

# The River Ericht Catchment Restoration Initiative

## Report on Stage 1 of Developing our Community-led, Investment Ready Riverwoods Project



The confluence of the River Ericht with the River Isla, photo Markus Stitz

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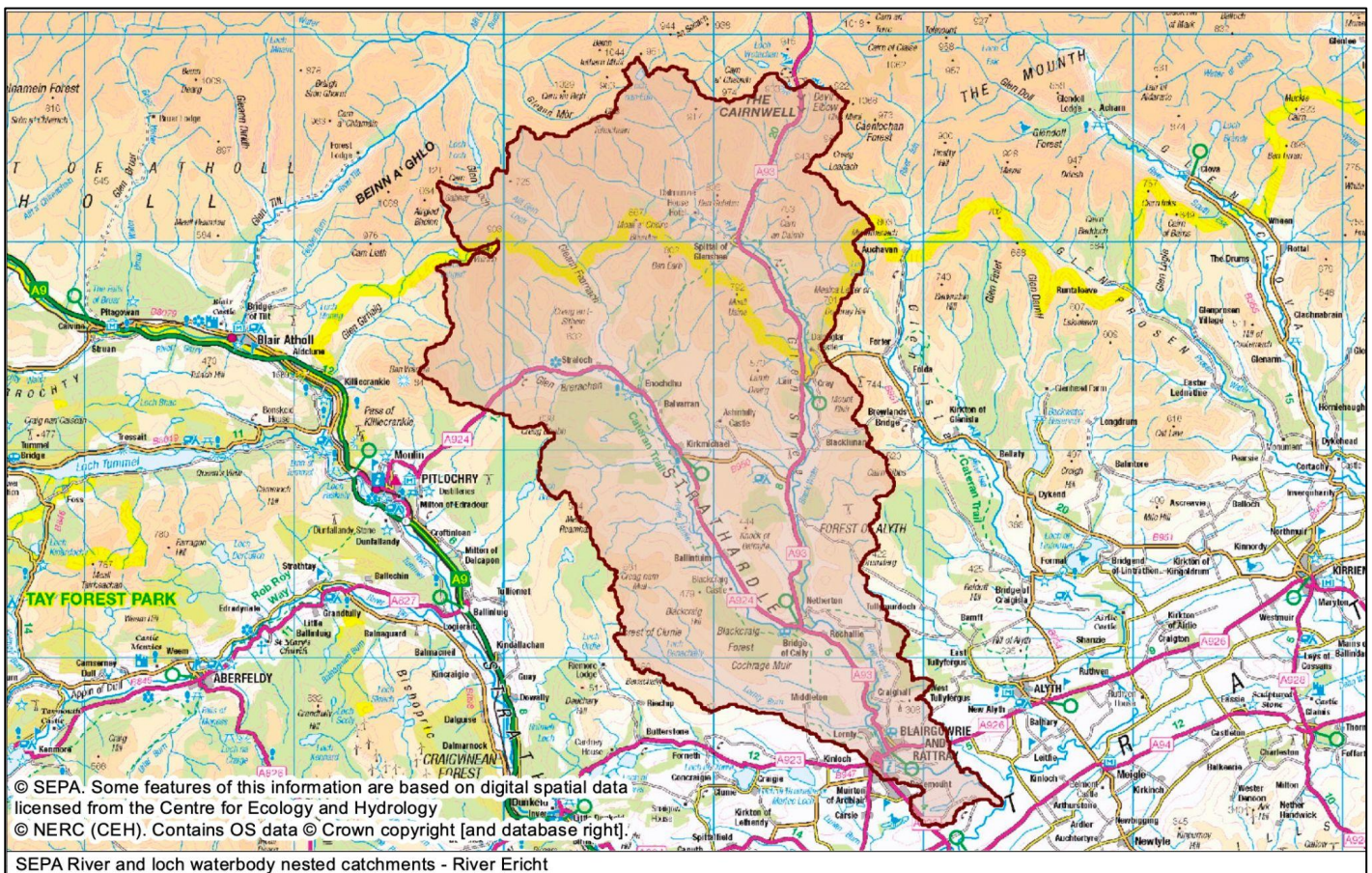
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Prepared July 2024

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The River Ericht Catchment, image SEPA

# Project summary

The River Ericht Catchment Restoration Initiative (RECRI): one of two nature-restoration projects in Scotland to receive funding from the Riverwoods Investment Readiness Pioneers<sup>1</sup>, aims to unlock a combination of public and private finance to deliver riparian restoration and nature recovery at different scales across the catchment.

The Ericht, one of the most important spawning grounds for Atlantic salmon in Europe, is in crisis. Extreme weather caused by climate change, historic and current land management practices and invasive species, are damaging the quantity and quality of water in the river and the health of its vegetation, woodlands and wildlife. As a result, salmon numbers are in steep decline<sup>2</sup> and in danger of disappearing altogether.

The funding for this first stage of work was provided by the Esmée Fairbairn Foundation and the brief was to develop a community-led, investment ready project with three outcomes:

**Outcome 1: A funded plan for the restoration of habitats across the catchment**

*Indicator:* Landowners commit to an ambitious plan to restore habitats in the Ericht.

**Outcome 2: The future of Atlantic salmon in the Ericht is more secure.**

*Indicator:* A funded work programme addresses threats to salmon including a lack of river shading, poor water quality and artificial barriers to migration.

**Outcome 3: Communities benefit from the work of the Initiative.**

*Indicator:* The project structure<sup>3</sup> involves local communities in its ownership and governance and is designed to catalyse investment<sup>4</sup> from community groups and individual community members.

We commenced work on the 1<sup>st</sup> August 2023 with the following set of milestones:

Milestone	Date Due
Project management & launch	1st August 2023
Natural capital baseline assessment	31 September 2024
Community and landowner engagement	28 February 2024
Restoration vision and ecosystem service generation calculations	28 February 2024
Financial model and identification of investors/buyers	31 March 2024 (revised)
Proposed Investment structure	31 April 2024 (revised)
Delivery plan	31st July 2024 (revised)

This report details progress against those milestones.

<sup>1</sup> The second is Almond Headwaters: <https://www.pkct.org/pages/category/almond-headwaters>

<sup>2</sup> Indeed the International Union for the Conservation of Nature (IUCN) reclassified Salmon in Scotland as officially endangered in December 2023.

<sup>3</sup> Previously described as 'Special purpose Vehicle'; this is just one option available to the anchor organisation for structuring the project's delivery in a way that includes the community.

<sup>4</sup> Note we have developed our direction on this indicator after assessing the suitability of different roles and levels of involvement for the community in this project. Further details can be found within this report and in the Progress on Outcomes section

# External Context

## Extreme Weather

The biggest external factor that has pre-occupied our communities of interest and place is the increasing severity of extreme weather events in the period since the project commenced. Whilst this is not impeding the logistical progress of our project, it is adding to the uncertainty about what may or may not be possible in the future.



Flooded farmland near the Ericht, Spring 2024, photo Markus Stitz

The latest climate trends reports by the James Hutton Institute<sup>5</sup>, which indicates that Scotland's climate is changing faster than expected, summarises the key implications for natural capital and policy in Scotland.

Of particular relevance to our project in relation to Natural Capital are:

- Increased water stress for multiple species and habitats, affecting ecosystem function and the provision of ecosystem services. Reduced water flow in streams, and higher soil and water temperatures.
- Increased species competition for water and nutrients, favouring those with broader tolerance ranges (i.e., pioneer and invasive species), risking species loss, habitat alteration and changes in ecological processes.
- Mismatches in the growth and development of species that rely on one another (e.g., pollinators and plant species) due to different responses to changed seasonal weather patterns.
- Mixed range of impacts for Peatlands: longer growing seasons may increase primary production and increase access and working conditions (i.e., if less snow cover) which would benefit restoration efforts (re-wetting). Reduced water in the summer and autumn will increase respiration. If there is a severe drought period, some

<sup>5</sup> <https://www.hutton.ac.uk/sites/default/files/files/2-page%20Executive%20Summary%20-%20climate%20trends-projections-extremes%20%20implications%20for%20Natural%20Capital%20and%20Policy%2012-7-23.pdf> and <https://www.hutton.ac.uk/key-scottish-sectors-warned-of-doubling-of-drought-events-by-2050/>

decrease in primary production and risks of drying of exposed soils. Multiple drought years threaten poor recovery.

- Drier and more flammable vegetation and peatland soils increases fire danger, requiring investment in ignition prevention and mitigation measures including habitat management and increasing public awareness of risks

Of particular relevance to our project in relation to Policy are:

- Combined changes in precipitation, temperature and evapotranspiration will affect land use management decisions, with implications for ecological function and land use transformations to achieve Net Zero.
- Peatlands: climate change projections indicate risks of reduced water availability hence the imperative is to restore peatlands sooner and at a larger scale of effort: the 2026 target of 110,000 ha of restored peatlands may need revision. Our findings imply a risk that the anticipated emissions abatement goals from restored peatland may be at risk due to future climate change impacts. Future drier conditions imply that peatlands that are currently in good condition risk deterioration. This implies the need for pro-active intervention now to ensure healthy peatlands remain wet under future climatic conditions.
- Forestry: our results indicate the potential for reduced Yield Class attainment and risks of tree establishment failure due to water scarcity and changes in soil processes in some years and locations because of climate change. Existing values of future carbon sequestration potential through tree planting and growth may be overestimated if they have not appropriately factored in reduced growth due to reduced water availability.
- The proposed land use Enhanced Conditionality measures need to be screened to ensure they will remain viable and effective under future climates ('climate proofing'), particularly those that require significant capital investment and / or are hard to reverse measures. Coordination between land managers of measures uptake at a catchment scale may aid water management efforts to buffer against droughts and floods.

## Scottish Agricultural Bill

Adding to the uncertainty that landowners are feeling in relation to how they might get involved in the project is the lack of detail surrounding the new Scottish Agricultural Bill<sup>6</sup> expected to be introduced in 2025. Farmers in the catchment need to know what they will be incentivised to do in relation to climate and biodiversity targets as a result of this new legislation before committing to any woodland creation in particular.

## Tay Rivers Trust (TRT) / Tay District Salmon Fisheries Board (TDSFB)

Regrettably, the Chair of the TRT asked us, early on in this design phase, not speak to three major landowners in the northeast of the catchment, specifically: Invercauld (who we had already begun a conversation with as part of the bid preparation process), Dalmunzie and Rhierdorrach. The reason given was that the Trust was already in discussion with them about natural capital projects they wished to pursue themselves and they did not wish to collaborate with RECRI. This has reduced the possibility of building up the scale of potential woodland creation for RECRI as together the three estates represent 27% of the land in the catchment with the baseline assessment identifying potential for riparian planting. The latest publicly available minutes of TDSFB (9th April 2024) confirm their position:

*"CI explained that the TRT are currently looking at widespread riparian tree planting in the upper Ericht area. Cairngorm National Park Authority funding is paying for breeding bird surveys. TRT are trying to source development funding from the Nature Restoration Fund and would like the Board to support this.*

*In 12 months' time, there will be a project ready to secure funding. TRT have consultants helping to get the Trust's story together and put out feelers for funding. TRT need to show support of wider community. The TRT have the trust and support of the landowners and it will be a great story to tell."*

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<sup>6</sup> <https://www.ruralpayments.org/topics/agricultural-reform-programme/arp-route-map/>

## The space for private finance

Historically, public grants have been the primary method for funding nature restoration in the UK. For most habitats, this is still the case. This has certainly served a purpose for nature restoration in the UK but there are risks and disadvantages. Public funding is generally provided in the form of up-front grant payments. They are designed to cover the costs of the work and not provide any income and therefore don't incentivise landowners and land managers to engage with them. In the last 2-3 years we have also seen there is a risk to relying on public grants with changes in policy, funding mechanisms and limited funding available.

The risks and disadvantages to public funding mechanisms provide an opportunity for private finance to develop a more stable, long-term offering which generates income for landowners and land managers.

At the same time, the growing nature-based solutions sector has seen recent pushback on the green finance agenda by the Scottish land reform campaigners. This demonstrates the clear need for a high integrity approach to trading ecosystem services, to structuring financial deals fairly, and to community ownership.

## Ecosystem Service Markets and the opportunity to attract private finance

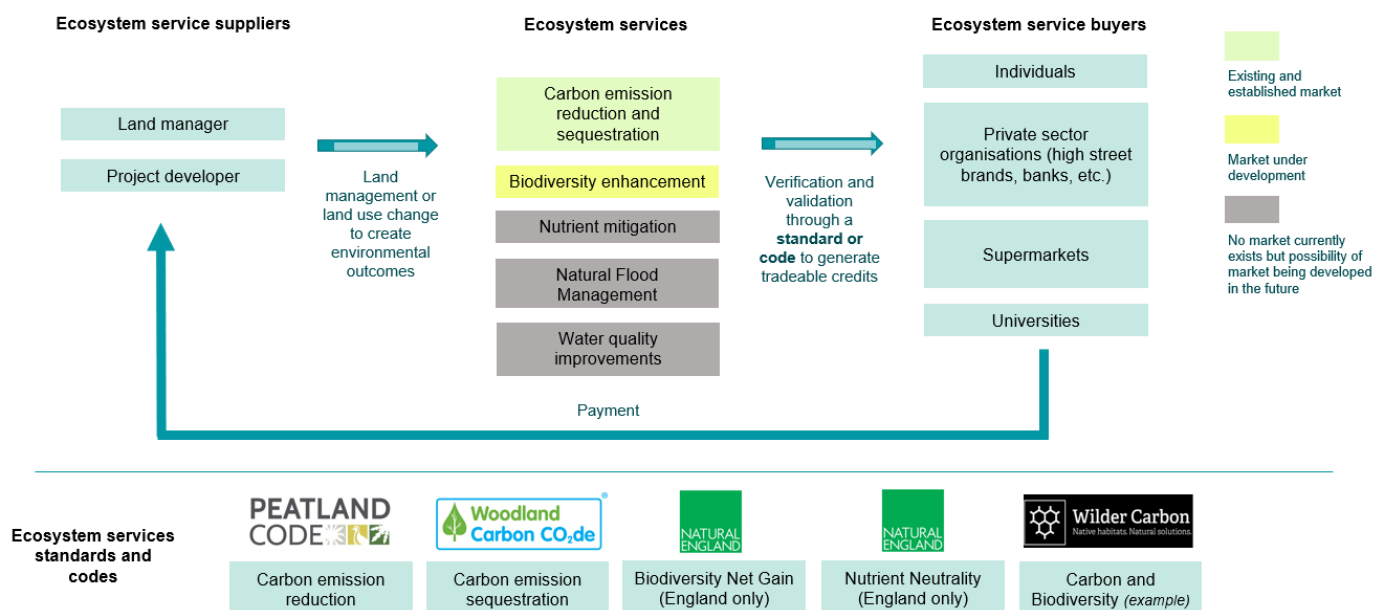
The clearest route for channelling sustainable private finance into nature-based solutions is by accessing ecosystem service markets such as the woodland carbon market. This creates an opportunity to provide long-term income streams to landowners and land managers.

For some nature-based solutions, the ecosystem service market is clear. For example, woodland creation and peatland restoration can be funded through a combination of public grants and private finance via UK carbon markets. For other nature-based solutions such as natural flood management, the mechanism for attracting private finance is less clear. The financial viability of long-term habitat creation and management projects often depends on access to these ecosystem service markets. This can be limiting, especially while the markets are still forming or in very early stages.

In the last year, progress has been made on the development of additional markets for ecosystem services in the UK. These markets present an opportunity for the Ericht Catchment to bring in long-term private finance, but we have no control over the timelines for these codes. Our ecological vision for the River Ericht Catchment would directly improve biodiversity, water quality and flood management. However, the markets that we would be able to sell these ecosystem services through are still under development. An assessment on the accessibility of ecosystem service markets in Scotland has been undertaken as part of Milestone 2, the baseline assessment.

Crucially, landscape scale nature restoration projects like RECRI need to attract patient, long term partnerships with financing partners based on fair sharing of risks and liabilities as well as rewards. This is a new sector with few examples of such partnerships; finding the right funder and designing such a partnership is a key challenge for this project.

## Demonstration of how ecosystem services are created and traded to generated revenues for land managers



## **Market participants: current knowledge, appetite and barriers to entry**

As the ecosystem services market is relatively new and still developing, the key market participants vary in their level of understanding and their appetite for involvement. For landowners, buyers and investors, our experience has shown that the 'first movers' are still the majority of the market. These are organisations and individuals with a pre-established interest in environmental improvement and nature-based solutions.

While the market continues to develop, there are risks and barriers that prevent many investors and landowners from engaging with ecosystem services. Existing funding mechanisms fall short of facilitating landscape scale habitat creation due to barriers to entry for landowners or lack of proven models for investors, due to complex governance structures, long term liability and current ecosystem market values.

Fragmented landownership and tenant farming agreements can present numerous challenges to large-scale conservation efforts, impacting ecology, governance and finance mechanisms. For example, it can lead to ineffective management of environmental threats that require coordinated management plans, and can result in conflicting neighbouring land management practices that reduce the efficacy of habitat restoration efforts. Therefore, an offer to landowners to encourage involvement in a project like this must provide a balance of flexibility and structure whilst being an attractive proposition for landowners to commit to long-term land use change.

In the last year, we have seen an increase in the price buyers are willing to pay for ecosystem services. This is particularly apparent with woodland carbon, as the low-price credits sold on international market in the last 12 months have come under scrutiny and companies have begun to turn to higher integrity, multi-benefit carbon credits for their offsetting<sup>7</sup>. This means the UK market has an opportunity to fill the gap with high integrity carbon credits that generate additional benefits such as biodiversity uplift and water quality improvements, as well as social benefits e.g. high quality ESG opportunities for investors.

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<sup>7</sup> <https://www.newyorker.com/magazine/2023/10/23/the-great-cash-for-carbon-hustle>

# Milestone 1: Project Management & launch

## 1.1 Structure and governance

### Steering Group

A Steering Group was set up involving representatives from the 6 partner organisations named in the bid, five of whom represented local communities of place and interest: the Blairgowrie & Rattray Development Trust, the Mount Blair Community Development Trust, the Tay Ghillies Association, the Ceteran Ecomuseum and Bioregioning Tayside. Our sixth partner was nature finance experts, Palladium. We also invited two land owner representatives to join the group, one from the south of the catchment, a farmer, and one from the north, a member of the Northwoods Rewilding Network and Board member of Mount Blair Community Development Trust and a local applied scientist who specialises in ecological restoration and nature based solutions. Local Steering Group members were paid for their time.

Eight Steering Group meetings were held over the course of the 12 months, which tracked progress on the milestones. Three additional meetings, exploring new approaches to the governance of complex nature restoration projects and the development of the Monitoring, Reporting & Verification (MRV) system for the project were also organised. People outside the Steering Group who expressed an interest in the project were also able to attend any of the meetings.

### Executive team

#### *From the catchment*

Two project managers, one based in the north of the catchment and one based in the south, led the relationship development with landowners and other communities of interest and communities of place in the catchment, each drawing on their existing network of contacts to do so. In addition, Bioregioning Tayside, who acted as the fiscal sponsor for the project, took responsibility for organising Steering Group meetings, developing the website<sup>8</sup>, financial management, contracting and funder reporting, researching potential MRV approaches, identifying and developing relationships with potential buyers and investors from the Bioregion and building formal partnership possibilities with key local research and academic institutions, local authorities and other bodies involved in nature restoration locally.

### External expertise

- **Palladium** led the work on the baseline assessment, financial modelling and potential investment structure, supporting early stage meetings with potential funders identified by Bioregioning Tayside
- **The Woodland Trust** undertook walkovers of potential woodland creation and peatland restoration sites once the project managers had established landowner interest. Their reports were then fed into the early stage financial modelling
- **TreeStory** were contracted to advise on potential woodland habitat expansions and woodland carbon sequestration on two landholdings, an estate in the north and a farm in the south
- **River Revivers** were contracted to advise on how the geomorphological and hydrological realities of the catchment and the same two landholdings, would guide what woodland planting could be undertaken and where, in the light of current and predicted climate change impacts

### Other sources of advice and support

The project team were also able to access advice and support from the following groups, watershed initiatives and nature restoration experts:

#### *Scottish Nature Finance Pioneers Network (SNFPN)<sup>9</sup>*

SNFPN explores, discusses and contributes to the supporting infrastructure required for high integrity nature finance markets. This includes project pipeline, metrics thinking, influencing policy alignment, and learning from what works elsewhere.

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<sup>8</sup> <https://erichtcatchment.scot>

<sup>9</sup> <https://finance.naturalcapitalsscotland.com/about-us/>



*The Facility for Investment Ready Nature in Scotland (FIRNS) Community of Practice (CoP)<sup>10</sup>*

Both Riverwoods Investment readiness Pioneer projects were invited to join the new FIRNS Cop hosted by NatureScot. The CoP aims to provide support to projects to help them progress towards their goal of investment readiness or market capacity provision. Its objectives include building the capacity to deliver the projects and ensuring that lessons learned are shared, both within the cohort of projects and beyond and acting as a source of information for Scottish Government and NatureScot to understand challenges, gaps, and therefore policy requirements emerging as nature markets develop.

*The FIRNS 1 (and now FIRNS 2) project that is developing a Community Benefits Standard<sup>11</sup>* RECRI was one of the first group of pilot sites.

*Glen Clunie - River & Floodplain Restoration Project<sup>12</sup>*

The project team were able to benefit from a guided visit to see a variety of riparian restoration methodologies 'in place'.

*Findhorn Watershed Initiative<sup>13</sup>*

This exemplary project has benefited from significant early stage funding from the Scottish Government's Just Transition Fund and their ethos and approach has been inspiring for RECRI to learn about.

*ETH Zurich<sup>14</sup>*

The opportunity to work with Professor Jaboury Ghazoul and his team from ETH Zurich on early stage methodologies for introducing an 'Adaptive Governance' approach to the RECRI project has been groundbreaking. It is widely understood that in complex landscape restoration projects, there are contested views, and any nature recovery activities need to build on opportunities that emerge from negotiated agreements and shared visions across a wide range of interests. Without such agreements and shared visions, achieving successful nature recovery will always be risky, and therefore less likely, in that objectives and outcomes will be conflictual and contested. Introducing an 'Adaptive Governance' approach, which is about connecting actors and institutions at multiple scales to enable ecosystem stewardship in the face of uncertainty and surprise via collaborative, flexible and learning based activities is being seen as key to addressing complex interactions and to managing uncertainty and periods of change. The Strategy Game methodology brought to RECRI by ETH Zurich is laying the foundations for this approach to be further developed in the next stages.



Members of Blairgowrie's Climate Cafe Crash Testing the Strategy Game, May 2024

<sup>10</sup> <https://www.nature.scot/funding-and-projects/firns-facility-investment-ready-nature-scotland>

<sup>11</sup> <https://www.natcert.earth/community-benefits-standard/>

<sup>12</sup> <https://riverdee.org.uk/success-stories/glen-clunie-river-floodplain-restoration-project/>

<sup>13</sup> <https://findhornwatershed.com>

<sup>14</sup> <https://usys.ethz.ch/en/people/profile.jaboury-ghazoul.html>

## 1.2 Budget

The total budget for this stage of the project was £130,000 with £125,000 of that sum provided by The Esmée Fairbairn Foundation and £5,000 from the Catevan Ecomuseum specifically towards the public engagement strategy.

### *Critique*

By and large, the structure and governance for this first stage of the project was fit for purpose and we were able to draw on the necessary non-executive, executive and other expertise we needed. All milestones were either completed and/or have reached an appropriate level of development given the timeframe and resources available, as evidenced by this report, and there is enough momentum behind the project to take it into a second stage.

However, some aspects of the work were under-resourced:

- the time required for landowner identification and engagement was significantly under recognised, with project managers committing large amounts of their time to this task, gratis.
- there was insufficient resource available for best practice early-stage public engagement. In the timeframe of this first stage of RECRI, understanding of best/next practice engagement and participation of communities of interest and place in nature restoration projects in Scotland has advanced significantly and there is beginning to be greater recognition of the level of resource and expertise needed to embed their perspectives, knowledge and aspirations.

Investing resource in developing two in depth case stories on the hydrological realities and potential woodland habitat expansion under two scenarios, 'conventional' and 'aspirational' on two different types of landholding, rather than spreading that resource thinly across the whole catchment, enabled the project team to show how the project could real value to nature restoration planning for two key landowners in the north and south of the catchment.

## Milestone 2: Natural Capital Baseline Assessment

We undertook an ecological (natural capital) baseline assessment<sup>15</sup> to understand the ecological opportunities for environmental uplift in the catchment and potential routes to funding this uplift. The key information from this assessment is summarised below.

### 2.1 Context of trading ecosystem services in Scotland

Ecosystem service	Market presence and sale opportunity
<p><b>Woodland creation:</b> contributes to the decrease of Green House Gases in the atmosphere via carbon sequestration into biomass and soils.</p>	<p>The Woodland Carbon Code (WCC) is the quality assurance standard for woodland creation projects in the UK and accredits the removal of carbon from the atmosphere as carbon credits, as a form of “removal” credit. Woodland carbon credits are independently verified via the code and can be sold to private or public buyers on the carbon market.</p> <p>The carbon market is the most established ecosystem service market in Scotland and the sale of carbon credits offers the most accessible source of additional revenue streams to landowners. The voluntary market for carbon is growing rapidly and there are a considerable number of interested buyers within the UK. UK-based native woodland creation projects are popular with buyers due to their high integrity and traceability of outcomes.</p>
<p><b>Peatland restoration:</b> contributes to the decrease of Green House Gases currently being released into the atmosphere by degraded peatland habitats that are natural carbon sinks.</p>	<p><b>The Peatland Carbon Code (PCC)</b> is the quality assurance standard for peatland restoration projects in the UK and generates independently verified carbon credits as a form of “avoidance” credit. Peatland carbon credits can be sold from the ongoing carbon emission reduction from restored peatland. Buyers include the UK government and the private market.</p> <p>As for woodland creation, the carbon market from peatland restoration is well established in Scotland and the sale of carbon credits offers accessible sources of additional revenue streams to landowners.</p>
<p><b>Biodiversity enhancement:</b> will reduce the decline in species abundance and diversity facing Scotland, leading to healthier more resilient ecosystems.</p>	<p>At present, there is limited national policy, nor a well established voluntary framework, for accessing payments for biodiversity outcomes in Scotland.</p> <p>However, the public and private sectors are currently working to develop voluntary and compliance markets for biodiversity in Scotland; these are anticipated to become accessible in the coming years. One of the key barriers to forming the markets is establishing a clear ‘demand case’ for buyers; with few exceptions such as large infrastructure projects, there is currently no policy requirement or significant market pressure for organisations to report on, or account for, biodiversity loss in their supply chains, unlike for carbon emissions.</p> <p>Bespoke agreements can be made with nature focused funders to finance biodiversity outcomes, though numbers of recorded trades in the UK still remain very low. Private funding is usually accessed as donations, or may be a trade of ecosystem services if buying through the developing biodiversity accreditation metrics e.g. Operation Wallacea’s scheme for biodiversity credits (under development).</p>

<sup>15</sup> See: [https://erichtcatchment.scot/wp-content/uploads/2024/07/Tayside-Baseline-Assessment\\_V4-copy.pdf](https://erichtcatchment.scot/wp-content/uploads/2024/07/Tayside-Baseline-Assessment_V4-copy.pdf)

## Ecosystem service

## Market presence and sale opportunity

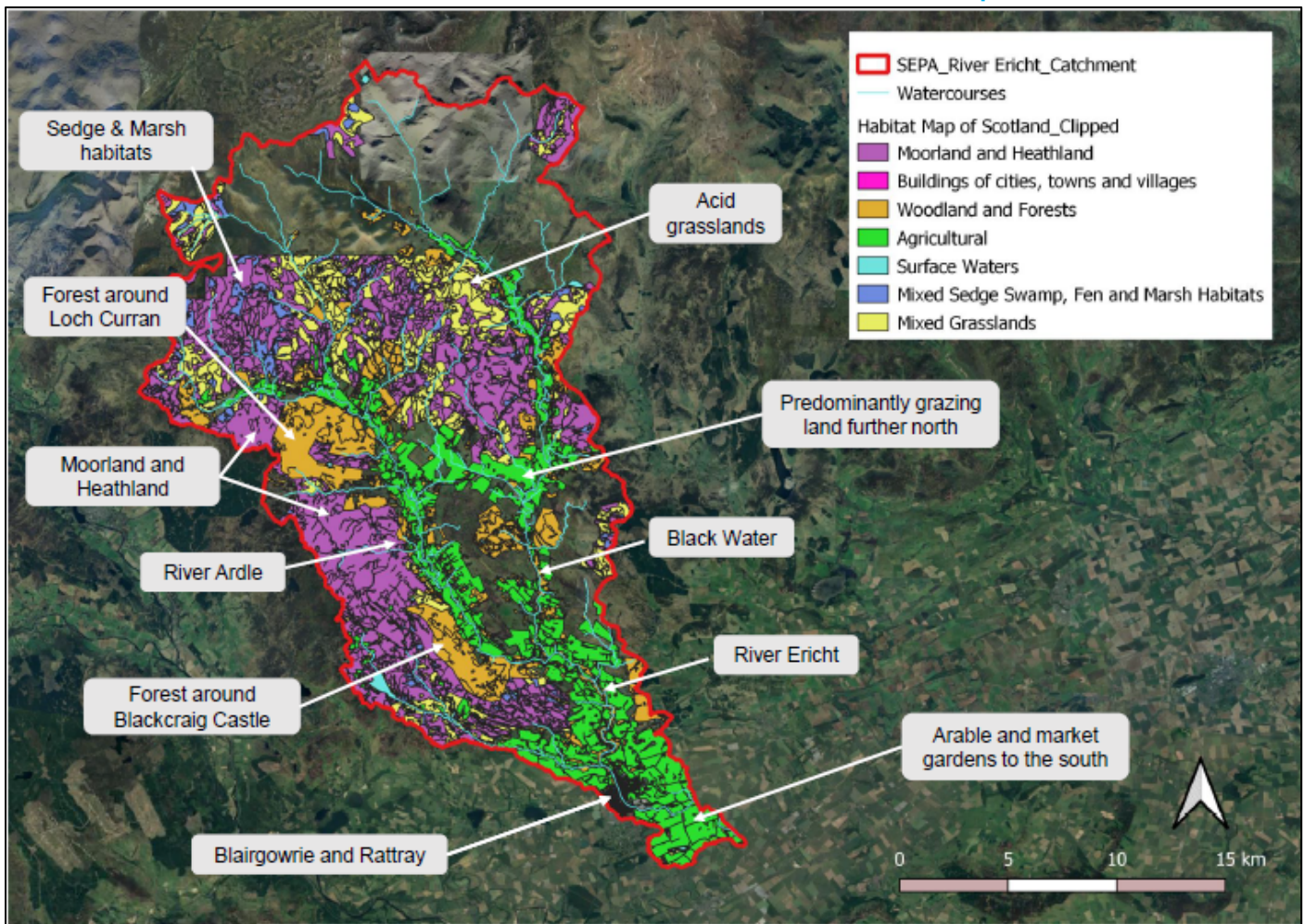
	<p>One route to accessing payments for biodiversity outcomes is by combining biodiversity value with existing carbon markets, for example with woodland carbon credits. The carbon credits from establishing a biodiverse woodland with significant additional biodiversity impacts (such as substantial deer or invasives control) can be sold at a premium compared to those without an extra biodiversity component. This is sometimes called 'carbon +'.</p>
<p><b>Water quality improvement and nutrient mitigation:</b> act to reduce inputs of, or the impact of, pollution such as from agricultural runoff and sedimentation currently damaging aquatic ecosystems.</p>	<p>A private market for improving water quality via nature-based solutions is yet to be developed in Scotland. There exists Scottish government policy for controlling nutrient levels in waterbodies though this works with licensing and permit agreements to manage impact, and is therefore not an opportunity to fund projects.</p> <p>Payments for water quality might be generated through bespoke arrangements for example where a local organisation e.g. a distillery would benefit substantially from local water quality improvement and therefore is willing to fund the interventions. This will be on a case by case basis.</p>
<p><b>Natural flood management (NFM):</b> reduces the risk and severity of flood events via natural interventions such as riparian planting and leaky dams.</p>	<p>At present, there is no national policy or a formal voluntary marketplace to access payments for natural flood management outcomes in Scotland. However, flood risk management stakeholders such as Scottish Environment Protection Agency (SEPA), water utilities, local council and flood risk insurance companies may be willing to fund natural flood management projects that have a demonstrable impact on reducing flood risk for property and communities.</p> <p>This ecosystem service may be a viable tradable ecosystem only where projects can identify both the opportunity to demonstrably reduce flood risks via nature-based solutions and the presence of interested local stakeholders that may fund such outcomes.</p>
<p><b>Future carbon markets:</b> would contribute to the decrease of Green House Gases either via reducing the release of emissions or by increasing the storage.</p>	<p>A number of habitat creation and restoration activities are capable of increasing the natural storage of Green House Gases and several new codes are under development to be able to demonstrate this. These include codes for farm soil carbon, seagrass carbon and hedgerow carbon. Until these codes have been released, these ecosystem services are not directly tradable and instead might only be funded through available grant schemes, philanthropy or carbon+ schemes.</p>

## 2.2 Ecological baseline assessment and potential funding opportunities for the Ericht Catchment

### The River Ericht Catchment

The River Ericht Catchment extends over circa 49,600 hectares and includes numerous waterways, namely the River Ardlie and the Black Water which both join at Bridge of Cally and become the River Ericht. The catchment is a varied landscape of habitats and uses with 12 designated sites protecting important wildlife, but some areas are in unfavourable condition and have low biodiversity values.

## River Ericht Catchment baseline habitat and land use map



### 2.2.1 Opportunity for woodland expansion

To understand the potential for woodland creation in the Ericht Catchment, we used online mapping to assess existing habitats and land uses and identified potential constraints that would make woodland creation not suitable. Additionally, as the woodland carbon market is actively trading in Scotland and could provide a source of income for the project, we ruled out areas that would not be eligible for funding via the Woodland Carbon Code.



#### Current land use and habitats

The predominant habitats in the area are moorland and heathland with some grassland patches. Towards the south of the catchment, there is more agricultural land in varying degrees of productivity.

Moorland, heathland, and marginal agricultural areas along rivers and lower productivity farm land have been mapped as sites presenting opportunity for woodland creation. We have not included the higher productivity farmland in the opportunity area as this land is likely unsuitable for land use change, unless requested by the farmer.

#### Constraints and sensitivities to woodland creation

Areas with an altitude of over 500 metres are likely to see less success with woodland growth and tend to be populated with species of montane scrub. The northern region of the catchment becomes more mountainous and includes areas with an altitude of over 500m.

Designated areas such as Sites of Special Scientific Interest (SSSI) and Special Areas of Conservation (SAC) require additional approval from Nature Scot for any woodland creation or tree planting activities. Where the management plan of these sites include the recommendation to expand woodland, these areas could form part of the project's woodland

opportunity area. Woodland creation surrounding these areas would also benefit the existing fragmented habitats by strengthening habitat corridors and increasing resilience to threats such as deer overgrazing and extreme weather events.

### Woodland Carbon Code constraints

Woodland planted on peatland is not eligible for the Woodland Carbon Code (WCC). We have used Scotland’s Soils Carbon and Peatland 2016 map to identify 2,938 hectares of Class 1 peat soils and 4,059 hectares of Class 2 peat soils. These areas are excluded from the woodland opportunity map.

Areas of existing forestry or woodland, areas that have been felled within the last 25 years, and areas with active felling licences are not eligible for accessing the WCC and thus have been excluded from our woodland opportunity assessment.

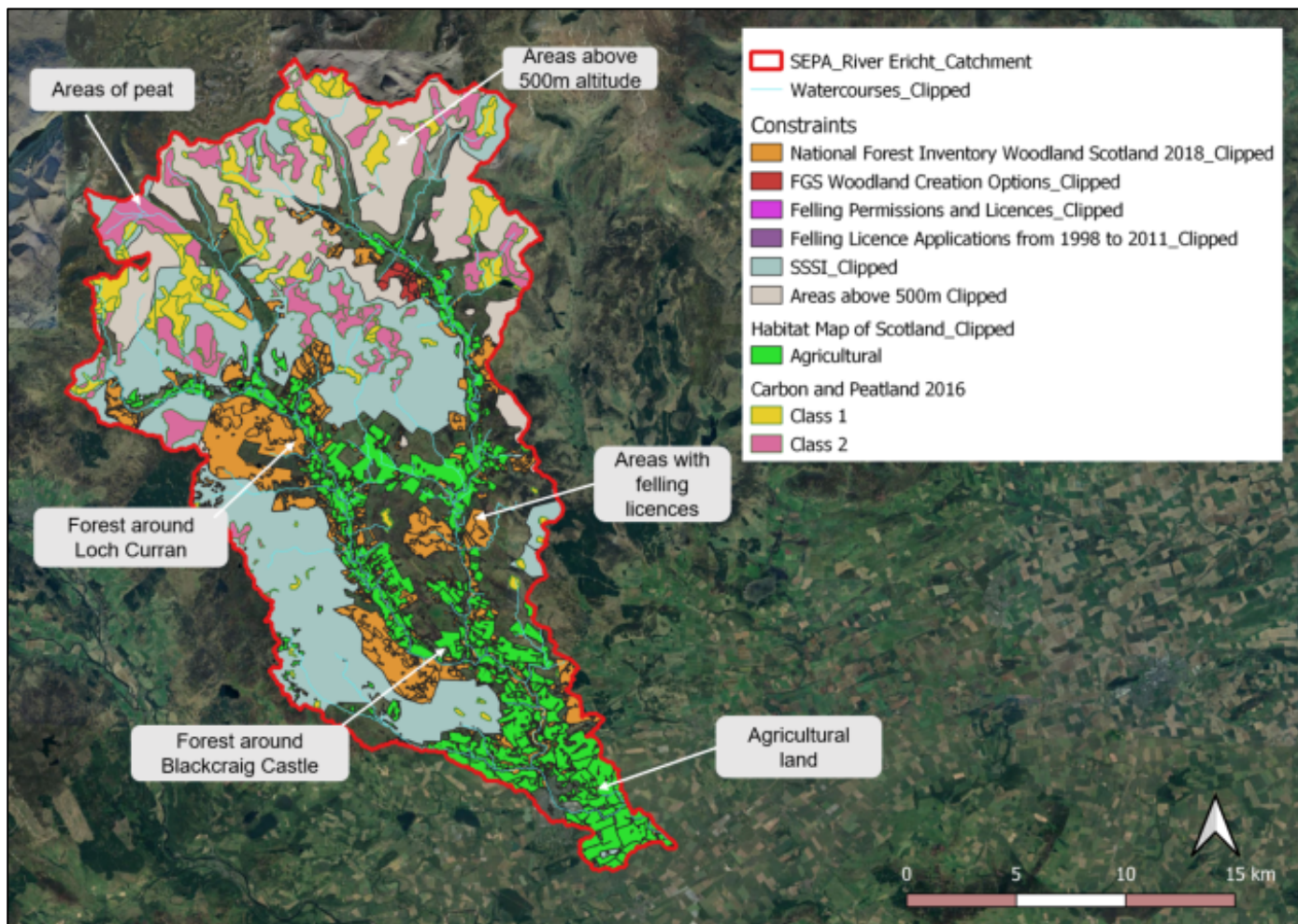
### Condition of existing woodland and the opportunity to support its improvement

According to the Scottish National Forest Inventory, there are 6,086 hectares of existing woodland in the catchment. The existing woodland is predominantly commercial forestry blocks which have lower biodiversity value compared with native, naturally occurring woodlands. The condition of the existing woodland in terms of biodiversity and habitat value is low. There are a further 428 ha earmarked for FGS woodland creation options, but these have not yet been planted.

There are 1,086 hectares of ancient woodland habitat along the river Ericht. These areas are often in decline due to the lack of regeneration but should be highlighted as species rich habitats that can be used as valuable local seed sources to enable natural regeneration in neighbouring areas.

By mapping the existing woodland, we are able to target new woodland creation opportunities to areas that improve the connectivity between the ancient habitats. We can also use the baseline to identify key areas that would benefit from natural flood management measures based on the geography of the catchment.

### Constraints and sensitivities for woodland creation in the Ericht Catchment



## Resulting woodland expansion potential

Taking all of the mapped constraints and sensitivities into account, and excluding opportunities on medium and above grade agricultural land, this preliminary mapping exercise has identified **circa 11,000 hectares of land that might be suitable for hosting native woodland expansion in the Ericht catchment**. This mapped opportunity area generally flanks the catchment's major river network, connecting currently isolated woodland blocks and extending woodland habitat towards the moorland fringes. A map of the woodland expansion opportunity map is included in the ecological restoration vision section, as Milestone 4.

Woodland planting will deliver multiple environmental benefits for the catchment whilst enabling the project to access an income stream by selling woodland carbon credits through the Woodland Carbon Code. Woodland has the ability to improve water quality by drawing excess nutrients from water down into the soil through roots. Riparian woodland in particular can support river ecosystems by stabilising soil sediments in river banks reducing sediment levels and provides shade helping to regulate water temperature. Woodland can also help with water management by slowing the flow of water throughout the catchment to reduce flood and drought risks.

### *Critique*

This baseline assessment was produced using online data from the Scottish Government and James Hutton Institute. This data is useful for an initial baseline to build an understanding of the feasibility of woodland creation, but there may be discrepancies as the data is often created using satellite imagery and similar methods which are less accurate over smaller areas. Working with the Woodland Trust during this first stage has been invaluable to begin to identify more 'ground truthed' opportunities with interested landowners. Further detailed work will ultimately need to be done using on-site surveys to confirm suitability for woodland creation.

## 2.2.2 Opportunity for peatland restoration

Healthy peatlands act as a carbon sink as well as supporting wildlife and water management through reducing flood risks and droughts while allowing the excess nutrients more time to be absorbed into the soil. Peatland also provides an opportunity for an additional income stream by selling peatland carbon credits through the Peatland Code.



To understand the scope for peatland restoration in the catchment, we undertook a baseline assessment of the peat locations, condition and depth using online data and the Scottish Government's PEATScope tool.

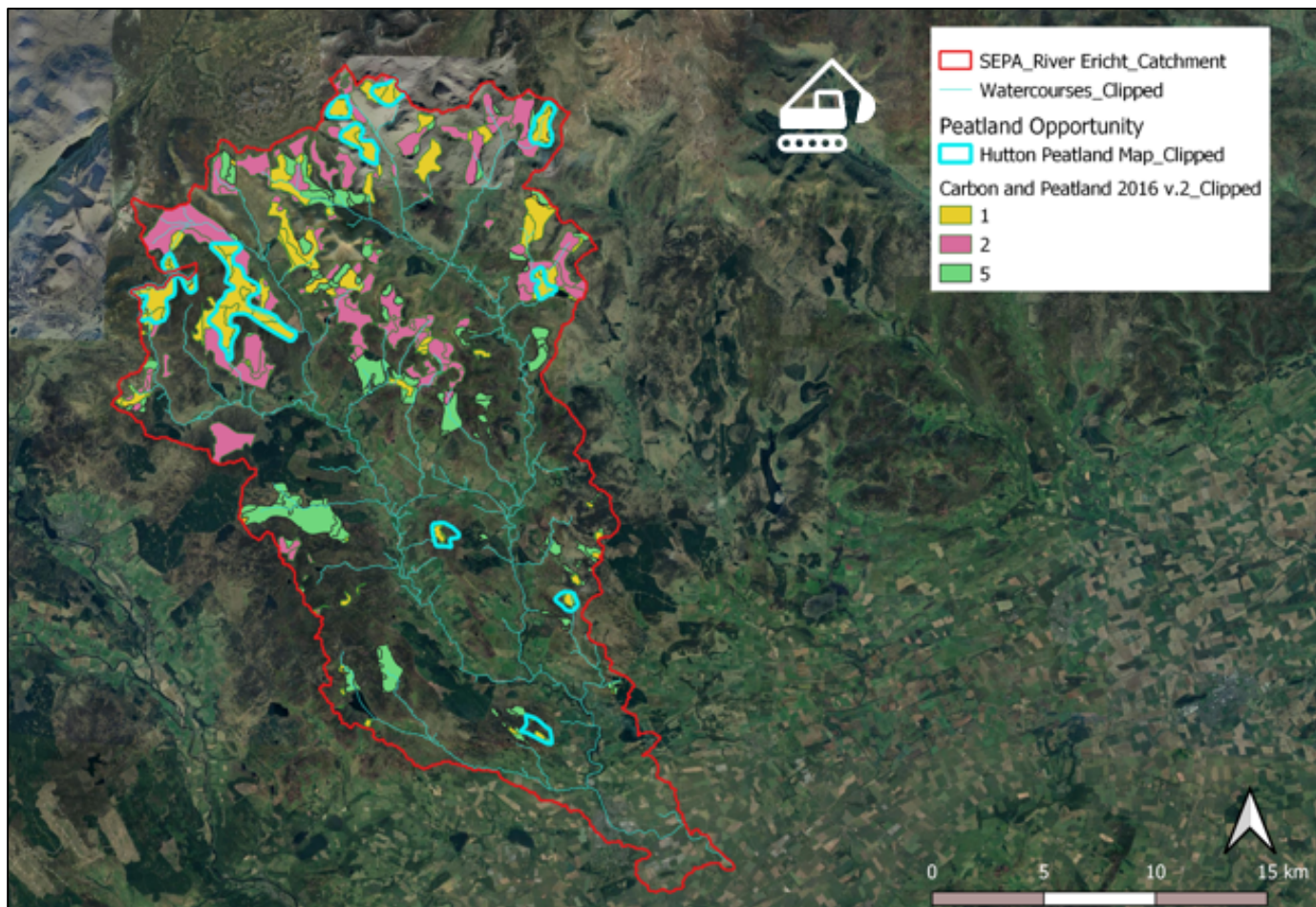
We used the James Hutton Institute and the Scottish Carbon and Peatland 2016 data layers to identify areas of peatland within the Ericht Catchment. Based on the initial mapping, the majority of the peatland can be found to the north in the higher altitude zones.

We used the Scottish Government's PEATScope tool which identified 506 hectares of actively eroding bare peat or hagg gully in the catchment. Approximately 20% of this area falls within estates that we have so far been successful at engaging with. Peatland with a depth of 50cm or more in these conditions is eligible for the Peatland Code.

To fully understand the scale of the opportunity for peat restoration, on-site depth and condition surveys need to be conducted. However, this baseline provides an understanding of the potential scale and will ensure we can take a targeted approach to the surveys.

The next step for peat restoration will be to further engage with the landowners of the mapped potential degraded peat and to investigate the condition of it. If there is actively eroding peat or drained peat (condition categories defined under the PC) then peat depth surveys can be contracted.

## Peatland baseline map for the Ericht Catchment



### **Critique**

As with the woodland assessment, this initial baseline assessment was created using available online data, only. This means there may be inaccuracies in the data, which is particularly relevant to peatland as it is very challenging to estimate peat condition and depth without site surveys.

We were able to reach out to the majority of landholdings mapped as presenting the opportunity for peatland restoration in the catchment. However, initial level of interest from the landowners has varied considerably, with the majority of interest being shown by estates in the middle and lower parts of the catchment where peatland restoration opportunities are limited. Further time spent discussing the opportunities for restoration with estate owners in the north of the catchment will need to be undertaken to pursue this intervention further.

### **2.2.3 Biodiversity**

There are 12 designated sites in the catchment including SSSIs, Special Protection Areas (SPAs) and SACs, including the Forest of Clunie which covers 13,519 hectares, or ~27% of the whole catchment. The woodland has been almost entirely deforested and contains multiple SSSI sites in 'unfavourable' condition.



Restoration works including peatland habitat restoration and reforestation of the designated woodland sites would improve biodiversity within the protected sites through increasing connectivity and resilience of the network of mixed habitats. Riparian woodland planting could also improve the condition of aquatic ecosystems by reducing sediment load, creating microecosystems and providing temperature regulation through shade cover.

Direct improvement of biodiversity on non-woodland or peatland habitats could be measured using one of the emerging biodiversity metrics such as the NARIA framework. However, until there is a reliable interest from buyers of biodiversity credits in the UK, biodiversity enhancement can be funded through peatland restoration and woodland creation interventions and the generation of high integrity carbon+ credits (see section 2.1 for more detail).



## 2.2.4 Natural Flood Management



The current Flood Risk Management Strategy for Blairgowrie states flood risk is caused mainly from surface water (75%) and river flooding (25%) with 30 residential properties at risk of flooding and annual average damages of £120,000.

River condition assessments were undertaken on two farms in the catchment as part of this project. Both reports recommended the use of nature-based solutions, including riparian planting, to reduce the impact of future flood events on the farms.

However, there is no current mechanism for trading NFM ecosystem services in Scotland. Additionally, the financial case has not been found to be substantial enough (due to the comparatively low degree of flood risk to infrastructure) to attract voluntary funding from local funders. These could be insurance businesses who may wish to avoid future flood events by proactively funding nature based solutions in the catchment.

NFM could become a viable revenue stream in the Ericht Catchment should future housing/commercial development take place in areas at risk of flooding.

Direct payments for NFM outcomes are not considered an immediate option within the River Ericht catchment, however flood mitigation services from interventions such as riparian planting may still be brought about via other funding sources such as the woodland carbon market.

## 2.2.5 River water quality and removing and/or easing active barriers to fish passage



Broadly speaking, SEPA rates the condition of water quality and flow in the catchment's waterbodies as 'Good' or 'Moderate'. However, the spawning conditions for Atlantic salmon are a growing concern for the local community and reports of the river condition contradict the SEPA broad statuses.

One of RECRI's key objectives in this first stage was to work with other partners to ease and/or remove active barriers to allow fish migration, one of the priority actions identified in the Scottish Government's new Wild Salmon Strategy Implementation Plan 2023 – 2028. Finding solutions to these issues on the Ericht, will help manage low flow issues, protect smolts and improve water quality, allowing migrating salmon free access to their spawning grounds and smolts free access downstream to the Tay and the sea.



The River Convenor of the River Ericht, fishing on the Ericht, Photo Markus Stitz

There were strong views from the local angling community that the issue of water abstraction via the Lade Gate at the Brig 'o' Blair, as well as the poor state of the Lade Gate was negatively affecting fish passage and river health.

In order to help clarify this issue, the project team lodged a Freedom of Information request to SEPA: this gave us access to every abstraction licence - including accompanying abstraction limits and associated data – between Bridge of Cally and Blairgowrie. After scrutinising the information provided it became apparent that one licence of particular interest to the project was missing, and that some detail regarding abstraction limits was contradictory. A second Freedom of Information request was therefore made to SEPA to supply the missing licence and to clarify the contradictory data previously supplied.

With the expertise of Steering Group partner, the Tay Ghillies Association, and the River Convenor of the River Ercht, a paper on the Lade Gates at the Brig 'o' Blair and related abstraction issues was compiled from the local knowledge provided by the angling community and the new data on CAR licences and circulated to relevant bodies at local, regional and national level. A meeting with SEPA to discuss the issues has been held, and we have identified local expertise in Lade Gate to assist in building a case for support for repairing the Lade Gates at the Brig 'o' Blair.

### ***Critique***

Some useful preparatory work has been achieved in relation to one important active barrier to wild fish passage, the disintegrating Lade Gate at the Brig 'o' Blair, an historic structure left over from the textile mills of the industrial revolution. Additional research through the Sasine Records office has established the land ownership on which the Lade Gates sit, although this still has to be fully ratified as the paperwork is hand written and from the early 20thC.



The Lade Gate and weir at the Brig 'o' Blair, photo Markus Stitz

Regrettably, though, RECRI's attempt to engage with two key organisations responsible for the management of wild fish, who could help drive other solutions forward, the Tay District Salmon Fisheries Board (TDSFB) and the Tay Rivers Trust (TRT) has thus far failed.

Despite initial meetings with both organisations since December 2022 when preparing the first stage bid, the Chair of the Tay Rivers Trust, and another Board member who shares membership of the Tay Rivers Trust and Tay District

Salmon Fisheries Board have made it very clear to us that their organisation “will continue to pursue its own projects without collaboration”<sup>16</sup>.

The Chair of the Tay Rivers Trust also expressly asked the project team not to talk to three of the largest estates in the north east of the catchment: Invercauld, Rhiedorrach and Dalmunzie as they wished to have their own conversations with them about woodland creation opportunities. These three large estates would have been key targets for engagement with RECRI as they are all positioned at key strategic locations in the north of the catchment.

Additionally, following efforts by us in the autumn of 2023 to connect to the new project Development officer appointed by the TDSFB to look at riparian planting in the Upper Shee we were advised by the Director that we could not speak to him.

At the time of writing this report, neither organisation has any interest in collaborating with RECRI on the issue of the Lade Gates at the Brig ‘O’ Blair either. The latest minutes of the TDSFB, (9th April 2024) confirm their singular path:

*“DG is going to put this (the Lade gate issue) on his list of priorities to keep smolts out of the lade...DG has seen reports, designs of gates and fish pass it looks quite achievable. DG is speaking to people who might be able to get funding for this.*

*CI thinks this would be a big win to get this done. DG agrees that if we can keep the smolts out, then we have done our job. DG encourages the Board to do this.*

*CI suggests that this falls into the Trust’s remit and the Board can deal with SEPA. This would show how the Board and Trust can work together. DG requests that should anyone have any potential funders, could they speak to CI. £25K is required.”*

The RECRI Steering Group’s aim is to continue to leave the door open to collaboration with both the TRT and TDSFB in order to strengthen collective ability to create environmental improvements in the catchment that will benefit the wild fish.

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<sup>16</sup> email from Jerry Saunders, 6th November 2023

# Milestone 3: Community & Landowner Engagement

## 3.1 Communities of interest & place

RECRI is a community-led landscape-scale nature restoration initiative, with five out of the six of the organisations involved in the current partnership representing local communities of interest and place - the two local Development Trusts, representing the interests of the two main human settlements in the catchment, Kirkmichael and Blairgowrie, the Tay Ghillies Association representing the interests of local anglers and Ghillies, the CATERAN Ecomuseum, the catchment's principal tourism destination and Bioregioning Tayside, a new platform whose aim is to build community resilience in Tayside in response to the climate and biodiversity crises. None of these organisations own any land in the catchment. All members of the partnership support the community-led ethos of the project, which mirrors the Scottish Land Commission's Community Benefits guidance<sup>17</sup>: "For Scotland's land and people to prosper, communities must benefit from the way land is owned and managed, at the same time as land delivers for nature and climate."

Our community engagement work in this first stage included:

- The creation of [a website about the project and its vision](#), including an Ericht memories strand.
- Four community consultation events, two in Kirkmichael and two in Blairgowrie, where participants were invited to prioritise what they would like to see resulting from the project and a presentation of RECRI at the Mount Blair Community Development Trust AGM (see graphs below).
- Hands on learning experiences of landscape based activities via the [CATERAN Ecomuseum](#), via the [River Detectives](#), where volunteers were invited to work on creating an environmental history of the Blairgowrie Mills, which at their peak numbered fourteen spinning mills stretched along the River Ericht either side of the Brig 'O' Blair.
- In partnership with ETH Zurich, the design and trialling of a [Strategy Game](#), a new tool to engage people in creating and shaping new models of their landscape, and support the development of their restoration vision – what all the different stakeholders, communities of interest and place in the catchment want to see happen in the future. The tool builds on systems modelling foundations to enable people, businesses and organisations to understand each other's points of view and find new ways to negotiate agreements in complex environmental and policy settings. Six events were conducted with different communities of interest in the north and south of the catchment during the preparatory work for the game design, all of which focused on collecting data about landscape and land management interests and concerns.

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<sup>17</sup> [https://www.landcommission.gov.scot/downloads/65572c79e77be\\_Guidance%20on%20Community%20Benefits-16.11.23.pdf](https://www.landcommission.gov.scot/downloads/65572c79e77be_Guidance%20on%20Community%20Benefits-16.11.23.pdf)

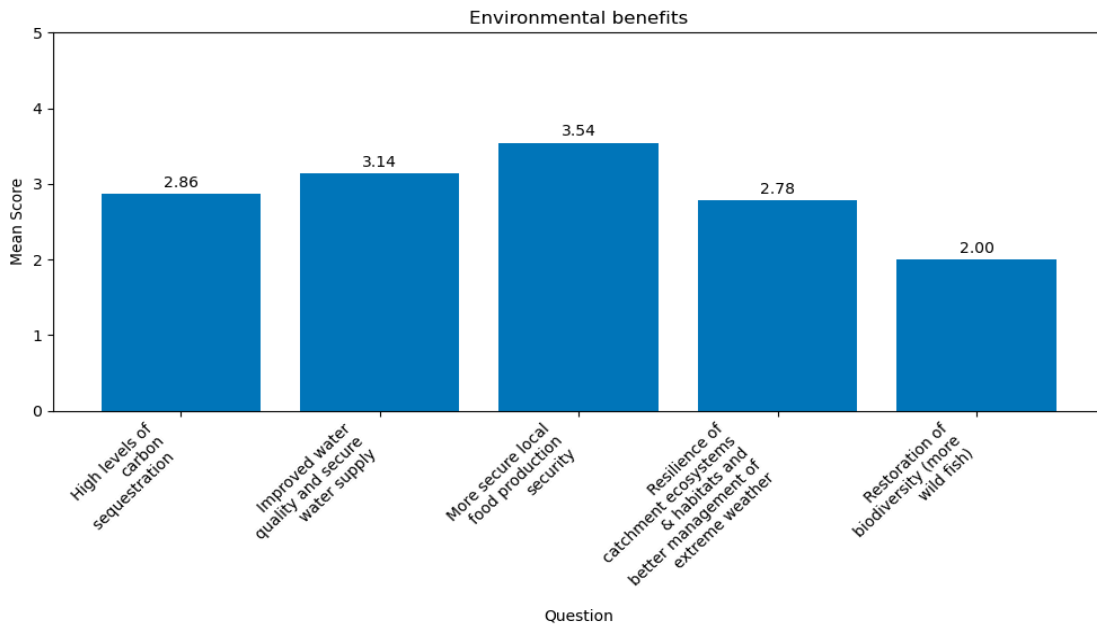


Setting up for a community consultation in Blairgowrie, November 2023, photo Clare Cooper

This first stage also benefited from being involved as a pilot site in the FIRNS 1 (and now FIRNS 2) project that is developing a Community Benefits Standard<sup>18</sup>

The data captured from the first four consultation events reveal much that can be built on in the next stage, with environmental priorities revolving around food and water security - see below.

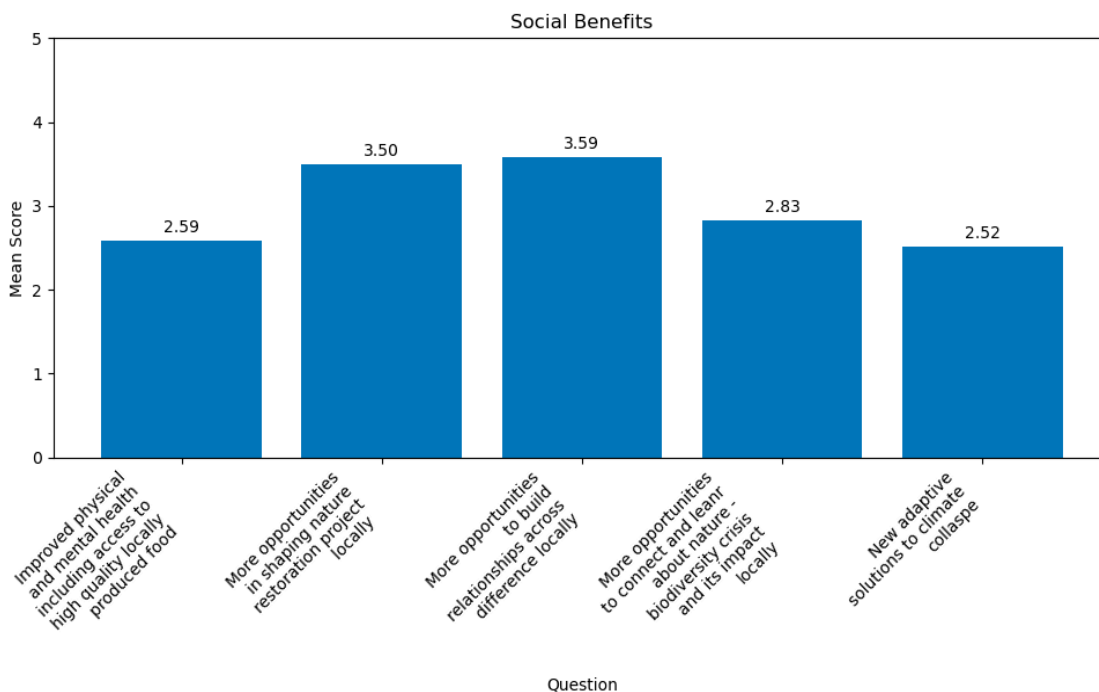
**Results from the community consultation events: environmental priorities voted to be prioritised with the RECRI project**



<sup>18</sup> <https://www.natcert.earth/community-benefits-standard/>

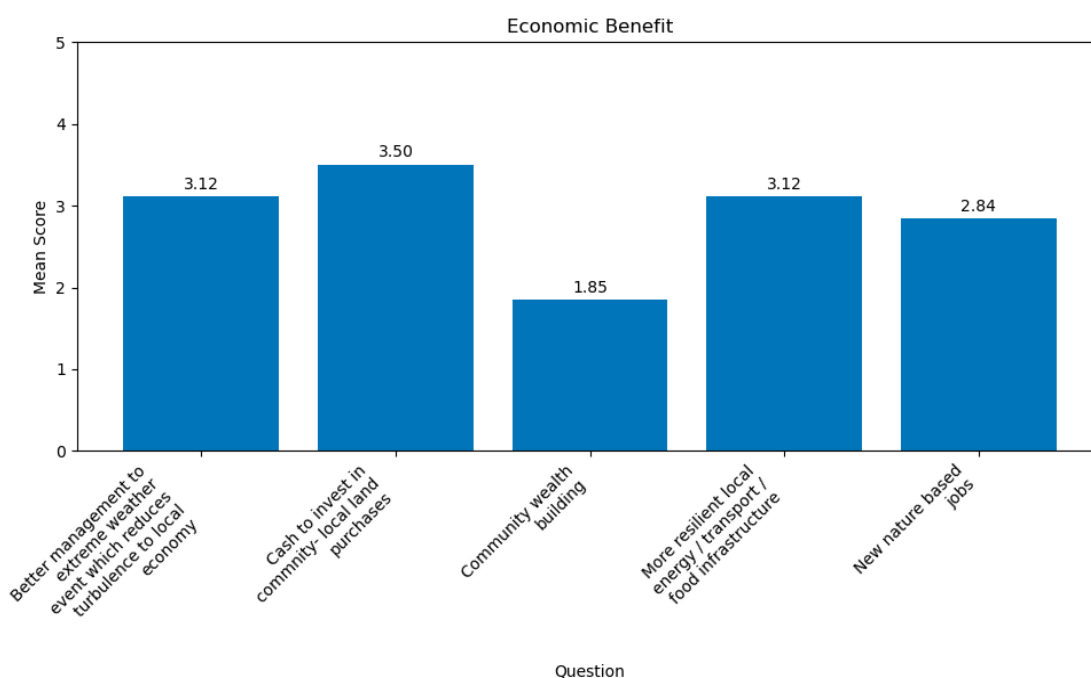
Social benefit priorities showing strong interest in building relationships across different groups and the desire for more opportunities to shape nature restoration locally, see below.

**Results from the community consultation events: social benefits voted to be prioritised with the RECRI project**



And the Economic benefits prioritising community land purchase, and better protection from climate breakdown, see below.

**Results from the community consultation events: economic benefits voted to be prioritised with RECRI**



## **Critique**

Counsel from local people early on in the project was to avoid raising too many expectations about what the RECRI project could deliver for communities given a strong collective memory of a major failed hydro-project planned for the Erich at Blairgowrie fifteen years ago and no certainty that RECRI would continue after this first phase.

In hindsight, and in discussion with other nature restoration projects in Scotland and learnings from the recent work undertaken by Scottish Government, Scottish Land Commission, the Community Benefits Standard, Highland Rewilding and others on engagement standards, the budget allocation for community consultation was too low. Much deeper work will be required to expand and improve the opportunities for participation and involvement, given the project's core aim of modelling community-led nature restoration and the maturing road map for community engagement in and benefits from nature restoration projects. This has been scoped out for the next stage of work.

## **3.2 Landowners**

Detailed mapping of landownership in the catchment remains scant. Over the last 12 months, Andy Wightman's 'Who Owns Scotland' website has begun to build up information in this area, but it is yet to offer full coverage. Added to that, the fact that the RECRI project is being led by people and organisations who are not part of existing land owner community networks meant that a good proportion of initial contacts from the project team were in effect 'cold calls'. Nevertheless over the course of the last twelve months, almost 50 landowners have been identified and contact made and/or attempted and 15 landowners are in early stage conversations about potential woodland creation and/or peatland restoration.

### **Landowner engagement – northern catchment**

The Mount Blair region sits at the northern end of catchment and includes the rivers Ardlie, Shee and Blackwater all of which converge to join the Erich at Bridge of Cally. Its geography is defined by wide, fertile river plains surrounded by higher ground which is either forested or open moorland and includes Munro height peaks. The major landowners are medium to very large 'sporting' estates with a huge variety of terrain, business models, interests and ownership models. All of them have been subject to a large amount of enforced change in recent decades and most have diversified away from the traditional picture of what a highland estate is. This complex mix of interests and priorities is also reflected in both the levels of existing knowledge surrounding the issues RECRI addresses, and the willingness to engage with them. There was significant prejudice against a community-led project by one major estate, the manager of whom pronounced "we don't like working with communities because they talk too much". There was a wide spectrum of



Looking north up Glen Lochsie at the Spittal of Glenshee, photo Markus Stitz

pre-existing knowledge, ranging from almost complete ignorance up to those who have already travelled the nature restoration route themselves, and all points in between. The issue of deer management came up in a number of conversations and whilst there are deer management groups operating in the catchment, there could be an opportunity for RECRI to collaborate with landowners to enable more effective management of deer and other herbivores at catchment scale as the Findhorn Watershed Initiative is doing.

## **Landowner engagement - southern catchment**

The south of the catchment is predominantly made up of landowners farming high value agricultural land for cereal, oilseed, vegetables and soft fruits. The impact of flooding and other extreme weather events, including drought, are a big concern as is the increasing population of Beavers due to their impact and potential for impact on bank and embankment stability. As with most landowners across the catchment, the fine detail of direct and indirect payments proposed in the Scottish Agriculture and Rural Communities Bill was keenly awaited, with decisions about involvement in carbon sequestration and biodiversity net gain being held over until this information was clear. This meant that it was difficult to advance formal expressions of interest. Similar to the north of the catchment, there was a wide spectrum of pre-existing knowledge on nature restoration potential and routes to finance. Early on in this first stage of work, contact was made with one of Scotland's first Farmer Cluster's, the Strathmore Farmer Cluster, and a conversation is in play with the James Hutton Institute and the Game & Wildlife Conservation Trust about whether, and if so how, a new Farmer Cluster around the issue of water could be set up as part of the RECRI project.



Farmland in the south of the catchment, photo Markus Stitz

## **Critique**

In the north of the catchment, landowner concerns were noted regarding the amount of time it takes for a business the size of some of these estates - many of whom already handle a busy mix of farming, forestry, tourism, housing and renewable energy issues in their portfolios – to take on board yet another issue with a new set of choices and complexities. Their 'day job' is complicated and time consuming as it is and some have not, and perhaps will not, move at the pace that the RECRI project would ideally like even if engagement and interest levels are high.

One particular issue that has made landowner engagement difficult in some circumstances is the issue of absentee owners. There are four target landowners in the region with whom engagement has proved almost impossible: the estates in question are part of a wider property and business portfolios and may only be visited by the owners a handful



of times. There are also three estates that would have been a perfect fit for RECRI engagement but are either already for sale or are planning to go on the market in the near future, making commitment impossible.

Despite these issues, positive and proactive engagement with many key prospects has in the main been very good, and a 'domino effect' of neighbouring landowners helped produce some excellent results. This bodes well for future developments, and it is particularly encouraging to see a line of key estates on the eastern side of Strathardle very well engaged with RECRI (this line being broken only by one estate currently for sale).

Similar issues were raised with regard to time poverty by landowners in the south of the catchment, together with concerns that with landholdings being primarily given over to high value agriculture, the opportunities for woodland creation especially, were limited and questions over the impact that Beavers as well as extreme floods could have on any new planting.

# Milestone 4: Ecological Restoration Vision & Ecosystem Services Generation Calculations

## 4.1 Ecological Restoration Vision

### Introduction

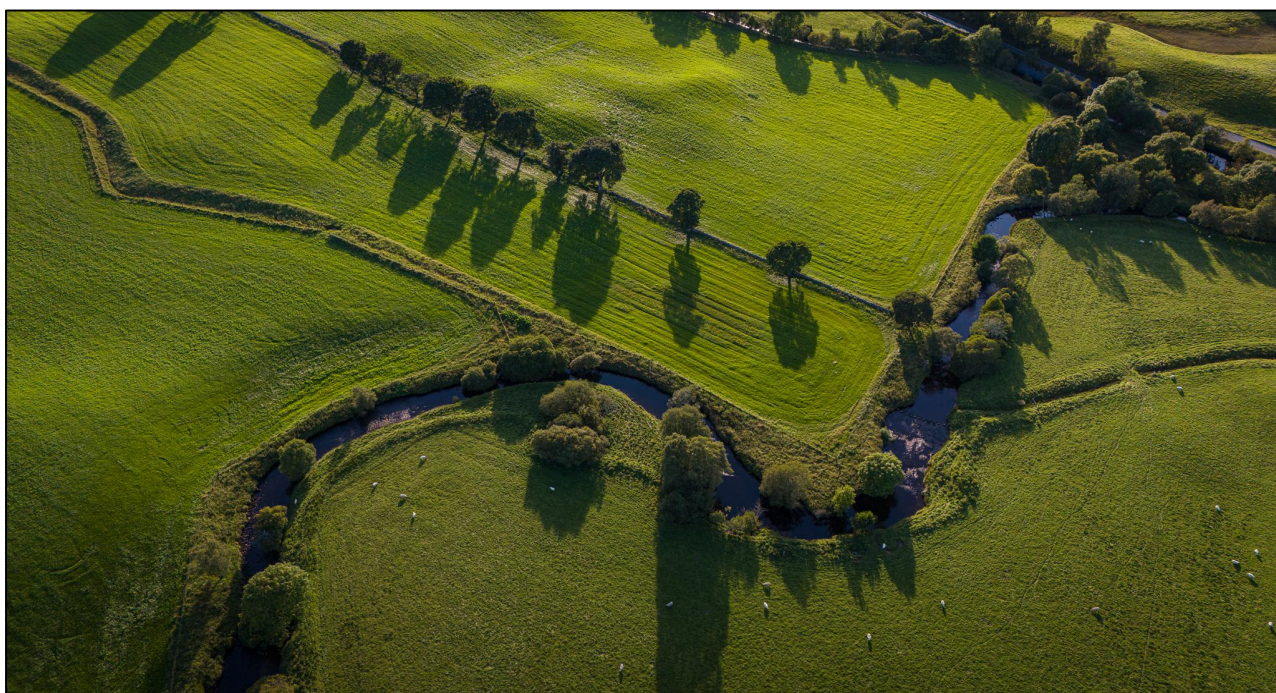
We have identified significant opportunity for generating ecosystem services through nature interventions in the catchment (see baseline assessment). We have also appraised which ecosystem services are currently accessible and tradable in Scotland. Carbon emissions avoidance or removal services, generated either through woodland establishment or peatland restoration, are the only reliably traded ecosystem services at present in Scotland and that have a clear route to local funders in the Erich Catchment. We have therefore focused on the carbon market as our initial route to leveraging private financing for this RECRI project. This will allow the project to become established in the near term and with a mechanism that will both fund nature restoration at scale whilst providing financial and social benefits to the participating landowners and communities of interest and place.

### Woodland expansion as the initial focus of nature based solutions in the catchment

We have chosen to focus on broadleaf woodland habitat creation as opposed to peatland restoration, as the initial route to generating income from the carbon market. This is for a number of reasons including: there is a larger scale and wider distribution of potential woodland creation sites in the catchment, providing opportunity to engage with more landowners; we can be more confident in our estimation of the scale of opportunity prior to on-site surveys when compared to the peat restoration opportunity; and, the revenue that can be generated through woodland creation is greater due to the higher sale value of removal credits in comparison to avoidance credits.

Broadleaf woodland, and particularly riparian habitat, will provide much more than carbon sequestration services in the Erich catchment. It has the ability to improve water quality in the river network through reducing sediment load and surface water run-off from farming activities. It will support water management by slowing the flow of water throughout the catchment lowering flood and drought risks. Riparian woodland will also support aquatic life by creating new quality habitats and providing vital shade along the watercourses, delivering water temperate regulation.

Peatland restoration will form part of the future of RECRI and funding will be sought via accessing available public grant schemes. This intervention will be built into the wider portfolio of nature interventions once the project has launched and secured initial funding for the team's design work efforts.



A view of Strathardle in 2023, photo Markus Stitz

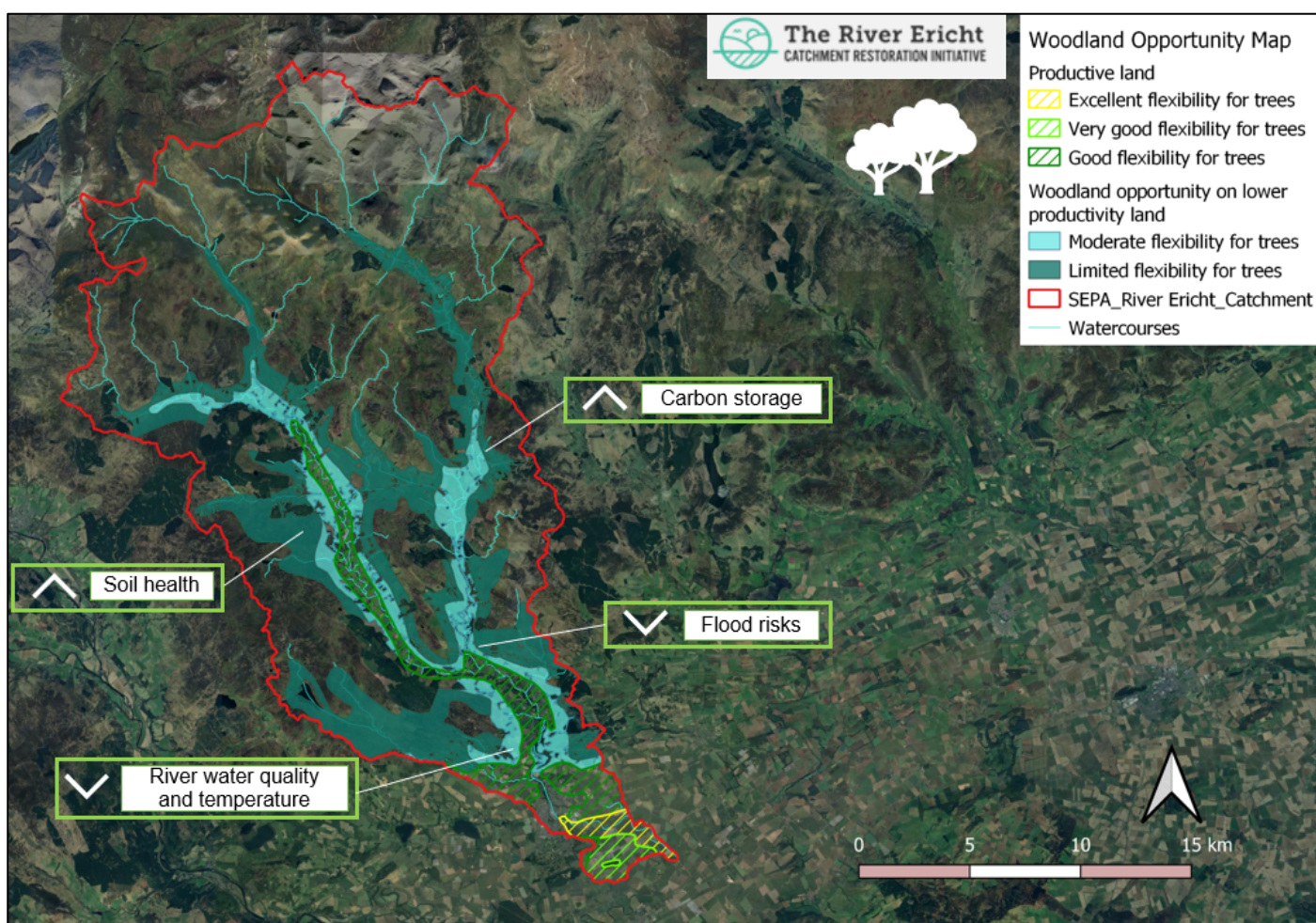
## Our proposals for ecological restoration in the catchment via woodland creation

We have modelled the economics and approach to broadleaf woodland habitat expansion in the Ericht catchment, to understand how much income the project could generate and how this might be distributed to the communities of interest and place, as well as participating stakeholders including the funders, delivery team and landowners.

Of the circa 11,000 hectares of potential woodland opportunity, **we have modelled a project that initially funds the creation of 600 hectares (5%) over multiple sites in the catchment**, delivered over five years of planting/creation. We have come to this conservative figure following our initial landowner outreach work that has identified a potential aggregated area of 853 ha for woodland creation, subject to landowner agreement.

We have compiled a set of design assumptions to model the anticipated cost and revenues of the project. These assumptions have been chosen following workshoping and invitations to feedback with community representatives, local farmers, and local forestry and regulatory experts. They are estimations that we have used to create the first draft of the financial model and will be refined as the project continues to take shape.

**We are modelling the gradual creation of 600 hectares of broadleaf woodland, located within estates that fall within the 11k hectares of land mapped as eligible for woodland creation**



## Project design with a focus on woodland creation

### General assumptions for modelling

- **Habitat creation:** native broadleaf woodland habitat created via planting and natural regeneration methods (90% and 10%, respectively)
- **Scale:** an initial 600 hectares
- **Distribution:** spread across the opportunity mapped area including riparian zones, low yield farmland and moorland fringes
- **Timescale for creation:** planted/created gradually over a five year timescale
- **Sites:** assuming 12 sites of between 25-75 hectares in woodland creation
- **Period of growth accounted for:** 40 years of woodland growth for every hectare created

### Woodland creation details

- **Ground preparation:** Mixture of inverted mounding and hand turfing, with allowance for bracken control
- **Woodland mix:** mix of broadleaf species including downy birch, sliver birch, sessile oak, holly species, hazel and crack willow. Yield classes ranging between 2-4YC.
- **Planting density:** an average of 1600 sph, or average 3 meters

### Managing environmental threats to woodland

- **Deer fencing:** 40 km strategically placed fencing plus deer gates
- **Deer culls:** initial reduction in density and ongoing annual management for 15 years

### Payments to participants and community groups

In addition to funding nature interventions, this project will provide income to landowners for restoration sites contributed, fund all work by organisations delivering this project, provide agreed financial returns to private funders, and a dedicated fund to be distributed to the local communities of interest and place. See milestones 5 and 6 for more details.

## 4.2 Ecosystem Service Generation Calculations

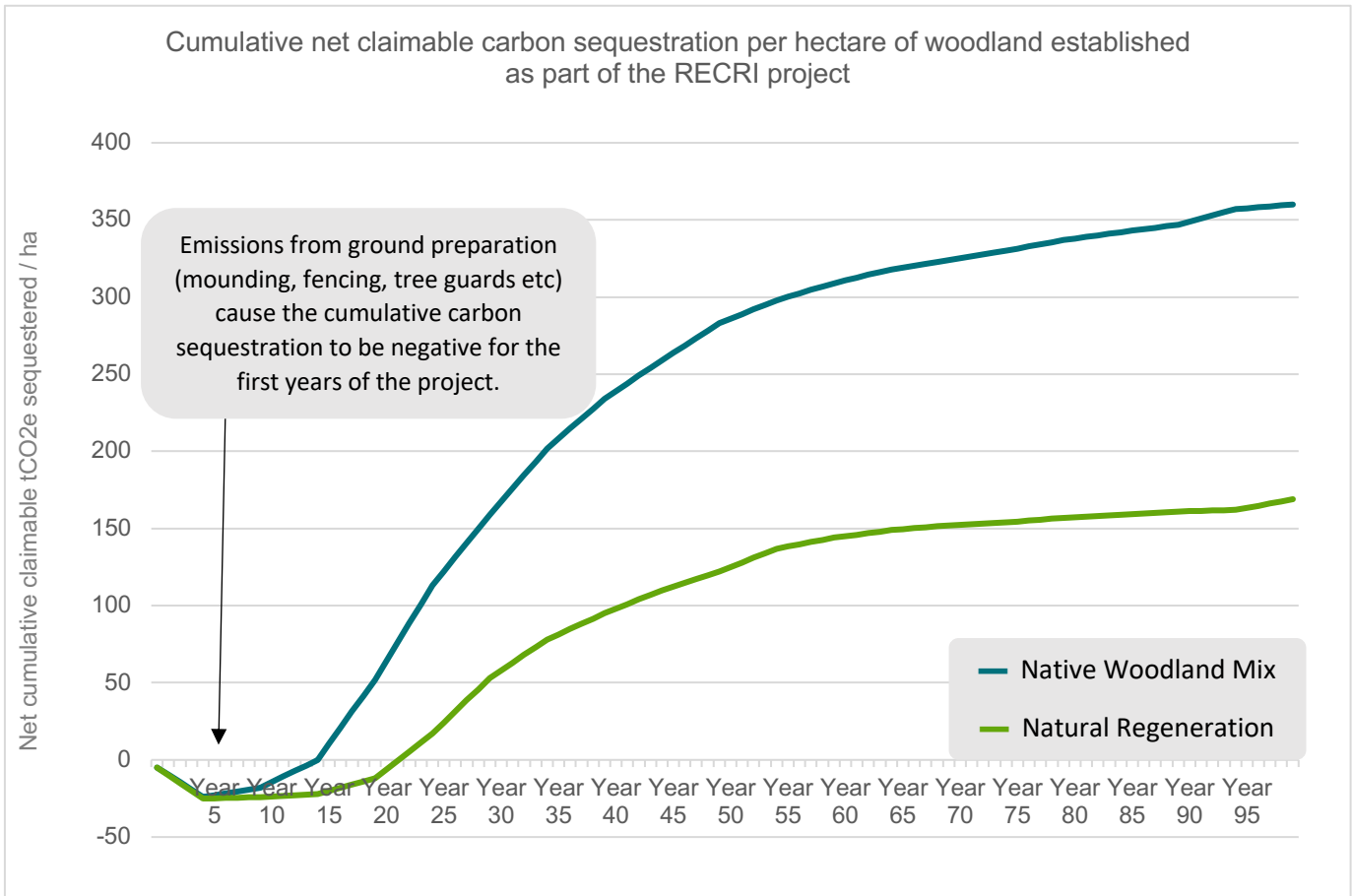
### Woodland carbon

Using the agreed average woodland mix and planting density, establishing one hectare of broadleaf woodland in the catchment would sequester approximately 360tCO<sub>2</sub>e over 100 years when planted, and 169tCO<sub>2</sub>e when established via natural regeneration methods (see graph below).

We have modelled the creation of 5% of the mapped opportunity area, 600 ha, to be gradually implemented over the next five years.

600 hectares of planted broadleaf woodland could sequester approximately **142,000tCO<sub>2</sub>e over 40 years**, and in total, **204,540 tCO<sub>2</sub>e over 100 years**.

## Carbon yield projection with the proposed broad species mix



### Critique

As with all initial modelling work, the carbon yield projections for this project are only an estimate at this stage. They are based on a set of assumptions that are subject to refinement with field testing and ultimately the results of verification audits as the woodland grows. Elements that are particularly influential to the project's carbon yield is the tree species choice, yield class and establishment success rate. We have chosen to model conservatively low yield classes where possible.

To estimate the carbon yield of our project, we used the official woodland carbon code calculator. Built into the calculator are two buffers, one to account for the limitations in accuracy of the desk-based assessment, and the other to allocate a portion of the credits to a collective pot to cover WCC projects that face force majeure circumstances. These automatically applied buffers result in a combined ~36% reduction in projected credits that this project can propose to sell.

### Peatland

#### Summary and critique

We have chosen to not focus on generating carbon credits from peatland restoration interventions at this initial stage of the project. This is namely due to: peatland being limited to the northern regions of the catchment across few estates and minimal registered so far from landowners, the projects are relatively more expensive to undertake and generate carbon avoidance credits that sell for a lower value, and without considerable site investigation data (which is costly and time intensive prior to any opportunity being confirmed), our estimations of opportunity remain comparatively low in accuracy. We therefore chose to keep peatland restoration in the future scope of this project, and focus initially on the creation of woodland access to private funding through selling carbon removal credits.

# Milestone 5 : Financial Model & Identification of Project Funders

## 5.1 Financial Model

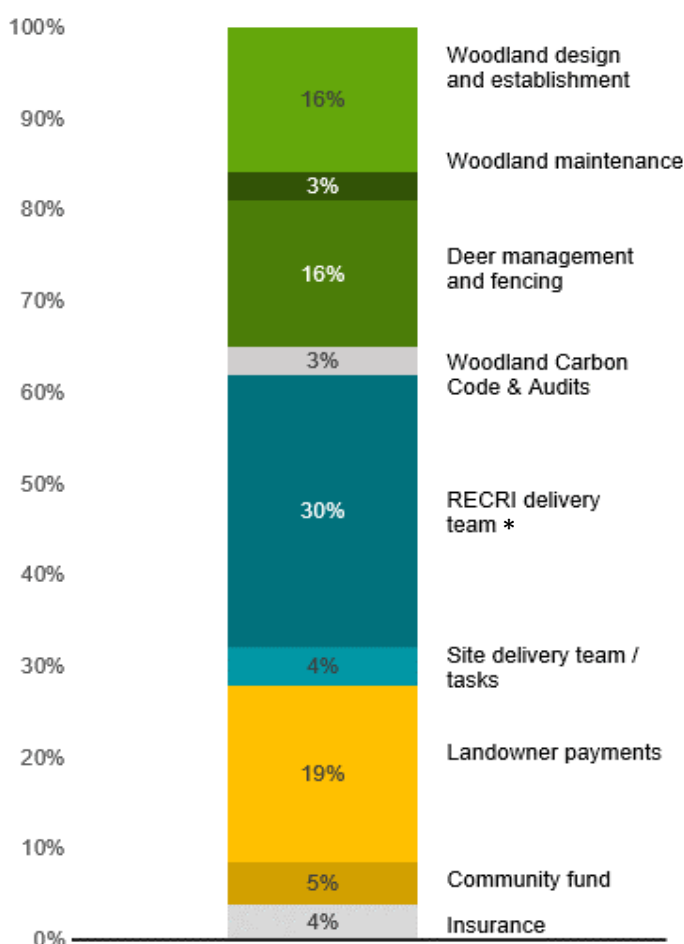
### 5.1.1 Introduction

We have created a financial model for the RECRI project that calculates the anticipated project costs and potential revenues over the project's lifetime, whilst taking account for inflation. The model consists of a set of cost and revenue assumptions that have been generated following engagement with representatives of the community, farmers, natural capital professionals and forestry experts. These will need to be refined as the project is progressed.

### 5.1.2 Project budget

Designing and delivering this 600 ha community led woodland expansion project has been modelled over a 47 year period (40 years of woodland growth with staggered planting across 5 years). In total, the project is estimated to cost in the region of £11.3 million (this includes inflation at 3% across 47 years). **This is the equivalent of £19k per hectare of woodland created in this project, or the equivalent of £80 per carbon credit that this project is anticipated to generate (nominal values).**

#### Cost categories as a percentage of the total cost for delivering this project design



Designing and creating woodland plus sharing financial returns to the delivery staff, landowners and community fund is anticipated to cost ~£19k / ha of woodland, or £80 / carbon credit.

Woodland creation, establishment and protection costs amount to approximately one third of the total project budget.

Professional fees for delivering the project amount to another third.

The remainder of the budget is spent primarily on landowner remuneration and benefit sharing with the community.

\* Includes labour cost for project launch, woodland carbon code activities, funder management, stakeholder consultation and reporting and long-term quality assurance. Plus staff overhead expenses. See more details in the budget table.

Provisional figures based on the current offer to landowners and project governance structure.

## Total project budget summary and assumptions

Operational costs	Operational costs per hectare (GBP)	Total costs (GBP)	% of total costs	Model assumptions
<b>Surveys</b>	63	37,910	<1%	
<b>Woodland design surveys</b>	21	12,960		Woodland design surveys: standard soil and vegetation surveying on all sites including reporting, plus 50% allowance for detailed soil surveys. Specialist surveys (e.g. bird and archaeology) on 50% of the sites.
<b>Deer density survey</b>	42	24,950		Initial deer density survey for the woodland opportunity area (11k ha) – placeholder cost prior to detailed discussion on the project's approach to deer management and quotes from survey contractors.
<b>Tree Planting and Groundworks</b>	2,934	1,760,370	16%	
<b>Ground preparation and vegetation clearance</b>	795	477,010		Combination of inverted mounding (75%) and hand turfing (25%) for ground preparation on all planted sites (540 ha). Allowance for some scrub control (on 10% of sites) and bracken clearance (20% of sites).
<b>Planting</b>	2,701	1,283,360		Broadleaf sapling plus fertiliser and planting labour.
<b>Fencing</b>	2,701	1,620,690	14%	
<b>Installation</b>	1,713	1,027,780		40 km of strategic deer fencing with deer gates (assumes 2 per site) – note placeholder cost before location and size of woodland sites is known, as well as catchment deer management approach
<b>Maintenance</b>	988	592,910		Allowance for the replacement of 50% of fencing in year 15 (20 km)
<b>Deer Management</b>	356	213,420	2%	
<b>Initial cull</b>	31	18,830		Density reduction for all sites prior to planting – placeholder value until deer survey is undertaken and deer management approach is agreed
<b>On-going culls</b>	324	194,590		Annual culls to maintain reasonable density for all sites for 15 years from planting
<b>Woodland maintenance</b>	577	346,330	3%	
<b>Beating up and wedding</b>	577	346,330		Including contingency for weeding in year 3 (10% of sites) and beating up for 30% of the total woodland spread over years 1, 3 and 5 post planting
<b>Professional fees</b>	6,445	3,866,810	34%	
<b>RECRI delivery team</b>	5,618	3,370,560		Responsible for: initial project structure design and launch, funder negotiations and contracting, landowner contracting, community engagement, woodland carbon code activities, disbursements, long term project management. Estimated cost includes for overheads such as site visits, laptops and admin expenses.
<b>Site delivery team/tasks</b>	827	496,250		Tasks include: supporting landowners in woodland design and surveys, ground prep and planting works, fence installation and initial woodland establishment activities. Responsibilities may be shared with interested landowners, or taken in-house by the delivery team.

Operational costs	Operational costs per hectare (GBP)	Total costs (GBP)	% of total costs	Model assumptions
<b>WCC Audits</b>	584	350,320	3%	
<b>Validation and Verification Audits</b>	584	350,320		Third party audits (validation then verification audits on years 5, 15, 25, 35 and 40) and associated woodland surveys.
<b>Landowner Payments</b>	3,643	2,185,900	19%	
<b>Landowner remuneration for participation</b>	3,643	2,185,900		The draft offer to landowners: all project delivery costs covered, £75/ha/yr for 40 years paid in year 2 as a lumpsum. There is also potential for profit share, and ownership of project credits post contract end. – placeholder and contingent on project financial viability and engagement with the community
<b>Community payment</b>	883	530,060	5%	
<b>Community fund allocation</b>	883	530,060		Dedicated 5% of the project's projected carbon revenue allocated to the community fund – placeholder and contingent on project financial viability and engagement with the community
<b>Insurance</b>	735	441,150	4%	
<b>Woodland insurance</b>	735	441,150		Woodland insurance to cover the costs of restocking lost saplings in case of drought, fire or storm. The insurance coverage decreases as carbon credits are verified and risk of loss is reduced: yr1-25: 100% insurance coverage, 26-35: 50%, 36-47: 15%.
<b>Total operational costs</b>	<b>18,837</b>	<b>11,352,960</b>	<b>100%</b>	<b>3% inflation assumed on costs</b>

## Available public funding

We have assumed that the woodland creation sites will be eligible for Forestry Grant Scheme funding in the form of: woodland creation and early maintenance grants (FGS Woodland Creation: Native Broadleaf at £1,840/ha and £270/ha for 5 consecutive years), natural regeneration grant (FGS New Natural Regeneration Establishment at £600/ha) and capital grants for deer fencing and bracken control (FGS Deer Fence High Cost rate at £9.90/m and Bracken Control at £720/ha).

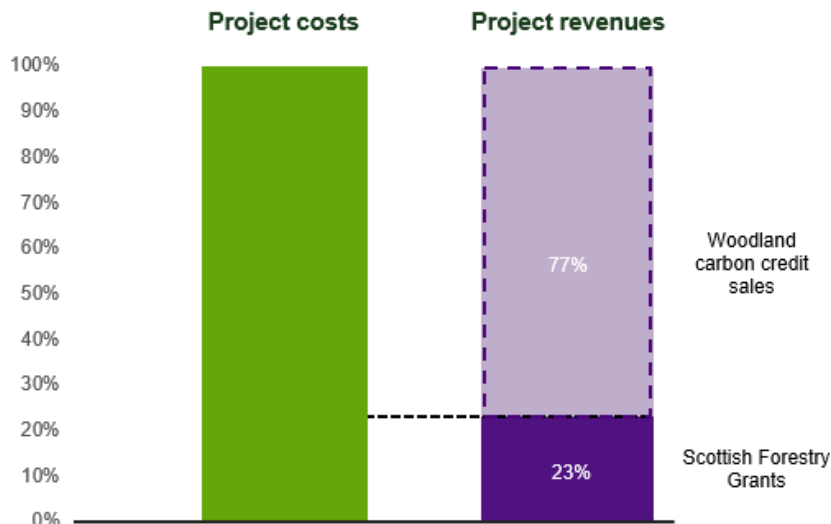
Accounting for the above grants, the public funding amounts to a contribution of £3.9 million over the lifetime of the project, equivalent to £5.2k per hectare of woodland created or £18 per carbon credit generated via this project. This is approximately 23% of the necessary funding to make this project viable.

## Outstanding cost

This project is estimated to cost the equivalent of £80 per carbon credit it could generate (circa 142,000tCO<sub>2e</sub>). With the available public funding accounted for, **the remaining cost per credit to deliver this project is circa £62 (nominal values).**



## Total project delivery cost versus funding opportunities



Public funding can contribute ~23% of the cost per hectare of delivering this project (£18/PIU).

The remaining cost can be covered by the sale of carbon credits at a minimum price of £62

### Critique

We have compiled this financial model with the best available data collated from and reviewed by local landowners, community representatives, project developers and regulatory experts. However our assumptions on the design, cost and carbon projection elements of this project will remain as best guesses until they can be confirmed on site and with the parties who agree to participating in the project. Many of the assumptions will likely change as the project design evolves and more information is confirmed.

## 5.2 Identification of Investors & Buyers

### 5.2.1 Introduction

As a Riverwoods Investment Readiness Pioneers project, RECRI aims to bring blended (public and private) finance into nature restoration projects in the catchment in ways that deliver environmental, economic and social impact and as part of this first phase of work, an assessment of the four principal payment mechanisms currently available in both the public and private sector was undertaken:

- **Investors** - cover the upfront costs of the project in return for either equity and/or a profit share on the project
- **Buyers** - provide upfront funding for the project in return for credits that the project delivers, at a fixed price
- **Philanthropy** - donations that can be given from a business as a grant, through corporate social responsibility and/or environmental, social and governance funds
- **Community Crowdfunding & Shares** - provide investment for a return from local citizens, community anchor organisations or businesses

Early on in this first stage, the Steering Group gave a very clear steer that with regard to the private sector, local, regional and national businesses and/or business interests would be preferred partners in the project. The possibility this would give to having a mutually beneficial relationship would be much greater than financial institutions and corporate entities headquartered many miles away from the landscape this project was focusing on.

The Steering Group also agreed a general set of ethics that private sector funders would need to meet to be involved in the RECRI project, agreeing in principal to follow the ethics charter laid out by Revere and that full due diligence should be undertaken for any private sector funder that the project progresses into negotiations with.

## 5.2.2 Investors



We explored two possible investment models to cover the up front capital costs of the project: debt finance and equity finance.

Pursuing debt equity is one possible approach to accessing investor capital for a large scale nature project. Triodos Bank is a prominent example of a debt investor in the UK that support nature restoration projects . However, the challenge with using debt for projects like RECRI, which do not include land acquisition include the need for collateral (not possible if land is not owned by the project) and the need to begin paying interest payments to the lender before carbon credits are verified. For this reason, we discounted debt-based investment as an option for RECRI.

Alternatively, an equity investor could support the project and provide long-term patient capital in return for an agreed return on investments. This type of investment comes with the benefit that the project could afford to sell credits later on as verified units as the trees are confirmed as establishing. Examples of UK based equity investors that we know are interested in supporting such projects include Federated Hermes, Aviva Investment and Abrdn. Equity based investment would be a more suitable financing option for RECRI.

We chose to wait to pursue detailed conversations with prospective investors until the design of project had taken more shape and the Steering Group had the opportunity to agree which style of funder would best suit the goals and ethos of the project.

## 5.2.3 Buyers



It was more clear from the outset of the project that collaborating with a local buyer of ecosystem services would be well aligned with the goals of RECRI. Below is a summary of our main outreach work and the prospective buyers that could support this project.

### University of Dundee

- The University of Dundee is committed to reducing all carbon emissions to a net zero position by 2045 and are proactively developing our Carbon Management Plan which will address Scopes 1, 2 and 3. Brokered by Bioregioning Tayside's University contacts, the project team spent some time in discussion with their sustainability team about the potential for an early stage partnership where they would become an upfront buyer of project carbon credits and get further involved in the project in other ways. A detailed financial model has been shared with the University who are keen to take the conversation forward once their own internal plans are clearer. However, the timetable for this is still to be determined by other work they need to do to develop their Carbon Management Plan.
- The RECRI project team have also reached out to other Scottish universities to have similar conversations and will continue to explore these options.

### Scottish and Southern Electricity Networks (SSE-N)

- SSE-N are required to off-set the impact of their construction works by investing in nature recovery on other sites. Early stage conversations with them have indicated that they would be keen to see detailed maps of potential sites in the Ericht catchment which could offer potential for Biodiversity Net Gain (BNG - a standard which estimates biodiversity values 'before-and-after'). Once RECRI is in a position to do this, the conversation will be developed.

### Dundee and Perth Chambers of Commerce

- The RECRI project team hosting an event in May 2024 for members of Dundee and Perth Chambers of Commerce. The invitees also included our sister Riverwoods Investment Readiness Pioneers project, Almond Headwaters, and a neighbouring catchment restoration project, Braes of Alyth, recipient of a FIRNS 1 award. Around 20 regional businesses attended and whilst there was significant recognition of the need for local businesses to get involved in nature restoration on their doorstep, awareness and action for nature recovery and nature finance is still at a very early stage of development and will require the efforts of many organisations and institutions in Tayside to scale potential. However, the outcomes could be significant. A visible, local partnership of communities and enterprises which support nature finance can become an important encouragement to other, external, larger-scale funders to join in and

the RECRI project is committed to building a mechanism into its delivery model which could enable smaller local businesses to get involved

### Using buyer funding to cover upfront costs

As an alternative to partnering with an investor, we also focussed on a funding option whereby RECRI would partner with a buyer of carbon credits willing to cover upfront project costs, in exchange for access to carbon credits when the project is mature. This funding model gained more traction with the RECRI Steering Committee (explained in more detail later in report).

### 5.3.4 Philanthropy



Preliminary efforts were made to interest Diageo in the project via the issue of water security, given that part of their barley supply comes from Strathmore. However, their current focus for catchment restoration work is limited to areas where they have distilleries and on developing a regenerative agriculture model which they hope will make their wider supply chain more sustainable.

### 5.3.5 Community Crowdfunding and Shares



As a community-led nature restoration project, RECRI is committed to investigating investment opportunities to local people and businesses. Research was undertaken into existing community crowdfunding and shares relating to nature restoration projects, which are still few and far between and often linked to land that is community owned. None of the organisations involved in RECRI own any land currently. Once the RECRI moves into delivery these opportunities will be further developed.

### 5.3.6 Public Finance



Currently, public finance is available to nature restoration projects in Scotland via the following grant schemes:

- **The Forestry Grant Scheme** offers financial support for the creation of new woodland and the sustainable management of existing woodland. Within the scheme, there are a range of support options covering planting, woodland protection, harvesting and more.
- **The Peatland Action Fund** supports on-the-ground peatland restoration activities and is open for applications from eligible land managers who have peatlands that would benefit from restoration.
- **The Nature Restoration Fund (NRF)** is a competitive fund, which specifically encourages applicants with projects that restore wildlife and habitats on land and sea and address the twin crises of biodiversity loss and climate change.

Once RECRI moves into a delivery stage, it is still envisaged that the project will facilitate applications from landowners to each of these schemes. Currently, an investigation is being made to see if a repair of the Lade Gates at the Brig 'o' Blair, could be the subject of an Perth & Kinross Council NRF application.

### *Critique*

Funding from a partner such as University of Dundee is very well fitted to the project. This could be done via the upfront buyer funding model described above.

The university is a large, well established institution with a high likelihood of continued operations. It has made clear commitments to addressing the climate and nature crisis, is local to the project and represents both the voice of the student community as well as the local community, and has shown clear interest in supporting such a project as RECRI. However, this is an innovative collaboration that this RECRI project is looking to design with the university and therefore will take time. UK organisations are also still working on how to meet their net zero and nature targets in practice and this includes a significant amount of internal work including carbon footprinting. We plan to patiently continue our discussions with the university to design a mutually beneficial project.

Alongside this, as the project now has a better defined vision and proposed structure, we will continue reaching out to additional prospective funders who may be interested in funding the project in the interim.

# Milestone 6: Proposed Investment Structure

## Introduction

To enable us to determine the private funding opportunities for this catchment scale project, we assessed two key components: how the project should be structured to include a clear role for the community, and what type of funder could finance the project prior to the sale of any credits.

We engaged the steering group in workshops on how to ensure that this project remains community focused, including seeking external advice from Scottish Enterprise on dedicated community structures.

The below represents the project team’s current preference for structuring and funding the project and is subject to change as the individual landowners and funders are onboarded and consulted.

## 6.1 Delivery team structure

RECRI is a multigenerational project and as such, will require a central delivery team who will manage the project on behalf of all of the parties over the coming decades. The Steering Group has assessed different options for structuring this.

### 1. Local anchor organisation-led RECRI project

The anchor organisation could either be an existing community organisation, such as a Development Trust or new entity such as a Co-operative (or similar structure that ensures community benefit) made up of local stakeholders, or an existing organisation such as a local development trust.

This anchor organisation would be responsible for launching and managing the catchment scale project – meaning that specialist staff would need to be hired.

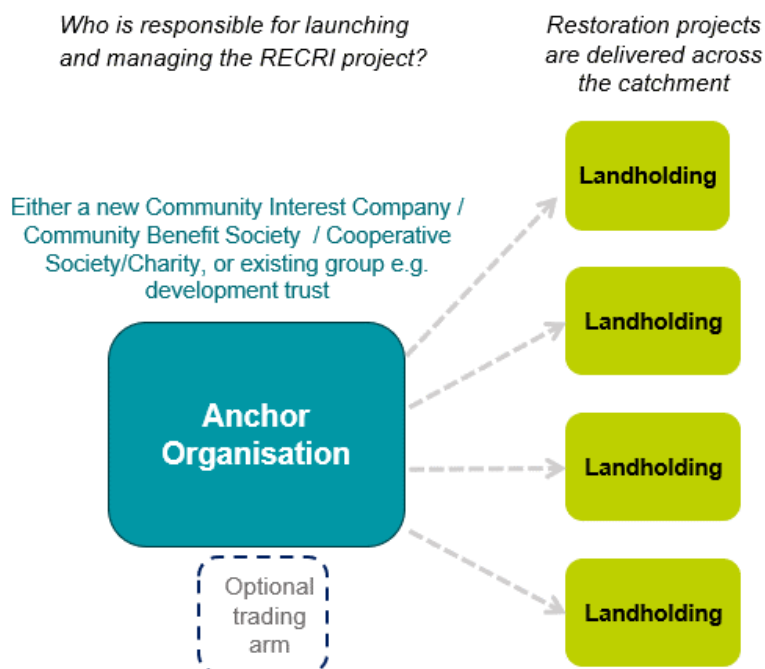
The anchor organisation may wish/need to set up a separate commercial trading arm to sign contracts e.g. local E-charity sets up an SPV to make trades

#### Potential pros:

- Complete oversight of the project and assurance that the restoration vision is delivered in a way that benefits all stakeholders, including non-landowners, fairly.
- Any and all agreed financial and reputational rewards are returned to the project parties.

#### Potential cons:

- The Non-Executive and Executive delivery team requires a broad range of expertise and significant time capacity to deliver/coordinate an aggregation project at scale, including the ability to negotiate and contract project partners and funders.
- Some corporations such as charities and charitable trusts are not able to receive equity investment, so an SPV would need to be set up alongside the anchor organisation
- Taking on total delivery responsibility of the project brings with it significant financial and reputational risks / liabilities which must be managed by the delivery team.



## 2. Local anchor organisation and specialist project developer joint delivery

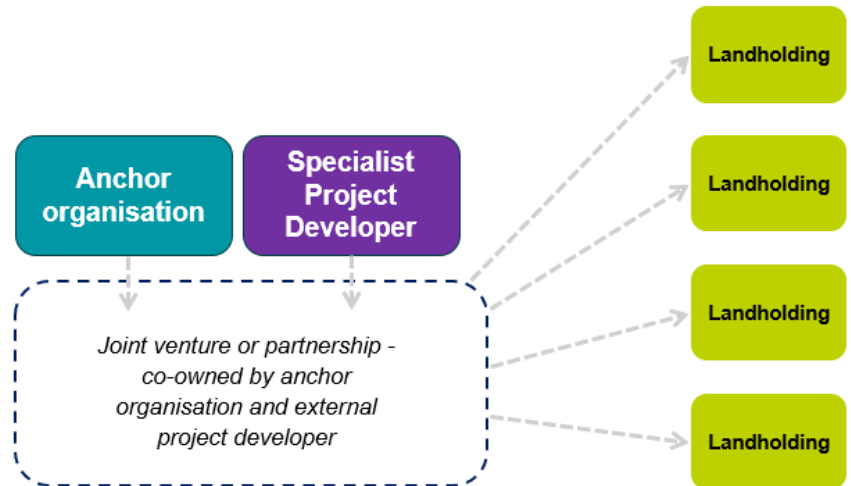
The delivery team consists of Non-Executive and Executive members from the anchor organisation and a specialist Project Developer organisation with nature finance expertise, working in partnership to design and deliver this multi-generational project.

### Potential pros:

- Project financial, delivery and reputational risks are shared between the organisations within the delivery team.
- Capabilities and capacity is more likely to be held in-house by the partner organisations, and equity investment can be viable via the project developer.
- Local organisation can directly ensure the project aligns with their set of standards e.g. community benefit sharing.
- Financial rewards such as upside of carbon revenue can be shared between the member organisations.

### Potential cons:

- The local anchor organisation will still require a high to moderate degree of capacity to take on new full time roles in launching and delivering the project and its legal entity.
- The anchor organisation will also need to be comfortable with the level of shared risk that this arrangement brings.
- Project developer will require a financial return (likely as a commercial fee rate) – meaning that a lower amount of profit will be distributed to local stakeholders.

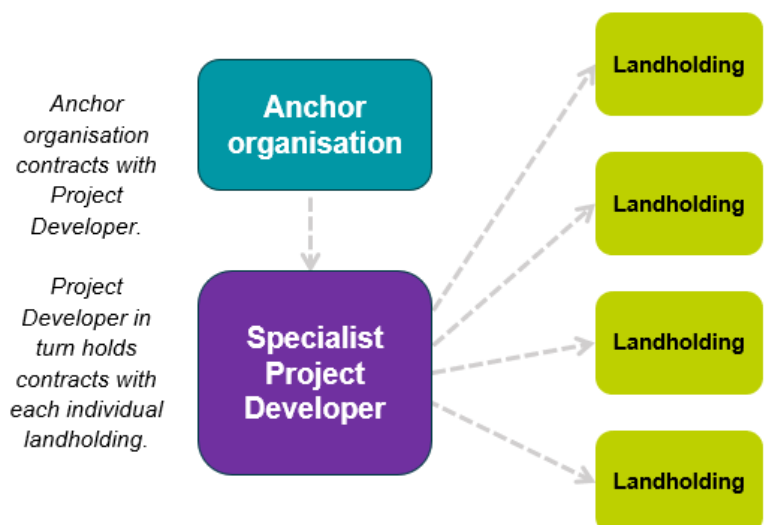


## 3. Local anchor organisation takes advisory role

The specialist project developer is contracted as the delivery team on behalf of the anchor organisation. The developer is overseen by a governance board made up of the local stakeholders who agree on design and decision-making processes for the project.

### Potential Pros:

- Project developer holds all commercial risks and liabilities; Mother Ship remains insulated from risk while maintaining an oversight role
- They can still ensure high quality delivery in line with their standards via their vision, values and governance ethos e.g. co-operative approach
- Unlikely to require capabilities not held by local stakeholders, and requires less time capacity for involvement.



- Offers flexibility to the anchor organisation in changing developer service providers if the provider does not meet the needs or standards of the local organisation. Also allows the anchor organisation to transition to leading the project's delivery once sufficient in-house capabilities and capacity have been built.

**Potential Cons:**

- Project developer will require a financial return (likely as a commercial fee rate) – meaning that a lower amount of profit will be distributed to local stakeholders

**Preferred option**

The RECRI steering group has agreed that the long-term goal for RECRI is to manage the project via a local anchor organisation (option 1) that represents all the communities of interest and place in the catchment. This option gives the most flexibility and ownership to local people. However, currently, there is no local anchor organisation that has the capacity and breadth of capabilities required to launch this scale of a project. This would necessitate the setting up of a new anchor organisation.

This new anchor organisation would then subcontract a specialist project developer to support in delivering the project in the early years (option 3). During this period, the anchor organisation could work to build inhouse capability, ensuring opportunities for upskilling the local community are part of the project's design. This arrangement also has the benefit of demonstrating to prospective funders that the project is being run by a suitably qualified team with a track record of similar project delivery; something that will be sought as assurance by large scale funders (namely investors).

## 6.2 Role of communities of interest and place

We have proposed four main input points for communities of interest and place who are not landowners involved in the project. Local community members could be engaged to:

### 1. Form part of the delivery team/advisory board (depending on chosen project delivery structure)



- This project will require a dedicated delivery team to launch and manage the project across multiple decades. Community members could be given the opportunity to form part of this delivery team or be on the governing board that advises the long term delivery team.

### 2. Co-design a long term vision for nature restoration across the landscape



- The project's delivery team will carry out a community engagement consultation near the start of the project to collectively build a shared vision for the landscape.
- This includes preference on woodland type, distribution of enhanced habitats and priority interventions, and will be complemented by mapping work that identifies what is ecologically feasible.

### 3. Co-design elements of the benefit sharing agreement with the project



- The project will ask the local community groups to co-design a benefit sharing agreement that works for the community.
- This includes how the allocated community fund is spent, timings for sharing the payments (e.g. in one lumpsum, or in staggered payments) and bespoke social benefits such as local employment opportunities and apprenticeships.

### 4. On-going monitoring of the values/ethos/quality over the long term



- The project could encourage feedback and quality monitoring from the community via a dedicated governance mechanism.
- This needs to be designed but could look like public involvement in MRV, a dedicated website and telephone line, periodic online surveys, and reporting to community on project progress and key milestones.

## 6.3 Funding model

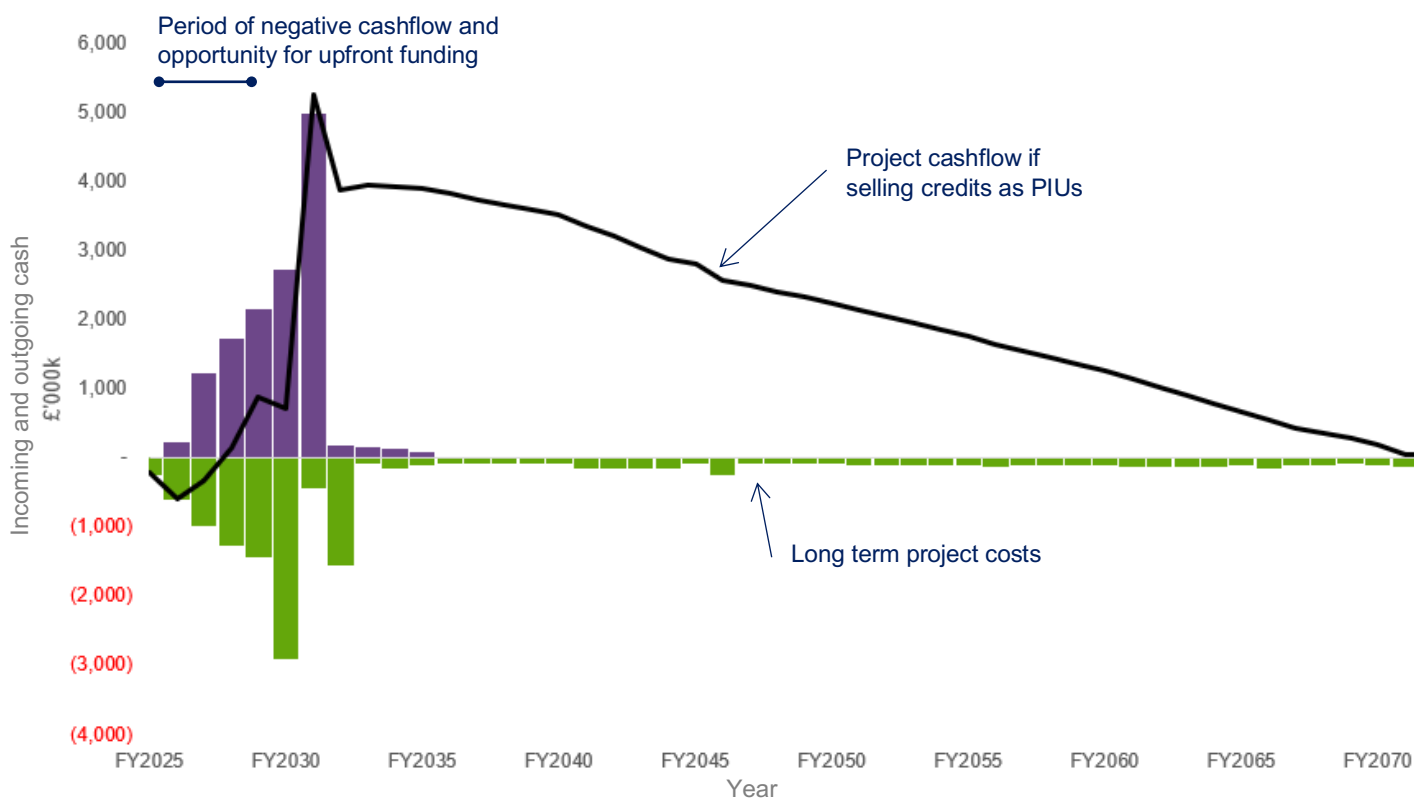
### Project cashflow before upfront funding

If the project were to sell all anticipated credits (circa 140,000tCO<sub>2</sub>e) at the estimated cost rate (£62/credit), all project lifetime costs of the project could be covered when combined with available public funding.

However, project cashflow remains a challenge without securing upfront funding; there is an initial period of time before credits can be sold by the project. If the project were to sell credits as confirmed and verified Woodland Carbon Units, this period of time is over 15 years (the woodland must achieve enough growth to equalise any lost emissions during planting works). If the project were instead to sell credits as soon as they are validated, this period of time still remains at ~4 years.

This initial period of negative cashflow accounts for costs in designing and launching the project structure, developing contracts and negotiating with funders and landowners, carrying out community consultation and vision creation work and initial woodland site design and creation works.

**Below is the anticipated project cashflow if instead the credits were sold following initial validation as Pending Issuance Units.**





### The choice of funder

The RECRI project will generate income to fund the project by selling ecosystem services, initially in the form of woodland carbon credits. There is, however, an initial gap in funding before carbon credits can be sold (pre the woodland project audit: validation). Activities such as landowner engagement and contracting, detailed project design and woodland creation works all require upfront funding.

This period can be covered by capital from a private funder:

- Either an equity investor who will cover project costs in return for a return on their investment (project sells credits on open market and this revenue is used to repay investor)
- Or, by seeking a buyer who will fund capex costs in return for the carbon credits delivered by the project.

We have assessed the pros and cons of opting for each of the above funding approaches with regard to the goals and ethos of this community-led RECRI project.

	Investor model 	Buyer model 
<b>How it could work</b>	An equity investor covers the upfront costs and receives a return on their investment and dividends from credit sales by the project.	A credit buyer funds the design and delivery of the project in return for credits that the project generates, at an agreed fixed price.
<b>Pros</b>	<ul style="list-style-type: none"> <li>Risks can be shared with the investor reducing the liability held by the project delivery team.</li> <li>Allows the project to sell carbon credits later in the project lifetime once they are verified. These verified credits can be sold for a higher value than unverified credits.</li> <li>Can share profits of rising carbon market prices with the project participants.</li> </ul>	<ul style="list-style-type: none"> <li>One primary funder to engage with and therefore likely to have a simplified contracting, admin and legal process when compared with investor model</li> <li>Guaranteed sale of credits that can be used to cover long term project costs and reassure landowners making the project appear more attractive</li> <li>Partnering with a local buyer could form part of a strong project story and help with attracting landowners</li> </ul>
<b>Cons</b>	<ul style="list-style-type: none"> <li>The investor would majority own the project – with implications for governance</li> <li>Equity investor would receive the majority of the profit share to make the project worthwhile for them</li> <li>Requires set up of a dedicated legal entity to work with an investor e.g. an SPV</li> <li>It may be challenging to design a project that is financially attractive enough to an investor; investors will be seeking a minimum returns.</li> <li>This model still requires negotiations and contracting with credit buyers; this could lead to higher project management costs.</li> <li>This funding approach is unlikely to work with the anchor-led project structure, at least in the first years</li> </ul>	<ul style="list-style-type: none"> <li>The project delivery team / founding organisations will still own the project</li> <li>A specialist legal entity may not need to be set up if working with a buyer, reducing administrative work and legal support</li> <li>Credit price will be determined by how expensive the project is – the cost of the credits may be too high to attract buyers</li> <li>Could lose out on the upside of future carbon market increases</li> <li>Unfamiliar arrangement for buyers and therefore negotiations may be more drawn out and at a higher risk of failure</li> <li>Liability lies with the project to convert the promise of credits (PIUs) into verified credits (WCUs) – this is a significant liability for the project. Reduced liability would need to be negotiated with buyer</li> </ul>

### Preferred option

The agreed preference of the Steering Group is towards a pre-paying buyer supporting the project to cover initial costs. This approach enables the team to potentially work with a local large scale buyer who could support the project in building a community focused brand (e.g. University of Dundee). This option also means the project will continue to be majority owned by the local anchor organisation, unlike with an equity investor arrangement. Initial collaboration with a large scale buyer is also more supportive of a project structure that is led by the anchor organisation and gives the delivery team the flexibility to opt to work with a specialist project developer or not.

### Critique

As part of this project we set out to sign an initial agreement with a funder; we have not yet been able to do this. Landscape scale nature restoration projects require a specific style of funder to work; one that is willing to work together in designing an innovative project structure and financial arrangement that works for all parties, that is patient for project returns and is willing to fairly share the risks and rewards that result from the project.



We have focused much of our outreach efforts on the University of Dundee considering how well aligned the project is with the university. However, signing an agreement with the university has not yet been possible in the current timescales. Though conversations with the university have been positive, until we reach a signed agreement, this source of funding is not confirmed. We will therefore keep the door open to other large scale buyers.

Without a funder agreement to back the project, though a group of landowners are interested in contributing restoration sites to this RECRI project in principal, without a clear offer for participation, they were unable and or uninterested to make any further commitment for the time being. An important next step for this project will be to continue the search and negotiations with a prospective large scale local buyer who meets the criteria set out in this phase of work.

# Milestone 7 Finalising a Delivery Plan

## 7.1 Detailed costed workplan

It has not been appropriate to produce a costed workplan for the delivery phase at this stage of the project as this requires both a draft funder arrangement and project landowners onboarded. We have instead laid out the key elements and indicative timeline that would be expected to deliver this scale woodland expansion proposal in the catchment.

### Design and Planning – 1-2 years



- **At the project level, this involves:** Launching the project entity including setting up accounts, project management systems and any legal registration, deploying funding to delivery partners, contracting specialist subcontractors such as woodland creation contractors, and agreeing the ecological vision for delivery with the catchment's communities of interest and places.
- **At the site level this involves:** Woodland design and planning, survey work, consultation with relevant stakeholders, regulatory approval, and grant applications.

### Woodland creation – staggered over five years from the end of the design and planning phase



- **At the project level, this phase involves:** Woodland Carbon Code registration and validation, payments to landowners and subcontractors (or as if agreed with the parties), general admin and project management tasks, and reporting to stakeholders, namely the community groups and funder(s).
- **At a site level this will include:** Contractor management, woodland creation works, deer and beaver management, and early maintenance activities including restocking and weeding of the new woodland.

### Long term management – 40 years of woodland growth per planting/creation year



- **Project level activities include:** Project admin and cashflow management, reporting to funder(s) and community groups, on-going Woodland Carbon Code audits and ecosystem service transfers to buyers (depending on funding arrangement). Engaging with and managing any opportunities for onboarding new landowners or accessing new ecosystem service markets.
- **At a site level, this includes:** Woodland management activities including annual deer control, fence repairs, oversight of woodland growth and reporting of any issues.

## 7.2 Immediate next steps

We have developed a delivery plan detailing where this project needs to go next to bridge the gap between this funded design phase of work and launching the RECRI project into delivery. This is the subject of a Stage 2 bid to the Esmee Fairbairn Foundation.

### The next steps proposed for this project are:

- **Workstream 1:** Finalising option for delivery structure, including governance values, ethos & approach, legal structure, benefit sharing, MRV, partnership development, non-exec and exec role briefs, costs and recruitment strategy
- **Workstream 2:** Deepening engagement with & participation from the catchment's human communities of interest & place to finalise River Erich Catchment Restoration Vision

- **Workstream 3:** Securing formal participation of landowners in the catchment and confirming woodland creation & peatland restoration project pipeline & priority projects for wild fish regeneration
- **Workstream 4:** Securing initial round of blended finance sources, signing up front investors, identifying buyers of ecosystem services and public and philanthropic funding streams
- **Workstream 5:** Investigating opportunity to scale the delivery structure into a Bioregion-wide nature restoration aggregation platform

## Progress Summary on Outcomes and Principal Learnings

### Summary of progress on outcomes

The brief for this first stage of work was to develop a community-led, investment ready project with three core outcomes. A summary of the progress on each of these outcomes achieved to date is presented below.

#### Outcome 1: A funded plan for the restoration of habitats across the catchment

*Indicator:* Landowners commit to an ambitious plan to restore habitats in the Ericht.

##### What we have been successful with

- We have designed and costed a plan for expanding 600 hectares of native woodland in the catchment. This has been developed with catchment landowners and representatives of the community and is a project blueprint that can be further developed with interested landowners. The new woodland will provide many environmental benefits to the catchment including carbon storage, increasing the connectivity and resilience of existing woodland habitat, reducing catchment flood risks and improving river conditions for aquatic life.

##### What has not gone to plan

- We have not yet had formal commitment from landowners for participation in the project but have registered interest from at least 15 landowners who are keen to continue the conversation. It has not been appropriate to sign formal agreements with the landowners in the timeframe of this project for a couple reasons, namely as the project's ecological design and architecture only began taking shape in the final months of the contract and will need to continue to be refined, particularly around the complex question of how the community is involved. Additionally, discussions with funders, namely University of Dundee, are ongoing and without a funder onboard, it is difficult to make a clear offer to landowners for participation.

#### Outcome 2: The future of Atlantic salmon in the Ericht is more secure.

*Indicator:* A funded work programme addresses threats to salmon including a lack of river shading, poor water quality and artificial barriers to migration

##### What we have been successful with

- We have engaged with local wild fish communities of interest in the catchment
- Our focus on finding a route to repairing the Lade Gates at the Brig 'o' Blair has enabled us to make progress on ownership and maintenance issues and the detailed design of a repair solution and we have established a possible public funding route that could pay for the cost of these repairs
- We have identified the potential for riparian woodland creation in the catchment which would assist with regulating water temperature and begun conversations with some riparian landowners

##### What has not gone to plan

- We have not been able to successfully engage with the TRT or TDSF
- We have not been able to advance conversations with three estates with the potential for riparian planting in the north east of the catchment because TRT and TDSFB have stated they are already in conversation with them for their own riparian projects

### **Outcome3: Communities benefit from the work of the Initiative.**

*Indicator:* A project structure involves local communities in its ownership and governance and is designed to catalyse investment from community groups and individual community members.

#### **What we have been successful with**

- We have proposed a project structure that has a local anchor organisation at this core and enables the sharing of benefits and responsibilities amongst the project participants including the local communities of interest and place. Benefit sharing with the community and landowners is more likely to take the form of direct payments and risk free royalties as opposed to investment opportunities due to the risk associated with personal investment.

#### **What has not gone to plan**

- We have adjusted our proposal for how the communities will benefit from the Initiative away from a preference of community investor capital and towards a lower risk alternative of royalty payments and a lower requirement of community time and responsibility. We think this is more suitable in terms of risk, capacity and capability, at least in the first years of the project.

## **Principle Learnings**

### **For the RECRI project team**

- **Investing enough time in building good relationships** between different communities of interest and place in the catchment are key to building trust and moving forward at pace and scale. Unsurprisingly, for example, those landowners with whom the project team had prior relationships were quicker to respond to requests for meetings about the project than those with whom there was no prior relationship. Resource - both human and financial - in this relationship building and development work, not just with landowners but with other communities of interest and place in the catchment, needs increasing in the future stages of RECRI and in ways that are equitable with other expertise needed for landscape scale nature restoration and consistent and viable over the long term.
- **Evolving governance structures that are fit for purpose for multigenerational ecosystem stewardship will be key to the success of landscape scale nature restoration projects.** Governance includes all the structures and processes undertaken across an organisation or initiative that support and enable people to work together towards shared or aligned outcomes. In landscape scale nature restoration projects, there will inevitably be contested views and a need to build on opportunities that emerge from negotiated agreements and shared visions across a wide range of interests. RECRI's engagement in ETH Zurich's Strategy Game methodology and broader conversations Bioregioning Tayside is part of on so called 'Adaptive Governance'<sup>19</sup> has enabled the Steering Group to gain valuable insight and learning into this and the next stage of the project will aim to design an approach to Adaptive Governance that can be trialled, ready for the delivery stage.
- **Transparency, accountability and legitimacy will need to be carefully woven into the final delivery structure model** for RECRI. This early design phase was relatively tension free. As a project pipeline is developed and revenues start to flow, ensuring open-ness will help build confidence in the project and consolidate support and engagement from the different communities of interest and place. Enabling local people to get involved in collecting data for the Monitoring, Reporting and Verification (MRV) system via a high quality participatory science programme for example.

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<sup>19</sup> **Adaptive governance** is about connecting actors and institutions at multiple scales to enable ecosystem stewardship in the face of uncertainty and surprise. It is collaborative, flexible and learning based and it is key to addressing complex interactions and to managing uncertainty and periods of change.

- **Co-benefits from a project of this nature can manifest quite quickly.** Whilst the focus of RECRI is about bringing blended finance into nature restoration, the act of strengthening and consolidating relationships through the project helped enable other conversations about other congruent projects to emerge. One example of this arose in the Mount Blair region where through the engagement with one particular landowner, the opportunity presented itself for Mount Blair Community Development Trust to support a modest but not insignificant river restoration/riparian planting/habitat restoration project in the north of the catchment by being the conduit through which the final piece of funding was secured. Work on this project is just underway at the time of writing and a community engagement plan is in progress which will help stimulate the conversation around the same issues RECRI aimed to support.

### Community Leadership, involvement and benefits

- Whilst all but two of the RECRI Steering Group members and both project managers came from communities of interest and place in the catchment and good progress has been made on engaging local landowners and introducing the project to local people, much needs to be done in the next stages to extend, improve and embed our engagement processes.
- In the last 12 months, work by Scottish Government, Scottish Land Commission, the Community Benefits Standard and other major nature restoration projects has created a set of principles, roadmaps and best practice which RECRI can build from, as long as appropriate human and financial resources are available. Compensating people for sharing their expertise and giving their time (as RECRI did for the Steering Group in this first stage) will need to be appropriately budgeted and locally contracted day rates need to be equitable with the wider nature restoration field.
- A much more comprehensive and fully resourced programme of informing, consulting and involving has been designed for the next stage of RECRI, which will utilise local knowledge, address power dynamics and co-identify specific community benefits that can then be designed into a comprehensive, long-lasting and deliverable restoration vision. This will include involving local communities the governance of the delivery structure and detailing the opportunities for communities to benefit financially from the project. (see Milestone 6).

### The natural capital markets are complex and contested

- **The markets are not a subject most people in the different communities of interest and place are familiar with.** The executive team from the landscape and all but two of our Steering Group were on a steep learning curve on nature restoration and the natural capital field throughout this first phase. Significant time was spent on background reading and attending online and offline meetings in order to learn further.
- Steering Group members who participated in the early stage development of the Community Benefits Standard found the language and framing unhelpful and obfuscating:
- “There is a basic need to explain what all this is about in non technical language – even the question above will leave most in the dark. The background section at the start will lose most with the project name *Community Benefits Certification Plug-In Project*. This is virtually impenetrable for most non engaged people.”
- The community consultation sessions undertaken in Kirkmichael were mainly attended by residents with no specialist knowledge of the issues RECRI seeks to address. Common to many conversations at these events were concerns about ‘greenwashing’ and whether and if so how the project would avoid this. The specific link to the local river system, and the health of the Salmon, was key in turning these conversations around and this was instrumental in placing a clear line between RECRI and the greenwashing stories they might hear or read about.
- In future stages, simple effective communications that help people to ‘see the system’, recognise different world views, priorities, capacities to engage and prejudices and ensure quality information flow throughout ‘the system’ need to be designed and appropriately resourced.

### There is only so much one project, even a sizeable one such as RECRI, can achieve given the bigger system changes that are needed for nature restoration to accelerate in Scotland.

- RECRI sits in a much bigger Social-Ecological System (SES) where very old, very entrenched power dynamics – especially around land ownership and land use, governance approaches that enable the persistence of those power dynamics and a policy landscape that remains sub-optimal are hampering change at pace and scale.
- “Large-scale restoration projects are normally part of a complex social–ecological system where restoration goals are shaped by governmental policies, managed by the surrounding governance system, and implemented by the related actors. The process of efficiently restoring degraded ecosystems is, therefore, not only based on

restoring ecological structure and functions but also relies on the functionality of the related policies, the relevant stakeholder groups, and the surrounding socioeconomic and political settings.”<sup>20</sup>

- Modelling new governance structures, as RECRI aims to do in the next stages of its work is an important contribution to the systems change required, especially if it can join up with other nature restoration projects with similar ambitions in the Tay Bioregion and indeed wider Scotland.
- “When a complex system is far from equilibrium, small islands of coherence in a sea of chaos have the capacity to shift the entire system to a higher order.” Ilya Prigogine

## For the Nature Restoration field in Scotland

### Skills Development

- Whilst the project team and Steering Group for this first stage of RECRI was able to access the necessary expertise in natural capital to undertake the work, nature-based projects across Scotland are being hampered by limited capacity and skills for project design and delivery at both the executive and non-executive levels. Certainly the talent pool in Tayside outside of existing commercial land agents is very small. Developing a best practice recruitment process in the next stage, including how local people could be supported to develop the skill sets required, will be a high priority, especially given the aspiration to advance ‘Adaptive Governance’.

### Replicability and Scaling potential

- The number of nature restoration projects has increased in Tayside over the duration of this first stage of RECRI and there is now growing interest from both project developers and potential investors and buyers in considering a larger aggregation platform that could support a diversity of projects and attract a range of blended finance. This would enable scale and administrative efficiencies whilst ensuring that individual project were able to maintain their integrity and identity. This will be investigated further in the next stage of RECRI.

### Policy Environment

- NatureScot and Scottish Government have issued supportive statements<sup>21</sup> regarding the potential role that private finance can play in scaling up nature restoration projects such as RECRI, if investment is guided by a robust ethical framework. HRMC has also issued useful clarifications<sup>22</sup> on the eligibility of landowners to benefit from the same tax reliefs as applied to agriculture when hosting nature projects. However, continued uncertainty over the future of agricultural subsidy payments in Scotland – particularly the Least Favoured Area Support Scheme (LFASS) remains a major barrier to decision making.

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<sup>20</sup> <https://orca.cardiff.ac.uk/id/eprint/48661/1/Petursdottir%20Baker%20et%20al%20Ecology%26Society%202013.pdf>

<sup>21</sup> <https://www.gov.scot/publications/interim-principles-for-responsible-investment-in-natural-capital/>

<sup>22</sup> <https://www.gov.uk/hmrc-internal-manuals/inheritance-tax-manual/ihm25253>