scdi Scottish Council for Development and Industry

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# Investing in Scotland's Natural and Social Capital

## A feasibility study into a community-oriented investment vehicle

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# FOREWORD

SCDI's Rural Commission made clear the need to nurture and harness Scotland's abundant natural assets to address the challenges rural communities face. As we act to tackle climate change, restore nature and deliver a just transition for our places and people, Scotland's emerging natural capital market is a focus for lively debate and innovative business models. Responsible, private investment is one of the vital ways in which funding can be increased, but there is concern that the current model of carbon offsetting projects is failing to benefit local communities.

SCDI is proud of our role in the foundation of new place-based economic activities and institutions in Scotland, including its first industrial estate and the Highlands and Islands Development Board as well as championing Scotland internationally. We continue to be inspired by our purpose of creating a prosperous Scotland for everyone, everywhere.

This feasibility study makes the case for a new SCDI-led not-for-profit organisation that would deliver credible and distinct benefits thanks to an innovative business model with a broader focus on building sustainable economic prosperity. It would attract responsible investors in high-integrity nature-based solutions and deliver financial returns. Critically, it would also increase community land and asset ownership and local economic and social development as a core element of its business strategy. This would de-risk and scale the new market for responsible investors, communities and the natural world.

The proposed vehicle would catalyse changes in local energy, housing, skills, enterprise and supply chains that build community wealth, repopulate places and unblock rural areas' full contribution to national economic prosperity.

As our organisation evolves to help meet the key challenges for Scotland now and in the future, this proposal demonstrates our renewed strengths as a dynamic, collaborative and values-driven forum through which innovative solutions are stimulated and then shaped, to accelerate them into delivery.

SCDI is grateful for the active support of our partners, Community Land Scotland, Forestry and Land Scotland, John Muir Trust, NatureScot, and the Scottish Land Commission, throughout the project. We also thank the many organisations who contributed ideas and comments in our meetings with them.

As we complete this first phase of the project, we also make a call to investors, communities and partners who share our values and are interested in our proposal to work with us to develop it and be part of a new solution. This is an opportunity to play a significant role in an organisation with real impact that realises better, lasting outcomes for people and planet as well as your own organisation.

We would like to hear how our new vehicle could deliver your priorities, and work with you to improve Scotland's natural, social, human and economic capitals - the foundations of our future prosperity.

**Sara Thiam**
**Chief Executive**
SCDI

SCDI is Scotland's Economic and Social Forum. We are an independent and inclusive network representing all sectors and all geographies of the Scottish economy. Our mission is to convene our members, partners, and stakeholders across the private, public and third sectors to deliver inclusive and sustainable economic prosperity for Scotland.

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# INTRODUCTION

This report presents the findings of a feasibility study conducted by SCDI into the creation of a not-for-profit organisation with an innovative business model to scale up private investment in Scotland's natural environment for the benefit of local communities and the natural world.

Natural Capital – the value of the goods and services that the natural environment provides to society – underpins all economic activity. Climate change and biodiversity loss caused by human activity are interlinked and deplete the stock of Natural Capital on which the world's economic and financial systems depend. This creates pervasive climate and nature-related risks for them. Nature-based solutions reverse this process. These are actions to restore Natural Capital in order to provide 'ecosystem services' which benefit both people and nature.

Global climate change and nature agreements are increasing interest in Natural Capital. This interest includes the potential for investors and businesses to offset carbon emissions through woodland creation and peatland restoration in Scotland, and to use nature-based solutions in Scotland to reduce costs or mitigate risks, including climate change related risks. There is growing interest in biodiversity and new reporting requirements will drive investors and businesses to invest in projects to compensate for some of their overall portfolio/impact.

During the UN Climate Conference in Glasgow (COP26) in late 2021, the Scottish Government committed to developing '*a values-led, high integrity market for responsible investment in Natural Capital, that helps deliver policy goals for economic transformation, climate change and biodiversity, and that provides community benefits and supports a Just Transition'*.

Discussions in which SCDI was involved at COP26 stimulated thinking about this project. In particular, Scottish stakeholders identified two key challenges which needed to be addressed:

a. The large gap between the funding available for Scotland's Natural Capital and the funding that is needed must be bridged, in part by attracting higher private investment
b. The current corporate-led model for offsetting carbon emissions by buying carbon credits could not by itself deliver a Just Transition for Scotland's rural communities

In early 2022, SCDI arranged a roundtable with a group of stakeholders to discuss how increasing private investment in carbon offsetting could be delivered with greater benefits for rural economic and social development. SCDI then developed a project research brief for a feasibility study into a new vehicle in discussion with stakeholders.

The main objective of this feasibility study is to find answers to the following questions:

- What is the nature of the problems for which solutions need to be found?
- Is there a market opportunity for a new not-for-profit vehicle to help solve them?
- If so, which commercial model is most likely to support a successful vehicle?

The feasibility study has been funded by Forestry and Land Scotland, John Muir Trust, NatureScot and the Scottish Land Commission. The Steering Group also included Community Land Scotland.

The feasibility study was launched in late 2022 with the final report completed in Summer 2023. Consultation meetings were undertaken with organisations developing and delivering Natural Capital projects, investors, landowners and other private, public and third sector stakeholders. SCDI and the project partners are grateful to the organisations involved in the feasibility study.

A detailed scoping report accompanies this shorter summary which is based on extensive research and input from partners and consultees. This summarised evidence about Scotland's rural land market; the government and regulatory context for Natural Capital projects; current and future opportunities for income generation via Voluntary Carbon Markets and nature-based solutions; existing and potential investors in and buyers of nature-based solutions; and potential mechanisms through which to support a Just Transition for communities. It also reviewed existing and innovative private, public and third sector models for Natural Capital projects. Informed by this analysis, it outlined a potential business model for the new vehicle.

SCDI commissioned Galbraith to provide additional expert advice on creating the new vehicle, accessing funding and generating revenues, including a worked example of a financial model for developing projects based on a recent land acquisition. Summary financial tables of two scenarios of the worked example are provided at Appendix A.

This work led us to explore an outline not-for-profit vehicle led by SCDI which in summary would attract and blend responsible investments from a range of private investors with other sources of funding to:

a. Buy land in Scotland on the market with the potential to deliver positive solutions;
b. Sell, lease or transfer assets on the land to communities and local organisations; and
c. Invest in high-integrity, nature-based solutions on the remaining land which would:
    i. Be sold on the market to individuals, organisations and businesses
    ii. Deliver lasting benefits to the local economies and environments
    iii. Deliver financial returns and wider outcomes for investors and the vehicle

This report sets out where we feel the market opportunity is and how the proposed model meets the demand. As a result of the feasibility study, we have reached the following conclusions:

a. There is a demand for innovative models which help to solve the problems of the funding gap for investment in Natural Capital and a Just Transition for communities
b. There is a demand for vehicles which can help to solve these problems and deliver credible outcomes in what can be a competitive and controversial market
c. While forecasts for Natural Capital markets are uncertain, there are existing and emerging income streams that we believe this new vehicle could generate to sustain its viability
d. The Natural Capital innovation space is competitive and developing rapidly, but our business model has the potential to demonstrate clear impact and distinct benefit thanks to its focus on the Four Capitals
e. Delivery of Community Wealth Building outcomes, including options to transfer assets, is likely to be the vehicle's USP
f. A full business case, which builds on the thinking outlined here, is needed to reach decisions on whether to create the vehicle and the scale of SCDI's investment
g. A description of the proposed model is outlined in Table 1 below.

# PROPOSED VEHICLE

**Table 1**

| | |
|---|---|
| **Purpose** | "Harness the power of responsible investment in Scotland's unique natural environment to empower community-led solutions for local prosperity and a more sustainable planet." |
| **Business Structure** | A Scottish Charitable Incorporated Organisation (SCIO). A flexible, relatively straightforward to establish structure, with tax advantages. Likely to have the trust of communities and philanthropists, and, in consequence, attractive to investors. Must only have charitable purposes and must provide public benefits.<br><br>Independent Board would guarantee accountability for delivery against Purpose. The vehicle would publish a code of conduct for itself and its partners, and conduct due diligence of investors and buyers to guard against reputational risks. It would commit to best practice in reporting to its stakeholders, auditing its impact. |
| **Partners** | SCDI would establish the vehicle. The vehicle would seek to form partnerships with communities and a group of investors to acquire land and develop projects. The vehicle would work closely with public sector and charitable stakeholders. |
| **Timescales** | A full business case would be completed for a decision on the vehicle later in 2023. It would be established in early 2024 and should aim to be in a position to make an initial land acquisition by the end of 2024 and subsequent acquisitions from 2026. An application for NatureScot's FIRNS grant scheme may support the resource required to move this forward. |
| **Funding** | SCDI will explore public sector grant schemes to develop the business case. Early investments most likely from philanthropists, companies and public sector funding streams (including investment banks). The vehicle will use blended finance. New requirements on companies to report carbon emissions and nature impacts by businesses and their supply chains will increase opportunities to attract funding.<br><br>Income generation would be from existing and new assets, asset sales and transfers to communities, and selling of carbon credits and ecosystems services from its projects. Some credits would be sold upfront, but it would hold others until they are verified to benefit from appreciating carbon offset prices. It would aim for higher prices for credits through the high quality of its projects and local outcomes. Smoothing costs and income in project development phases will be a priority as the front-ended costs increase while financial returns are back-ended. |
| **Land Acquisition** | Initial acquisition of c. 500 hectares. Between 1 - 4 landholdings of 500 – 750ha are usually sold on the market per year. We would then make regular acquisitions. Targeting larger properties may increase our ability to aggregate projects to attract investors and to deliver its wider socio-economic and environmental goals. The vehicle would prioritise acquisition of land on the market which both:<br><br>Offers opportunities for investment in nature-based solutions of a scale and quality able to generate attractive returns for investors and buyers;<br>Includes lands and assets which communities are interested in owning.<br><br>Proposed land reforms would increase visibility of potential sales of large landholdings, opportunities for Natural Capital projects and community partnerships. The vehicle may have more flexibility than public sector models on what it can pay landowners, making it more competitive in the market and complementing their acquisitions. |
| **Local Economic Development, including Community Wealth Building** | Sale, transfer or lease of land, assets and sporting rights to community and local owners is a core part of the vehicle's purpose and funding strategy. This includes transfers to community development trusts, housing associations and local businesses etc. Community transfers typically take 3-5 years. Revenues from land and asset sales will be reinvested in delivering its purpose. The vehicle may have more flexibility than public sector bodies in how it structures deals with community and local buyers to improve their affordability.<br><br>On the land it continues to own, it would engage with local communities and stakeholders early-on to develop projects and integrate community benefits. It would offer tailored opportunities to them for shared ownership in its nature-based solutions and opportunities for insetting of emissions by local businesses. It may partner with local housing associations on small developments and local businesses on eco-tourism and sustainable products e.g. food or craft products. The vehicle will support secure, fairly paid, quality jobs and local supply chains. It will form partnerships with local education institutions to develop local skills. |

## Nature-based Solutions

The initial project would be woodland- and/or peatland-based as market mechanisms in these areas are more mature. Once established the vehicle would seek opportunities to invest across all categories of nature-based solutions to support market developments. The vehicle is likely to have an interest in rewilding, carbon 'offsetting', forestry, green energy, agroforestry/silvopasture and public access to nature (see Glossary of Terms for more detail of these). Variations in sites and land quality will influence plans.

The vehicle would invest in nature-based solutions on the land it would own in the long-term and generate income from carbon markets and payments for ecosystem services. The range of ways to monetise Natural Capital is proliferating. The vehicle will aim to develop solutions to apply new carbon codes as they emerge for different habitats, biodiversity/ nature credits and water management to benefit from these emerging opportunities.

The vehicle would be an exemplar in using land use management plans for sites, including information on community engagement, emissions reduction, nature restoration, future developments and revenues generated from offsetting. It would incorporate biodiversity metrics into carbon sequestration projects.

Diversification of income streams and holding onto a share of the credits rather than selling them upfront would reduce risks (and increase benefits) in long-term Natural Capital projects. As it grows, the vehicle would establish its own project development function.

Net zero and nature positive will be central to Scotland's economic strategy for decades. The vehicle will seek to maximise  collateral benefits through capacity building in the supply chain and through skills development and knowledge sharing among its staff, networks, and communities. This will ensure a positive legacy for investors and stakeholders whether or not the vehicle operates in the long-term.

# PURPOSE

## What Problem is this Solving?

The Business Purpose Commission for Scotland, established jointly by SCDI and the Scottish Government, proposed that the role of business in Scottish society should be defined as "to find profitable solutions to the problems of people and planet, not to profit from creating problems for either." It also recommended that every business should define its own Purpose. This is its reason for being and its USP – what defines, guides and drives all of its activities.

While the new vehicle will be a not-for-profit organisation, this formulation of business purpose provides a useful lens through which to view its role in Scottish society. We need to define the problems it is seeking to solve for people and planet, and the opportunities and benefits that arise from solving them. We should also be clear about what makes it different.

## Problems of Planet

The finance gap for nature in Scotland for the next decade has been estimated to be £20bn.[1-2] This is an indication of the scale of the financial challenge. Bridging this finance gap and providing a certainty of investment are absolutely crucial.

Public and philanthropic funding in Scotland's Natural Capital, such as woodland creation and peatland restoration, is increasing. However, in an exceptionally challenging public spending context and outlook for public funding, unlocking higher private investment will be essential.

Private investment in projects in more mature Natural Capital markets is growing, supported by the established UK Woodland and Peatland Carbon Codes. This must be increased further, while investment is also attracted into nascent carbon markets and ecosystems services. A broad spectrum of investor types may finance nature-based investments, but they tend to fall into higher risk or more niche asset classes, so there is a need to create or tap into broader demand.

The global Voluntary Carbon Market continues to face criticisms that some companies are buying credits and not reducing emissions, rather than doing both, and that some of the methodologies used to measure emissions reduction and nature restoration are inaccurate. Investors, buyers, communities and governments are increasingly concerned to partner only with high-integrity nature finance models which deliver projects with credible outcomes.

## Problems of People

Private investors in carbon offsetting often have a distant relationship with projects, but land is of great economic, social and cultural importance to local communities, and the challenges that they face, including declining populations and ageing demographics, lower business start-ups rates and higher job and income insecurity, and poor economic and social infrastructure.

Land ownership in Scotland is the most concentrated in Western Europe and the expansion of the area of land and land assets transferred into community ownership of land has slowed in recent years.

The increased demand (and increase in values) for plantable land and the emerging demand for degraded peatlands, represents a major shift in Scotland's rural land market. Natural capital investment is a key driver for acquisitions of estates. Nearly half of estates purchased in Scotland in 2021 were sold to corporate bodies, investment funds or charitable trusts.[3]

1 Biodiversity strategy to 2045: tackling the nature emergency - gov.scot (www.gov.scot)

2 Although some commentators have critiqued how the Green Finance Institute calculated this figure e.g. If the answer to Scotland's climate goals is private finance, then we are asking the wrong question (holyrood.com) and The Credibility Gap for Green Finance – Community Land Scotland

3 https://www.landcommission.gov.scot/downloads/62543b9498bb1_Rural Land Market Insights Report April 2022.pdf



Market shifts have the capacity to result in large-scale land use transitions in the longer term. This may reduce the ability of communities to buy land and on the availability of land and land assets for housing, rural enterprises, farming entrants, and other local economic priorities.

Investment in Natural Capital which disadvantages or does not benefit communities would not support a Just Transition. Negative PR about impacts on local communities also presents a business risk to investors. Consequently, they may not invest in Scotland's Natural Capital without assurance that communities will benefit in a way that is robust and transparent.

Natural capital projects have the potential to stimulate long-term economic improvements in rural areas, but communities need to be able to engage with an alternative to the corporate-led model.

## Policy & Market Responses

Responding to these problems, and opportunities, the Scottish Government is developing a series of related policies which will reform how land is used and managed. These changes will shape the market in which the vehicle would operate and its role in solving these problems. A timeline for major policy developments is shown at Appendix B.

The Scottish Government's Biodiversity Strategy makes a commitment to developing a Biodiversity Investment Plan to direct how the Finance Gap for nature is addressed.[4] The Scottish and UK Governments are supportive of developing Voluntary Carbon Markets. The Scottish Government's Climate Change Plan says that Voluntary Carbon Markets have a key role in achieving its legally-binding target for Net Zero emissions of all greenhouse gases by 2045.[5]

In March 2022, it published the Interim Principles for Responsible Investment in Natural Capital.[6] The Scottish Government's National Environment Bill will introduce the first statutory targets for nature restoration.[7] The '*Investment*' section of this report considers the likely public investments in Natural Capital markets.

Proposals to increase community ownership, engagement in decision-making about local land, and share in the benefits that land can create are planned for a new Land Reform Bill.[8] These would create requirements for land use management plans for large scale landholdings, public interest tests for large scale land sales and for access to public funding for land-based activity. Conditionality proposed for the receipt of public funding, including through the new agriculture support regime, as well as for carbon and nature market participation, would incentivise actions by landowners on Natural Capital and climate change which deliver agreed and direct economic and social benefits for communities and community agency.[9] An analysis of responses to the public consultation on the proposals found majority support for most the main ideas and proposals.[10] The '*Social and Human Capital*' section of this report considers how the Land Reform Bill and Community Wealth Building legislation will further enhance the need for our proposed model.

A wide range of business models are being developed in Scotland's land market to take advantage of opportunities in carbon offsetting and/or nature-based solutions. These can be categorised into corporate landowners, asset manager landowners, Charity/NGO landowners, 'mass ownership' models, individual landowners, public landowners and community land ownership.[11] Some corporate landowners, asset manager landowners, charity/NGO landowners and high-net worth individuals – often working with project developers and land management companies – are currently further advanced in the development of their financial models. But

4 Biodiversity strategy to 2045: tackling the nature emergency - gov.scot (www.gov.scot)

5 Securing a green recovery on a path to Net Zero: climate change plan 2018–2032 - update - gov.scot (www.gov.scot)

6 Interim Principles for Responsible Investment in Natural Capital - gov.scot (www.gov.scot)

7 Biodiversity strategy to 2045: tackling the nature emergency - gov.scot (www.gov.scot)

8 Land reform in a Net Zero Nation: consultation paper - gov.scot (www.gov.scot)

9 Natural Capital and Land Reform: Next Steps for a Just Transition (landcommission.gov.scot)

10 Land reform in a Net Zero nation: consultation analysis - gov.scot (www.gov.scot)

11 https://www.communitylandscotland.org.uk/?resources=community-wealth-building-and-a-justtransition-to-net-zero

they may not be connected with communities or public bodies, and may be unsure about how to develop, deliver and evaluate community benefits, and concerned about reputational risks.

In our scoping work, we examined in detail group of innovative business models which, in differing ways, aim to support a Just Transition to Net Zero for communities and society: Highlands Rewilding; Trees for Life; Riverwoods; Wilder Carbon; a Crown Estate Scotland pilot in scoping; Forestry and Land Scotland (FLS); and Future Woodlands Scotland's support streams. The analysis considered their business structures, partnerships, funding sources, project categories, interests in land acquisition, strategies, and plans for community benefits. Appendix C provides an overview of the Highlands Rewilding and FLS models alongside the proposed vehicle.

All of these models include many positive features and there are some areas of overlap. This will lead to competition for land, investors and ideas. Only the strongest ideas will be tested on the ground and only the very best vehicles will develop beyond their pilot phase in the coming few years.
However, all the models we looked at seek to deliver local economic opportunities and community benefits, but, with the exception of a vehicle being developed by Crown Estate Scotland and the Scottish Land Commission, none of them propose to transfer assets to communities as a core part of their purpose. This proposed mechanism has the potential to be a notable and valuable differentiator in the marketplace.

## Purpose of the Vehicle

Taking all this into consideration our analysis is that the proposed new vehicle could play a distinct and positive role in the market. Its strength would be its working partnerships with communities and investors to catalyse nature-based solutions and empower people to solve deep-rooted local problems.

Based on these points, we propose that the Purpose of the new vehicle would be to:

*"Harness the power of responsible investment in Scotland's unique natural environment to empower community-led solutions for local prosperity and a more sustainable planet"*



# THE FOUR CAPITALS

## The Foundations of our Approach

The purpose of our vehicle would be to accelerate progress across 'Four Capitals'. Natural Capital is part of the 'capitals approach' to understanding sustainable development. These describe the types of assets that enable us to produce goods and services which benefit people.

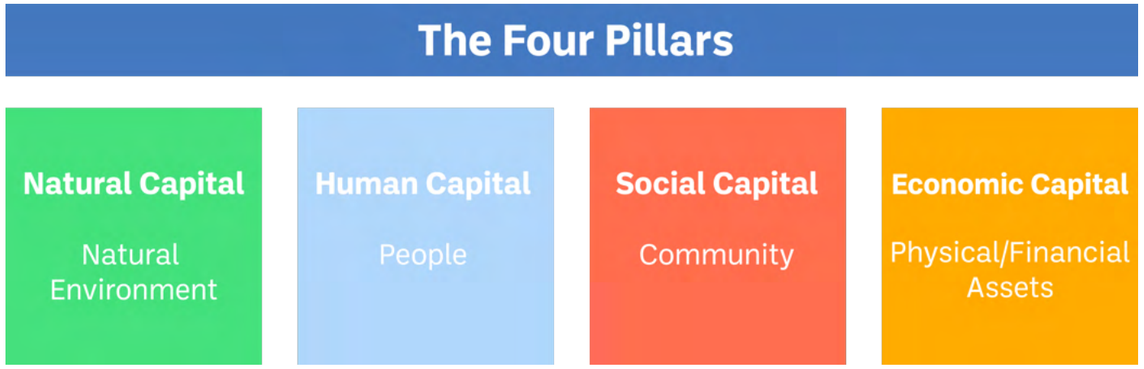
Natural Capital is the most fundamental, underpinning all the other types of capital. In a 'Four Capitals' approach, these are Human Capital, Social Capital and Economic Capital.

These are briefly defined in Table 2 and shown in Graphic 1.

### Table 2: Four Capitals

| Type of Capital | Description |
|---|---|
| **Natural Capital** | Natural assets that are needed to support life and human activity |
| **Social Capital** | Shared norms, values and connections that facilitate cooperative activity |
| **Human Capital** | Knowledge, skills and health that enable individuals to participate in activity |
| **Economic Capital** | Infrastructure and financial assets that are used in economic activity |

### Graphic 1: Four Pillars




Using a capitals approach framework enables us to understand how their activities are underpinned, directly or indirectly, by the types of capital assets. By identifying, measuring and valuing their dependencies and positive and negative impacts, we can make decisions which maintain and strengthen each of the assets and how well they work together. This increases our resilience and is our foundation for long-term sustainability and success.

Organisations leading Natural Capital projects have become increasingly aware of the need for them to adopt a capitals approach in their model from the outset rather than attempting to retrofit the Human, Social and Economic Capitals dimensions at a later stage. These are projects with long lifetimes which depend on long-term support from government, investors and local communities/ the public. The organisations leading them must be able to

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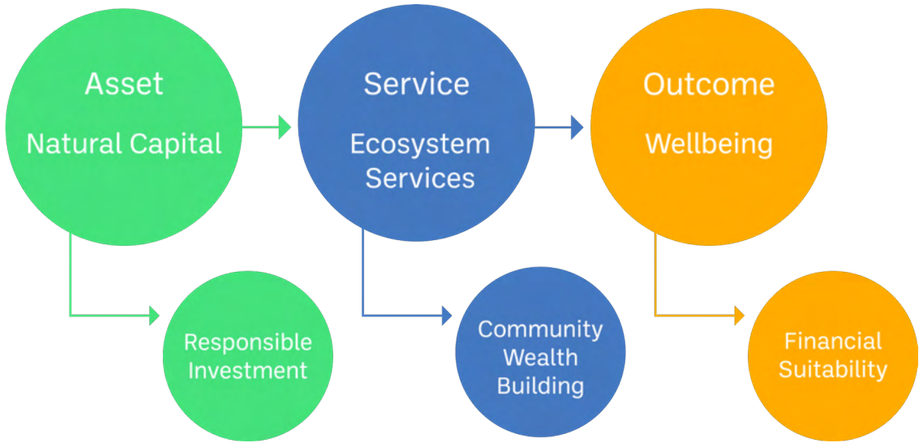
**Graphic 2: Asset – Service – Outcome Model**




explain their positive impacts and maximise the benefits that flow from them to each of the Capitals.

This means that for our model to engage government, investors and public stakeholders we must be able to identify distinct and significant benefits in the new vehicle if it is to capture and maintain their interest and support. An Asset – Service – Outcome model (Graphic 2) can help to guide our thinking.

In our model, the **Social and Human Capitals** dimensions of sustainable development are bound up with how the vehicle will empower communities and people. This includes, but is not limited to, the transfer of assets into community and local ownership where there is a demand. The ways in which we will do this are outlined in the *'Social and Human Capital'* section.

There are two stakeholder groups that we need to think about in relation to **Economic Capital** outcomes. The vehicle will need to attract investors in and buyers of nature-based solutions who want to manage their Economic Capital to ensure the long-term sustainability of their business. Our pitch to them is set out in the sections on *'Investment'* and *'Commercialisation'*

In contrast, communities and businesses in the areas where nature-based solutions are developed often currently lack Economic Capital.

A model of Natural Capital investment which essentially involves one-off investments (e.g. in forestry) and benefits (a carbon offset) is neither feasible nor enough for them. Our vehicle will need to deliver a flexible model which utilises the income and opportunities from Natural Capital projects to builds long-term local Economic Capital, as set out in the *'Social and Human Capital'* section.

Natural Capital is the basis of income-generating activity by the new vehicle. It will attract responsible investment in Natural Capital projects which deliver ecosystems services which generate financial returns. The Natural Capital benefits our model will deliver are outlined in the section on '*Commercialisation*'

In the next section, we focus first on how the community benefits that the proposed commercial model underpins would strengthen social and human capital in rural Scotland.



# SOCIAL & HUMAN CAPITAL

## How will our vehicle strengthen these dimensions?

Natural capital projects have the potential to catalyse a Just Transition for communities, creating new income streams which can build their social, human and economic capital.

While Natural Capital projects generate wider public benefits, community benefits mean the positive and direct impacts on the local community. There are a wide range of potential community benefits from Natural Capital projects, including financial and the better management of land to meet the local community's needs and aspirations. The community benefits can and should be tailored to the unique circumstances of each community and landholding, based on early engagement and agreement, and embedded in business plans from the start.[12]

Natural capital projects should aim to complement the economic, social and environmental priorities of rural communities, such as attracting and retaining more people, quality jobs, housing, sustainable business growth, social entrepreneurship and innovation, and so on. A range of approaches can provide positive economic outcomes for communities. Communities' voices should be to the front and centre in project design, development and delivery.

The Community Wealth Building principles of shared ownership, harnessing local financial flows, fair work, developing local supply chains, and socially productive use of land and property can be a useful reference.[13] While initial returns from shared ownership would be relatively modest and there would be complexities in the allocations of returns and risks, approaches can learn from the main models typically used in onshore wind.[14] Such a model could demonstrate stronger ESG credentials than one led by a commercial developer.

Some community groups have said that they are opposed in principle to Voluntary Carbon Markets, believing that they are being used by companies to 'greenwash' rather than reduce emissions. They may be sceptical about participation in Natural Capital projects. Some community representatives do not believe that they are set up to make decisions about permanent land use changes which will bind the future generations in their communities.

In Scotland, there is concern that high demand for land due to institutional investors and corporate carbon offsetting will permanently change land use with no say for communities, make it harder for them to buy local land and decrease the land available for local priorities.[15]

Land reform has been a major priority for the Scottish Parliament since it was re-established. A series of Land Reform Acts expanded the Community Right to Buy. However, land ownership is still relatively concentrated. While the number of assets in community ownership has continued to grow to 711 in late 2021, they account for only 2.6% of Scotland's land area.[16] The Scottish Government will introduce a new Land Reform Bill later this year. It has proposed a Public Interest Test for large-scale land transfer on the basis that the purchase could exacerbate scale and concentration of land ownership, with conditions potentially on sellers or buyers to split the land into lots or offer land to community bodies. It has also proposed compulsory land use management plans for landholdings over 3,000 hectares[17] (including emissions reduction, nature restoration and information on potential asset transfer or leases to communities and future ownership plans) and

12 Community benefits from investment in Natural Capital: A discussion paper (landcommission.gov.scot)
13 Community Land Scotland Community Wealth Building and a Just Transition to Net Zero-May 2022-final.pdf
14 Shared Ownership of Onshore Renewable Energy Developments - gov.scot (www.gov.scot)
15 Major report shows Scotland's changing rural land market - News - News & Events - Scottish Land Commission
16 Community Ownership - Ownership - Our work - Scottish Land Commission
17 A small majority of respondents to the Scottish Government's consultation disagreed with the use of a fixed threshold of 3,000 hectares, with most of those suggesting an alternative threshold calling for a lower figure in order to include more land-holdings. See: Land reform in a Net Zero nation: consultation analysis - gov.scot (www.gov.scot)

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new requirements to access public funding.[18]

Land reform and community empowerment legislation have strengthened community bodies' rights to buy, lease, manage or use land, land assets and buildings. Examples range across large estates, forestry, standing timber, fields, salmon fishing rights, riparian and certain mineral rights, energy opportunities, community centres, churches, schools, pubs and empty shops. Forestry and Land Scotland's *Community Asset Transfer Scheme* provides a model for sales and leases which have enabled small-scale community hubs or rural housing developments.[19]

Sale, transfer or lease of land, assets and sporting rights to community bodies[20] and local owners is a core part of the vehicle's purpose and funding strategy. The guiding principles would be demonstrable community support and the transference of assets that would strengthen the economic and social life of the community. The strategy includes sale, transfer or lease of commercially viable elements to community development trusts, housing associations and local businesses. For example, housing could be transferred, repaired if necessary, to local housing associations or community development trusts; larger residential properties could be converted to flats by a housing association or sold for hotel accommodation or institutional use; and farms and sporting rights could be sold to start or grow local businesses.

It typically takes 3-5 years for communities to go through the legal process and raise funds. The vehicle will pursue sympathetic/phased asset transfer processes with the community. Our vehicle may have more flexibility than public sector bodies in how it structures deals with community and local buyers to improve their affordability, although it would need to maintain its financial health to continue to deliver its charitable purpose. Revenues from land and asset sales would be reinvested in delivering its Purpose. It is proposed that the vehicle would be developed as a SCIO which would have tax reliefs on most of its income and charitable rates reliefs.

On the land it continues to own, it would engage with local communities and stakeholders early-on to develop projects and integrate community benefits. It would offer tailored opportunities to them for shared ownership in its nature-based solutions and opportunities for insetting of emissions by local businesses. It may partner with local housing associations on small developments and local businesses on eco-tourism and sustainable products e.g. food or craft products. The vehicle will support secure, fairly paid, quality jobs and local supply chains. It will form partnerships with local education institutions to develop local skills. The vehicle will seek to maximise its capacity building in the supply chain and through skills development and knowledge sharing among its staff, networks, and communities.

Landowners and farmers have been diversifying activities on their land.[21] Activities like food production are of national and local importance. They will be key stakeholders for the vehicle.

In a voluntary carbon and biodiversity market, commercial Natural Capital projects are developed to demonstrate strong Environmental, Social & Governance (ESG) credentials to investors, policymakers, regulators and public opinion. Criticisms of community impacts can be a disincentive to investors.

Voluntary carbon markets increasingly take account of wider social and environmental impacts. Demonstrating a positive community impact is becoming a business opportunity. This is evident in the independent governance body the Integrity Council for Voluntary Carbon Market's *Core Carbon Principles and Assessment Framework*[22], the UK's Carbon Codes[23] and the Scottish Government's *Interim Principles for Responsible Investment in Natural Capital.*[24]

18 Land reform in a Net Zero Nation: consultation paper - gov.scot (www.gov.scot)
19 Land reform in a Net Zero Nation: consultation paper - gov.scot (www.gov.scot)
20 The Land Reform (Scotland) Act 2003 and The Community Empowerment (Scotland) Act 2015 define the qualifications of community bodies.
21 Microsoft Word - The Contribution of Scotland's rural estates to building a wellbeing economy - final report - 22Sep22.docx (scottishlandandestates.co.uk)
22 The Core Carbon Principles - ICVCM
23 5. Social responsibility - UK Woodland Carbon Code



## Conclusions & Next Steps

We conclude that there is evidence that the current model for private investment in Natural Capital will not support a Just Transition. Carbon offsetting projects in which corporates benefit from making a payment to manage a risk may make permanent changes to land use and management with immediate and lasting impacts on the local community. Moreover, increasing demand (and increase in values) for plantable land and emerging demand for degraded peatlands may make it more difficult for communities to buy land.

Delivering community benefits is likely to become a higher priority in UK carbon codes in the near term and at a projects level, due to international, UK and Scottish frameworks for Voluntary Carbon Markets. There are also indications that clear community impact and distinct benefit may attract a carbon price premium. Development of a wider range of nature-based solutions offers opportunities for rural communities to grow stronger, sustainable economies. However, there is a need for new community-centred investment models to deliver this purpose. There can be no one-size-fits-all model because communities and nature-based solutions are diverse. The new vehicle will work from a menu of community benefit options, developed in line with best practice community engagement from the inception of the project/purchase.

A new vehicle that is created to use the opportunities of Natural Capital investment to enable a Just Transition for communities is needed to deliver the public interest in the land market. What currently differentiates the proposed model of our vehicle is the intention to acquire land with assets which will be sold, transferred or leased to local communities and organisations. Moreover, we can fully develop its USP by embedding Social, Human and Economic Capitals (as well as Natural Capital) in every facet of the vehicle and at every stage of project life cycles, such as Community Wealth Building outcomes. This would be attractive to the vehicle's key stakeholders, including investors in and buyers of 'charismatic carbon'.[25]

Land ownership, use, management and tax policies are in a period of major reforms. These will influence changes in the land market. Governments are interested in vehicles that will deliver positive local outcomes including diversity of land ownership and community benefits. The new Land Reform Act, and other new policies, will create opportunities and expectations of the new vehicle. Increased transparency about future ownership plans, prior notice to surrounding community bodes about intended sales and potential conditions to split land into lots on sale could increase visibility of forthcoming opportunities and potential partnerships with communities as well as increase the sites on the market. The vehicle will develop an Acquisition Framework with which to assess opportunities to buy against its charitable purpose and target strategically. The vehicle will not compete with communities to buy land.

Communities should not only be involved in Natural Capital projects through best practice in consultation and engagement, decision-making about all projects should be inclusive of their local communities. The vehicle would help communities to develop the agency to make informed decisions. The vehicle would discuss appropriate governance models for every project with the community which offer meaningful representation, participation and say. It will invite Local Place Plan proposals from them about how land is developed and used.

The vehicle will publish Participation Statements which describe when, with whom, and how it intends to consult on land use management plans for its sites to ensure that these are inclusive. The plans will include information on community engagement, emissions reduction, nature restoration, future developments and revenues generated from carbon offsetting.

We do not yet have a view on the longevity of the vehicle. It should aim to be self-sustaining, but there may come a time when its Board

24 Interim Principles for Responsible Investment in Natural Capital - gov.scot (www.gov.scot)
25 See Glossary of Terms

decide that its charitable purpose has been fulfilled. The vehicle will always be open to transferring land to interested communities or a community-approved third party, but will want to ensure that they do not face a situation in which the Natural Capital value has been extracted and there are costly management burdens.

The future of the Voluntary Carbon Market is uncertain and many innovative business models in the market will not last. We must act at all times to create a positive legacy for communities, investors and other stakeholders, whether or not the vehicle itself operates in the long-term.

As we develop a full business case for the new vehicle, we would need to do the following:

- Consult with community representatives on how the vehicle could meet their goals
- Consult on how to identify and prioritise acquisitions based on community need and interest
- Consult on which assets would interest communities and how these would be sold or leased
- Consult on options for flexible community-led models for Natural Capital and shared ownership
- Consult with community representatives on inclusive post-acquisition governance models
- Consult on how the vehicle will compensate or collaborate with sitting tenants on the land
- Consider how to transfer assets that need capital works to make them fit for community use
- Consider how to manage surplus assets where no community interest is forthcoming
- Review wider blockages to local economic assets that the vehicle would need to overcome
- Develop proposals for carbon insetting opportunities for local supply chains
- Consult with housing associations, educational institutions and other local delivery partners
- Engage further with stakeholders including landowners, public bodies and local authorities
- Update our information on trends in the land market, including off-market sales
- Understand the likely impact of new policies on the land market and the vehicle's operations
- Understand the impact of asset transfers to communities on the value of the remaining land
- Engage with investors and buyers on leveraging wider contributions to community goals
- Review exemplar land management plans and consult on potential local impact metrics

In the next section, we focus on the sources of investment that are available to set up a new vehicle for Natural Capital and the returns and outcomes that different types of investors are seeking.



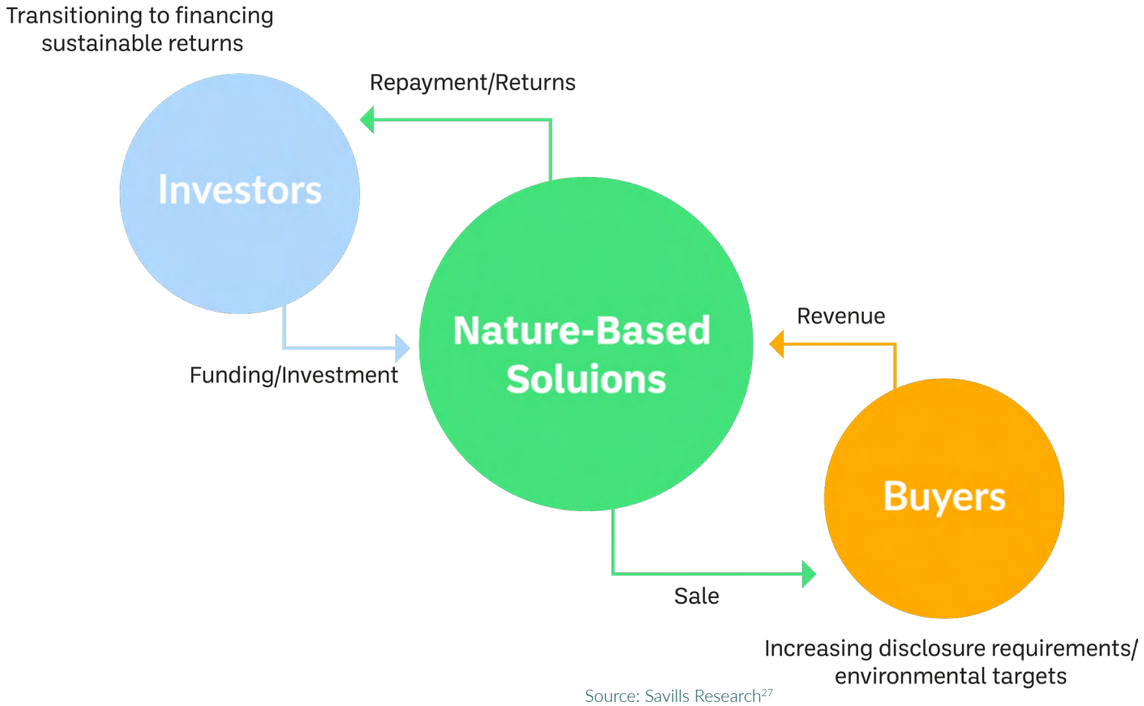
# INVESTMENT

## Where will investment come from?

The Voluntary Carbon Market is a non-regulated market where carbon credits are purchased, usually by businesses voluntarily offsetting their carbon emissions to be a responsible business or protect their social licence to operate. Its value quadrupled between 2020 and 2021, to reach nearly $2bn.[26]

Nature-based projects accounted for over 66% of transaction value in 2021. Natural capital markets put a value on the services provided by nature, and create new opportunities for investors to allocate capital and for buyers to purchase credits and services. Graphic 3 shows the financial flows and motivations in the nature-based solutions market.

### Graphic 3: Financial Flows & Motivations for Nature-based Solutions




Source: Savills Research[27]

26 Voluntary Carbon Markets and Offsetting - Climate Change Committee (theccc.org.uk)
27 Savills UK | Spotlight: Nature-based solutions – November 2022

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A broad spectrum of private investor types may finance activity which advances sustainable development priorities with a mixed range of motivations, but they tend to fall into higher risk (such as private equity) or more niche asset classes (with specialist management teams). Significant numbers of projects operate on 'commercial' terms offering market rate returns.[28] Many companies are interested in Natural Capital investments. Some are buying land in Scotland to deliver schemes directly, others are investing via public or third-sector projects.

But global private sector investment will have to increase by several orders of magnitude to halt biodiversity loss, limit climate change below 1.5°C and achieve land degradation neutrality. The finance gap for nature in Scotland for the next decade has been estimated to be £20bn.[29]

Major barriers to attracting this investment are the undervaluation of nature, uncertainties and complexities, a lack of standards for measuring and accrediting projects and a limited pipeline of attractive projects.[30] Natured-based solutions can be capital intensive and take years to implement with financial payback timeframes, typically, very long.[31] Asset owners such as pension funds and private banking clients require liquid assets with clear and predictable flows of revenues.[32] The risks for investors are elevated while nature-based solutions need patient capital.

Consequently public funding is often fundamental in market dynamics. Projects rarely do not include public funding alongside private funding and all projects are dependent on government incentives. On land with low economic value projects can be financed, but others may require multiple revenue streams for an acceptable return on investment.[33]

'Blended finance' involves strategic use of public and philanthropic capital to help grow and prove investment models. Table 3 shows how investors and income sources for our model may evolve over time.

Innovative business models for Natural Capital in Scotland tend to follow this approach.[34]

There is support to develop these projects. The Facility for Investment Ready Nature in Scotland (FIRNS), delivered by NatureScot, has offered grants of up to £240,000 to *"help develop a viable business case and financial model… that also yield rewards in a Just Transition and bringing economic benefits to communities."*[35] The overall aim and ambition of the FIRNS programme is to support the development of the pipeline of nature based projects as well as innovation favouring more resilient high integrity Natural Capital markets in Scotland.

The UK Infrastructure Bank (UKIB) plans to focus on Voluntary Carbon Markets, biodiversity and water services initially. It is interested in investment models that aggregate smaller projects, and may provide bridging finance that allows developers to hold carbon credits until validation when they may achieve higher prices, and invest in scaling projects delivering significant social and environmental co-benefits.[36] The Treasury accepted an amendment to the UKIB Bill to include nature-based solutions within the definition of infrastructure[37] and the UKIB has made its first Natural Capital investment, a short-term bridging facility to Highlands Rewilding.[38] The Scottish National Investment Bank is exploring options.

28 47% of the transactions reviewed did not disclose returns expectations. 42% of them claimed to generate market rate returns, with 11% of investments expected to generate sub-market returns.
29 Biodiversity strategy to 2045: tackling the nature emergency - gov.scot (www.gov.scot)
30 Finance-Earth-GPC-Market-Review-of-NbS-Report-May-2021.pdf
31 HIE, Optimising carbon sequestration opportunities for Community Wealth Building in Argyll and Bute - Business Modelling Report
32 State of Finance for Nature | UNEP - UN Environment Programme
33 Financing UK Nature Recovery.pdf (cdn-website.com)
34 Highlands Rewilding Investment
35 FIRNS - The Facility for Investment ready Nature in Scotland | NatureScot
36 Natural capital - discussion paper (ukib.org.uk)
37 ENDS Report - Green light for UK Infrastructure Bank to invest in nature-based solutions, following Treasury concession
38 UK Infrastructure Bank announces first Natural Capital transaction | UK Infrastructure Bank (ukib.org.uk)



**Table 3: Potential Investor and Income Sources**

| Start-up investor/ income | Transition investor/ income | Long-term investor/ income |
|---|---|---|
| Government grant | Investment for financial return: bonds or shares | Sales of commodities (e.g. food, materials, energy) |
| CSR donation | Carbon offset credits | Sales of services (e.g. tourism, education, accommodation) |
| Venture capital | Biodiversity credits | Price premiums/ competitive advantage for regenerative practice |
| Crowdfunding | Water management improvement | Long-term dependence on sales of commodities or services elsewhere via 'maintenance offsets' |

Project aggregation can be essential to attract investors generally interested in a size and scale of investment opportunities in the tens to hundreds of millions of pounds. However, aggregation can also have downsides. Some investors prefer to be connected with a specific site with its own metrics and there may be complexity in aggregating projects. Landscape Enterprise Networks (LENs) aggregate ecosystem services at a landscape or a catchment scale to attract smaller investors and support a positive local economic impact. Investors also understand the likely cashflows and financial returns that more mature activities can offer models[39], however, the rules of carbon code can restrict combinations of revenues streams.

Reporting frameworks, such as Nature-related Financial Disclosures and UK Sustainability Disclosure Requirements[40], will promote investments in nature-based solutions. Projects that provide multiple economic, social and/ or environmental benefits are attractive to investors, and commercial developers are rapidly developing plans for what they will deliver on-site.

## Conclusions & Next Steps

From our feasibility study we conclude that there is a large gap between the funding available and the funding needed for Natural Capital at global and Scottish levels. This must be bridged in part by attracting higher private investment in nature-based solutions at scale. The main obstacle is that the risks and uncertainties in projects and future prices outweigh the potential returns.

Nevertheless, private investment in Natural Capital has been rapidly increasing. A broad spectrum of investor types with varying motivations may invest in our vehicle. At present, the investment classes are likely to have a focus on impact or a higher tolerance for risk, but a growing range of investible income models operate on commercial terms and offer market rate returns to investors. However,

39 Building Investor Confidence in Nature-based Solutions | Sustainability Accelerator (chathamhouse.org)
40 Financial Risks of Nature Loss (parliament.uk)

policy and regulatory changes will further de-risk investment and encourage institutional investors and businesses to invest. Blended finance will be important to reduce risks and mobilise private capital. Project aggregation and stacking of revenues diversifies risk and improves investment readiness for large-scale investors, and opportunities to do both should be pursued by the vehicle as it acquires more land assets.

However, projects like ours that provide multiple economic, social and environmental benefits are attractive to investors because they comply with their ESG metrics, and can increase long-term value and reduce risks. Scotland is an attractive place for investors in Natural Capital, and is a green and sustainable finance hub.

A new vehicle that offers a diverse range of high-quality natured-based solutions delivering multiple benefits, supported by cashflows from other activities, and structured products which meet the needs of the investor types in or entering the market, would be positioned well to attract the investment it needs. Early investments in the vehicle would be most likely from philanthropists, companies and public sector funding streams. By forming partnerships with responsible investors, the vehicle could reduce its own risks of negative publicity and be able to access the wider contributions that committed investors are able to bring to its projects.

As we develop a full business case for the new vehicle in the next phase we would need to do the following:

- Define the investments needed for start-up, initial acquisition, scale-up and the long-term
- Consult further with the investment community on how the vehicle could meet their needs
- Review how policy and regulatory changes will change the scale and profile of investment
- Explore the opportunities for blended finance with public, philanthropic and private funders
- Check that the UK Internal Market Act/ public subsidy control regime permit public funding.
- Develop proposals for investment
- Review the potential to agree and leverage long-term partnerships with a group of investors
- Consider if the vehicle might also channel investment to projects already in development
- Consult with investors on their financial and impact reporting and auditing requirements
- Develop an ethical investor relations framework to reduce risks for the vehicle and investors
- Market test the idea that SCDI would lead on the delivery of this, most likely with partners
- Consult with communities on models of investing in collaboration with communities

In the next section, we turn to the proposed commercial model through which it would generate income for the financial returns to its investors and deliver its business purpose.

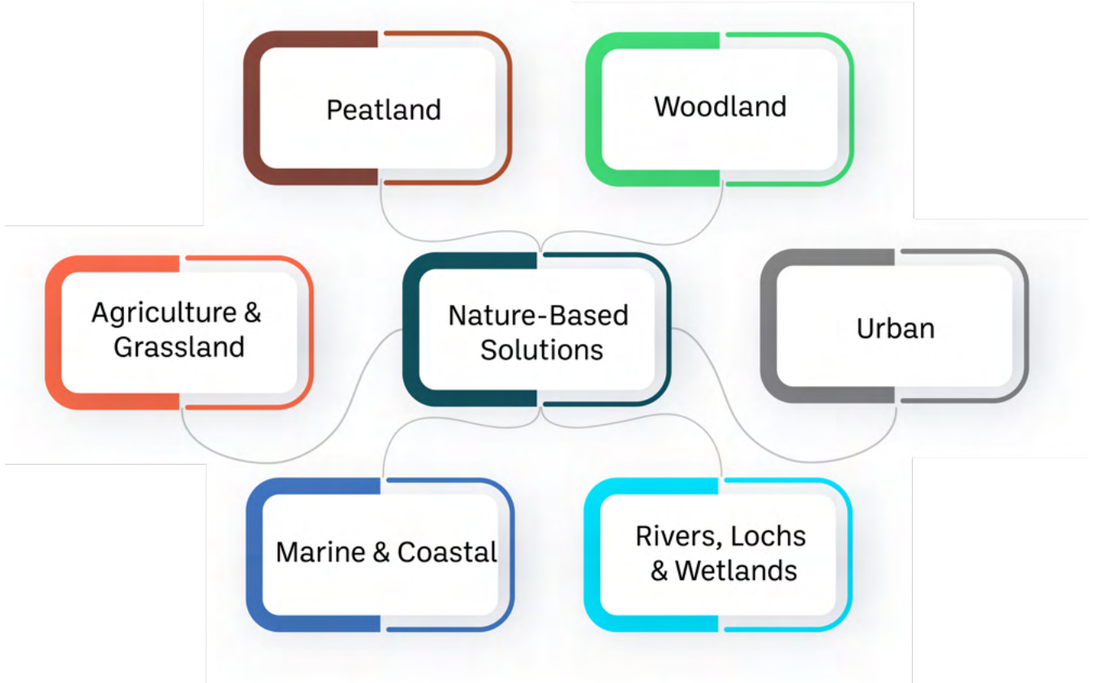
# COMMERCIALISATION

## What is our proposed commercial model?

The range of ways to monetise Natural Capital is proliferating. These include established carbon codes and carbon codes for new habitats, and codes for biodiversity and other services. For long-term income it is important to consider ecosystem services as well as Natural Capital, which might include 'traditional' income streams such as food, materials, energy and tourism, but potentially delivered, with added value, in new ways in a 'transitioned' landscape.

Nature-based solutions may be split into six categories, as shown in Graphic 4.

### Graphic 4: Asset – Service – Outcome Model




Source: Nature-based solutions | Climate change | Scottish Wildlife Trust

The UK Woodland Carbon Code and UK Peatland Code were created to develop the domestic markets in those categories. These outline standards for the registration, verification and validation of carbon sequestration projects. Table 4 shows they offer two options to trade a carbon asset:

## Table 4: PIUs and WCUs/PCUs

| Pending Issuance Units | Woodland/Peatland Carbon Units |
|---|---|
| • Once a project has been validated, it can be sold as Pending Issuance Units (PIUs)<br>• PIUs are a promise to deliver a Woodland/ Peatland Carbon Unit, based on predicted sequestration. When selling PIUs the landowner commits to deliver that amount of carbon.<br>• A majority of expenditure on projects (planning, preparation, planting etc) is incurred before PIUs are issued, but PIUs generate income earlier in the project's lifetime. This usually means that they miss out on any uplift in the value of the units in the future if carbon prices rise. | • PIUs are converted to Woodland/Peatland Carbon Units (WCUs/PCUs) on verification.<br>• Their value is likely to be higher than PIUs as they allow companies to state carbon neutrality.<br>• By holding PIUs to convert to WCUs/PCUs, the landowner may reduce their risks if the project faces problems and may gain if carbon prices rise pre-verification, but that is not guaranteed.[41]<br>• By waiting, landowners also have the option to use their credits for their own low carbon claims.[42]<br>• The sale of PIUs and WCUs can take place at the same time and can include a mix of the two.<br>• Carbon credits may be purchased upfront or in instalments, and through varied mechanisms |

Appendix D shows the growth of projects under the Codes and compares WCUs and PCUs.

The key principles underpinning both codes are **Additionality** and **Permanence**. Projects must show that the carbon would not have been sequestered without the income from carbon credits and ensure that sequestration is not reversed, even if the land is sold or transferred.

According to Scottish Forestry, the average prices for PIUs have grown from £5/tCO2 or less in 2011, to £15-£20/tCO2 between 2015 and 2020, to £15-£20/tCO2 (even £25/tCO2) in 2022. Forestry and Land Scotland report hearing that some project developers are selling for £30-£50/tCO2 and some corporate buyers are paying >£60tCO2 from brokers for UK projects.

Variations in sites and land quality will influence plans. Typically only 40-60% of a site will be plantable. A number of factors can affect the carbon unit prices achieved by a specific project. These factors include the associated benefits to wildlife, community, water and the economy.[43]

One of the risks to Voluntary Carbon Markets is criticism of a buyers' broader commitments to the transition to Net Zero or nature. The wrong buyer can quickly ruin a reputation and dramatically decrease the demand for carbon units coming from that project.

The reputational risk is now going both ways. Sellers and new codes are now developing/ designing stricter criteria and due diligence processes to select buyers. UKIB will only invest in projects that sell to end buyers which have a public commitment to achieve Net Zero by 2050 and have signed up to a credible initiative for delivering on this commitment, such as the UN Science-Based Targets initiative and are only using offsets to address unavoidable residual emissions.[44] Palladium, a company which implements international development programmes, have developed codes of conduct that are applicable to all their business partners.[45] Our vehicle is likely to want to partner with a group of buyers to increase benefits, manage risks and minimise the need for due diligence.

Most forecasts suggest that the Voluntary Carbon Market will continue to expand over the next 30 year due to pressure on corporations to take action. The latest UK carbon code data is expected to show new entrants active in the market. However, carbon price forecasts are very uncertain. Appendix E shows three scenarios modelled by BloombergNEF. These ranges would have to be built into any risk analysis at the next phase of the business case modelling.

The market is also diversifying. Soil Carbon Codes have been launched[46], with codes being created for hedgerow and agroforestry, and coastal habitats such as seagrass, seaweed and saltmarsh.

Biodiversity credits are a subject of huge interest, with a range of developers launching credits. These include Ecosulis' CreditNature as part of Scottish Government's CivTech challenge. These will be more complex than carbon codes, and they could potentially be used for offsetting, insetting, to add a premium to carbon schemes, or for philanthropic purposes. Water management benefits are also set to be monetised through a new code developer.

Voluntary Carbon Markets are, at present, a relatively small element of income from land management. Financial returns promised by some Natural Capital models appear to be based on forecasts of land asset value appreciation rather than income from Natural Capital projects.

Natural capital projects last over many decades and their ability to catalyse economic transformation and a Just Transition depends on a successful transition to long term income. Galbraith's advice has highlighted the benefits of considering diverse income streams from the start, and that understanding the difference between investment in Natural Capital and revenues from ecosystem services will help to develop a business plan for the long term. Investors and buyers will pay for woodland when it is being created, but in the long-term it could produce services such as food, materials, leisure, tourism, health, wellbeing, or energy, and business plans should include these opportunities.

Landowners may sell ecosystem services in two ways – 'bundling' (packaging services produced by a project on a single area of land and selling the package to a single buyer) or 'stacking' (selling services produced on a single area of land separately to different buyers). Projects that provide multiple benefits may command a higher price for carbon credits, but this can make it more complex to show that a project passes the Additionality principle.

The worked example from Galbraith shows a wide range of potential revenues. It also includes costs. These are currently rising rapidly. We understand that the cost of a similar property to that modelled would be approximately £12,500/ ha. This a competitive market and there are constraints across project supply chains. It is taking two years at present to conclude legal agreements. Decision gates for potential buyers of credits can be anywhere from 12 months to 4 years. Planting costs are up 40% in a year. Costs are front-ended while financial returns are back-ended. Carbon payments typically support 25-30% of woodland creation capital costs and carbon pricing itself is not sufficient to support the majority of peatland restoration activity. Consultants and specialised services providers can help project owners to develop projects and prepare the documentation for validation and/ or verification. They may also help manage the project and/or help find buyers, and bear the financial risks of developing projects.

## Conclusions & Next Steps

From our feasibility study we conclude that there is increasing market demand for high quality nature-based solutions such as our

41 For example, Galbraith advises its clients to sell no more than 50% of credits upfront.
42 The_opportunities_of_agri-carbon_markets_summary.pdf (wwf.org.uk)
43 FC Fact Sheet Carbon (publishing.service.gov.uk)
44 UK Infrastructure Bank - Natural capital - discussion paper (ukib.org.uk)
45 GBL CC02 Business Partner Code of Conduct (sharepoint.com)
46 Soil Carbon Code | About the Code (sustainablesoils.org)

model which demonstrate genuine effectiveness and protect the social licence to operate and reputation of buyers. While future supply and demand is uncertain, and forecasts of prices vary significantly, international climate change treaties and widespread market adoption of new risk-management and disclosure financial frameworks are expected to influence more organisations to shift their capital flows into Natural Capital projects.

Mixed income models will be essential. The mature model of public capital grants supporting the Woodland and Peatland Carbon Code is generating rapid expansions in projects and is likely to remain available. But array of new approaches to Natural Capital monetisation are emerging and being experimented with, including carbon codes, biodiversity credits and Payments for Ecosystems Services (PES), such as water management, opening up other revenue streams.

However, carbon payments do not cover woodland or peatland project costs. Inflation is high, a shortage of supply chain capacity is leading to delays and the financial returns are back-ended.

Projects which package revenue streams can attract higher prices but this can also cause complexities, constraints (such as carbon code rules) and costs. Nature-based solutions may attract higher prices from some buyers by involving them in projects and delivering wider benefits, including biodiversity, community, water and economic benefits. The marketplace in Scotland is highly competitive and rapidly evolving. In this context, some innovative business models have found it difficult to explain granular details of their financial models.

A new vehicle, such as ours, that offers nature-based solutions which show robust credibility and impact across all Four Capitals would find market appetite. An initial project based on the woodland and peatland carbon codes would be more certain to generate income, but there are emerging opportunities, such as biodiversity credits, which the vehicle should seek to seize, finance and integrate into projects. This should be balanced with developing a sound business with prudent cost and risk management, and long-term partnerships to deliver its purpose.

As we develop a full business case for the new vehicle, we would need to do the following:

- Analyse market data for current and forecast buyers and price trends
- Assess the vehicle's needs for start-up, transition and long-term income in detail
- Consult with buyers on their needs and how to accentuate factors that attract a price premium
- Consider how to add value to traditional income streams and deliver alongside Natural Capital
- Review the scope to bundle or stack schemes and any changes which make them easier
- Build understanding of emerging carbon codes, biodiversity credits and PES income streams
- Weigh up how and when to sell credits based on short and long term opportunities and risks
- Review the options to agree long-term partnerships with a group of buyers and local insetting
- Model start-up, land acquisition, project development and long-term costs in detail
- Consider how to smooth (increasing) front-ended costs with back-ended financial returns
- Consider the potential to partner with other organisations to minimise (start-up) costs
- Develop a risk register for the vehicle, with consequences and how risks will be managed
- Engage with investors on the ESG commitments that should be required from potential buyers
- Test advantages and disadvantages of a SCIO against alternatives structures for the vehicle
- Consider whether or not the vehicle would plan to be the long-term owner of land

The transition described in this report across natural, social, human and economic capitals are a long-term task. We have described some of the uncertainties and challenges in the preceding sections. In the final section we highlight key risks for the vehicle and proposed mitigations.



# RISKS

## Risks and Potential Mitigations for the Proposed Vehicle

| Risks | Mitigations |
|---|---|
| Availability of Land | • Build relations with Land Agents |
| Competitive market for investors, buyers, skills and resources etc, with rising costs, delays in projects, and uncertain future prices, causing potential business failure | • Distinct Business Purpose<br>• Income diversification and innovation<br>• Achieve premium prices for quality projects and outcomes<br>• Public, private and third sector partners in start-up phase<br>• Skills and supply change development<br>• Delivery of multiple/collateral benefits<br>• Positive legacy e.g. knowledge creation and sharing Commercial modelling based on reasonable range of scenarios for Natural Capital credits<br>• Patience in order to secure the right price to make the vehicle viable |
| Difficulties in delivering and demonstrating real environmental impacts | • Use of UK Carbon Codes<br>• Reporting and auditing<br>• Business purpose and independent Board<br>• Charity test<br>• Internal expertise<br>• Land management plans<br>• IoT and data partnerships (e.g. CENSIS, James Hutton)<br>• Positive PR e.g. environmental appraisals, eco-tourism |
| The identity of the vehicle's investors | • Due diligence<br>• Code of conduct<br>• Blended finance<br>• Long-term partnerships<br>• Attract responsible investors |
| The identity of the vehicle's offset buyers | • Due diligence<br>• Code of conduct<br>• Long-term partnerships<br>• Transparency |



| Risks | Mitigations |
|---|---|
| Challenges in delivering community-led model and demonstrating community benefits for diverse communities over project lifetimes. Not securing consensus from community on any given decision.<br><br>Any asset acquired is likely to have sitting agricultural, sporting and residential tenants and employees (often in grace and favour properties) | • Engagement and collaboration on land acquisitions<br>• Community asset transfers<br>• Land management plans with local metrics<br>• Engagement on Natural Capital projects and benefits<br>• Shared ownership opportunities<br>• Local economic development e.g. housing, skills, supply chains<br>• Carbon insetting of emissions from local businesses<br>• Access to land<br>• Business purpose and independent Board<br>• Charity test<br>• Positive PR e.g. human interest, economic appraisals<br>• Community/stakeholder engagement code of conduct and best practice protocols |
| Risks posed by different categories of income | • Financial management<br>• Income diversification<br>• Achieve premium prices for quality projects and outcomes |
| Selling credits upfront v holding until validation | • Sell some credits upfront to generate income<br>• Hold onto a share of credits to mitigate risks/ achieve uplift (e.g. 50%)<br>• Income diversification |
| Land losing asset value with conversion from farming to Natural Capital | • Phased conversions<br>• Agroforestry/silvopasture<br>• Commit to only selling carbon units at a value that would mitigate this loss in capital value<br>• Accept that we will break-even only on assets and need to seek reinvestment for every property we seek to convert |
| Liability for woodland projects with potential for losses or destruction | • Forest management<br>• Land management per management plan<br>• Restock where project involves harvesting<br>• Only sell carbon units which are validated and verified to a standard<br>• Do not sell all credits for a project<br>• Multiple landholdings<br>• Diversity of carbon categories and nature-based solutions<br>• Consider taking out standard security on the asset against the value of the carbon transferred<br>• Employ conservation burdens to ensure that the land change is permanent even on transfer of title and burden |

# CONCLUSION

As described in the Introduction, the main objective of the feasibility study was to find answers to the following questions:

- What is the nature of the problems for which solutions need to be found?
- Is there a market opportunity for a new not-for-profit vehicle to help solve them?
- If so, which commercial model is most likely to support a successful vehicle?

We have sought to answer these questions through a focus on the Four Capitals. We have concluded that there is a market opportunity for a new vehicle with a community centred model to nature-based solutions and a purpose which solves problems for social, human and economic capital as well as Natural Capital in rural areas, and thus supports a Just Transition.

SCDI welcomes comments on this report. Please contact gareth.williams@scdi.org.uk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# REPORT PARTNERS

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FOR *wild* LAND & *wild* PLACES

NatureScot
NàdarAlba

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COIMISEAN FEARAINN NA H-ALBA


Partners supported the feasibility study via a Steering Group and provided extensive input. The content of the report should be attributed to SCDI. SCDI takes full responsibility for the feasibility study and association publications.

The views and conclusions in the report are those of SCDI and should be attributed to SCDI.

# APPENDICES

## Appendix A - Summary Timber Planting Pricing Table from Galbraith's Model

Model is a farm of approximately 450ha, with c.60% available for timber production. Estimated cost to purchase at £12.5k/ha is c.£5.625M

| Year | Total Expenses* £000s | Total income† £000s | Net Expense/ Income £000s | Cash flow £000s |
|---|---|---|---|---|
| 1 | 768 | 0 | (768) | (768) |
| 2 | 203 | 754 | 550 | (218) |
| 3 | 86 | 69 | 17 | (234) |
| 4 | 77 | 69 | 8 | (243) |
| 5 | 16 | 69 | 53 | (190) |
| 6 | 16 | 69 | 53 | (137) |

*Expenses include Fencing, Access, Ground prep., planting Conifer and Broadleaf, weeding, beat up, supervision and management fees, maintenance and insurance

†Income comprises grant income for Fencing, Planting and Annual Maintenance – note that this Grant income is only available for Rotation 1

### Long term cash forecast

There are various options for revenue generation over the next 100 years for the land. The below estimates assess over the initial 35 years timber rotation and include:

- Timber planting as above
- Retaining the farm steading and letting to part time farmer at favourable rate (rather than sell at c. £350k-£400k)
- Leasing land for windfarm – say 24MW
- Peatland Carbon restoration – may impact on ability to lease land for windfarm

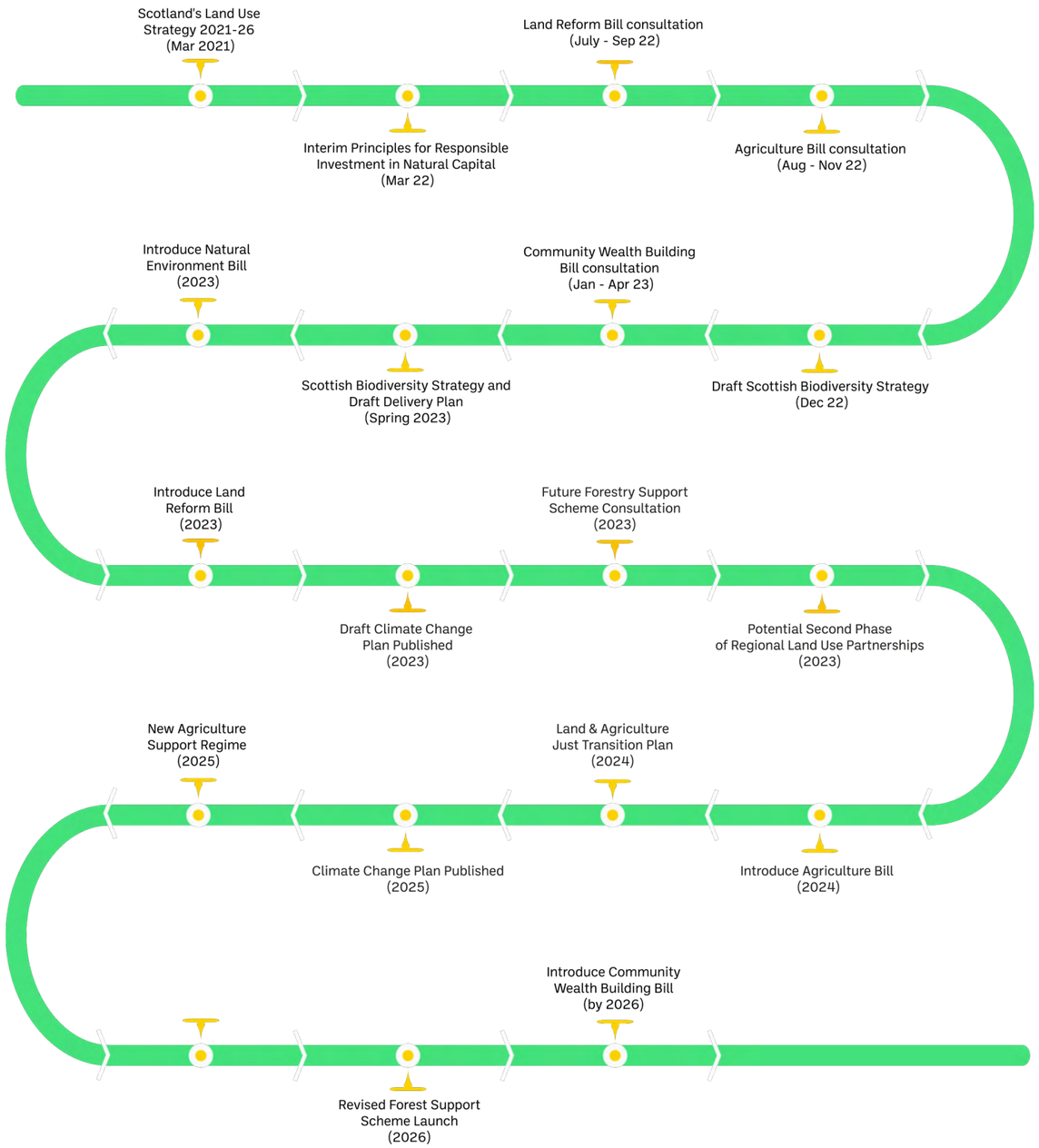
Note that no discount rate has been applied. As an aside, we understand that most investors are applying relatively low discount rates of 1-2%. We look at 2 potential scenarios; scenario a) which sells 80% of the PIUs up front in order to maximise early cash, but bringing in greater long term risk over carbon obligations, and scenario b) which sells only 50% of the PIUs, lowering the risk of future obligations and with potential upside, but with less cash received upfront. There may also be ongoing timber maintenance costs which are not factored here.



| Scenario a) 'sweating the asset' | | | £000s |
|---|---|---|---|
| Cost of land – 450has | | | (5,250) |
| Timber – first rotation | Establishment as above | (137) | |
| | Revenue at age 35 | 2,835 | |
| | Replanting costs | (737) | 3,572 |
| Carbon | | | |
| Selling 80% as PIUs (less costs) at £25/PIU | | | 1,587 |
| Upfront cashflow (first 6 years) | | | (91) |
| Management of retained farm revenue | 35 years | 15 per year | 525 |
| Windfarm – 24MW – net rent of 5% of gross rent | 30 years – assuming full lifecycle | 170 per year | 5,100 |
| Peatland restoration – assuming 7200 PIUs less costs | | | 112 |
| Total potential cash over 35 years – without discounting | | | 5,646 |

| Scenario b) 'de-risking the project' | | | £000s |
|---|---|---|---|
| Cost of land – 450has | | | (5,250) |
| Timber – first rotation | Establishment as above | (137) | |
| | Revenue at age 35 | 2,835 | |
| | Replanting costs | (737) | 3,572 |
| Carbon | | | |
| Selling 50% as PIUs (less costs) at £25/PIU | | | 992 |
| Upfront cashflow (first 6 years) | | (686) | |
| Management of retained farm revenue | 35 years | 15 per year | 525 |
| Windfarm – 24MW – net rent of 5% of gross rent | 30 years – assuming full lifecycle | 170 per year | 5,100 |
| Peatland restoration – assuming 7200 PIUs less costs | | | 112 |
| Total potential cash over 35 years – without discounting | | | 5,051 |
| With potential upside to sell the remaining up to 30% of carbon credits as WCUs depending on carbon pricing and actual carbon credits produced | | | |
| Net value of WCUs at £50/unit | | | 1,211 |
| Net value of WCUs at £75/unit | | | 1,826 |
| Net value of WCUs at £100/unit | | | 2,443 |

# Appendix B - Policy Timeline

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## Appendix C - High-Level Overview of Highlands Rewilding, Forestry and Land Scotland, and Proposed SCDI Vehicle Models

| | Highlands Rewilding | Forestry and Land Scotland | SCDI Vehicle (proposed) |
|---|---|---|---|
| Business Structure | Private company limited by shares<br>22 members of staff | Public corporation | SCIO |
| Creation | Founded by mission-driven entrepreneur in 2020 | Succeeded Forest Enterprise Scotland in 2019, carbon offset partnerships launched in 2022 | Founded by SCDI |
| Partners | Beldorney project partners with Cabrach Trust, Woodland Trust, Trees for Life | Wide range of partners including local and Scotland-wide organisations | National partners TBC, community groups |
| Funding | Four categories of shareholders:<br>Founders; Citizens; Operations; Investors<br>First round of funding in Jan 2022 raised £7.5m from 50 investors; second round aimed to raise £8m (£7.5m from equity investors and financial institutions; £500,000 from citizens, with a £1.1m stretch target from 1000 investors – by 27 Apr, £1,011,380 has been raised in total from citizens from 634 investors c.40% of whom live in Scotland)[42]<br><br>The UK Infrastructure Bank provided a £12m short-term bridging loan facility to support the Tayvallich Estate acquisition | Majority of income from timber, followed by renewables. Also from estates, visitor centres, venison and carbon credits sales<br><br>Direct funding from Scottish Government includes £30m Low Carbon Investment Fund which can be used for acquisitions<br><br>Not eligible for woodland grants | Public grant schemes to develop business case Early investments most likely from philanthropists, companies and public sector funding streams/investment banks Income from existing and new assets, asset sales and transfers to communities, and selling of carbon credits and ecosystem services |
| Category | Woodlands/ Peatlands/ Grasslands | All land types | Initial project Woodlands and/or Peatlands, later projects potentially all categories |
| Land Acquisition | Yes - 10-year plan to own c.20 tracts<br>Owns two estates (Beldorney is 338.3 ha) and currently acquiring Tayvallich estate (1,300 ha) | 60% of carbon projects pipeline on existing landbank, 40% acquisitions | Initial acquisition of c. 500 hectares Regular acquisitions |
| Description | Rewilding projects on estates<br><br>Target return of 5% annualised over a 10 year plan<br><br>Carbon credits from woodland and peatland restoration<br><br>Beldorney estate project includes regenerative agriculture and restoring ruined crofts for eco-tourism; plan to build small number of eco-homes and businesses on both estates<br><br>Long-term ownership transfer to a trust | Manage 650,000ha land on behalf of Scottish Ministers.<br>Identified carbon project pipeline includes >7,000ha eligible for WCC and PC<br>Some partnership-funded projects not focussed on carbon e.g. biodiversity/water quality outcomes. Part of several landscape-scale partnerships in different parts of Scotland.<br>Identified over 80 carbon projects spanning over 5,000 ha for carbon offset partnerships with corporate investors<br>Funding and delivery model under development<br>All FLS land has 10 yearly public consultations to update Land Management Plans, with 5 year interim reviews. | Rewilding, carbon 'offsetting', forestry, green energy, agroforestry/silvopasture and public access to nature Develop solutions to apply new carbon codes as they emerge for different habitats, biodiversity/nature credits and water management Revenues from land and asset sales would be reinvested in delivering its purpose Full business case to be developed |
| Communities | Hope majority of shareholders will be Highland Scots<br><br>10% of profits to be shared with local community<br><br>Majority of Highland Scots on Board<br><br>Share their model with communities<br><br>Land sold at cost to local building co-ops for affordable housing<br><br>Exploring solar energy JVs with communities<br><br>Proposed MoU with community on Tayvallich estate | Community Asset Transfer Scheme can be applied to any FLS land<br>Transfer many not always be best option: also work in partnership with communities<br>Engagement and consultation = minimum expectation<br>More info: Communities - Forestry and Land Scotland | Sale, transfer or lease of land, assets and sporting rights to community and local owners Community benefits integrated in projects, with tailored opportunities for shared-ownership and insetting of emissions by local businesses<br>Community benefits integrated in projects, with tailored opportunities for shared-ownership and insetting of emissions by local businesses<br>Local partnerships to develop economic opportunities e.g. housing, eco-tourism, sustainable products, skills development etc<br>Engagement and consultation at all stages following best practice<br>Community representation in governance of individual projects |

42 Highlands Rewilding Investment

## Appendix D – Woodland Carbon Units (WCUs) and Peatland Carbon Units (PCUs)

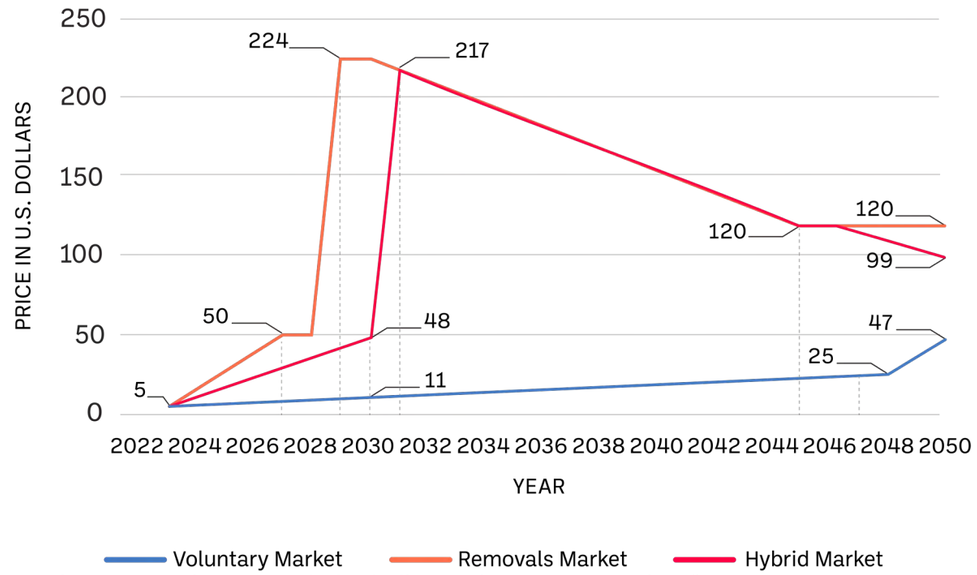
The Woodland Code, which was launched in 2011, has been operational for longer than the Peatland Code, which was launched in 2015. By December 2022, 424 projects had been validated, up from 187 projects in 2019. Of these, 268 projects were in Scotland. Over 1,000 projects were in the pipeline around the UK. The Peatland Code had over 100 projects registered by July 2022, triple the number from a year earlier.[43] Of these, 22 projects have been validated, but none have been verified yet.

| WCUs | PCUs |
|---|---|
| Based on sequestered carbon (included in UN-backed SBTi for over 4,000 global companies) [45] | Based on avoided carbon (not included in UN-backed SBTi initiative for over 4,000 global companies) |
| First verification for WCUs is 5 years, and then at least every 10 years. | First verification is at year 1 and then every 10 years. |
| Most projects do not have many to sell until 15 or 25 years after the start. WCUs follow the growth curve of a tree and so depends on woodland type, conditions and management regime. | The quantity of verified units generated is more consistent every 10 years. Average lifetime of projects is around 80 years.[46] |
| Woodland projects can produce anywhere from 100 units/ha to over 500 units/ha over 100 years, which can generate £1,000/ha to £15,000+/ha through the sale of carbon units.[48] | Peatland projects typically generate fewer units per hectare, although there can be a ten-fold difference based on the condition of the peatland. Galbraith has estimated that they likely generate less than 2 units/ha, or 200 units/ha over 100 years |

43 100 Project Milestone for the Peatland Code | IUCN UK Peatland Programme (iucn-uk-peatlandprogramme.org)
44 Peatland Code Projects Summary | IUCN UK Peatland Programme (iucn-uk-peatlandprogramme.org)
45 UN-backed Science Based Targets initiative (SBTi)
46 Peatland Code Projects Summary | IUCN UK Peatland Programme (iucn-uk-peatlandprogramme.org)
47 The benefits of woodland creation Woods and Carbon - GOV.UK (www.gov.uk)



## Appendix E – BloombergNEF Carbon Price Scenarios




N.B. The Voluntary Market scenario is similar to the current market[48]

43 Carbon Offset Prices Could Increase Fifty-Fold by 2050 | BloombergNEF (bnef.com)

# GLOSSARY OF TERMS

| TERM | DEFINITION |
|---|---|
| **Additionality** | Key principle underpinning carbon codes that carbon would not have been sequestered without the income from carbon credits |
| **Agroforestry** | Tree-planting combined with agriculture on the same land |
| **Blended finance** | Use of public and philanthropic funding to mobile private investment into emerging markets to reduce risks |
| **Bundling** | Packaging services produced by a project on a single area of land and selling the package to single buyer |
| **Business purpose** | A business's purpose is its reason for being – defining, guiding and driving all of its activities |
| **Biodiversity/nature credits** | Emerging mechanisms which allow businesses to invest in biodiversity to mitigate its impact on biodiversity or demonstrate its commitment to the natural environment |
| **Capitals approach / Four capitals approach** | Sustainable development model which describes the types of assets from which people derive the goods and services we need to improve our lives - a Four Capitals approach has Natural, Social, Human and Economic types |
| **Carbon codes (UK WCC and PCC)** | The UK's voluntary carbon standards for woodland creation and peatland restoration projects. Used to validate carbon units sequestered. New carbon codes are being developed |
| **Carbon credits** | A credit generated by projects which reduce or remove carbon which are bought and traded by organisations to offset an equivalent amount of their emissions |
| **Carbon insetting** | A reduction or removal of carbon emissions by businesses within their own (often local) supply chains |
| **Carbon offsetting** | A reduction or removal of carbon emissions to compensate for emissions made elsewhere |
| **Carbon sequestration** | The process of capturing and storing atmospheric carbon in carbon pools, such as plants, soils and geologic formations |
| **Charismatic carbon** | Reductions in carbon with evocative human or nature co-benefits, which may attract higher price carbon credits |



| TERM | DEFINITION |
|---|---|
| **Carbon units (WCUs and PCUs)** | One tonne of CO2e removed from the atmosphere under the woodland (WCUs) or peatland (PCUs) codes following validation of PIUs. Buyers use as credits to offset emissions |
| **Community Wealth Building** | An approach to local economic development which aims to enable communities to own, have a stake in, access and benefit from the wealth that is generated locally |
| **Ecosystem services** | The direct and indirect contributions the natural environment and healthy ecosystems provide to people |
| **Environmental, Social and Governance (ESG) Investing** | A investment framework which uses environmental, social and corporate governance measures to assess investability and performance |
| **Natural Capital** | Value of the goods and services that the natural environment provides to society |
| **Payments for Ecosystem Services (PES)** | Rewards from beneficiaries of ecosystem services to the owners or managers of the natural resources providing them |
| **Pending Issuance Units (PIUs)** | Promises to deliver carbon units. Issued on project verification. May be sold upfront or converted to carbon units on validation |
| **Permanence** | Key principle underpinning carbon codes that sequestration must not be reversed in the future, even if the land is sold or transferred |
| **Silvopasture** | Trees combined with livestock grazing on the same land |
| **Stacking** | Selling services produced on a single site separately to different buyers |
| **Voluntary Carbon Markets (VCMs)** | Non-regulated carbon market where carbon credits are purchased, usually by businesses voluntarily offsetting carbon emissions to be a responsible business or protect their social licence to operate |

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