

Integrating Natural Capital Schemes

Opportunity analysis for integrating carbon markets into multifunctional landscape marketplaces, such as those developed by the Landscape Enterprise Networks (LENs) approach



May 2020



Summary Findings

- The Landscape Enterprise Networks (LENs) approach, and carbon markets (delivered via Woodland Carbon Code and Peatland Code) are quite separate categories of natural capital mechanisms:
 - LENs is a mechanism for organising stakeholders around multiple natural capital opportunities – where delivery and certification of delivery is subcontracted to service providers.
 - Carbon markets tend to be more direct, vertically integrated service provision arrangements, where a carbon product is delivered on the ground for a carbon offset buying client (albeit usually with an expectation on the part of buyers that co-benefits will be delivered alongside carbon).
- There is strong potential for synergy between these mechanisms, in that carbon markets may provide a significant source of co-investment into LENs (or LENs-like) multifunctional marketplaces, and LENs might provide additional ‘customers’ for carbon funded schemes. In both instances this creates two wider societal benefits:
 - Increased funding for sustainable landscape management practices.
 - Market drivers for landscape management practices that are explicitly multifunctional in nature.
- Integration of carbon markets and LENs mechanisms presents both technical challenges (principally around additionality) and organisational challenges (principally, how to organise trades so they are not overly complicated, do not result in overlaps, and so they benefit the interests of all players).
- These challenges are tractable, but solutions may be complex. This report sets out a range of potential organisational options for integrating LENs and carbon market transactions, whilst maintaining organisational interests and opportunities. It also sets out the main options for managing additionality.
- In addition to integrating private schemes in these ways, it will be important to consider how these interact with public schemes to avoid competition between public and private funds for natural capital projects, and a number of options are provided to enable effective public-private integration across schemes.
- Our recommendation is that integration is trialled in practice, selecting a relatively simple trading environment, and using some of the more straightforward mechanisms described in this report for integration.

1. Characterisation of key ‘moving parts’

The Landscape Enterprise Networks (LENs) approach, and Carbon Markets (delivered via Woodland Carbon Code and Peatland Code) are quite separate categories of natural capital mechanisms. LENs is a mechanism for organising stakeholders around multiple natural capital opportunities – where delivery and certification of delivery is subcontracted to service providers. Carbon Markets, such as those delivered by Forest Carbon, tend to be more direct, vertically integrated service provision arrangements, where a carbon product is delivered on the ground for a carbon offset buying client.

The main characteristics of LENs, Carbon Markets, and the Woodland and Peatland Carbon Codes are set out below:

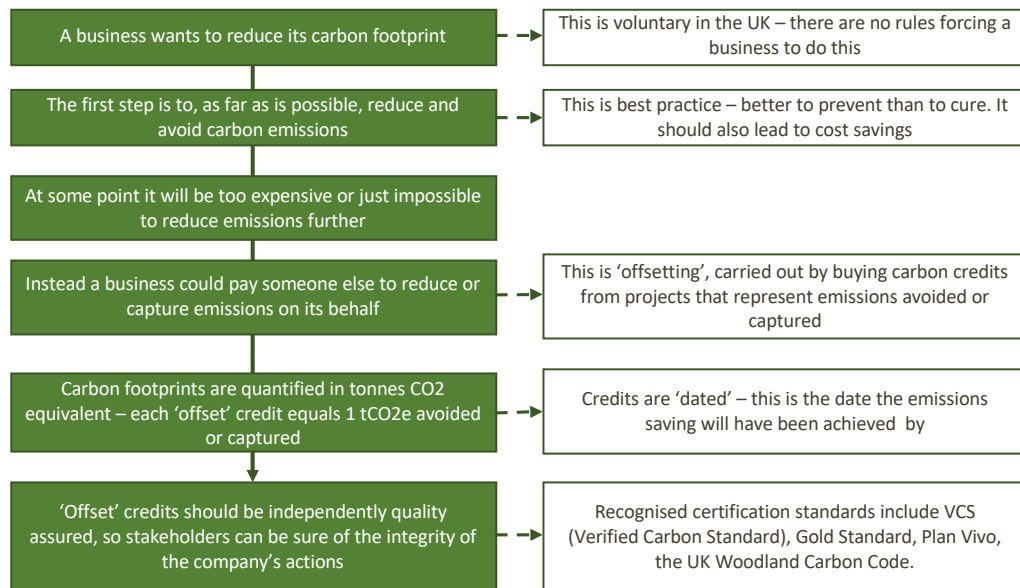
1.1 LENs

- a) LENs (Landscape Enterprise Networks) is a mechanism for creating and managing markets for the services provided by multifunctional landscapes.
- b) LENs works by providing a transparent and efficient framework through which consortia of commercial (and public sector) interests can collectively procure land management interventions.
- c) Its operating space is limited to: (1) drawing together demand-side entities around their shared interests, (2) arranging procurement of landscape outcomes on their behalf from credible suppliers, and (3) ensuring that projects delivered by those suppliers have appropriate third-party assurances / audit / accreditation in place.
- d) Multifunctionality arises in two ways:
 - 1) *At the level of a single trade.* Individual demand-side players in a ‘co-trade’ are brought together around their shared interest in the performance or condition of a set of landscape assets, but very often their interest in outcomes is different. For instance, a food manufacturer may be interested in soil health to secure supplies of ingredients to their factory, while a water company may be interested in securing the same soil health as a means of managing nutrient loads in their water catchment.
 - 2) *At a network level.* LENs programmes operate regionally, and aim to develop and manage multiple co-trades, for a range of ‘demand-side consortia’, which in turn will have a range of interests in the landscape. In combination this creates a range of (variously complementary and trading-off) market signals for a range of landscape functions.

1.2 Carbon markets

- a) The carbon markets operating in the UK are voluntary markets, where carbon buyers (usually businesses) are paying to have greenhouse gas reduction projects implemented on their behalf. Project types include emissions avoidance (e.g. peatland restoration) and emissions removal (e.g. forests)
- b) Forest Carbon is the leading UK carbon offset provider in this space, and since it was founded in 2006, it has established over 5,000ha of woodland – over 8% of all private sector UK woodland creation since 2015 - and it established the first peatland carbon project in the UK.
- c) The two carbon codes we have in focus in this options appraisal are the **Woodland Carbon Code**, and the **Peatland Code**.

Fig. 1 below shows how the basic process for a company procuring carbon credits is set out



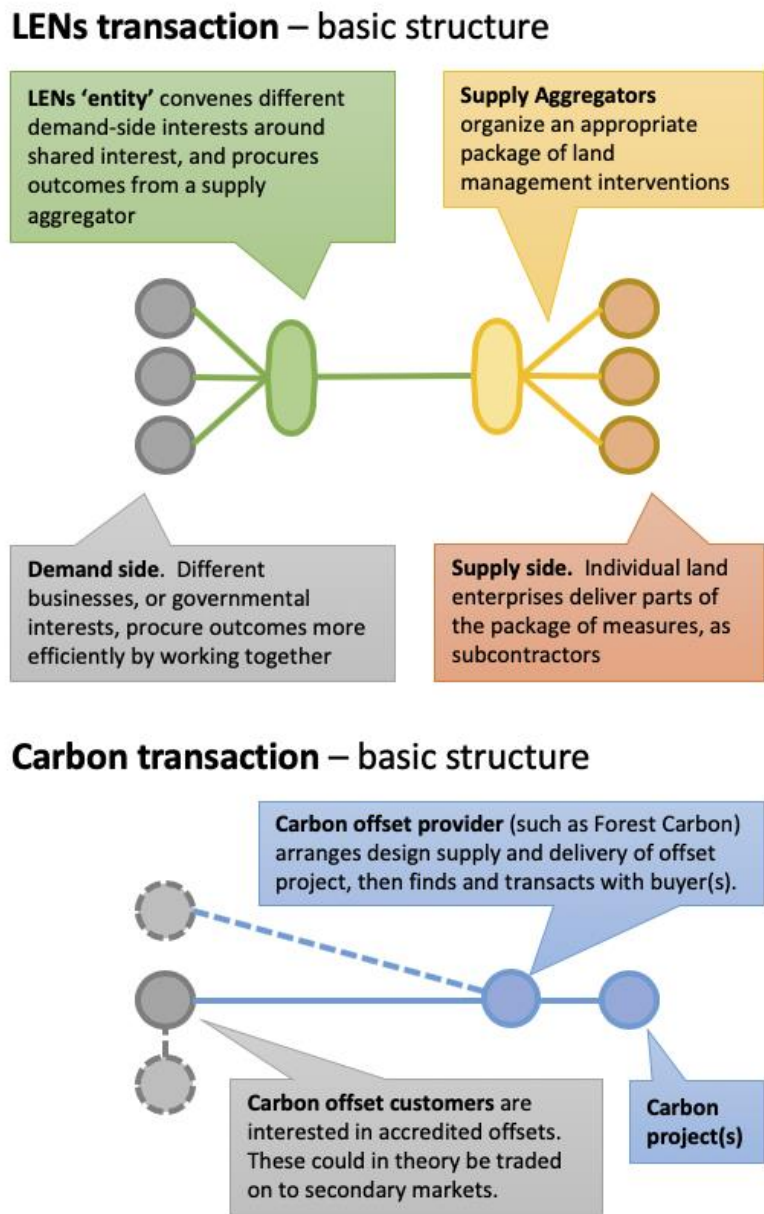
1.3 Woodland Carbon Code

- a) The Woodland Carbon Code (WCC) is one of the world's leading domestic carbon standards, launched in 2011. Developed by UK Government, WCC offers independent audit and ISO certified carbon credits. Credits are accepted under UK Government guidance on environmental mitigation.
- b) Accredited projects meet all international carbon project rules. These relate to:
 - **Additionality**
 - Quality assurance
 - Conservatism
 - Permanence
 - Monitoring
- c) As emissions reductions take time, and most older projects are pre-sold, projects lend themselves to 'net zero' over a longer time period, and/or to CSR messaging, and do not confer carbon neutrality in the immediate term. Nevertheless, with the UK government taking a Net Zero approach businesses are increasingly thinking in this way.
- d) Forest Carbon has found the need to provide liquidity in the market, by: (1) signing contracts to secure sites and projects in advance of securing a carbon buyer(s), and (2) simultaneously maintaining an inventory and pipeline of projects to service enquiries as they come in.

1.4 Peatland Code

- a) The Peatland Code was developed by IUCN, with financial support from various donors and Defra, and was launched September 2015.
- b) Peatland carbon capture estimates are more difficult than woodlands, and the code offers independent audit but not as yet ISO certified carbon credits (this process is underway, and is expected to take around a year, as sufficient projects become validated and the audit and standard performance can be assessed by UKAS).
- c) The Peatland Code uses condition categories before and after project implementation (Near Natural, Modified, Drained, Actively Eroding) to determine a change of state. As a result, projects need to be surveyed before implementation, to create a baseline. This increases the 'at risk' up-front cost to a potential peatland project.
- d) As emissions reductions commence early, projects could offer 'carbon neutrality'.

Fig. 2, below compares the basic structure of LEN and Carbon value chains



2. Integrating carbon with markets for other landscape outcomes

2.1 Opportunities

There are two main types of advantage associated with integrating carbon and LENs-type multifunctional landscape marketplaces:

- a) *Increasing investment into sustainable landscape management.* In simple terms, by combining market demand for different ecosystem functions, we increase the funds available for land management interventions. This means that resources are available to do more (cover more area) and do better (further invest in design, materials and implementation).

In many instances, it will be the factor that makes a package of land management measures viable. The experience of LENs, for example, is the decision to invest in nature-based solutions for flood or nutrient management in catchments becomes much easier when funds are available for co-investment from other demand sources.

- b) *Driving multifunctionality.* The inherent risk in any successful market for products or services from land management is that it can compromise or squeeze out other important functions that the land can provide. This could be as true for carbon sequestration, or rewilding projects, as it is for oilseed rape production or keeping grouse moors. Good scheme design, or farming practices, can ameliorate some of this risk. But having tangible commercial signals – price tags – for each of the range of functions coming from a package of landscape measures will provide a more rewarding and therefore robust means of securing those multiple benefits.

An example where both of these benefits might come into play could be a peatland restoration and tree planting in the uplands. A carbon-funded project is in practice very likely to ‘design-in’ a wide range of co-benefits. However, if the package was co-funded by a water company with interests in water resource management and recreation, then a range of more ‘difficult’ scheme features – such as establishing clough woodland, stock management, and access infrastructure – might become ‘core’ rather than ancillary to the project. The increased scale of investment might also make the project financially viable.

2.2 Challenges

There are technical and organisational challenges involved in integrating natural capital schemes. The key technical challenge is around ‘additionality’, and this is addressed in **Section 3**, below. Organisational challenges revolve around two issues:

- a) *Aligning stakeholder interests.* Carbon markets are becoming well-established, with providers such as Forest Carbon delivering ‘end-to-end’ services for clients requiring carbon credits with a pipeline of forest and peatland projects. The sort of multi-functional landscape marketplaces being developed by LENSs have so far been structured around a separation of ‘demand aggregation’ (i.e. customer management) from the organisations providing services on the ground. This creates a potential conflict between the approaches, in that it would be undesirable and disadvantageous for a provider such as Forest Carbon to ‘give up’ its primary client relationships.

This challenge is manageable, and the three scenarios for integration set out some options for managing transactions in ways that retain the principles developed to enable LENSs to operate, whilst maintaining the integrity and commercial opportunity associated with carbon value chains.

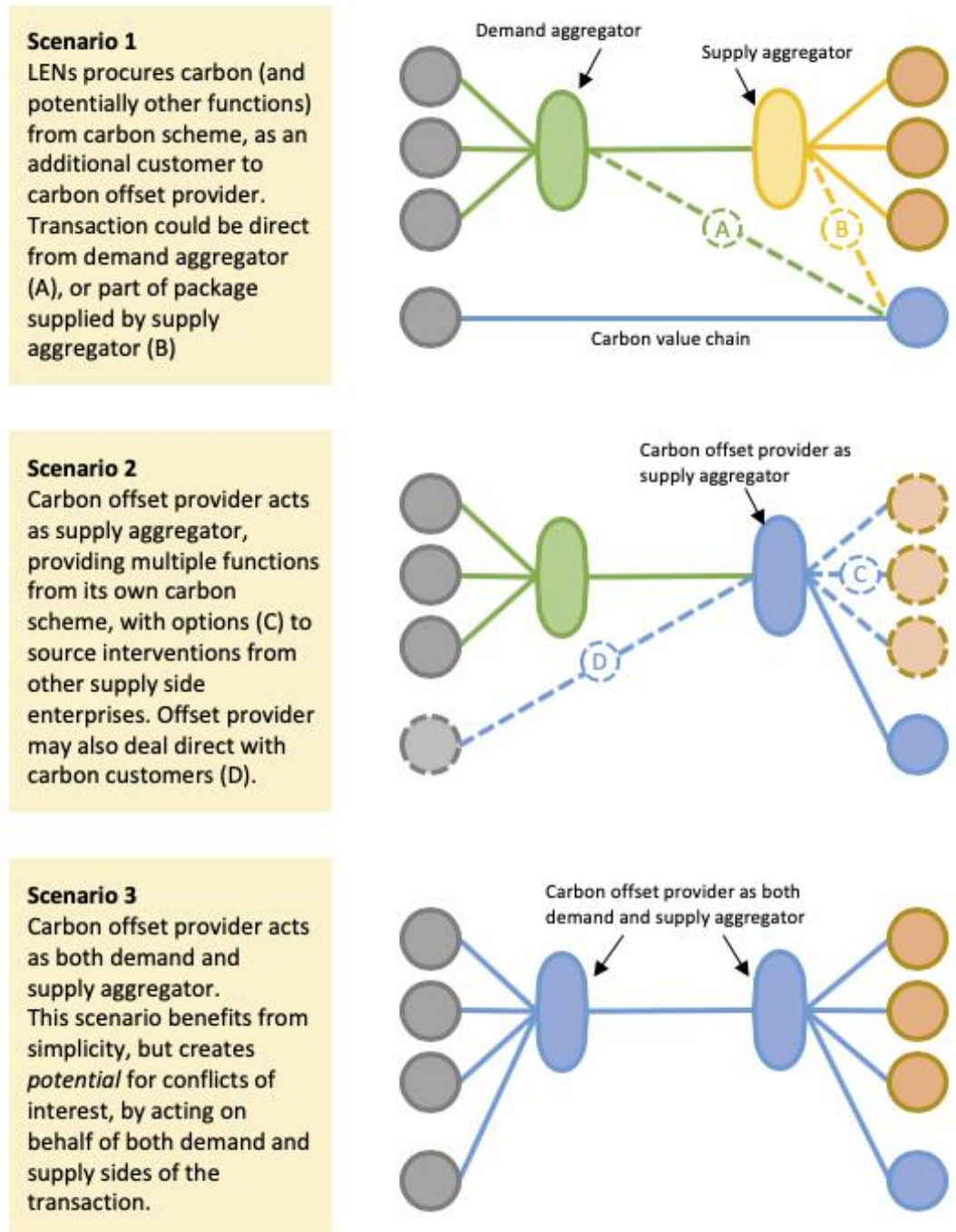
- b) *Managing complexity.* An inevitable downside of integration is that it builds complexity into the system. This is an issue for carbon offset providers, who have a system that works and already copes with relatively complex technical requirements. It is also an issue for systems like LENSs, because the special requirements and practices surrounding carbon offsetting, plus the potential disproportionate ‘commercial force’ of carbon markets, may be disruptive.

For both carbon providers and LENSs projects there is a trade-off, or cost-benefit analysis to be made. Are the risks and complexities associated with integration outweighed by the financial and strategic opportunities? It is likely that the answer, and the potential solution, will vary from situation to situation.

2.3 Organisational options for structuring trades

In **Figure 3** (over the page) we set out a series of ways through which transactions could be directed to integrate carbon and LENSs-type transactions. Depending on circumstances, each of these could be appropriate.

Fig. 3 below sets out the three basic scenarios under which we might see integration of carbon delivery with the development of a LENS-style value



Note on timing. An important principle in integrating carbon, or any additional function into a multifunctional landscape trade, is that different income streams should be put together simultaneously to make a 'deal', and that this should be 'baked in' before action is taken on the ground. In essence, once a trade – or action on the ground – has commenced then there is either: (1) little incentive for a future customers to pay for outcomes, since those outcomes are already being delivered, or (2) in the case of carbon (or other fungible) offsets the 'additionality' test – see below - would not be met, since activities on the ground would demonstrably not be dependent on the additional payment.

3. Additionality

3.1 Why and where additionality matters

- a) Additionality refers to a requirement that a payment for a particular landscape outcome is essential to its delivery. It ensures that something that is being paid for 'wouldn't have happened anyway'.
- b) Additionality rules are especially important for landscape outcomes in which the purchaser has no direct technical interest, but instead is buying an offset against the impact of their separate trading activities. Carbon offsets are a case in point, but this also applies to other 'fungible' products, such as biodiversity offsets. In both cases there is a theoretical 'moral hazard' on both sides of the offset transaction that money changes hands without any additional action taking place on the ground.
- c) Additionality is less of a concern with landscape outcomes in which the purchaser has a direct technical interest. An example would be businesses interested in reducing their exposure to flood risk or costs relating to water quality, or consortia of businesses and local government interested in regional 'placemaking'. In these instances, the purchaser has a direct interest in the technical outcome of the work they are paying for. It follows also that if the outcome is already being delivered, then the market for it – the incentive to pay – disappears. The more important test here is *quality assurance* for the buyer, and the main challenge faced may be that of 'free riders' – i.e. beneficiaries of landscape outcomes who do not pay.
- d) In the case of carbon outcomes being delivered as part of a LENSs (or LENSs-like) multifunctional marketplace, the issue arises when an intervention scheme on a particular patch of land is designed to deliver and be paid for by multiple markets for outcomes, including but not limited to carbon. For instance, restoring a peatbog for both carbon and water catchment management outcomes. In this case, the question arises, 'would the restoration have happened anyway, even without the carbon money'?
- e) Where carbon is being delivered on discrete land parcels, where carbon is the only funding source (whether or not as part of a wider LENSs 'package' of measures) then the additionality question is the same as it would be in a conventional carbon offset scheme.

3.2 Managing additionality in multifunctional marketplaces

There are three basic ways in which additionality for carbon may be managed in multifunctional marketplaces, such as those created by LENSs:

- a) *Setting and applying additionality tests*. This is in effect what happens already within the Woodland Carbon code, where there are two main 'additionality tests'. These comprise:
 - 1) A minimum contribution of carbon money to the work carried out (currently 15%), and
 - 2) Evidence that carbon contribution is instrumental to the trade.

One way of satisfying the second additionality test would be through the use of 'carbon trigger funds', which would be additional match funds (public or private, and potentially linked to 'added value' components of a carbon scheme – i.e. other landscape functions, such as access) that are only triggered when a threshold of carbon money is put up.

At the Woodland Carbon Code Advisory Board meeting in May 2020 this challenge was discussed, and the recommendations were:

- All known or potential sources of additional revenue (outwith grant and carbon) should be included in the project financial assessment at validation stage. This could include

contracted or projected LENS or Biodiversity Net Gain values, for example. These would be viewed as a legitimate part of the funding mix, with the usual additionality rules then applied.

- If it became clear later that projects were subsequently adding contracts or plans, but had not included them in WCC validation, then de-registration under WCC would be an option.
- The WCC cannot legislate on additionality for future actions of landowners in other markets, so may add some *caveat emptor* language to the Code to make credit buyers aware of the importance of considering the additionality of other co-benefits transacted from the same project.

b) *Separation of service delivery*. This is possibly the most straightforward approach, and involves either:

- 1) Spatial separation of carbon delivery from the delivery of other landscape functions, or
- 2) Separation of actions. Discrete ‘menus’ of added value actions beyond the core carbon investment, against which separate payment streams are aligned.

Separation of service delivery presents a partial solution. While it provides a ‘cordon sanitaire’ around the generation of carbon credits, it may not realise the potential for ‘leverage’ presented by more fully integrated payments and action.

c) *Apportionment of credits to budget contribution*. This mechanism would allow a blended approach to funding an integrated carbon / LENS scheme, but would limit the carbon credits to the proportion of the project funded by carbon. While not providing direct ‘leverage’ with the carbon money, this approach may create economy of scale benefits, making otherwise non-viable projects viable and reducing the unit cost of delivery.

4. Integration with public schemes

- a) Public and private sector natural capital schemes currently interact in a number of ways. For example, Government sets the regulatory framework within which carbon markets can develop and *operate*; captures and defines ‘good practice’ in policy guidance; and sets the legal framework within which projects (selling ecosystem services), investors (buying services) and intermediaries (aggregating supply and demand, and brokering deals between buyers and sellers) can operate.
- b) As such, Government can play a role in ensuring that funding for interventions under LENS approaches are integrated with existing regulatory regimes e.g. environmental permitting for air and/or water discharges, and land management obligations imposed to address diffuse water pollution (for example NVZ requirements).
- c) Existing regulatory mechanisms address specific environmental concerns e.g. discharge consents focussed to ensuring water quality, clean air etc, or operational consents for works in protected sites (SSSIs, SPAs, SACs etc.). LENS works from the opposite perspective – identifying ecosystem services that can be provided and targeting blended approaches to provide them. Ensuring that existing regulatory tools are ‘ecosystem’ focussed in their application will be an important issue to be addressed if LENS is to be fully integrated with existing regulatory approaches.
- d) Any new public scheme will need to be designed in a way that avoids problems of duplication and ‘additionality’ where ecosystem services can be provided by LENS with private funding. In particular, close consideration should be given to whether grant payments under future public schemes can be designed to incentivise co-investment with privately funded LENS actions.

Ideally the grant system should be designed to act as an incentive to participate in privately funded LENS solutions, rather than funding obligations that could have been provided more cost-effectively through a privately funded LENS approach.

- e) The following five options could be considered for integrating public and private schemes (for full details, see report, “Funding Peatland Restoration: Options analysis for optimising public-private funding of peatland restoration, for carbon and other ecosystem functions”):
 - 1) Funds delineation – *using public investment to fund a discrete menu of ‘value-added’ components of a peatland scheme.*
 - 2) Carbon trigger funds – *setting up government funding that only ‘triggers’ when a certain level of private sector carbon funding is achieved.*
 - 3) Establishing fund-matching / co-investment as a default principle
 - 4) Using a transparent cost-benefit matrix to target public sector funds
 - 5) Creating integrated systems for public-private implementation

5. Recommendations

- a) Our principal finding is that while there is a burden of complexity created by integrating carbon mechanisms into LENSs or LENS-like multifunctional marketplaces, it is very likely that the potential benefits will make integration desirable in many situations.
- b) Our recommendation is that integration is trialled in practice, selecting a relatively simple trading environment, where there are relatively few pre-existing complexities from either a carbon or a LENSs perspective.
- c) In selecting mechanisms for integration, this should reflect the circumstances on the ground, and in particular the needs of the natural capital clients. However, again, relatively simple options such as **Scenario 1** as described in **Section 2.3** are likely to be desirable. In selecting a solution, or suite of solutions, to cover additionality, it may be desirable to work in collaboration with the Woodland Carbon Code and Peatland Code, to achieve the best results.