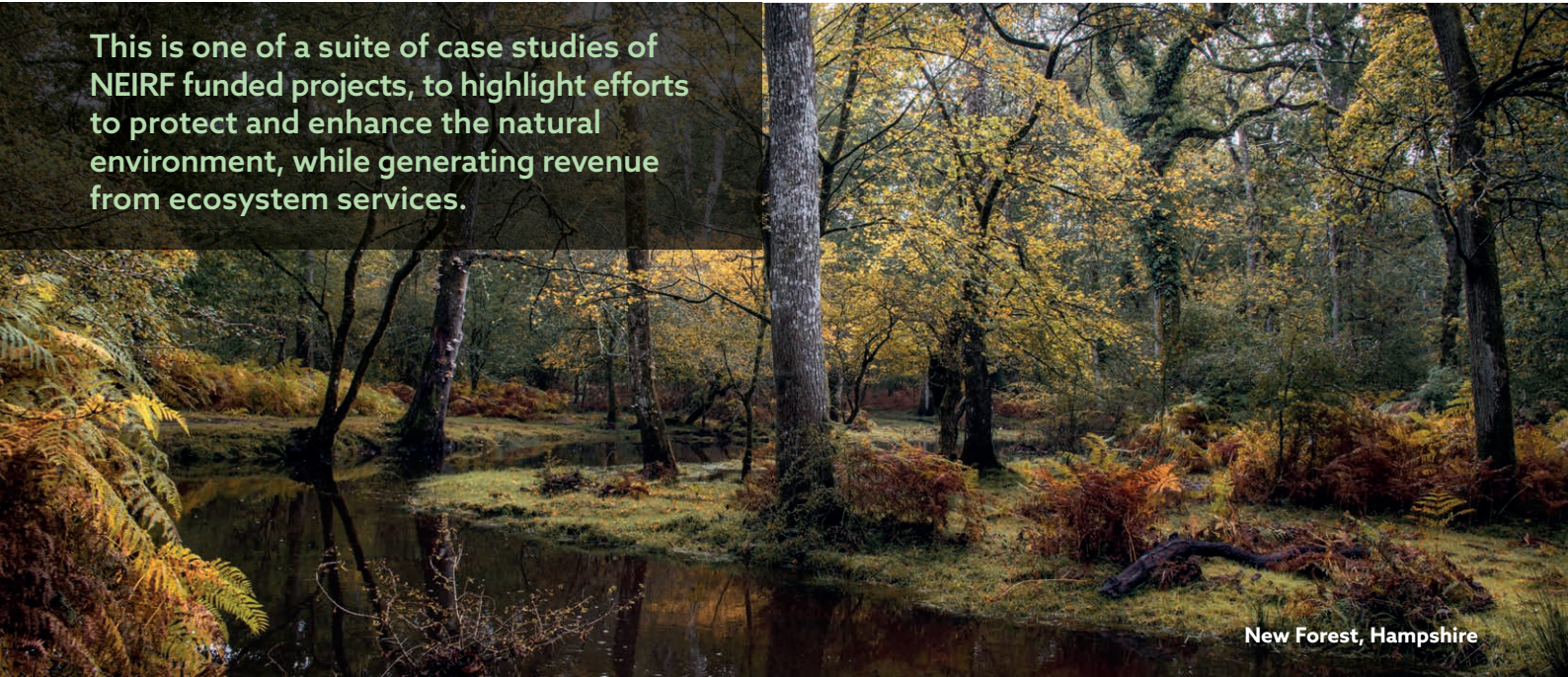


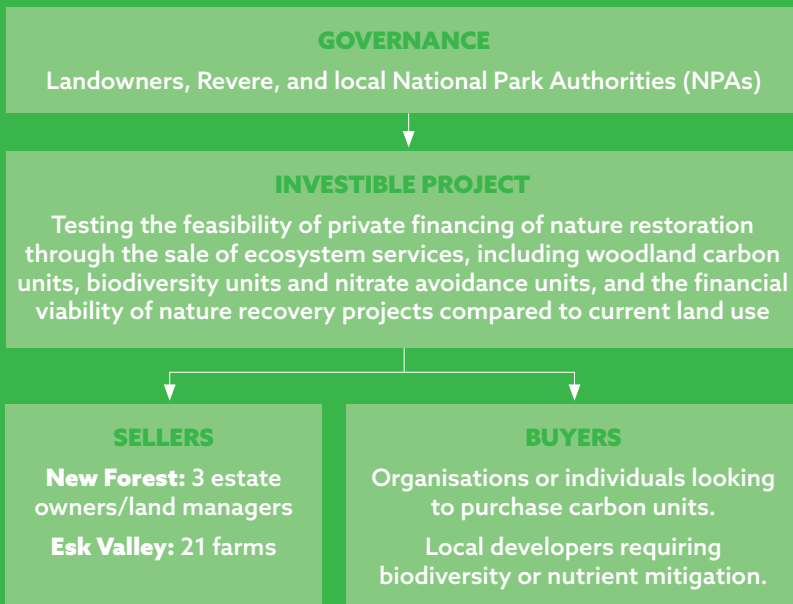
This is one of a suite of case studies of NEIRF funded projects, to highlight efforts to protect and enhance the natural environment, while generating revenue from ecosystem services.



New Forest, Hampshire

INVESTMENT MODELS FOR NATURE RESTORATION IN THE ESK VALLEY AND NEW FOREST NATIONAL PARK

HIGH LEVEL SUMMARY OF PROJECTS



Habitat and geographical location

-  Native broadleaf woodland
-  Species rich grassland
-  Hay meadows
-  Wetland
-  Heath and hedgerows
-  New Forest National Park, Hampshire and Wiltshire and Esk Valley, North Yorkshire



INVESTMENT MODELS FOR NATURE RESTORATION IN THE ESK VALLEY AND NEW FOREST NATIONAL PARK

PROJECT OVERVIEW

This case study covers two NEIRF projects with similar business and investment models, which were designed in a collaboration between Palladium, National Parks Partnerships and the National Park Authorities.

The partnership between Palladium and National Parks Partnerships is named Revere (previously referred to as Net Zero with Nature). One NEIRF project worked with estate owners/land managers in New Forest National Park in Hampshire and Wiltshire; the other worked with farmers/land managers in the Esk Valley in North Yorkshire.

Both projects saw the National Park Authority and Palladium teams working closely with local landowners and land managers, Natural Capital Research Ltd data modellers and the Environment Agency, to draw up design business cases based on the creation and sale of various ecosystem services.

NEW FOREST NATIONAL PARK

The New Forest National Park is a 56,980ha area on the south coast of England consisting of a mixed landscape of farmland, woodland, grassland, river and coastal habitats. Nature in the Park is at risk from a number of threats including habitat loss, climate change and invasive species; while landowners face the challenge of financing sustainable and economically viable nature recovery within these protected areas.

The project explored the potential to enhance three of the Park's estates with ~35ha of native broadleaf woodland and ~340ha of species rich grassland whilst generating long-term income through the sale of ecosystem services from the new habitats. The ecosystem services in scope were woodland carbon units from woodland creation, and biodiversity units and nitrate avoidance units from species-rich grassland. Revenue from the sale of these services would be combined with income from public grants such as the [England Woodland Creation Offer](#) (EWCO) for habitat creation and maintenance. The restoration vision was led by the landowners and farmers, drawing on their experience, knowledge of their land and long-term ambitions.

A second vision was designed together with ecologists and the Revere team and included additional areas of their land that could both maximise local environmental outcomes and provide financial returns for the landowner or farmer. Revere then carried out financial modelling for delivering each of the restoration visions, allowing the participants to better understand the potential opportunities that their land can offer through ecosystem services, from environmental, financial and social perspectives. The project focussed on the options for independent estates' delivery of habitat creation and ecosystem service generation/sales.



INVESTMENT MODELS FOR NATURE RESTORATION IN THE ESK VALLEY AND NEW FOREST NATIONAL PARK

ESK VALLEY

The Esk Valley is a 36,000ha catchment in the North York Moors National Park. The Esk Valley Farmers group, made up of 52 members, covers 10,500ha of this in moorland, farmland, rivers and woodland. The area also holds a large amount of disconnected woodland habitat which are subject to nutrient run off and at risk from wider habitat loss and climate change pressures.

The project looked at the creation of an estimated 330ha of broadleaf woodland and 560ha of species-rich hay meadow across the catchment, and modelled the potential for revenue generation from the sale of ecosystem services combined with available public funding to provide additional long-term income to the landowners/farmers. Similarly to the New Forest project, the Esk Valley project explored the option to draw income from the sale of woodland carbon credits verified through the [Woodland Carbon Code](#) (WCC), combined with income from public grants for woodland and grassland creation and maintenance. The Esk Valley project also explored the potential for biodiversity unit sales and nitrate avoidance credits.

Both projects aimed to work towards market-readiness, and used NEIRF funding to:

- Engage with land managers, owners and farmers to design land use change visions, to create baseline site assessments and to provide mapping.
- Research and engage with local market opportunities for the sale of ecosystem services.
- Provide financial and business modelling for approaches to trading the projected ecosystem services (particularly stacking). Cash flow models were created for each site vision using short and long-term delivery and maintenance costs, and revenue from ecosystem service sales and grants.
- Understand the investment potential for delivering each project vision.
- Generate a knowledge hub to support project replication and scaling.

Each project uncovered a number of barriers in implementing the models explored using NEIRF funding.





These were:

- Geographical proximity to market demand: in the Esk Valley, a lack of nearby housing developments due to protected landscapes meant that demand for BNG was limited.
- The complexity of payments to landowners/farmers where public and private payment sources are combined.
- Challenges in obtaining investment at the smaller scale required by independent sites.
- Perceived risks for landowners: upfront land conversion costs and sole trading within nature markets with a degree of uncertainty were dissuasive for landowners in The New Forest.
- Stacking BNG, nutrient markets and woodland carbon presented difficulties whilst market rules were unclear or incomplete. Woodland carbon was the most accessible market for both NEIRF sites despite other markets such as BNG holding greater potential financial benefits for farmers.

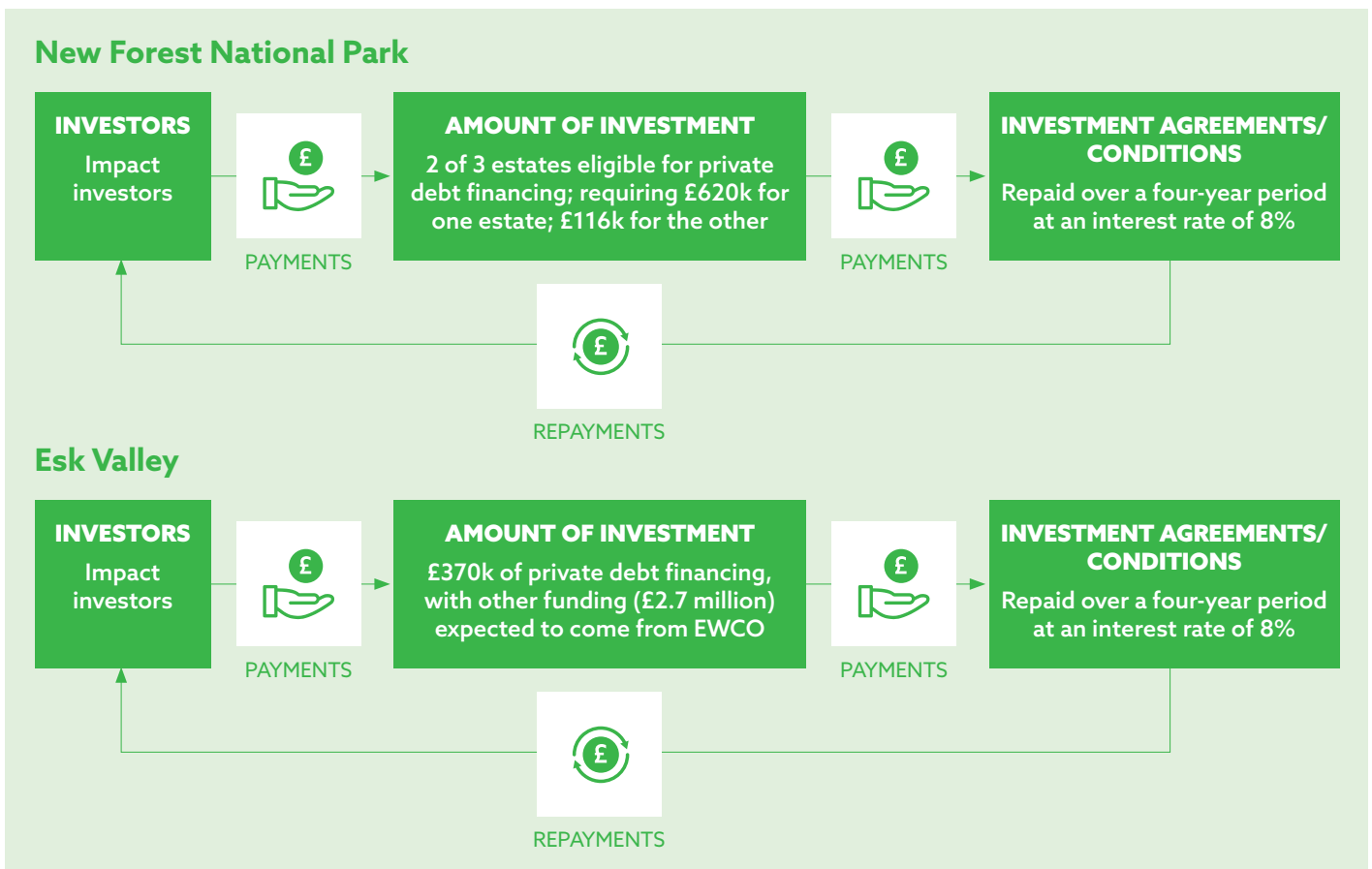
As part of the NEIRF project, Revere also considered how an aggregation model could help to address some of these challenges, and created an early design of a Park-level aggregation platform with Parks authorities. Next, Revere aims to build on this work to develop a landscape-scale aggregation model (see later).

INVESTMENT MODELS FOR NATURE RESTORATION IN THE ESK VALLEY AND NEW FOREST NATIONAL PARK

GOVERNMENT ENVIRONMENTAL GOALS

 <p>Thriving plants and wildlife</p>	<p>Both projects will enable the conversion of farmland into new habitats for species to thrive in. In particular, the New Forest National Park is a special protection area for birds where rare and endangered species including the Nightjar, Woodlark, Dartford Warbler, and the Curlew can be found.</p>
 <p>Reducing the risks of harm from environmental hazards</p>	<p>The New Forest National Park is currently threatened by flooding and wildfires in periods of extreme weather. The creation of new woodland and species rich grassland will help to tackle these threats by making the ecosystem more resilient and improving soil health leading to better water storage.</p>
 <p>Enhancing beauty, heritage, and engagement with the natural environment</p>	<p>Both projects are enabling the conversion of arable farmland back into a more natural landscape, improving the natural beauty of both areas. This will further support the National Parks as popular places for tourism.</p>
 <p>Mitigating and adapting to climate change</p>	<p>Both projects are focussing on joining up habitats to increase species resilience to climate change. Also switching land from arable to woodland or species rich grassland will sequester more carbon and mitigate the risk of wildfires and flooding.</p>

POTENTIAL INVESTMENT MODELS



INVESTMENT MODELS FOR NATURE RESTORATION IN THE ESK VALLEY AND NEW FOREST NATIONAL PARK

The New Forest National Park project's business model was designed considering each estate and designates land parcels to sell different ecosystem services. It assumes that public grant and private revenues can be combined for woodland carbon creation, but that other land, such as grassland, will access only one or the other type of payments due to the additionality rules in place during the NEIRF project timeframe. Revenues from grants and private ecosystem service sales would be used to return investor payments and as income for the landowners.

The Esk Valley project determined that to fund its habitat design and creation, around £3.1 million of upfront financing would be required. Revenue from government grants and woodland carbon credit sales would be used to repay investors and provide on-going income to landowners/farmers.

Both project models anticipate that revenue from government grants such as EWCO would be used to continue to support woodland habitat maintenance, and that no further private investment would be required after initial debt financing.

The lifetime of the projects was set at a minimum of 40 years for the Esk Valley and 30 years for the New Forest, both based on minimum 30-year contracts for selling carbon credits through the WCC. These have the potential to be extended to account for other ecosystem service markets that may develop locally.

While not taken further by either NEIRF site, during the projects, Revere also developed a design of a potential Park-level aggregation model as an alternative vehicle for ecosystem service delivery and sales. The platform would operate at a National Park level, aggregating sellers, buyers and investors to engage them in ecosystem services at scale. An investor, or multiple investors, could provide the upfront capital to the platform, which the platform would then distribute to each restoration project, to cover the necessary works. Buyers would purchase ecosystem services from the platform following verification of the intended environmental outcomes at project sites. This revenue would then be paid out to the investor(s) and provide income for the participants.

Possible design of the Ecosystem Services Platform



ROLES IN A JOINT TEAM

NPA	Project Developer
Leads consultation process to define a vision for a landscape managed for nature	Fund model design
Manages call for sites with interested land managers	Secures private buyers for ecosystem services
Leads relationships and advisory support for land managers	Designs landscapes GIS-based monitoring system
Co-owns fund and payment administration process – similarly to FIPL	Leads on ecosystem service accounting, stacking and reporting to buyers
	Fund management and allocation of payments over time

Costs could be covered through a fixed % management fee of funds secured from buyers

INVESTMENT MODELS FOR NATURE RESTORATION IN THE ESK VALLEY AND NEW FOREST NATIONAL PARK

INNOVATION

The innovative element of these projects include:

- Providing financial and business modelling for landowners and farmers that integrates multiple ecosystem services and combines public and private financing opportunities.
- Exploring a flexible business model that is scalable to a landscape-scale project, for example across a national park or catchment, and supports small scale land managers and farmers to engage with different nature markets.

SCALABILITY AND REPLICABILITY

The business model allows for scalability and can assess the deliverability of emerging ecosystem service markets. The projects have evidenced the opportunities, financial viability and challenges facing estate owners, farmers and land managers when delivering commercial nature restoration, and their findings will support other projects to use similar models where public and private finance is blended. The modelling can also be replicated for new woodland creation projects that draw on existing grants and financial opportunities through the woodland carbon market. Learnings will underpin Revere's exploration of an aggregated approach to sales of ecosystem services which aims to address some of the challenges experienced by the pilot projects.



LEARNING POINTS

- **Access to ecosystem services for tenants is more difficult:** for tenant farmers to benefit from the WCC, changes in tenancy agreements would be required. Tenants are able to benefit from BNG and the developing UK farm soil carbon code directly. Defra's [Farm Tenancy Forum](#) will further engage with tenancy farmers and support on agricultural tenancies, which highlighted challenges faced by tenant farmers including around land use for natural capital projects.
- **Aggregation platforms could help small landholdings to benefit from nature markets:** in accessing private market opportunities, landowners must register with different frameworks which is labour intensive and is often not financially feasible for small scale independent landowners. An aggregation platform may help to engage smaller landholdings. The Green Finance Institute (GFI) has also developed its [Farming Toolkit](#) which aims to support farmers in assessing nature market opportunities and to provide guidance on markets, codes and revenue models.
- **Trusted local advisors and facilitators are important:** nature restoration projects need to be delivered thoughtfully to be able to balance landowner interests, local community needs, and returns for buyers and investors. The restoration vision and delivery process should therefore be co-designed with landowners/managers with the guidance of local trusted advisors.
- **Connecting buyers and sellers at a landscape scale will deliver more environmental and societal benefits:** a piecemeal approach to delivering BNG and nitrate market funded projects limits overall efficiency, misses out on the opportunity to deliver landscape connectivity, and increases complexity and time spent for auditors and project delivery teams. Connecting buyers and sellers with a landscape restoration vision in mind would help make projects more efficient while creating wider benefits for the environment.

INVESTMENT MODELS FOR NATURE RESTORATION IN THE ESK VALLEY AND NEW FOREST NATIONAL PARK



OTHER WORK BY REVERE RELATED TO DELIVERING NATURE RESTORATION PROJECTS IN NATIONAL PARKS

Revere is developing a landscape-scale aggregation platform model with UK National Parks with an initial focus on revenue generation through the woodland carbon market and contribution from emerging markets where available. This platform would support landowners, farmers and small holders to put habitat creation sites into a larger portfolio and receive financial support and ongoing maintenance payments for their work through more streamlined mechanisms.

Through the Revere partnership, Palladium and National Parks' Environmental Land Management (ELM) Test and Trial has also developed and tested several models for blending public and private finance in nature restoration projects. The [Test and Trial](#) project explored potential solutions and developed recommendations for ways to combine these streams of finance in a way that is accessible and appealing to farmers and landowners; that safeguard investments in land use change and that create high-integrity projects which maximise benefits to the environment.

WOULD YOU LIKE TO KNOW MORE?

If you would like to learn more about the investment model for catchment-scale nature restoration in the Esk Valley project, please get in touch with Briony Fox, Director of Conservation & Climate Change at b.fox@northyorkmoors.org.uk.

Full details of the New Forest Net Zero project are available [here](#), or contact Paul Walton, Head of Environment & Rural Economy at the New Forest for further information at paul.walton@newforestnpa.gov.uk.

For questions or comments to Revere, please get in touch with Ashley Gillan at ashley.gillan@thepalladiumgroup.com. For information about the Revere partnership's Test and Trial, please contact Tom Gegg at thomas.gegg@thepalladiumgroup.com.

For questions regarding NEIRF, please contact NEIRF@environment-agency.gov.uk.

This case study was produced by Ecorys.