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.

Clyst Valley

# CRYSTAL CLEAR CLYST BOND

## HIGH LEVEL SUMMARY OF PROJECT

**GOVERNANCE**

East Devon District Council

**COMMUNITY MUNICIPAL INVESTMENT BOND**

Once designed and implemented, the Crystal Clear Clyst Bond will channel impact investment to farms and landowners to convert farmland into woodland. The sequestered carbon and biodiversity units generated by the woodland will be sold.

**SELLERS**

10 farms and landowners across the project area

**BUYERS**

Local businesses

### Habitat and geographical location

Primarily broadleaf woodland and coniferous forestry

Clyst Valley, East Devon

## PROJECT OVERVIEW

**East Devon District Council (EDDC) will create an investment model designed to increase woodland in the Clyst Valley in East Devon. The model will fund small farms and landowners to convert agricultural land to woodland, by channelling investment to them through a Community Municipal Investment Bond (CMIB), called the 'Crystal Clear Clyst Bond'.**

This CMIB will receive investment from local businesses and help landowners and farmers to bridge potential cashflow barriers in woodland creation that may occur during site preparation and woodland planting. Financing will also be provided by government grant and loan schemes, specifically the Woodland Carbon Guarantee (WCaG) and the England Woodland Creation Offer (EWCO) which will offer affordable loans. Landowners and farmers may also choose to sell biodiversity units in addition.

The NEIRF grant enabled EDDC to conduct market research on carbon units with large businesses and SMEs in East Devon, which revealed that many are seeking to buy carbon units locally, motivated by the risks posed by climate change and their net zero targets. NEIRF also provided EDDC with the resources to develop financial models for the sale of woodland carbon.

Broadleaf woodland creation will be the main focus of the project as the Clyst Valley currently has 9.3% canopy coverage, which EDDC aims to increase to 30%. This will be achieved through natural regeneration of woodland, and planting trees to create new forests, parklands, orchards, hedges, shelter belts, and new agro-forestry systems. Land for woodland creation will primarily be converted from pastural farmland, with the CMIB specifically designed to make the model financially sustainable for smaller landowners over the long-term.



River Clyst, Devon

## GOVERNMENT ENVIRONMENTAL GOALS

**Clean air**

Tree belts will **reduce and capture air pollutants such as ammonia** which can cause environmental damage. Additionally, reducing the amount of land used for pastural farming will reduce cattle and pig slurry and fertilisers which also produce ammonia.

**Clean and plentiful water**

Well-positioned woodland, trees and hedges help to reduce surface water run-off, which allows suspended sediment to settle and to lock in agricultural chemicals rather than these reaching and polluting watercourses. The reduction in cattle and pig farming will also **reduce the nitrate pollution into the Clyst River**, its tributaries and the underlying aquifer.

**Thriving plants and wildlife**

Protecting older trees, and new woodland and hedge planting **will maintain and provide habitat for wildlife**. Additionally, the River Clyst discharges into the Exe Estuary Special Protection Area (SPA), Ramsar, and Site of Special Scientific Interest (SSSI). The quality of the water in the river is therefore critical to birds in the estuary, for which the site is internationally important.

**Reducing the risks of harm from environmental hazards**

Woodland can intercept, slow, store and filter water which helps to reduce flood peaks, flows and frequency. The project area has significant underground infrastructure such as water and sewage pipes, a planned France-Alderney-Britain electricity cable, and district heating pipes, therefore **reducing the risk of flood damage** will also have financial value to the companies providing services locally.

**Enhancing beauty, heritage, and engagement with the natural environment**

The expansion of Clyst Valley Regional Park will support the restoration of the landscape's character and **promote public access and community engagement** with the landscape for education and wellbeing, for example via community planting initiatives.

**Mitigating and adapting to climate change**

Across England, 16% forest land cover by 2050 could be equivalent to a **10% reduction in greenhouse gas emissions** at that time. EDDC have set a target of 30% tree cover in the catchment by 2050. Increased tree coverage will also provide shade and cooling.
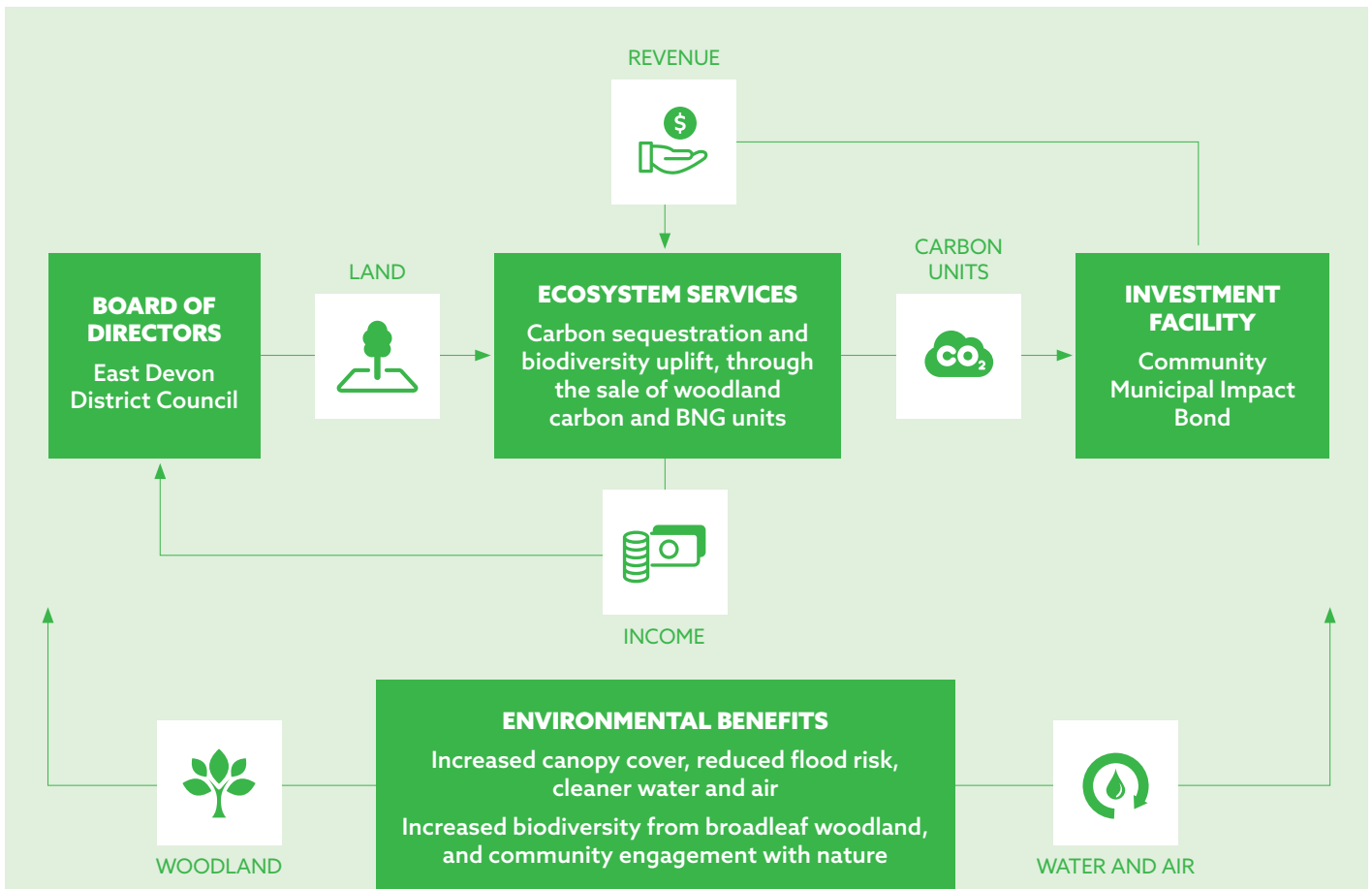
# CRYSTAL CLEAR CLYST BOND

## REVENUE MODEL
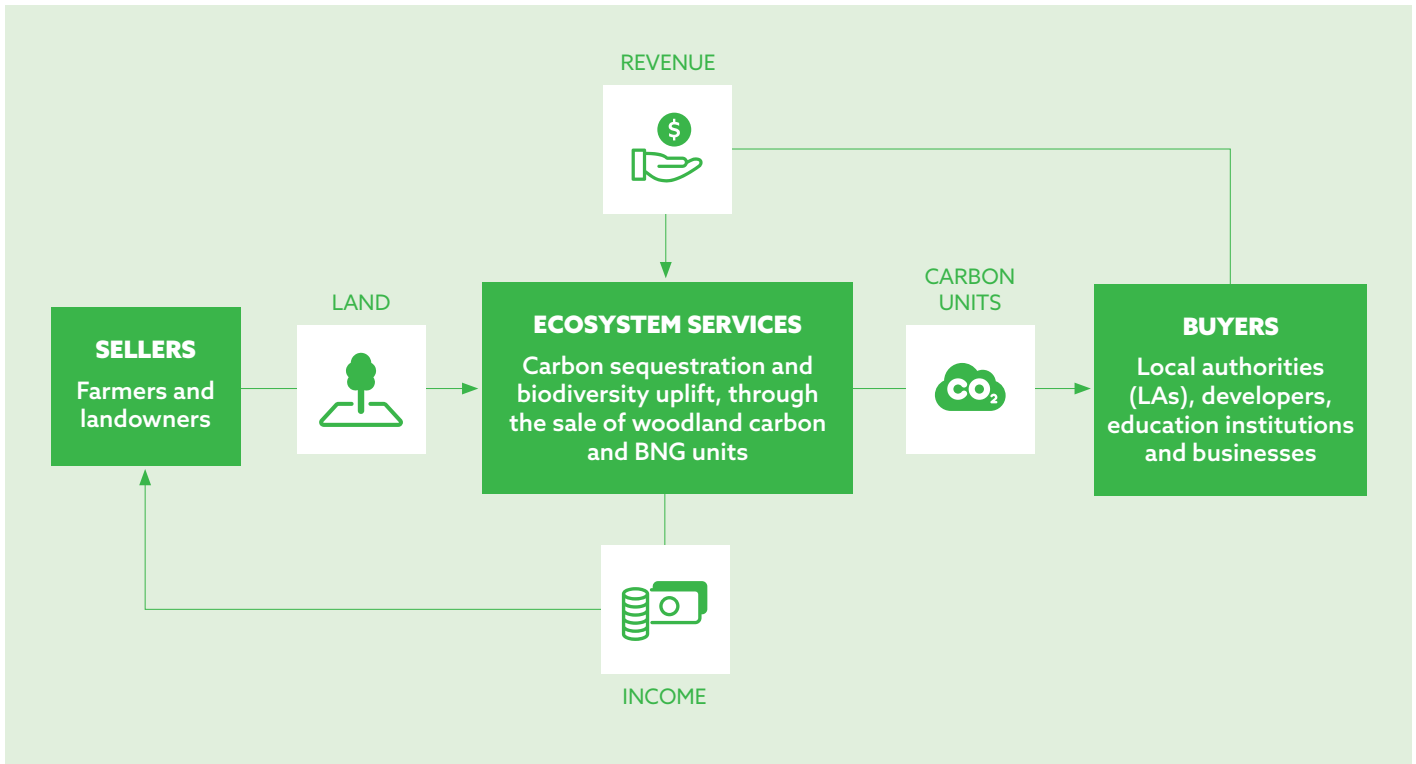


EDDC has identified an increasing and presently unmet demand for verified carbon units from local businesses and organisations, with many open to paying a premium for units generated locally, which supply benefits to the area. Initial research has identified many potential private sector buyers within the project area.

EDDC therefore plan to serve as a broker for carbon unit sales between planting projects in the Clyst Valley and buyers with currently unmet demand, such as Devon County Council. WCaG also provides a mechanism to match sellers with buyers, in exchange for a brokerage fee of 10% of the carbon unit value. In the future, BNG units may also be sold to local developers, as the BNG mandate will increase to 10% within the catchment area from November 2023, and, subject to approval of a new Local Plan, may set a mandatory 20% for East Devon.

Although the initial rate of returns from broadleaf woodland are typically low, this can be mitigated by using less productive farmland for woodland creation, such as floodplain and, on Grade 3 land outside the floodplain, more coniferous plantations which provide a faster yield for forestry and carbon products.

# CRYSTAL CLEAR CLYST BOND

## OPERATING MODEL

REVENUE

BOARD OF DIRECTORS

East Devon District Council

LAND

ECOSYSTEM SERVICES

Carbon sequestration and biodiversity uplift, through the sale of woodland carbon and BNG units

CARBON UNITS

INVESTMENT FACILITY

Community Municipal Impact Bond

INCOME

WOODLAND

ENVIRONMENTAL BENEFITS

Increased canopy cover, reduced flood risk, cleaner water and air

Increased biodiversity from broadleaf woodland, and community engagement with nature

WATER AND AIR

As landowners will not be able to draw revenue from the sale of carbon units for 5-10 years after land conversion has taken place, upfront financing will be required to convert land.

As well as targeting financing from government grant and loan schemes (WCaG and EWCO), EDDC will offer 5-year loans to landowners against 90% of the expected value of carbon unit sales, using finance from an anticipated fund of £500,000 raised from local investment in the CMIB. Local residents and businesses will pay into the CMIB through a financial broker. This approach will encourage local investment in community projects while offering smaller loans and more favourable interest rates than traditional municipal bonds (although lower than commercial borrowing interest rates).

The CMIB will fund over 200 hectares of tree planting, which EDDC will broker for a 10% return on the eventual sale of carbon units. Research into demand has indicated a willingness to pay £30 per unit for local carbon units, above the national average of £19.[1] Using this operating model,

payments will be made in monthly instalments over 35 years to the landowners, who will pay interest rates of approximately 4.5-5%. If demand for finance continues at the same pace, then further funding rounds for the CMIB would be made in years 3, 5 and 6 to match the level of demand. Total funding would peak in year 6 at £1.3m, before gradually reducing year-on-year.

As part of their strategy to attract investors in the CMIB, the project will also consider monetising the public benefits arising from achieving 30% tree cover across the area, such as tourism, water quality and flood amelioration which are likely to appeal to utilities companies or social housing organisations as beneficial investment opportunities.

Operating costs at EDDC will be covered by seeking capital or capacity from existing partner authorities Key measures for success will be areas of woodland created, habitat type, public access to the woodland created and tree canopy cover across the project area.

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1   2022 figure.

# CRYSTAL CLEAR CLYST BOND

## INNOVATION

The project seeks to achieve its targets by changing attitudes to woodland creation. Research has highlighted that there is a lack of awareness of the productivity and ecosystem benefits of woodland, including to farmers who can increase productivity through reforestation. To raise awareness, the project will undertake educational outreach, disseminating the science of tree planting and the benefits it can have on farming, as well as the availability of finance options. The project hopes to involve local experts, businesses, academics and charities in this process such as the Forestry Commission, LiveWest and the Farming and Wildlife Advisory Group.

## SCALABILITY AND REPLICABILITY

The project could be expanded further through collaboration with neighbouring LAs and the creation of a dedicated team of officers within EDDC. A dedicated team could establish a pipeline of projects, set up bespoke agreements and carry out monitoring and impact reporting.

## LEARNING POINTS

- Smallholders are often losing income on their farming enterprises. They often have an environmental ethos and are in a good place to start to create woodland.

- There is scepticism amongst farmers about carbon units, who often perceive them to be 'greenwashing' even to those who have previously planted trees for nature and amenity. Educational work with farmers can help to change those views – for example communicating available funding, and the wider benefits tree planting can have in increasing farm productivity and mitigating climate change risk to farming operations.

- There is cultural resistance to generating extensive new woodland, especially on good quality soils or on the edges of major development, where landowners' pledges so far amount to an increase of 6% in canopy cover. Resistance can be tackled by adapting the kinds of canopy cover proposed, such as open treescapes, parkland, wood pasture, and orchard which are typically more accepted, and can offer benefits to livestock such as shade and shelter.

## WOULD YOU LIKE TO KNOW MORE?

If you would like to learn more about the Crystal Clear Clyst Bond, please get in touch with Naomi Harnett, Delivery Manager, **nharnett@eastdevon.gov.uk** or Simon Bates, **simon.bates1@nationaltrust.org.uk**. For questions regarding NEIRF, please contact **NEIRF@environment-agency.gov.uk**.

This case study was produced by Ecorys.