



Aggregation and Investment for Nature

A report

for

Environment Agency

from



Supported by:

**Apella Advisors / Mott MacDonald
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Aggregation and Investment for Nature

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From: North Star Transition
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We thank you for giving us the opportunity to support the Environment Agency in growing your understanding of the financial models and governance tools that could be employed to connect buyers and sellers in landscape transformations.

In this report, you will find:

- A summary of the aims of the project, to:
 - Establish, in parallel to landscape interventions, a series of finance industry actions that are needed to get financial institutions comfortable with investing at scale in landscape interventions
 - Review some of the leading examples of landscape-scale aggregation and investment examples, set out in prior work
 - Engage in a 'product development' process with potential customers/investors
- A description of the process we used to engage with financial institutions
- The takeaways and learnings we acquired through our engagement process with investors
- Our proposed next steps for continued development of this work

I hope you find this a useful summary of the work we have carried out, and the discussions we have already updated you on.

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We were supported in our work by UCL's Climate Action Unit, led by Kris de Meyer.

If you have any queries, please contact us.

Yours sincerely,

Jyoti Banerjee

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1. Executive summary

There is an urgent need for large-scale funding of nature-based solutions across many landscapes if the UK is to achieve net zero, environmental, social and health transformations. At present, investment is largely piecemeal, tends to be project-based and scattered rather than place-based and connected and therefore the scope for the systemic change needed is limited.

This report reflects the views of financial sector participants, when asked what they need in order to invest in nature-based solutions, at scale, across a landscape.

We started with two key questions: what do investors want and what do the assets they will invest in look like? We approached this project by asking financial institutions these questions directly, through bilateral conversations and via a facilitated workshop. We believe large-scale landscape funding has a greater chance of success if financial institutions co-create the funding instruments needed.

Our dialogue revealed preferences around revenue streams, costs, risks, financial and operational structure and appropriate governance:

- **Revenues, Costs and Risks:** These are the core considerations for investment committees around which clarity is essential. Four revenue streams were identified; carbon and biodiversity credits, payments for renewable energy, value add from flood management and improved resilience through regenerative agriculture. The risks – from governance to operations - were multiple and some are known, while others are unknown, some are quantifiable and others unquantifiable.
- **Financial Structure:** We tested three models with participants; project finance based, counterparty based or a platform driven hybrid. We summarise the pros and cons of each.
- **Organisational Structure and Governance:** Our dialogue revealed a tension between the need for a well-known entity with a strong credit rating, possibly with equity involvement, to stand behind any project, and the importance of a place-based organisation with strong local ties and a focus on social impact and the public good. The report proposes ideas to resolve those tensions.

The ideas discussed were well received, with general support for a number of foundational principles:

- the overall vision
- the general risk-sharing structure
- the landscape scale
- the ticket size (e.g. minimum investment at a scale suitable for institutional investors)
- the community involvement
- the collaborative approach with other organisations already in the area
- the visual presentation; constructing a 'straw man' to draw feedback worked well as a way to engage finance professionals.

This work has established that high-quality, well-structured projects, which address aspects across finance and a fair sharing of the benefits of the monetisation with local communities, are credible tools for investment. However, further work needs to be done to make a landscape-scale transformation into an investable proposition.

Using the intelligence gained from the dialogue, the next step is to address the issues raised through this initial engagement. The process should involve co-production with potential investors with the overall goal to develop an investment structure or vehicle, which can be deployed across a landscape and then replicated across other landscapes.

It is clear that there is an appetite within mainstream financial institutions to participate in the *development* of the tools and products needed to enable landscape transformation. This is an opportunity not to be missed, since financial institutions are rather more likely to regard as credible the initiatives they have co-developed. Such an “outside-in” innovation process contrasts with the “inside-out” process that is at the heart of many existing landscape finance initiatives.

The clear recommendation from North Star Transition is to continue the co-development process for landscape finance with those institutions that have already chosen to engage with the initiative, and to continue to draw in new participants from across the mainstream of financial institutions.

2. Project Introduction

There is a disconnect between place / environment and the financial sector. And that disconnect is hampering the flow of the large-scale funding that is vital if our economy is to transition to Net Zero.

This disconnect is apparent in multiple ways. There are huge gaps in:

- understanding (bankers don't know what makes a healthy soil or how long that takes, farmers don't know which deals will pass an investment committee)
- trust (farmers don't trust bankers, bankers only know farmers through the media caricatures)
- incentives (most financial institutions have a very short-term outlook due to quarterly results and pressure to increase share prices, many landscape interventions take decades to be impactful)
- communication (each have jargon the other side doesn't understand)

It is relatively easy to accuse each side of being one-dimensional in their thinking. A common response to the perceived need to create a return from environmental actions is to set up a market or platform to monetise ecosystem services. This may work for someone wishing to *buy* ecosystem services but does not help those wishing to *invest* in landscape transformation, who may have rather more sophisticated needs for balancing returns, time horizons and risk profiles.

Another example of one-dimensional thinking is the widespread belief in the efficacy of a Community Interest Company (CIC). A CIC is an excellent vehicle for helping ensure that the local community owns the benefits of the actions being carried out. However, a CIC is relatively difficult to scale up for large financings as it is unlikely to be able to achieve the combination of governance, alignment of interests and credit rating that institutional investors will require.

The finance side of the equation is just as likely to be one-dimensional in its thinking: the focus on buying failing farms for planting trees to achieve net zero completely misses the negative social impacts of breaking up rural communities, the environmental problems caused by monoculture forests, or the food security challenges of losing our farms.

The Environment Agency recognises this disconnect and seeks to investigate how to overcome it and catalyse large-scale investment in nature-based solutions.

The Approach

We summarised the EA's ask in the Aggregation and Investment RFQ thus:

- What are different models for aggregating the supply and demand of ecosystem services at the landscape scale? How can we best bring together buyers and sellers across multiple objectives and multiple sectors?
- What are the benefits and trade-offs of these different ways of bringing people together?
- How do the aggregation and investment models explored in the first point fit with governance structures, and how best to manage risks, liabilities, and equity between actors?

In response, North Star Transition proposed a project approach that carries out the following actions at the start of the project:

1. Review the different aggregation arrangements and governance proposals set out in the prior work carried out by Eunomia, 3Keel's LENS and the various platform finance initiatives that have emerged;
2. Use our review to shape and inform an *engagement* with representatives from a variety of financial institutions to get their take on what works, what doesn't work, and where the challenges, obstacles and hurdles arise that prevent large-scale financing to be unlocked.

We start from an understanding that there are, broadly, three groups in play:

- Sellers of ecosystem services (e.g. farmers who improve soil and practice regenerative methods that capture carbon and increase biodiversity, and firms that sell renewable energy or put in place natural flood management).
- Buyers of ecosystem services (e.g. corporates looking to offset their emissions or wanting to inset by improving their supply chains / procurement, utilities such as water companies who will pay for cleaner water, and insurance companies who want to reduce the risk of flood payouts. There is also the public good of improved food security, reduced risk of drought, better energy security, etc.).
- Funders of ecosystem services (e.g. pension funds, asset managers, banks, private equity, venture capitalists [see Appendix for glossary]). This group may also be buyers of ecosystem services of a sort, in that part of their motivation to fund nature-based solutions may be to earn a return, but part may be for reputational uplift, regulatory compliance or a need to offset high emitting investments elsewhere on the balance sheet.

For the purposes of this project, we have focused on the first and last set of stakeholders; sellers of ecosystem services and funders of those services. We implicitly address the middle set – buyers of ecosystem services – by making informed assumptions about their appetite to pay for such services and so generate a return for funders.

This report begins with a review of aggregation methods and proposals to date. It focuses on the work done by Eunomia, in collaboration with the Environment Agency, the Landscape Enterprise Network (LENS) developed by 3KEEL and Finance Earth's work on mobilising private investment in natural capital, commissioned by the Scottish government.

Our aim is to build on this valuable work by establishing - in parallel to the 'landscape interventions' - a set of 'finance industry interventions' or action items, which would shape the necessary cash flow patterns, risk/return profiles and governance structures, among other things, that would enable institutions to commit large sums to landscape transformation.

We go on to outline the process we deployed for this project; our stakeholder selection and engagement and the investment proposition we designed and invited financial participants to critique.

The main body of the report describes the findings and learnings from our dialogue with financial participants. We divide this section into four broad groups:

- Views on the **revenues, costs and risk** thresholds that participants would need to see met in order to make a landscape finance proposition viable;
- A discussion of the **financial structure** most likely to gain traction with financial institutions;
- The **organisational structure and the governance** needed to meet internal and external regulatory thresholds; and
- Other issues of significance such as complexity versus simplicity and the appropriate scale of any fundraising.

The report concludes with suggestions for next steps.

3. Review of work to date

Aggregation methods and proposals

To be clear, North Star Transition and its partners are not the first to explore or develop aggregation arrangements, nor will we be the last. There is much to learn from the ideas developed to-date on the environmental side of the finance-environment interface, from market models that connect buyers and sellers, to governance implications of such models, their successes, and gaps and limitations in attracting large-scale finance.

Eunomia's "Governance of Blended Finance", written with the support of the Environment Agency, dived deep into the reality of governing nature-based solutions. The report lays out the dynamic and complex nature of the undertaking: it takes time, requires learning by doing in an idiosyncratic way, it is driven by relevant partnerships and funding streams, and requires adequate information and engagement of stakeholders throughout. The report helpfully lays out key questions to guide through decisions. Overall, it is an excellent review of the experience and learnings to date.

Landscape Enterprise Networks (LENs) was developed by consultancy 3KEEL as a system for organising the buying and selling of nature-based solutions. LENs creates local trading networks where buyers with a common interest in nature-based solutions are linked up and matched with groups of land managers who can deliver measurable outcomes. LENs is particularly interesting because the approach is being applied in several regions of the UK and Europe. It involves large corporate partners such as Nestle, Cargill or Diageo alongside farmers. LENs has also developed a financing solution with 0% loans from impact bank Triodos in the Lake District. There will be much to learn as the model expands to Wales and other locations, including whether and how institutional investors and lenders can get involved at market rate solutions and scales.

Equally of interest, Finance Earth's "Mobilising Private Investment in Natural Capital" was commissioned by the Scottish Government, in partnership with NatureScot, to explore how voluntary carbon markets can be harnessed to accelerate the delivery of high-integrity peatland restoration across Scotland. The report explores the opportunity to leverage voluntary carbon markets to restore the UK's severely depleted natural capital stocks. The report finds strong evidence to support the launch of a Scotland Carbon Fund as a project finance vehicle to restore Scotland's peatlands. The report also backs a Price Floor Guarantee mechanism to decrease the downside risk of project developers. This approach is valuable for our purposes because it has taken the specific steps of engaging with institutional financiers to assert the benefits and drawbacks of different financing models. From that perspective, it offers a realistic pathway to scaled finance solutions.

We have also identified a number of other interesting models on landscape-related questions.

Green Finance Institute has created a helpful Investment Readiness [Toolkit](#). It guides project developers interested in the creation or restoration of habitat, from scoping to contracting with financiers and stakeholders, with a focus on community engagement and regulatory context.

Meanwhile, consultancy CEPA and infrastructure firm Agilia have teamed up to propose "solutions to developing a commercial and legal model for multi-sector reservoir systems", commissioned by several water companies. The extensive report looked at solving the key challenge of enabling third-party financing of large-scale infrastructure projects like reservoir developments, which rely on funding from a wide range of large and small stakeholders, and considered how such models can be adapted to maximise carbon and

biodiversity benefits. The report is insightful in exploring several use cases for such reservoir systems (public water storage, irrigation, energy, flood storage, etc.), each presenting its own set of risks and opportunities. It also points to the idiosyncratic nature of such structures and their funding opportunities.

At the request of Anglian Water, building on the work of CEPA & Agilia, Mott MacDonald and North Star Transition assessed funding arrangements for large scale landscape transformation when undertaken in conjunction with major infrastructure development. Our work assessed the potential of landscape investments of around £900M alongside investment of £4bn in two reservoirs in the East of England. The significance of this work is that it provides a practical example of the assessment of landscape investments at scale. The work is [summarised](#) as part of the submission to the regulator OFWAT for the development of the reservoirs.

Thinking behind the North Star Transition process

In our view, the end goal with the Aggregation and Investment for Nature project is to oversee the execution of a series of actions that collectively rehabilitate a landscape, while balancing economic, environmental and social or community needs, including health impacts. In our view, landscape transformation is much wider and deeper than just environmental actions.

The prior studies referenced above have surfaced various landscape-centric interventions, and the actions that may be taken by potential investors and lenders. However, the lack of deal flow at the level of hundreds of millions of pounds (and more) tells us that more work needs to be done on the finance end to attract large-scale capital flows, and thereby fund or enable the landscape-specific interventions that have been identified as helpful.

The aim of this project was therefore to establish - in parallel to the 'landscape interventions' - a set of 'finance industry interventions' or action items, which would shape the necessary cash flow patterns (outflows in terms of costs vs inflows of income for repayment/returns), risk/return profiles, fund structures/entities, transaction terms and conditions, due diligence and monitoring processes, and other items, to enable financial institutions to get comfortable with and thus commit large sums to landscape transformation activities.

We proposed that these 'finance industry interventions' should be identified or co-created by a select group of empowered individuals at relevant financial institutions, with the idea that these institutions could eventually also invest in the products.

In sum, the project we envisaged was to engage in a process of 'financial product development' in collaboration with the potential customers - the financial institutions - themselves.

In North Star Transition's view, involving the financial institutions was critical because of the pioneering nature of the process and desired product, which could at a later stage be replicated, at different scales; at the current early stages of development we need individuals who are invested in the process of product development and feel they can influence outcomes.

A common question with regard to large-scale financing of nature-based solutions is this: do we really need large-scale financing? After all, one of the benefits of nature-based solutions is that the costs are relatively lower compared to alternative methods, such as gray infrastructure. In our view, such a limited approach to nature-based solutions belies the systemic issues relating to landscape transformation. If we want to use nature-based solutions to, say, clean up a river, we are unlikely to achieve landscape transformation if we don't address (and resource solutions for) those systemic challenges that prevent rivers from being healthy.

For example, in the Wye and Usk landscapes, the causes of the ecological distress that the rivers are in are manifold: farm run-offs bringing chemicals into the river; slurry from poultry farms being dumped in the rivers, and the water companies feeding untreated sewage into the rivers. Nature-based solutions can be applied to each of these individual problems at the point where they are occurring – farms could, for example, use meadow margins to slow down the rate of soil loss into the rivers. But nature-based solutions would be rather more effective if we could also address the fundamental reasons that are putting chemicals on to our farms, in the first place. But addressing chemical farming would require a massive shift in how farming is done in the UK, given that less than 5% of UK farms don't use chemicals today.

Enabling this larger shift in the root causes of river pollution is rather more expensive than simply implementing nature-based solutions as a point approach to problem-solving. Raising the finance for this scale of transformation is no longer a matter of a few million in a landscape – it may well be hundreds of millions or billions that are needed to enable a systemic transformation.

4. Project process

In order to set the project in motion, we started the following activities:

- Constructed a set of issues to engage financial institutions on the subject of large-scale financing of landscape transformation actions – these discussions focused on the aggregation / investment gap when it comes to unlocking large-scale finance for landscape restoration;
- Identified participants within financial institutions who will want to engage with these issues, share their learnings, and bring their own issues to the table;
- Engaged with these finance sector participants on an individual basis;
- Ensured that we covered a variety of financial institutions: pension funds, insurance companies, asset managers, investment banks, environmental impact focused funds, etc.

4.1. Stakeholder identification

Drawing on this work, North Star Transition identified representatives from a range of over two dozen financial institutions. We chose a mix of institutions based on the size and volume of the assets managed by their institutions, and the alignment of their organisation's stated values and sustainability strategies with the goals and ambitions of this project. Almost all institutions in this engagement, except the impact investors, are regarded as Global Systemically Important Financial Institutions (as defined by the Financial Stability Board).

4.2. Engagement process

North Star Transition carried out an engagement process with each financial institution representative as follows:

- First, we met each participant on a 1-1 basis to assess their interests and specific concerns, as well as socialise the ideas of aggregation and investment in more depth.
- Second, we constructed a collaborative workshop, in which participants:
 - Shared their desired outcomes;
 - Explored a shared vision for potential investment products/processes/transactions/entities (as above);
 - Discussed potential obstacles; and
 - Started the development of a series of interventions or action items to achieve the goals.
- Third, we took the results from the workshop and carried out further engagement with some participants to iterate and develop the emerging findings.

4.3. Sample deal structure

In our conversations, we encountered questions about how landscape transformation deals can be constructed to meet multiple objectives around financial, environmental and social impacts. To help us address such issues, we created a sample scenario upon which our conversations could be based.

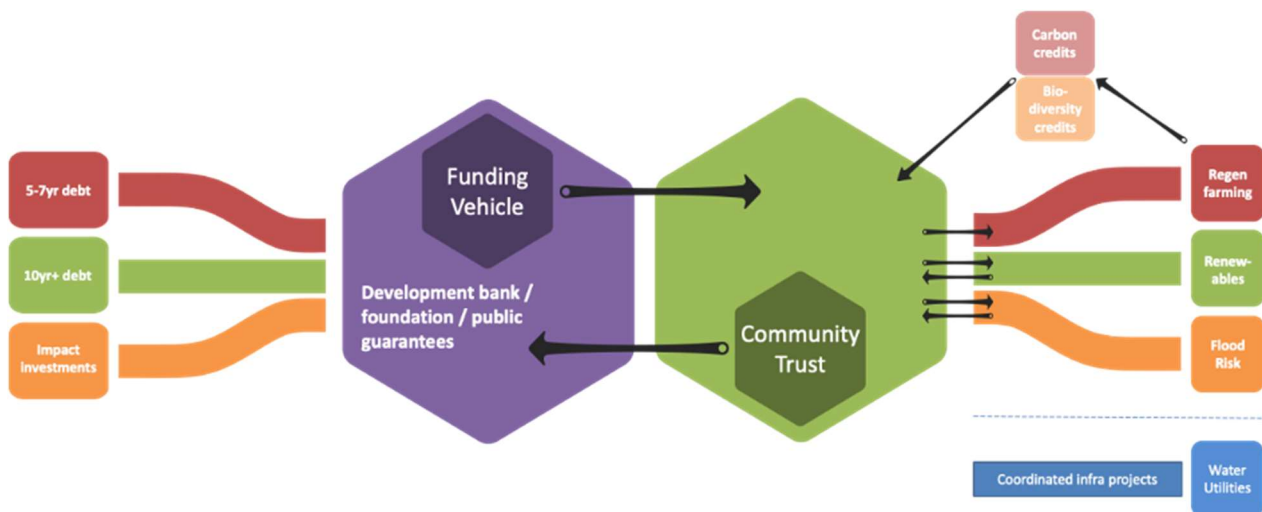


Figure 1: Schematic of the sample deal structure

Assumptions regarding the transformative actions

Our starting assumption was that individual farmers receive loans to transition to a regenerative/organic model of farming. Based on other studies¹, the average outcome for a farm carrying out such a transition over a 10-year timeframe is higher revenues, lower costs, and higher and more stable profits on an annual basis. However, the first three years involve lower revenues and higher costs as the farm transitions to its new model and invests in its soils.

This change in approach will generate carbon and biodiversity credits which may be sold in lieu of individual loan repayments. Small scale renewable energy projects (wind, solar, micro-hydro, biogas) are financed and installed wherever appropriate, generating income streams from the sale of the power. Flood risk mitigation strategies are implemented where needed. Whilst the community and infrastructure benefits of flood risk mitigation are clear, it is less obvious which parties (from among the financial institutions) would share any financial gains. Every effort is made to coordinate the above interventions with other related infrastructure projects which are not being funded through this scheme, such as new reservoirs or factories.

Deal structure

In our sample transaction, funding needs are aggregated and raised by a funding vehicle which is suitably rated and could seek guarantees from development banks, philanthropic foundations and/or other public sources. This vehicle is wholly owned by a common asset trust to enable any asset ownership and long-term financial upside to be retained by the local community. This in turn means that the aggregated funding needs would have to be focused on one specific place, albeit with the *model* replicable for other places. Multiple forms of capital could be raised, but for simplicity the initial assumption is limited to medium-term (5-7yr) debt, long-term (10yr+) debt and impact investments (concessionary returns).

The scale of the investment is in the hundreds of millions of pounds. It is possible to argue that nature-based solutions are inherently cheaper than grey infrastructure and don't need large investments. The other side of the coin is that landscape transformation is more than just a stringing together of nature-based solutions: we need to ensure that the social, health and local economy impacts are carried out, plus the actions are

¹ One example of this is an Ecdysis Foundation study referenced in Forbes which reported that while farms shifting to regenerative systems had 29% lower yields, they were 78% more profitable, due to lower input costs and end markets. Milinchuk, A., "Is Regenerative Agriculture Profitable?" Forbes (Jan 2020) - <https://www.forbes.com/sites/forbesfinancecouncil/2020/01/30/is-regenerative-agriculture-profitable/>

carried out for a long enough time to be impactful. All of these issues contribute to the need for scaling up. Plus, by ignoring these complementary issues, we run the risk of lowering the success of the actions we do carry out, as many nature-based solutions benefit from supportive actions in other spheres. For example, a landscape transformation to drive improved water quality does not need a renewable energy action, but by incorporating opportunities for diversification of farm income, it may be possible to help farmers make the step of shifting away from industrial agriculture methods that are ultimate determinants of water quality in a landscape.

Institutional / governance arrangements

The daily operations of the funding vehicle are outsourced to professional management acting on the instructions of the community trust. The community trust employs an executive team to implement the specific interventions, overseen by a mixed board of experienced professionals and local community members.

5. Findings and learnings

We have several findings from this process – from the one-to-one discussions before and after the group meeting, from the group meeting, and from working through the process itself. In many cases these learnings take the form of direct feedback or insights to our ‘straw man’ sample structure; in other cases, they take the form of existing gaps that force a deeper level of specificity as we explore the questions. We have perhaps also improved our ability to productively engage with financial institutions, evidenced by their interest in continuing to collaborate with us on this issue.

We summarize key learnings below while taking stock of how we have progressed toward the initial problem statements.

We started out framing the problem from two perspectives: first, there needs to be a willing supply of capital from asset managers and owners; second, there needs to be a sufficient supply of investable assets, which can meet the demand from the first group. The financing challenge is essentially one of designing assets in ways that allow decision-makers at asset managers/owners to feel comfortable committing funds for the five, 10 or even 20-30 years needed to effect landscape change. “What do investors want?” and “What do assets need to look like?” are the key questions we sought to answer.

We made important progress towards answering those two core questions. While we do not yet have definitive answers, we do have a better understanding of the gaps, considerations and potential options across key elements.

Overall, the ideas discussed were well received, with general support for a number of foundational principles:

- the overall vision;
- the general risk-sharing structure;
- the landscape scale;
- the ticket size (e.g. minimum investment at a scale suitable for institutional investors);
- the community involvement;
- the collaborative approach with other organisations already in the area;
- the visual presentation, namely constructing a ‘straw man’ to draw feedback worked well as a way to engage finance professionals.

Our conversations helpfully uncovered a number of challenges from the perspective of potential funders / investors. These can be grouped as follows:

- Revenues, Costs and Risks;
- Financial Structure;
- Organisational Structure and Governance;
- Other.

Revenues, Costs, and Risks

A key set of questions that emerged relate to the project’s **source of revenues**. How will these be earned, and what are the associated costs of setting up and operating these activities, and managing the entire project? What are the risks around revenues and costs in terms of the certainty of obtaining those revenues or staying within the cost projections, so that investors can get a sense of how well covered the costs are by

the revenues and thereby some sense of the potential returns? Investors need to feel they have enough information to address these questions before they can advance an idea to investment committees.

Our sample structure suggested four revenue possibilities:

- carbon / biodiversity credits;
- renewable energy;
- payments toward flood risk mitigation;
- improved resilience and therefore food security from regenerative farming.

In general, participants wanted more specifics and certainty around these revenue streams.

Carbon

Participants asked how the project would organize 10,000 farmers to change practices and increase soil carbon.

The underlying question here is around execution and operational risk. Other risks included regulatory and legal risk; specifically, the point was made that there is not yet a fully developed framework in the UK for monetizing soil carbon, and no guarantee whether or how quickly the current nascent attempts will develop. There is also considerable uncertainty as to how any domestic carbon framework might interact with or be influenced by international frameworks.

Biodiversity was recognized by participants as a significant upcoming gamechanger but again there is not yet visibility on a regulatory or legal framework for monetizing credits. Voluntary or international markets might be an option. However, financial institutions indicated a preference for clear policy and regulatory frameworks being in place, and felt that as a potential investment destination the UK was lagging others in this regard.

Renewable Energy

Although not a core part of nature-based solutions in themselves, our contention is that renewable energy projects would be an important part of any landscape transformation. They may help farmers to transition to a regenerative system by providing them with a diversified income (thereby catalysing carbon and biodiversity improvements indirectly) and could also be instrumental in decarbonising the landscape more generally. As such it is a key factor in system change.

With renewable energy (as well as carbon), participants said concrete offtake agreements would be needed to raise project finance. These would show that credit worthy customers were contractually obliged to purchase a certain volume of energy or carbon credits from the project for a specific number of years, at a certain price, thereby allowing a revenue projection.

Flood Risk Mitigation

Insurance is trickier to bring into an investment vehicle, as the benefit to insurance companies is reduced future cash outflows (lower claim payments) rather than increased future cash inflows (revenues). This therefore raises the question of whether insurance firms should be part of the same financing mechanism. Insurers are likely to have interest but what is the best way for them to be involved?

Improved Resilience

As to other potential sources of revenue, participants said they did not value non-monetisable benefits as part of revenue streams. This may include improved resilience to drought and flooding from moving to regenerative agriculture, and hence better food security. This is a key learning as it suggests the need to find

other ways of drawing value from these improvements. One idea was to consider outcome-based payments or grants from local/national governments, to be paid if certain of those non-monetisable benefits are achieved (e.g. payments received if carbon or water-related outcomes are achieved). Another idea was that we find a way to monetise higher land values that might result from the accumulation of positive externalities around nature, water and community.

Risks

Participants identified a number of risks to revenue streams. Investment committees will expect each to be identified in granular detail, scoped, rated and mitigated. Examples cited by participants included:

- **Construction and operational** risks as described above. For example, what is the risk that a certain percentage of farms will not transition to regenerative techniques, are there risks to constructing small scale renewable energy plants, and will both prove too expensive to maintain, therefore reducing the overall revenue streams from carbon and biodiversity credits in the longer term?
- **Regulatory** risks around carbon pricing, emerging biodiversity frameworks or other activities.
- **Reputational or legal** risks. If certain benefits are promised that fail to emerge, or if certain co-stakeholders suffer reputational damage, the risk of reputational contagion is high. Participants cited this as a considerable barrier for Executive Committees.

Participants flagged high set up costs to a landscape finance project as another challenge; the structure being suggested was thought to be relatively complicated and expensive to construct. It would therefore stand a greater chance of success if it was able to be replicated, at scale, multiple times. Larger funding deals would also help as costs would form a smaller proportion of the deal, making it more worthwhile.

Financial Structure

The issue of revenue sources, risks and costs leads to the question of financial structure. Our sample structure posited a funding vehicle which will essentially aggregate all the invested funds, channel them to projects, aggregate all the disparate revenue sources, and distribute these back to investors.

A key question is whether investors have claim at the project level, or at the entity level.

- **Project finance vs ‘counterparty’ vs Platform model?**
 - In a **project finance** model, which is often used for infrastructure or public service projects (such as [the Mersey Gateway Project](#), which one participant pointed us to), project revenues are protected and must go first to paying back investors, before any residual profits can be distributed by the sponsor. However, if the project defaults (runs out of cash) the investors do not have recourse to the project sponsor.
 - **‘Counterparty’** model: Here, a single entity, such as a development bank or corporate, may underwrite the entire project and simply issue their own green bond (to multiple investors). The bond proceeds go to the project, and project revenues go back to the entity’s overall pool of funds. The investors accept the credit risk of a single counterparty (the development bank), which takes the responsibility (and earns the residual profits) for managing the project. If a development bank is able to do this, it might be easier than trying to set up a new project vehicle.
 - **Platform/Fund** model: A hybrid of the two. The difference from a project finance model is that a platform might run a few different projects. This might be helpful if the interventions and cashflows involved are complex enough that more than one mechanism/project is needed. It also enables scale by using the same platform to launch other projects in other landscapes. Investors might invest at the project level, or at the overall platform level.
- **Blended Finance:** It could help to attract commercial investors if there was a subordinated tranche or ‘first loss’ tranche of capital, invested in by the government or a development bank, which bore

the first N% of losses (or, would start to be paid back only after all the commercial investors were fully paid back). Alternatively, the public sector could provide guarantees up to certain level of return (e.g. the government agrees to pay back N% of the invested amount even if the project fails), with similar effect.

- **Securitisation:** Another idea was to securitize the project revenues and distribute them to multiple smaller investors, instead of a handful of large investors. It is not clear yet if this is necessary.

Organisational Structure and Governance

The next key area is organisational structure and governance. Issues raised by participants include:

- **Considerations:**
 - Investors prefer that the project is sponsored, managed, or outright guaranteed by a well-known entity – either the UK government, a development bank, or even a commercial bank. This suggests a level of professional management and supports any credit rating.
 - However, the project needs to be aligned with and accepted by the local community and other stakeholders. Our original idea of a community trust owning the project vehicle was conceived for this reason, and also so any positive externalities might accrue to the community. But the idea saw pushback, with investors asking if a community trust would be sufficiently incentivised and capable to execute successfully.
 - Involvement of the local government in some way seems advisable. In general, government involvement is positive as it suggests regulatory support.
 - It was suggested that the project is not run by a commercial entity like a bank, as other investors might opt out if the project was seen as ‘owned’ by any particular competitor.
- So there are multiple permutations here for the project sponsor/manager, as well as the ultimate owner. The different actors include:
 - The UK government or agencies such as the EA or Green Finance Institute;
 - Local government, e.g. Greater London Authority, [Greater Manchester Combined Authority](#);
 - Development banks, e.g., Development Bank of Wales, or the UK Infrastructure Bank;
 - Commercial organisations such as a bank or asset manager;
 - Infrastructure owners such as water companies;
 - NGOs.
- One possibility is for the front-end structure to be set up and professionally managed by a development bank or NGO, which would be paid for providing this service, and with local government and EA involvement and oversight. The project could be owned by the local government or a community trust, so that any residual profits are reinvested locally.
- A related question is whether equity investment is relevant here – there might be scope in parts of the project, if not at the overall project level itself.
- Another possibility is that the project is as one part of a bigger infrastructure project, which might cost billions, with this project playing a complementary ‘nature-based solutions’ role. However, a water company, for example, is limited by UK regulation on the amount of non-water related business it can do.

Other issues to consider

- **Complexity:** Participants recognised potential tension between innovation and complexity when designing financial structures. The former is attractive to some investors, but familiarity and simplicity are also highly prized. The choice between the two is not binary but both needs must be borne in mind.
- **Scale:**

- The project needs to be large enough for the potential returns to be worth the cost of due diligence, but not so large that (especially for a new idea) it is seen as unfeasible and requires extra strict diligence due to its size.
- Project size buckets are roughly: Financial institutions have an investment threshold in the hundreds of millions. However, anything £1bn and above would be regarded as extremely ambitious for an investment model that still needs to be validated.
- This suggests it might be viable to aim for a ticket size around £250m – this would be sizeable enough to encourage institutional investors to dip their toes in a structure like this, but not so large that it would attract extra scrutiny.
- **Sustainability and impact considerations:**
 - Measuring impact is important, but investors are still learning and willing to accept qualitative comments or narrative.
 - ‘Additionality’: that said, one complication in the UK might be the need to prove ‘additionality’ – the idea that the positive outcome would not have occurred in absence of the investment (this may only be relevant for specifically defined impact funds).

So, what do investors want? Adequate economic return, real impact, low transaction costs and with risks adequately addressed. If a project can deliver this, there is a willing investor base.

In summary, we have made progress toward attracting a small group of potential investors who have essentially said: we like the idea, we need to see more, come back when you have more detail. Within that group, we see a smaller subset who are even willing to work closely with us to work out details on the design. A key next step seems to be digging into the assets side of the question to understand the real potential for revenues and the associated returns and costs. In some cases, the rates of return are pre-set by codes, such as with woodland carbon – in other areas, those codes do not exist. Many of the other details will be worked out as we tackle these items.

6. Next steps

A number of landscape-centric studies have identified the interventions that need to be carried out to transform landscapes. What has been rather less successful is attracting large-scale capital flows to fund these interventions, or getting the locals in the landscape to enter into such structures given the scale of change they need to be willing to carry out. On the Wye-Usk landscape, our approach has been to create a Transition Lab to bring both local and finance participants into a single collaborative space.

This initiative has sought to establish the finance industry interventions that would shape the necessary cash flow patterns, risk-return profiles, fund structures, due diligence processes, and other actions that would enable financial institutions to be comfortable with investable landscape interventions. We felt it was important for financial institutions to be involved as co-creators in identifying the interventions needed on the finance side of the landscape-finance fence.

What this work has established is that high-quality, well-structured projects, which address aspects across finance and a fair sharing of the benefits of the monetisation with local communities, are credible tools for investment.

What has also been established is that there is much further work that needs to be done to make a landscape-scale transformation into an investable proposition. Some of the work relates to bringing well-established financial tools into environmental propositions, such as seniority of debt or risk-bearing equity. Other components relate to the development of new concepts, such as community asset trusts or regulated markets for biodiversity credits.

There is an implicit assumption among those involved in landscape interventions that the creation of a Community Interest Company addresses a multitude of financing problems. This study finds that entities receiving external finance need to be investable in their own right and demonstrate governance capabilities that address due diligence concerns at the start of the project, and ongoing management issues through the life of the project. Most such Community Interest Companies would fall at these hurdles.

It is also clear that there is an appetite within mainstream financial institutions to participate in the *development* of the tools and products needed to enable landscape transformation. This is an opportunity not to be missed, since financial institutions are rather more likely to regard as credible the initiatives they have co-developed. Such an “outside-in” innovation process contrasts with the “inside-out” process that is at the heart of many existing landscape finance initiatives.

The clear recommendation from North Star Transition is to continue the co-development process for landscape finance with those institutions that have already chosen to engage with the initiative, and to continue to draw in new participants from across the mainstream of financial institutions.

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7. Annexes

7.1. Glossary

Term	Definition
Aggregation	Bringing together multiple landscape projects into a single investment portfolio. Such a vehicle has opportunities to reduce transaction costs and due diligence costs for investors.
Blended finance	Bringing together different types of capital from, potentially from a range of private, state and philanthropic sources. Such a model can make it easier to introduce private funding sources to community-based actions.
Capital	While capital is usually thought of as being financial capital, it can be thought of as resources used to produce a return. The resources and the returns can be diverse in their nature. The International Integrated Reporting Framework defines six different types of capital: financial, infrastructure, social and relationship, natural, human and intellectual capitals.
Carbon credit	A tradeable financial product that monetises 1 tonne of CO ₂ equivalent (tCO ₂ e).
Ecosystem services	Ecosystems provide a variety of benefits, including provisioning, regulating, cultural and supporting services. Many environmental actions are planned to be funded by monetising ecosystem services.
Impact	Impact investments are investments made with the intention to generate positive, measurable social and environmental impact alongside a financial return.
Institution	An organisation that invests money or banks money on behalf of clients or members. In this study, we have focused on Systemically Important Financial Institutions (SIFI) as defined by the Financial Standards Board.
Investment	The provision of capital (e.g. debt or equity) for an expected return, including the repayment of capital. This needs to be differentiated from non-repayable capital, such as that provided by grant or philanthropic sources. It is also different from payments made for the purchase of services, such as payments for ecosystem services.
Nature-based solutions	The actions taken in a landscape to manage and restore natural ecosystems in ways that address societal challenges, human wellbeing and biodiversity gains.
Transaction costs	The costs incurred when buying / selling a good or a service. A related issue to consider is due diligence costs, which relate to verifying or validating the appropriateness of the claims made regarding the investment's returns, risks and governance.

7.2. Sample projects we discussed in our engagement

Wye-Usk Transition Lab

North Star Transition's work in the Wye and Usk landscapes takes a wider approach to identifying solutions through changes in energy, food, health and wellbeing as well as the environment. North Star Transition is working with participants from multiple sectors across the landscape, including farming, the environment, health, government and business – their primary task would be to collaboratively assemble the actions on the ground that would transition the entire Wye and Usk catchments and landscape to a healthy state.

Future Fens Transition Lab

Public and private water infrastructure owners are working individually to transition the Fens, and the 600,000 people who live there, to a future adapted for climate change. However, long-term funded solutions are not close to delivering for people and resources.

Future Fens Transition Lab is an innovation which will support The Fens and areas in the top 10% most deprived with the future risks of drought, flooding, ill-health and food supply. This project will establish a virtual laboratory bringing together key players across disciplines and cultures to reframe problems, identify obstacles of change, co-learn, and construct novel co-creative solutions. Importantly, North Star Transition will raise the resources necessary to carry out the actions, through blending public and private finance.

7.3. Engagement questionnaire

We drafted an “interview guide” to use in our 1-1 discussions. The guide covers the following issues:

1. What current/existing/traditional financial mechanisms you are seeing for addressing eco-system health?
2. Why/where these work or do not work?
3. Of the areas that work, what might we build on to create something useful for landscape finance — or what might be missing altogether and need to be created afresh?
4. What benefits are to be gained by bringing together the providers of ecosystem services with the funders of those services – and what blockages are currently preventing those benefits from being realised
5. Assuming the environmental/social benefits can be proved, what might be the specific combination of characteristics that you would need to see at a minimum in order to make a product investable at scale by your organisation? For example,
 - Expected returns vs risk profile
 - Maturity
 - Creditor/Investor protections
 - Collateral or guarantees/first loss tranches
 - Credit Rating
 - Assurance
 - Etc

These questions fed back into discussion on ‘landscape interventions’ as to how to size up the monetizable benefits + other communal/non-monetizable benefits.

7.4. Participant feedback

The following section outlines feedback from the engagement of the North Star Transition team with study participants from financial institutions. The quotes provided have been cleaned up for readability but are near-verbatim. They have been loosely structured under a number of themes.

7.4.1. What people liked about the investment scenario

Financing structure

- It looks like a reasonable and realistic schematic that reflects, I would say traditional, if there's anything like traditional blended finance structures.

- It provides adequate risk sharing between different types of stakeholders according to their level of appetite for risk and expectations for return.
- It looks like the proposal is that development banks or other comparable parties would give first loss or other guarantees to take some of the risk. If that's structured correctly, clearly, it can work.
- What we would like is the innovative part of the whole construction. This innovative character for the funding structure will be appealing to some (but that's what other people in an investment committee will also dislike).
- High quality well-structured projects, which take care of all the different aspects, including the fair sharing of the benefits of the monetization with the local communities, are definitely a tool I believe needs to be used. And it's a way to channel money into sustainability projects.

Scale

- At £250m, the scale of investment feels like a good ticket size.
- We're looking for things we can do at scale.
- Our Investment Committee would love the concept. They are actively looking for climate or natural capital solutions at institutional scale.

Impact

- The whole project is very visual to me, it's attractive to see the real impact of such a deal.
- It's a terrific vision (but not necessarily a financing vehicle).
- It's holistic, and at a landscape scale.
- The fact that you're patiently trying to develop structures that are thinking about what the long term value is, and how to bring in the various different stakeholders in a manner that marshals that capital and tries to work out how to marry the various different interests. I think that's a real positive and I am very supportive of that effort to try and solve what is a knotty problem.
- I think first of all the project, you know, bravo, I think is really interesting. You're trying to address a perennial problem. And as you say, if we can get to the core of this, then I think the world will be a better place.

Community involvement

- I like that the idea is to embed it in the community and bring some of those value flows back into the community. From an ethical standpoint, you don't want to just be extracting value from these communities. But also from an investment standpoint, there's an element of security around your investments that tends to mean that local communities don't dislike the thing you're doing.
- I also like that is a local and very tangible project.

Partnerships

- I think is a super strength to team up with other organisations with a clear ambition, where we can trust each other.

7.4.2. Information needed to turn it into an investable proposition

Financing structure and business model

- I would also probably get a request for cash flow statements or cash flow overviews for the next couple of years.
- I agree from a credit committee point of view in terms of meeting the revenue forecast cash flow models, understanding how and to whom those revenues accrue, the governance of that, who issues and owns the carbon credits in that revenue stream for example. There's quite a lot more detail to understand in that from a kind of institutional point of view.
- There is no indication of who would be the end payers for all of this. Blended finance is just a way to organize financing, but it relies on who is going to be paying the actual costs: who would be off takers of whatever services are going to be provided, who will be buying the carbon credits?
- Funders have the ability to contribute towards financing, but they need to be repaid. So who is going to repay them? Where are those income streams going to come from? So let's go to the right hand side of the diagram, we need to focus on what are the revenue flows from the benefits that allow us to make hard cash out of those benefits.
- What will the capital structure look like in terms of:
 - Who the expected sort of providers of that capital are

- Where do they each sit in that structure? It talked about tenor / duration in the model, but not too much about whether there was any kind of mezzanine equity, or is it just a debt fund? And what are the various sort of seniorities within that that could be available?
- if I know what the activity is, what the underlying revenue stream is, what my annual expected return on investment is, all those would make it investable.
- What will the project costs look like? What do the cash flows look like in terms of the income and how they're made up? And what's the profile of what capital you need, when to deliver it? And how does this all look from a financial model perspective? I don't mean an endlessly detailed financial model, but more numbers to get your head around is really important to unlock.
- How will getting returns from the credits system pan out?
- As investors in this Community Trust, would that mean that we're directly going to purchase ex-ante credits? And that's how we get return? If so, will there be offtake contracts in place already for the credits to be sold to say corporates before the investment is made? Also, the timeline of those credits, because if we're doing ex-post credits, that has already a long horizon for those credits to mature in the market and then be sold.

Financial risk

- I think we need clarity on who is taking what part of the risk so now it's in one big box. We would like to see that separated out more and what guarantees can cover parts of that risk.
- I do think we need to see the layering. The low return but low risk tranches could be very, very attractive to a lot of fixed income investors (such as myself) but that needs to be very clear.
- If you're in the long term, stable end of the capital structure it is quite key to know if there are going to be issues or a risk mismatch. Seeing some risk bearing capital is a really key part of that. In order to establish the credit quality of any debt, I think that's really fundamental. So moving quickly to a structure [the Community Trust] which doesn't have risk bearing equity demonstrably in it, opens a whole load of questions, which may or may not be answerable, but it's definitely a quite key thing.
- What is the credit worthiness of the debt you're proposing to issue? And how does that fit with my mandates? And what sort of return on capital does that come with? Would that come with a public credit rating? Are agencies easily able to rate this structure? Through existing project finance methodologies or would they have to take a different approach? Banks may ask that in a different way than the likes of an insurance company.

7.4.3. Warnings and red flags

Partnerships

- Who are the other financial entities? And do we want to be in business with them? I've seen a lot of project financing go wrong, because there was one party at the table that was on a list that we did not want to be part of.
- Co investors: I think it is super important to avoid a risk of being associated with someone you don't want to be associated with.

Legal liabilities

- How do we get past the future reputational and legal liabilities associated with doing this? So soon as you commit to doing these sorts of things where there is an implied future benefit for a landscape. What about if that doesn't come true? What about if something comes out in the wash?

7.4.4. Challenges, barriers and perceptions to overcome

Proposals for alternative financing structures

- It looks as if the structure is over complicated. And I did wonder, looking at it, if you have a development bank in that mix of the funding vehicle, if a simpler approach is the development bank not just to issue its own green bonds to fund this. That's a simpler, lower risk, lower cost form of capital.
- So while 250 million is a huge amount of money, as an additional element to a reservoir project of real scale, there is a question whether or not it's easier to finance the 250 million as part of the overall reservoir project. There's some regulatory questions on that in the water sector. But I think in terms of the scheme overall, I think there is a real question about how fundamental the utility is to

the overall project being embedded in the structure above the blue line as opposed to just staying below.

- I'm just wondering whether there is value to wrap this project into another one. I have looked at a number of biodiversity projects and they're always very difficult to bank on a standalone basis. But I was thinking that if they are embedded in a bigger project, for instance, an infrastructure project, let's just take a random example that say building a new road or building an offshore wind farm or a project that is bankable by banks that can bring a lot of capital basically, if the biodiversity element is embedded into this bigger project.

Keys to unlock additional treasure chests

- One of the super important keys to unlock here is what that 900 million of investments could generate for value. So was it 3 billion plus I think. It was mentioned the insurance business is interested in this, the local community is interested in this, maybe even the farmers could be interested in also seeing more tourists. But we need to find a way of capitalising, if not all, 2 or 3 billion of returns or value creation, at least some of that could be capitalised, and then pointing to these low, but still financial returns for the lower risk tranches.
- Thinking about other ecosystem services: are there any other any water quality benefits? Are there nutrient credits? Are there other regen ag benefits? I spoke to an investor recently that invest directly in regen ag farming. Their main income stream is from a product premium they get from doing regenerative agriculture.
- I wonder whether the way you're looking at it from a risk perspective where there's an insurance angle, rather than just an investment angle. Swiss Re and others have done work on climate, in marginal communities that are vulnerable to extreme climate events. So rather than thinking of it purely from the investment, can we think about the insured risks around some activities?
- Whether or not a corporate can offer offtake guarantees on the far right hand side, say with regen farming. So if you look at similar stuff in Brazilian or Indonesian context, you often have a corporate lending its rating to the setup in order to help de-risk it. And that might have been beside lending the rating or offering a long term offtake guarantee for some of the products at a certain price, which obviously provide some de risking.
- I think in the offtake agreements that were mentioned are hugely important. You'd have to have agreements in place for that. In terms of regenerative farming practices, I can't see any flow back on the cash flow on that.
- I think the key thing for any blended finance structure for anyone coming in at that first loss of concessionary capital side is that it's got to be additive. It's key that with any of these projects, that they can see that there is a genuine benefit from them being involved. That's really the key for investment from their side, so you'll need to be able to prove that.
- One thing that could be further explored, is all those local municipalities that deal with the local consequences of climate change. Whether it's drought in some cases or flooding, or whatever, they are spending money to cope with it on their local basis. So the question is, how can we make them understand that, if they invest today into this project, the budget that they have to cope with the negative outcomes of climate change, might potentially be reduced.

Perceptions of uncertainty, unfamiliarity and risk

- I think the challenge then really is around that due diligence question. So for a large scale institutional investor, the ideal we're looking for is transactions that look very similar from transaction to transaction. This currently is framed as a one off and then you look if that structure is in any way complex, and we're taking very much risk beyond a known quantity, then that due diligence cost starts to add up for effectively a one-off transaction.
- My final question was, talk to me about reputational risk. I don't know what it is, but what could go wrong? I'm an institution and I put a slug of money in. Whether it is the fact that there's still a bunch of phosphorus or I'm exposed to Cargill decisions or whatever. Talk to me about that stuff.
- Is there something to do with a critical mass of uptake? Does this depend on getting to a certain number of farmers? Persuading them in? How does the return flow depend on the uptake by the farmers?

- Is there any construction risk involved? And is there any completion risk involved? Are there any impacts if the works are not done on time and on budget? We always analyse what is the result, there are two phases, the construction risk, the completion rate, then there is the operational phase.
- I would look at things in terms of how can I de-risk my cash flows. So as much as possible, I'm trying to see if the credits can be hedged. And that will be a function of the markets that exist at the time when the project is completed. Differently recovering markets, and also how long in time we can hedge them. Because the market needs to be deep enough for that. So I noticed in your diagram, you have a five, seven year debt chart, a 10 year debt challenge. I don't think that at this moment there's any maturity and markets to hedge 10 years. I don't know about five, maybe even five will be a lot.
- What's the risk something changes? And now those revenue streams dry up? So what's the risk that either there's a change in public policy, or there's a change in ownership of the land that's in question, or some other reason that the funding stream is somehow halted? So for me, it's all about focusing on how can we increase the certainty around those revenue flows.

Debt vs. equity

- I think one thing here is, you know, we sort of talk about five to seven year debt and 10 year debt, and then impact investors. If there's a way we can attract some kind of institutional equity to take on some of those high-risk projects. That's the way we scale. Debt will always service things that are more reliable, that's kind of how to scale and how to save the world.

Methodological challenges and obstacles

- *Governance*
 - What is the disconnect between political geography and natural geography? You have to ask the question what can you do in this natural geography? In the sense of what's available from governance institutions in the UK? You have to get your head around the whole geography in some way to create a special district or some governance organisation to manage around this.
 - A Community Trust has some benefits in terms of people understanding its purpose and ring fencing it to those purposes and having clarity on it. What it leaves open as the question is, what's the sort of political structure and governance that sits behind that? Does a local entity need to sponsor this? Does the flood risk not come with any local authority linkage? What is the backing or otherwise of the local authority? How does that impact on the legal sort of standing and durability of the trust? How much political support does it have in a raw politics sense? And then in terms of ongoing governance, what is it that any counterparty would be dealing with, in order to set it up and to see that it's durable in order to resolve any issues?
 - How do lenders who are lending into the Community Trust vehicle know what's going into the different products? How do lenders have access to the cash flow? Is it going to be produced by the carbon credits generated by each regenerative farming project? So I think that's a very granular consideration, but it's all about how do we secure that as lenders.
- *Credits*
 - We're mainly investors in the carbon markets. Our question would be what carbon credits for what activities? Under what methodology? And are they additional? Those would be the threshold questions for us to put any money into the deal, whether it's early equity for a project, a project developer, project finance, or for offtake agreements. We'd want to have a strong sense of what that actually is, and understand the context. What market are we looking at here? Is it a regulatory market in the UK? Is it the international voluntary market? Because it's all a moving target at the moment. So, thinking about financing this for a longer term, given that moving target, and this essentially, as yet unborn nature of a UK, soil, carbon credit or biodiversity credit. Those are hard things to invest in if they don't exist. A lot of them will require legislative action. The definition of biodiversity credit, and its use there in a UK context, that's a book that's totally unwritten. So that will be a critical factor to get any investment at all. You can say, well, we've got these benefits to people and to nature that we can quantify and put a price tag on what their value is. But if you can't figure out how to generate through some sort of regulatory or in the case of voluntary markets, quasi regulatory process, some sort of revenue stream for it, then it's an interesting number. No more.
 - Stacking carbon and biodiversity credits, you need to be really careful there. The different types of capital for the different types of risks. Also thinking about income profiles. So your carbon credits and

your biodiversity credits may well be generated at different times. So less appropriate for debt more appropriate for equity finance.

- I think there's a regulation piece to that: can we get clarity on stacking? Yeah, essentially how you can blend different income streams? What requirements will there be from regulation in the future?
- Would there be stacked credits where there will be a single piece of land that would provide biodiversity credits, carbon credits, you know, there's replenish credits, new credits and all sorts of credits and stuff that's coming up in the UK market at least. So would those be stand credits or bundle credits from the same piece of land. And then obviously, when there's more government regulation that would also channel the flow of how those credits are priced and how much of those credits would provide in terms of return.
- In terms of the carbon credits, especially, I haven't looked so much at biodiversity, but for the carbon, we would need to insure them as well as lenders. So we will need to have an insurance market developed enough for the carbon credits because the insurance is always a big part of the due diligence that we do for project finance.
- *Who gets the benefits?*
 - I think from an investor's perspective, if you're taking high risk, what's the balance between benefits flowing back to the community and flowing back to the investor? And how do you manage that?
- *Administrative costs*
 - If you look at the administrative cost involved in putting something like this together, it does often mean that it's not a commercial prospect. So I think there's a big question about who pays for the administration of developing these concepts and seeing them through to fruition?
 - From an administrative perspective, it can be very cumbersome. So maybe this is where the Community Trust can step in. If there's a way to make it more manageable from an admin point of view and a security point of view as well. Because the last thing you want to do is during the 5 or 10 years of the project have to be assigning things in and out as we go along.
- *Scale*
 - And I think just, again, the millions, I think is good, but I think kind of just to acknowledge that to get a lot of that institutional capital, I think we should instead be looking to design stuff that can be securitized up to the billions level. And the reason why I say that is because even though those big guys might not come in to begin with, I think we need to be trying to work towards creating an asset class that they can come into.
 - I think that the biggest issue, and I may have missed that but it's about the size of the project and the scale, especially for carbon credits. I mean if you're comparing an investment in Peru, or some of the Amazonian countries where you've got half a million hectares of forestry that's kicking off carbon credits, I just don't know where the scale of what you are trying to achieve on this would be investable in that size.

7.4.5. Investor-specific challenges or questions – 'not for me' responses

- One of the things that can be challenging is whether or not the investors have to be close to the project. As a non-sterling investor, that's something I see. Maybe it's a market or investment that's not for me as a Euro-based investor.
- We have a lot of thematic funds that would say, well, it's too niche, it's away from our specific theme that we focus on, CO2 emissions or whatever. That's one of the keys to unlock, to knit together all of these things because we need to cooperate - we need to look holistically on this regenerative transition and that's actually a challenge to some very niche players or investors.

Information about related projects and organisations

- The Institute of Sustainable Development, IISD, they've created the nature-based Infrastructure Resource Centre, which is an open source website. They're also providing a free analysis of projects to promote nature made infrastructure versus grey infrastructure. They model all these ecosystem services to provide the decision maker with a cost benefit analysis. That compares, okay, if you spend X on the grey infrastructure, you get no side benefits. And you pay X OPEX per year. If you spend Y in a nature-based infrastructure, you have much lower OPEX because nature takes care of itself. And you say, well, these are the costs of things that are not needed anymore as a result of the co-benefits.

So that's maybe a route to explore. And we can maybe ask them if they're able to work on this project.

- I know that there are projects that have been done in this country, I think it's in Norfolk area where they are trying to move away from more intensive farming methods. And they've planted some trees on the land with very, very fast growing hardwoods that have generated an investment case for that. So I think that's coming out of the hardwood trees that obviously normally take many, many decades to grow. But these can grow within sort of 5/6/7 years. So you can get some, some investments from that. I think it's out of Germany, where these where these, where these trees coming from.
- The idea that what's being proposed here is new, is to probably put it bluntly untrue. If you looked at what the Global Landscapes Forum has been curating, putting on for the past five years, you'll see a lot of things like this.

7.4.6. Questions from the North Star Transition team – and participant answers

Q1: Might land investment be interesting here, because all the externalities and benefits would eventually accrue to more demand for that land and property in that area. And we haven't really talked about property values, whether that has a place.

A1: There are mechanisms to capture increase in land value from public investment. Tax increment financing is a good one. There's definitely a land value play there.

Q2: We are trying to replicate a traditional debt by replacing the equity with a combination of grant impact and or guarantees, because the equity returns here are not necessarily going to be very strong. And to be honest, we'd like to leave those with the community from an impact perspective rather than that ultimate end profit being taken away by investors. So hence, we would like to replicate that debt is debt, and then the equity quotients take the risk. Is that realistic? Would that portion need to be so enormous that we'd end up with, you know, 230 million of grant and 20 million of debt? Any reflections on that would be greatly appreciated.

A2: When we look at large scale investments, transformative investments, I don't see many examples where that's been successful based on a kind of diversified localized trust structure. And one of the reasons is that one of the criteria that funders, this is my bank, but it will include others as well, is we need to know that the people who are running these investments, these opportunities, they need to be experts, because they're complicated. And they need to be incentivized. So, although we're not looking for an investment to have a high level of return, they need to have some skin in the game to incentivize them to ensure that these investments will be successful. And you know, we will never be experts at running or constructing any of these opportunities, we need to rely on normally the equity holders to do that. And the equity holders need some skin in the game and some expertise. Having said all that, I would not rule out equity investments for these types of opportunities.

Q3: If you hear the word Community Trust, I'd love to understand people's thoughts on what you would call it if it wasn't called Community Trust.

A3: It's not what you call it. It's who is there. Are they experts? Do they have the capability? Are they incentivized?

7.4.7. Remarks and questions about onboarding local stakeholders

Several participants asked about how to bring local stakeholders on board – the work cut out for the Landscape Group of the Wye-Usk Transition Lab.

- And the last thing that is not really dealt with here, which is the biggest issue, it does not reflect the inertia and the extremely heavy bureaucratic burden that is weighing on the municipalities who might be deciding like yes it's a good idea for them to do that.
- One really crucial one that we're finding a lot at the moment, especially in the UK is getting landowners on board. You said was it 10,000 farmers, the amount of engagements and work behind getting enough landowners on board, developing the appropriate proposition for them in a way that rewards them enough for changing their practices, it's a risk, it's their entire livelihood.
- I also think the aggregation of the very many smaller projects outside can be challenging. How do we mobilize 10,000 farmers? To do this. I think the incentive structure needs to be there.