



LANCASHIRE WOODLAND CONNECT

Climate Rivers People

Abstract

Ribble Rivers Trust has undertaken some of the greatest amounts of tree planting across the Ribble Catchment and Lancashire over the last 5 years. Starting in 2010, RRT began planting trees in recognition of the wide range of benefits they provide for rivers particularly, but also to the wider environment and society, and now proposes a 10-year campaign to continue and increase this programme of work.

Jack Spees
jack@ribbletrust.com

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Executive Summary

Over the last few years, there has been increasing knowledge and understanding of the benefits of woodland creation for biodiversity and for wider ecosystem services. This has led to increasing rates of woodland creation and more recently, this has been in conjunction with growing calls and demand for action on climate change.

The declaration of climate emergencies by a range of organisations along with the demand for carbon offsetting has created an opportunity for wide-scale change that will deliver a range of benefits for people and the environment.

To capture this opportunity and maximise the potential benefits, RRT has developed a collaborative approach, with partners from across the governmental and non-governmental sectors. This aims to encourage each partner to contribute expertise, and resources to deliver 500 hectares of woodland, 500,000 trees and 167kms of rivers improved. Resulting in 160,000 tonnes of carbon dioxide sequestered, 60,000kg of PM2.5 (particulate matter shown to cause health issues) captured, the involvement of 6000 volunteers, and 5000 children planting a tree over 10 years.

This 10 year £15m campaign aims to utilise existing and new funding streams, and seek to establish innovative and emerging funding models. These will ensure the campaign is well placed to support net neutral targets, support the Clean Growth Agenda for Lancashire through “A healthy and prosperous Lancashire, through clean green growth”, offer an improved “sense of place”, and ensure greater resilience for communities and businesses across Lancashire.



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Principle Author

Jack Spees

Other Authors

Contributors

Trust Staff and the Board of Trustees

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Approvals

This document requires the following approvals:

Name	Signature	Title	Date of Issue	Version
Jack Spees		CEO		

Document Audience

This documents audience is principally the Trust's board of trustees, and trust employees. However, it also extends to members and supporters, and to funders where appropriate.

Distribution

This document has been distributed to:

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Introduction

Healthy functioning woodlands, particularly riparian woodlands, are a key ecosystem influencing the health of rivers. This is due to the way they interact with the water environment and regulate key pressures affecting rivers and streams. These include: reducing diffuse pollution (from sediment and nutrients to faecal matter), providing habitat (trailing branches and roots), regulating water temperature, and slowing the rate of flow to help lower flood risk. The River Ribble and all of its tributaries are subject to these pressures, to the extent that only 24% are considered to be in “good ecological status”. As a result, Ribble Rivers Trust (RRT) has developed an evidence based tool, based on data modelling by Durham University, to identify the priority areas in the catchment that will provide the greatest benefit in addressing these pressures.

Woodlands in themselves are valuable habitats for many threatened and endangered species, and their quantity and connectivity is pivotal in supporting these species. Within the Ribble Catchment the amount of woodland cover is approximately 13%, which is one of the lowest amounts in the UK. As such, increasing the woodland coverage provides opportunities to improve rivers and streams but also to provide valuable habitat, and importantly, seek to increase the connectivity of existing woodlands. Work by the Lancashire Environment Records Network, the Environment Agency and Lancashire Wildlife Trust identified key areas for expanding woodlands and creating ecological corridors to improve the conservation status of woodlands, and the species that rely on woodlands.

Additionally, woodlands can provide health and wellbeing benefits, from simple walks within the woodland (shown to have mental health, and physical health benefits), to active involvement in the creation and management of them. They also aid in cleaning air, by stripping particulate matter and so benefiting human health, as well as offsetting ammonia from agriculture, which has recently been highlighted as a key focus for human health in government policy. Ribble Rivers Trust, the Environment Agency and Lancashire County Council Public Health Board have undertaken a study to identify which communities health will benefit the most from community led action to improve the environment, including through woodland creation.

Finally, trees play another crucial role, very much in focus within the public domain, the sequestration of Carbon. A key need in the fight against climate change. The Independent Panel on Climate Change (IPCC) stated in July 2019 that the UK needed to plant between 30,000 and 50,000 hectares a year to be on target for net zero carbon emissions by 2050. As a proportion of the UK, that means 240 hectares of woodland per year for the Ribble Catchment (and 381 annually for Lancashire) – or 326,880 trees (520,000 trees for Lancashire). These numbers are probably conservative, as Lancashire’s industry means it is probably a greater emitter of carbon than the average, and so a higher target may be necessary if considering emissions alone.

It is clear that expanding woodland cover should be a priority for all, and that there are significant benefits to be achieved, and although the levels of woodland creation required and desired are far beyond the ability or capacity of one organisation, a partnership is best placed to take this forward, with a key organisation(s) leading the partnership.

RRT has planted over 150,000 trees over the last 5 years and has 60,000 planned over the next 2 years. This has been achieved through a number of woodland creation projects; Keeping Rivers Cool, Keeping the Ribble Cool, Pendle WINNS, Ribble Life Together, and Woodlands for Water. These projects are usually 2-3 years in duration. RRT has reviewed these projects, and considered the opportunities and targets going forward, and decided that a 10 year campaign (2020 – 2030) to increase woodland creation across the Ribble is needed, and is the most effective approach to deliver significant woodland creation at a catchment scale.

The Challenge

The principle challenge in taking forward this programme is the amount of land required to plant the aspired number of trees. Although there are a number of large land-owning organisations across Lancashire, each has its own tree planting targets, and constraints within land holding (such as tenants on varying tenancy agreements). Furthermore, a single large site or small number of medium sites presents the potential of a large conflict with other objectives, such as agricultural land use, conservation objectives and landscape character, and may present greater costs as large-scale land purchase or compensation are required.

Targeting a single or a small number of larger land blocks does not necessarily provide the benefits that can be achieved, or that are needed, across the whole of Lancashire, which in some cases are very localised (such as Natural Flood Risk Management, water and/or air quality improvements, or woodland connectivity). It can also present the situation where beneficiaries and benefactors are far removed from the woodland created which can reduce the health and wellbeing benefits of woodland and woodland creation.

It is therefore envisaged that to maximise benefit and uptake of woodland creation across Lancashire, starting in the Ribble and then expanding, that a large number of smaller sites will be required, which will present the widest benefit if created along water courses, rivers and streams. This will require relationships with a large number of landowners and tenants, an evidence base for identifying woodland creation sites that will deliver multiple benefits, bespoke agreements with individual landowners and tenants that ensure the desired outcomes are achieved, and knowledge and experience of delivery of woodland creation from grant agreements to woodland design, contractor management and volunteer supervision.



Targets, Outputs and Outcomes

Targets

- 167 kms (100 miles) of rivers and streams improved
- 500 Ha. of woodland created in priority locations to maximise benefit
- 500,000 trees planted
- 6,000 volunteers involved
- 5,000 children have planted a tree
- 1000 volunteering days

Outputs

- 63,000 kg of particulate matter removed from the air
- 160,000 tonnes of carbon dioxide sequestered
- Greater public awareness and involvement in taking action on climate change
- Better knowledge of the countryside and its benefits to people and wildlife

Outcomes

- Contribution to net zero carbon emissions
- Increased woodland extent across Lancashire
- Better connectivity of woodland and woodland species
- Improved health and well-being of communities
 - Less deaths attributed to poor air quality
 - Increased physical activity
 - Reduced obesity-related illness
 - Better green spaces and increased interaction with green supporting mental health improvements
 - Improved resilience of communities from climate change impacts (such as flooding)
- Greater abundance and diversity of river insects and their predators
- Mitigation and adaptation of rivers, streams and woodlands (and species within) to climate change through better habitat and more shade
- Improved and sustained water quality at our Bathing Waters.



The Approach

There are a number of funding streams that could be utilised to deliver the capital elements of the initiative. However, to conduct a campaign such as this and deliver the outputs and outcomes, a dedicated team is required to oversee and manage the campaign and the individual elements of capital works, as well as to utilise and engage volunteers.

RRT and a number of key partners (including Lune Rivers Trust and Wyre Rivers Trust) have worked to establish a suitable team to identify, secure and deliver woodland creation. This will be achieved through working with an established network of farmers and landowners across Lancashire, developing a pipeline of woodland creation opportunities. Each opportunity will seek to maximise the benefits of woodland creation by using the targeting tools developed to identify water quality, NFM, climate change adaptation, health and woodland connectivity improvements (see [Appendix 1](#)). The campaign team would look to utilise woodland creation grants through Countryside Stewardship and where appropriate the Woodland Carbon Code and Woodland Carbon Guarantee.

However, it is unlikely that the woodland creation grants will be sufficient to cover all the costs of each woodland site for the campaign, the full whole site costs please (see Campaign Costs [Appendix 2](#)).

To secure the funding required, RRT has identified a range of sources, corporate sponsors, grant giving bodies, carbon offsets, public donations, but also Local Authorities and organisations such as the Environment Agency, Electricity Northwest, and Network Rail. It is viewed that the funding needed cannot be secured from a single source, and a collaborative approach where multiple sources contribute will be successful (see Campaign Income [Appendix 2](#)).

The campaign has been developed with some funding already secure, and is looking to grow commitments from the variety of funders identified. Although it is hoped funding targets could be hit in year 1, it is recognised that it will take time for momentum and commitments to the campaign to grow. However, it is crucial to secure elements of funding early, as the development of sites requires funding in advance of tree planting, by up to 12 months.

The principle is then to combine contributions from the potential funders, in a transparent and reportable way, to deliver the campaign. Smaller contributions from an array of funders is likely to be the most effective way of bringing about the ambitions everyone shares to quote an RRT volunteers - "Lots of little things add up to big things"

RRT has secured a significant number of planting opportunities for the winter of 2020/21 (as well as new sites becoming available, subject to funding, for 2021/22). For each site, the cost, number of trees, carbon sequestered, area, and other key metrics have been calculated. A significant proportion of the capital costs have also been secured, and approaches and commitments made from local authorities and from corporate sponsors. With ongoing discussions it is hoped that from the organisations identified, further funding can be secured for these sites, as well as an ongoing commitment to enable the development of sites for the following years, and the establishment of a continuous 10 year programme of woodland creation.

Establishing whether potential funders wish to support the campaign and its objectives, to purchase a carbon offset, or to be responsible for the planting of specific quantities of trees (as separate to purchase of carbon) will be key to taking forward funding opportunities. Through clear definition of funder requirements and the transparent funding mechanism proposed, carried out by a charity, the campaign is set up to provide this function.

Upon completion of each planting season, a short report and/or certificate would be issued to the various funders associated to their contribution and desired outputs. Where the Woodland Carbon Guarantee or Code has been employed, farmers and/or landowners will begin to receive payment for the carbon sequestered on their land.

Verification Monitoring and Evaluation

As part of its annual programme of maintenance RRT will visit sites to ensure that the woodland is developing as required, assess survival rates and identify necessary maintenance work. This will be undertaken in line with Forestry Commission guidance, and Woodland Carbon Code requirements to ensure successful validation and verification of carbon sequestered.

Depending on the size of a site, further monitoring and evaluation maybe required as part of the Woodland Carbon Code certification.

There will also be ecological monitoring carried out to determine responses to tree planting, and monitoring of volunteer participation, and evaluation through questionnaires and surveys.



Appendix 1

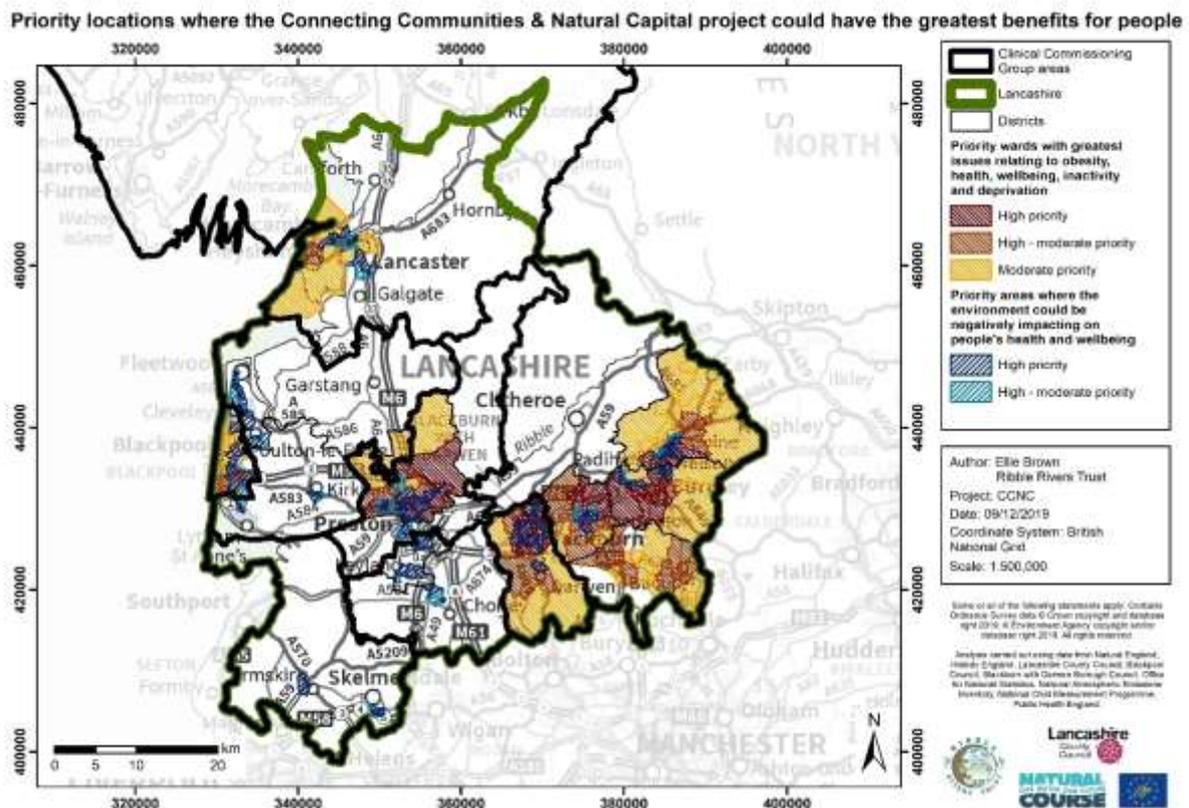
Woodlands for Public Health

A two-stage GIS-based analysis was used to identify priority locations across Lancashire where woodland creation could have the greatest benefits for people. Using freely available data with national coverage, produced by leading organisations within their respective fields, Ribble Rivers Trust identified:

1. Administrative wards that currently have the greatest issues relating to obesity, health, wellbeing, inactivity and deprivation (many of the Lancashire-wide priorities are also national priorities)
2. Areas where the environment currently has the greatest potential to negatively impact on people's health and wellbeing

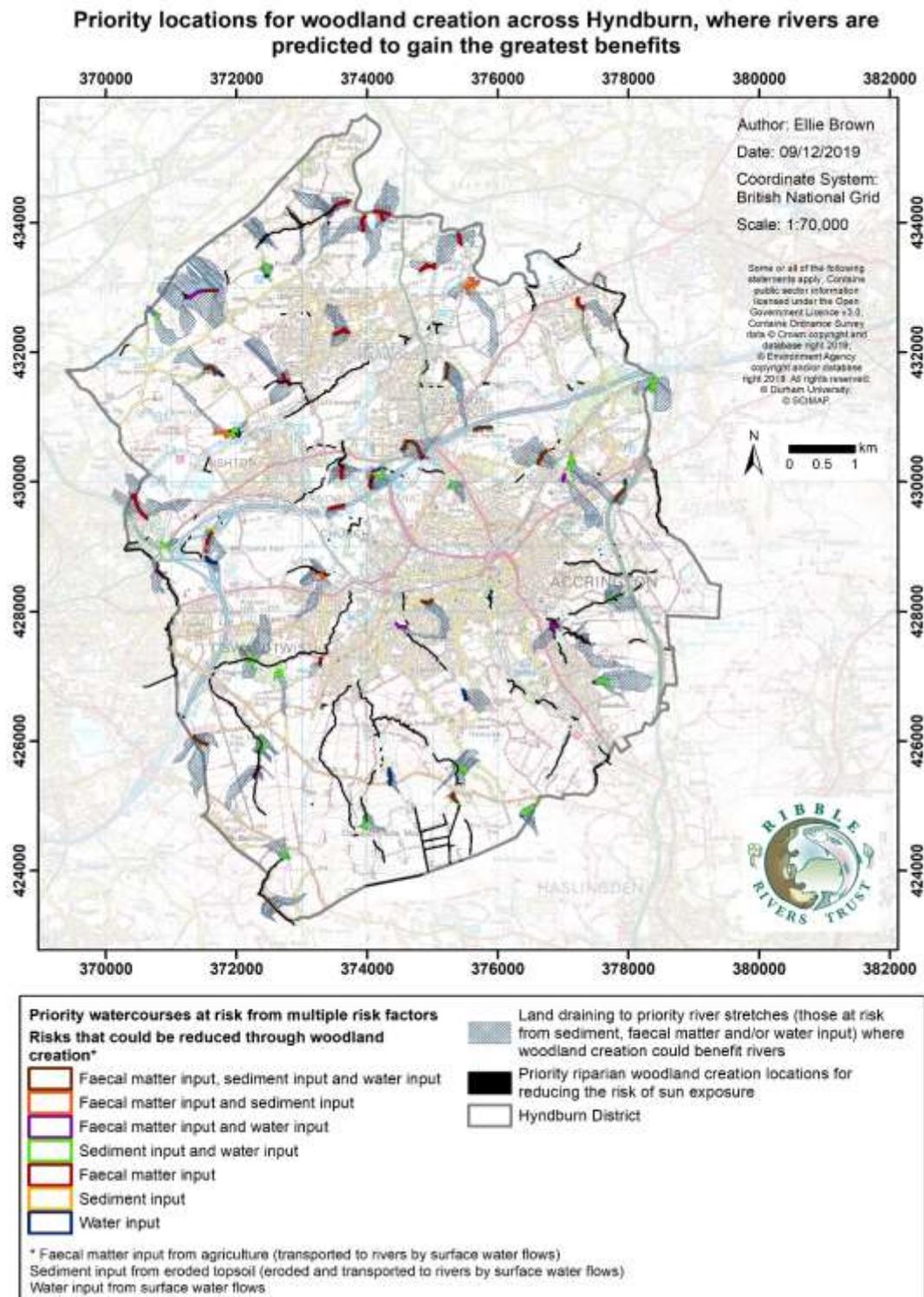
Locations where the priorities identified during Stages 1 and 2 respectively overlap are areas where woodland creation could have the greatest benefits for people, through increasing health and wellbeing and reducing the negative impact the environment has on people.

This evidence base was created through the Connecting Communities and Natural Capital project, in conjunction with Lancashire County Council Public Health and the Environment Agency, including funding through the Life Integrated Project "Natural Course".

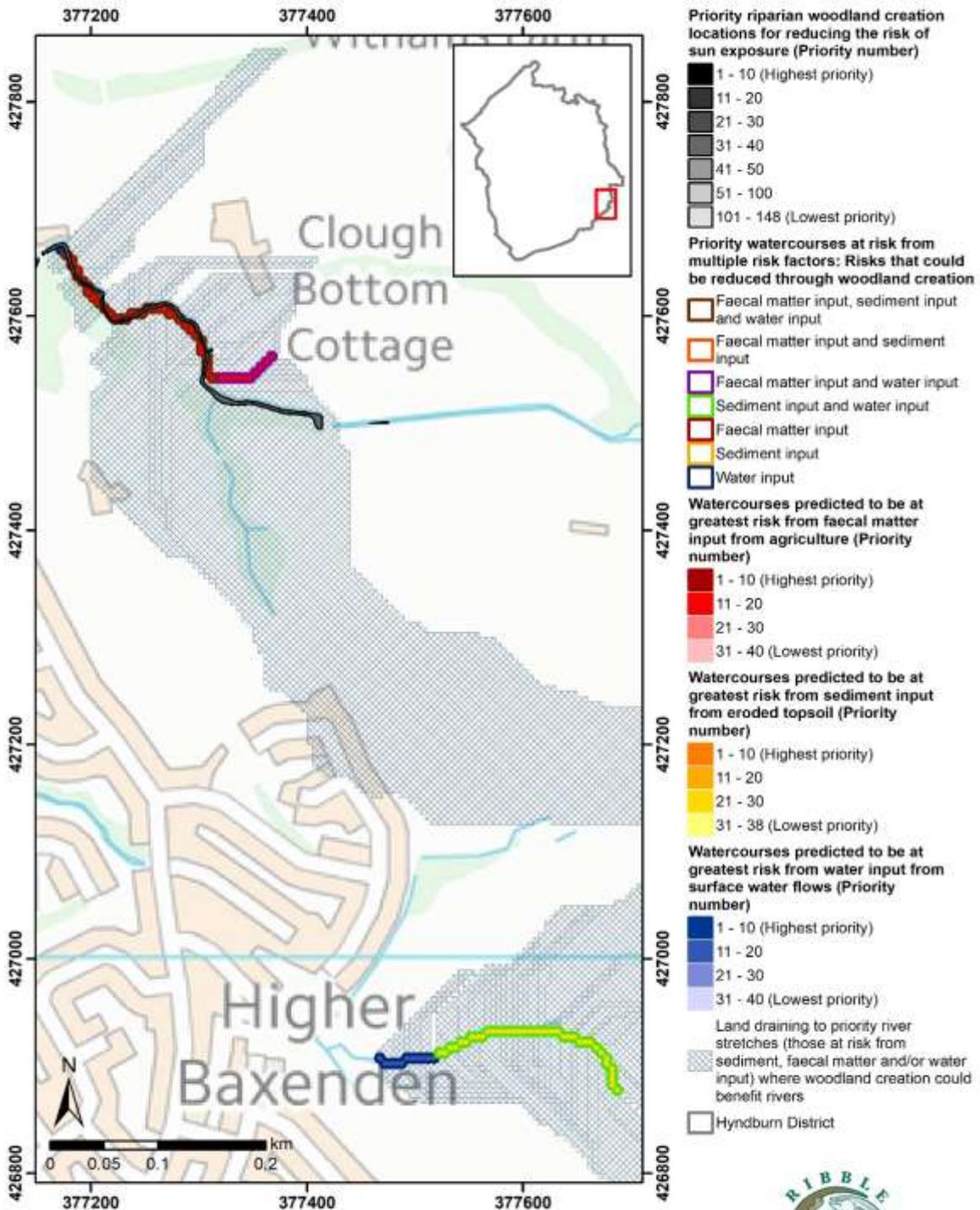


Woodlands for Environment Benefit

Ribble Rivers Trust, working with Durham University, developed a GIS based tool to prioritise riparian and catchment tree planting locations across the Ribble catchment for a variety of the Ecosystem Services they provide. This tool, worked on a 5m length of river resolution, a higher resolution than any other tree planting prioritisation tool developed across all sectors. It enables targeting of woodland creation for maximum delivery of multiple ecosystem services (priority site to invest in Natural Capital) and thus maximum benefit.



Priority locations for woodland creation across Hyndburn, where rivers are predicted to gain the greatest benefits



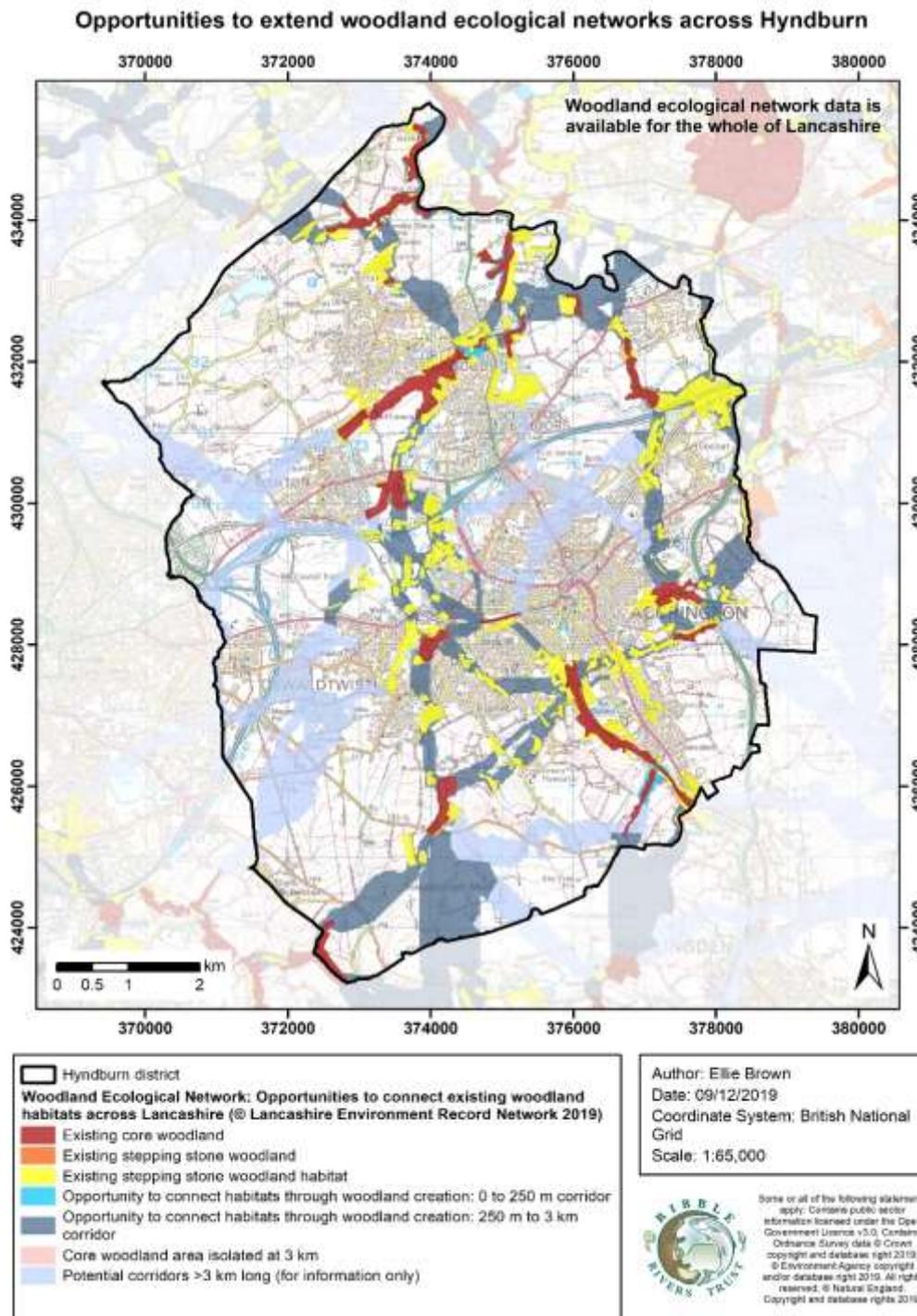
Author: Ellie Brown 09/12/2019 Coordinate System: British National Grid Scale: 1:4,500

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Ecological Networks Woodland

Using work carried out by Lancashire Environment Record Network (LeRN), supported by the Environment Agency and Lancashire Wildlife Trust (“An Application of Ecological Networks: Achieving multiple benefits through planning for integration within the North West River Basin District” Nik Bruce and Richard Shirres, 2015), we are able to prioritise where woodland creation will enhance woodland networks, to improve connectivity of habitat to enable species to disperse across the Lancashire landscape, supporting their conservation status.



Appendix 2

Campaign Costs

Item	Quantity	Cost (£)
Capital		
Fencing, signage, gates	33,400m	280,560
Trees	68,136 unit	163,526.4
Other costs (livestock watering, access etc)	11,690 unit	11,690
Sub total		455,776.4
Revenue		
Project Managers	2 FTE	70,200
Volunteer Supervisors	1 FTE	29,250
Farm Advisors	1 FTE	35,100
Consultation, Monitoring and Verification	1 FTE	29,250
Sub total		163,800
Maintenance		
Maintenance Staff	1 FTE	23,800
Maintenance materials	N/A	20,000
Sub total		43,800
Other Costs		
Travel	3,500 miles	15,750
Contingency	5%	31,413.82
Overheads	10%	94,241.46
Sub total		141,405.3
Total		804,781.68
Landowner Payment		
Payments to landowners/farmers (50 years of payments)	50 Ha.	751,345.51
Total Costs Year 1		1,556,127.2

The costs above are the forecast year 1 costs, and would increase year on year, subject to inflationary or market rate increases (currently forecast at 2.5%).

Staff costs are full employment costs including all employer contributions to pension, life assurance and National Insurance.

The payments to landowners are based on the forecast annual payment of £250 per hectare for 35 years and £140 per hectare from year 36 to year 50, this is subject to carbon prices between now and securing of the first Woodland Carbon Code certified sites. The total includes increases each year for inflation index linked or 2% increase per annum (whichever is lower). The price of Carbon will be reviewed regularly to ensure appropriate prices are being paid to landowners, and we are meeting our targets.

Campaign Income

The below table sets out a summary of the potential funding sources:

Potential Funder	Target Amount (£)	Target Quantity	Total (3)
Countryside Stewardship	6,800	50	340,000
Countryside Stewardship (maintenance)	200	50	10,000
Corporate Sponsors	10,000	15	150,000
Public Donations	15	2700	40,500
Local Authorities	15,000	10	150,000
Charitable Grants/Funding	114,300	1	114,300
Carbon Off setters	50	15027	751,350
Total			1,556,150

The Countryside Stewardship rate is based on a standard rate for riparian woodland creation, and 50 hectares a year being created. Additionally, annual maintenance payments are made for 10 years at £200 per hectare.

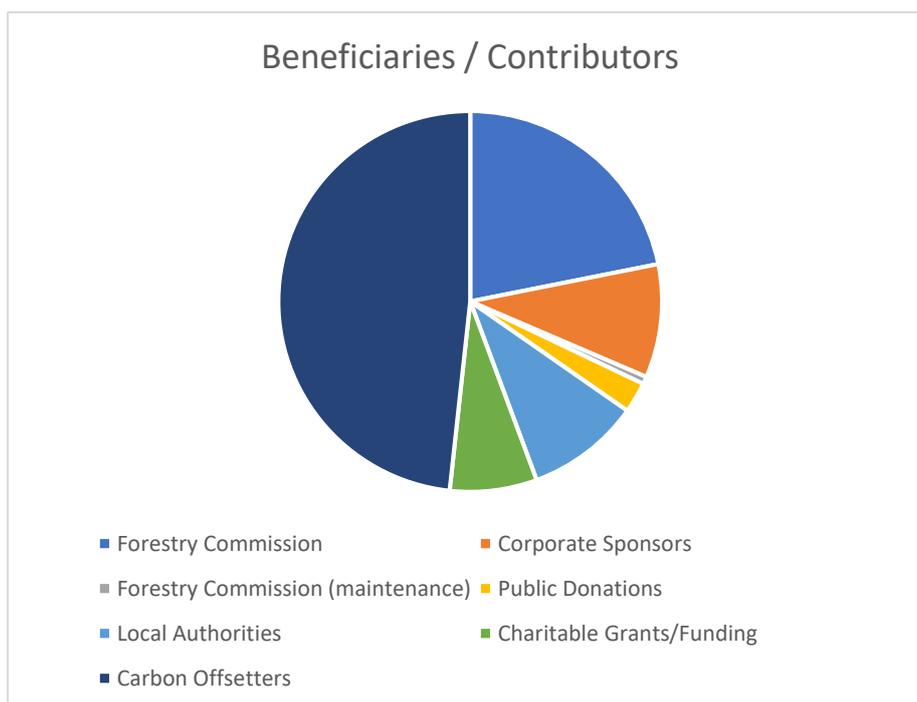
Corporate sponsors are expected to have thresholds based on both corporate sponsor turnover and their ambitions, ranging from £1,000 to £15,000 a year. For this calculation we have set out a £10,000 rate and target of 15 corporates based on discussions to date.

Public donations are targeted at 2700 people donating 15 each. This is an ambitious target but Lancashire population should see this amount to be achievable.

Following discussions with local authorities a figure of £15,000 has been put forward. This is based on at least 10 authorities contributing to the campaign annually.

Ribble, Lune and Wyre Rivers Trusts have an excellent track record in securing funds from charitable sources for the delivery of projects, including woodland creation, and have set a target of £114,277.19 annually to be achieved.

Carbon Offsetters - based on a £50 per tonne of carbon, 15,027 tonnes of carbon would need to be sold annually (note that this would be in the form of "Pending Issuance Units" – the government certification that carbon will be sequestered in the future). Discussions with 1 large corporate based in Lancashire have seen discussions around securing 80% of this target in year 1, and other discussions are ongoing with additional potential buyers.





TRUSTEES: J. Bleasdale, D. Bradley, J. Cowburn, M. Ellacott, Dr. M.W. Horner, J.P. Lord (Chairman), C.H. Marchbank, J. Rawkins, A.T. Rowntree, D. Wilmot.

CHARITY NUMBER: 1070672 COMPANY NUMBER: 3498691 ENTRUST REGISTRATION NUMBER: 600122

To secure the conservation, protection, rehabilitation and improvement of our rivers, streams, watercourses, water impoundments, bank sides tributaries and estuaries in particular of the river Ribble, Calder and Hodder for the benefit of the public.

The Ribble Rivers Trust is the operating name of the Ribble Catchment Conservation Trust Limited, Registered Address: Central Buildings, Richmond Terrace, Blackburn, Lancashire, BB1 7AP