide for Crofting Communities.

Topics that we suggest require further scrutiny by the Committee in relation to Natural Capital Financing (submitted in response to request for expertise):

1. The impact of carbon finance, i.e., money directed from private sources for carbon credits resulting from peatland restoration, on the Scottish Government's land reform objectives and rural landholdings, in particular crofting communities and tenant farmers, and on the objectives of the National Just Transition Planning Framework.
2. The impact of the domestic voluntary carbon market and market mechanisms (e.g., UK Peatland Code, Wilder Carbon registry https://www.wildercarbon.com/), on the long-term health of peatland ecosystems (considering ecological realities of peatland restoration).
3. The impact of the domestic voluntary carbon market and market mechanisms, and their current incentive structures (i.e., benefiting mostly large landowners who have heavily degraded/exploited their peatlands in the past) on the long-term health of rural communities (considering rural livelihoods and changing economic conditions).
4. The relative benefits of public vs. private vs. blended finance schemes for peatland restoration, considering the long-term health of peatland environments and rural communities, under the full spectrum of land ownership and management.
5. The fair distribution of financial benefits - resulting from restoring peatlands - from either carbon financing or agri-environment schemes amongst communities/landowners/managers that have kept peatlands in relatively healthy states, and fair distribution of costs/responsibilities in the context of common grazings – making sure that crofters that have statutory rights to access/use the land do not lose their rights.

The Net Zero, Transport and Energy Committee resources state that "Natural capital finance is investment to conserve the value of the natural environment for the long

term." Our research has demonstrated various challenges to the fulfilment of this statement in relation to peatland ecosystems and carbon credit schemes.
Firstly, through research in crofting communities in Lewis, Outer Hebrides, we have seen that, instead of natural capital finance leading to the long-term conservation of peatland ecosystems, speculation and uncertainty associated with private investment is one key factor leading to the slowing down of commitment to restoration work (in these contexts). Further details on this situation are presented in our article in The Conversation (https://theconversation.com/ecosystem-restoration-in-the-scottish-highlands-isnt-going-to-plan-heres-why-219841) and this Correspondence in Nature (open access version here).

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Secondly, the framework for directing private finance to the restoration of peatlands is not incentivising the holistic regeneration of peatland ecosystems, aimed at securing their health and resilience for the long term. The Peatland Code protocol, the UK standard that awards carbon credits based on the emissions avoided/reduced through restoring peatlands, calculates carbon credits according to the depth of the organic-rich layer, the area of the peatland, and the average change in condition of the peatland in response to interventions (with further details in these FAQs). Each restoration project registered with the Peatland Code is awarded carbon credits for the expected immediate change in "category condition", moving the peatland from a damaged state (actively eroding or drained) into a less-damaged state (drained or modified). As the amount of avoided emissions (i.e., carbon units) reduces significantly with each category change (towards the near-natural state) and moving beyond one category would require longer-term interventions and lead to slower, less dramatic changes, restoration beyond a change in one category condition is not incentivised. As a result, the peatland is neither restored to a state in which it can act as a net carbon sink (removing emissions through peat growth), nor does it build resilience to the ongoing environmental disturbances inevitable under a warming climate. This example illustrates how private funding is not currently leading to the long-term conservation of peatlands or the goal of achieving net zero, with interventions leading to carbon reductions but not the removal of carbon (via sequestration in healthy peatlands). Addressing longer-term ecosystem change, in consultation with rural communities, would further prevent "greenwashing" practices (superficial restoration that covers the bare minimum in order to maximise profit).

Thirdly, the "investment" dimension of private financing opportunities under natural capital schemes is providing a source of uncertainty, and understandably, eliciting caution amongst rural communities (according to our experience in Lewis). Crofters and members of rural communities are uncertain of what the opportunity costs are of carbon finance for peatland restoration, and how it compares to accepting 'free' support from the publicly-funded Peatland ACTION scheme. What does accepting

and committing to private investment mean in terms of rights to and responsibilities over land and resources for those people living in and around peatlands, now and in the future? How might private investment alter the relationship rural communities have with peatlands, especially with the elements of these landscapes that possess value beyond carbon (carbon being a historically novel dimension)? How might private investment alter the pattern of access to, management or ownership of local peatlands? And over the multiple generations that could be affected by a decision on carbon trading made at this point in time? The lack of answers to these questions and state of uncertainty reflect the current lack of regulations and guidance around the voluntary carbon market and associated mechanisms.

Moreover, and fourthly, they reflect the fact that the Peatland Code has not been designed with crofting communities in mind. It is thus not unexpected that there have been unintended consequences of the peatland carbon market to date, such as carbon brokers/investors, reportedly, creating false hope for crofting communities through suggesting they can financially gain from their peatlands, while the existing patterns of ownership and management make these promises doubtful. The next iteration of the Peatland Code has the opportunity to develop guidance that directly addresses the context of different types of landowners and land managers, in order that local communities do not feel “shut out” of opportunities provided by natural capital.

Fifth, irrespective of the potential of a revised Peatland Code, we would caution that there are commitments inherent within developing a trusted investment opportunity for private financers - such as ensuring permanence of carbon stored in peatlands - which seem incompatible with rural land management and crofting rights. The physical footprint and dynamics of land use and landownership in rural communities need to be able to adapt over time, over multiple generations, in response to environmental and political change. Private investors, under current schemes, are less able to support that flexibility whilst getting the guarantees they require. There may be opportunities for de-risking investments (as being explored by companies such as Rainmaking Climate), which could help to provide the assurance required by the market, whilst providing the flexibility for those responsible for the stewardship of healthy ecosystems. However, we would suggest that there are alternative routes to incentivising and supporting the restoration of peatlands on crofting land, for example, through government subsidies to encourage management of the farmed land in a particular way, as is currently being explored via the Piloting an Outcomes Based Approach in Scotland (PoBAS) scheme. This suggestion comes with the caution that natural capital investment schemes must be designed to avoid further exacerbating wealth disparities between rural population groups, and relatedly, ongoing depopulation. Instead of “land sparing” approaches, governments need to uphold crofting rights, facilitating locally grounded “land sharing” practices.

Sixth, the Peatland Code is a visible, supported framework for managing private investment towards peatland restoration, providing a level of transparency and accountability - This is not the case for other market instruments that are providing opportunities and structures for investment into peatland-based natural capital, such as Wilder Carbon. These unregulated brokers have the potential, without checks and safeguards in place, to drive the voluntary carbon market towards unintended consequences (e.g., false promises, misinformation, social

exclusion/marginalisation, and green washing), which run counter to the goals of Scotland's "just transformation" to net zero.

Seventh, natural capital financing schemes directed at peatlands are principally focused on quantifying and selling carbon at present, i.e., carbon constitutes the "value" of natural capital on which investment is concerned. Long-term carbon sequestration in/through peatland ecosystems with the goal of achieving atmospheric carbon dioxide removal, in pursuit of climate change mitigation, is dependent on the simultaneous practice/achievement of biodiversity conservation. It also requires restoration approaches that take a landscape-scale approach, or more specifically for peatland ecosystems, consider interventions at the scale of a hydrological unit (akin to a drainage basin). Natural capital schemes, in order to create scalable, cost-effective procedures for initially quantifying, then monitoring, reporting and verifying change over time, are in danger of missing key ecological details, or values, that may deem any interventions unsuccessful in achieving the ultimate, universally-shared goal of achieving a sustainable future.

Eighth, our research in crofting communities in Lewis suggests that addressing energy poverty would contribute significantly to reducing the extraction of peat for use as a domestic fuel. Multiple respondents associated a recent increase in peat cutting (over the last several years) with an increase in energy prices (in a region where energy prices are already relatively high). This example further illustrates how different policy areas need to work in conjunction. Failing to address the need for energy security while advocating for peatland restoration can have social detriments on already marginalised population groups.

Finally, the focus on the carbon stored in peatlands, or the value of carbon reductions possible via peatland restoration, is driving up rural land prices, as peatlands are now seen as a scalable investment. This trend pushes land centralisation and prevents diversification of land use and ownership. Particularly, community-buy-out is increasingly unfeasible and new market entrants, like less affluent young families, cannot compete. In part due to the speed of the development of the carbon market and the technical challenges of quantifying peatland assets (requiring area, depth and condition measurements), there is uncertainty as to whether these elevated land prices even accurately reflect the carbon within the landscape and thus the carbon credits available for sale on the voluntary carbon market. The Land Reform Bill should make sure to address the ways in which natural capital finance is challenging democratic processes of land governance in rural areas (e.g., through limited available information on the consequences of schemes) and countering attempts to secure more widespread ownership of land.

With relevance to all above points, our research suggests that any natural capital financing initiatives must explore, with well-planned consultations (to ensure effective public engagement), the different landownership/land management scenarios across Scotland, to reduce the likelihood of unintended consequences generated by interventions. Any new injection of finance into landscapes will inevitably alter the relationship between farmers/"traditional" managers of the land/rural communities and elements of their environment, in predictable and unpredictable ways. Before any further significant agreements, policy changes or investments are made by the Scottish Government, it would be pertinent to co-design a pilot scheme, working

closely with rural communities (across the spectrum of geographies and modes of governance) and researchers, to test and learn, and then co-develop strategies that do not rely on one-size-fitting-all.