



**Cyfoeth
Naturiol**
Cymru
**Natural
Resources**
Wales

**Opportunities for sustainably managing the Dyfi's natural
resources...to benefit people, the economy and the environment**

Vol 2 – Opportunity Maps – September 2016



Vol 2 Dyfi vision, aims and opportunity maps

Purpose and status of this document

Vision and aims (including stakeholder's views)

Map No Topic

- 1 Opportunities to connect people to the outdoors, help communities become more sustainable and support health and tourism**
- 2 Opportunities to maintain/ increase agricultural productivity, improve resilience and deliver public benefits**
- 3 Opportunities to connect and improve the natural environment**
- 4 Opportunities to improve the Historic environment**
- 5 Opportunities to increase carbon storage, biodiversity and flood regulation**
- 6 Opportunities to increase woodland cover and deliver multiple benefits**
- 7 Opportunities to improve the water environment and deliver multiple benefits – detail view**
- 8 Opportunities to improve biodiversity, recreation/access and the water environment in the coastal area**

The Purpose and status of the Document

Wales' natural resources provide our basic needs and give us energy, prosperity and security. They protect us and make us healthier and our lives better. A healthy resilient environment creates the conditions for a thriving and sustainable society. But evidence shows that our natural resources continue to be put under pressure from a variety of sources. We need to think and act differently, to manage our natural resources in Wales in a way which values and enhances them and the many benefits they provide. The Environment (Wales) Act and the Well-being of Future Generations (Wales) Act together create a modern legislative framework to bring this about. NRW is at the forefront of this with a new purpose under the Environment (Wales) Act to seek to achieve the sustainable management of natural resources (SMNR) and apply the SMNR principles in exercising all our functions.

To help Wales prepare for this new legislation, in 2014 Natural Resources Wales set up three natural resource management trials; the Rhondda and Tawe in South Wales and **Dyfi** in Mid Wales. Trialling the application of SMNR allowed us to:

- Learn how to apply SMNR and the nine principles at a local scale;
- Explore Wales' emerging natural resources priorities, described in Welsh Government's Natural Resources Policy statement;
- Test engagement, evidence and planning approaches which might be used to develop Area Statements, which are a key element of the natural resources planning framework and a requirement of the Environment Act;
- By sharing our learning, inform the developing Environment Bill and NRW's ways of working.

We deliberately took an open and flexible approach. From the outset, we involved the people who live and work in these places to identify priorities, risks, and opportunities for better management of the area. Generally people responded positively to our approach because they felt part of developing solutions. The trials led us into working with partners on some of the significant issues, which in the past were considered either too challenging or not within our remit. Each trial was based on a river catchment and, to maximise learning, was selected because of its different environmental, economic and societal circumstances. Whilst the scale of Area Statements remains to be decided it is now expected that they will cover a larger area than those of the individual trials.

In the Dyfi, we produced this document to outline the priorities for sustainably managing the natural resources in the trial area. This information is based on two years of working with organisations, community groups and residents in the area, extensive evidence gathering and knowledge sharing.

These documents are not Area Statements and are non-statutory (as the work preceded the Environment (Wales) Act). However, they **provide a local framework for the Public Service Board, organisations, community groups, local business** and people to use and refer to. They can be **used by communities and organisations to work better together** and deliver outcomes which deliver multiple benefits. They can **encourage better working between partners by focussing resources on clearly identified opportunities** and can also be **used to support both local and landscape scale proposals for funding**.

Meeting the Challenge – Vision

Having identified the key challenges the Dyfi faces the following vision was produced. We conducted a second workshop in autumn 2015 to agree the vision and key aims for the management of natural resources in the Dyfi.

'The Dyfi will be recognised for its natural beauty, thriving community, strong rural economy, linguistic and cultural identity and diversity of wildlife. Opportunities for tourism, recreation and education are well developed and managed within a robust environment that is able to withstand future change. The community recognises and supports the need to sustainably manage its natural resources for the benefit of people and environment of the Dyfi.'

We then produced **6 aims** that will help us meet the challenges described above.

- **Helping land based businesses become more resilient**
- **Connecting & improving the natural environment**
- **Improving the water environment**
- **Helping communities become more sustainable:**
- **Improving opportunities for people to connect with the outdoors**
- **Building capacity**

The figures below show why stakeholders supported these aims and their ideas for achieving them.

Helping land based businesses become more resilient

We want to see resilient land based businesses that can withstand setbacks from economic or natural causes; are economically sound, environmentally responsible and contribute to thriving communities. **You said**



Greater support to those that manage this land

Sheep farming traditions important and can be continued alongside food growing, tourism etc. Young people more likely to choose a life in farming if more valued

Welsh Culture valuable as a tool to connect people. Place names, field names, etc

Sensible incentives for farmers so they feel they are doing what is good for their own land

Farmers supported and appropriately advised

Talk to farmers interested in new things e.g. Future Farmers and support them financially to realign their ideas. Trust that farmers can have good informed input

Too much mature timber still being lost from the framed landscape - hedgerows, trees

Support large scale restoration of grasslands/hedgerows etc through Agri-Environment schemes

Helping land based businesses become more resilient

Restore PAWS, control rhododendron, restrict grazing under tree cover to allow regeneration [In forests and woodlands]

Well maintained rights of way and permissive paths - support for landowners to keep them open

C.A.P. needs radical overhaul to include payments towards ecosystem services, not just meat production

Pontbren approach

Preserve indigenous culture and heritage but not at the expense of farming practice change

Farmers not encouraged to diversify by present grant system

Connecting & improving the natural environment

We want to see a better managed and more connected natural environment that can provide the range of benefits described above. **You said...**

Connecting and improving the natural environment

(uplands) Too long overgrazed by sheep. Where uneconomic should consider destocking / rewilding as an option. Move to a more natural, developing ecosystem

Removal of alien conifer plantation from areas where they have destroyed valuable habitats. Increase areas of broadleaf woodland to connect-up existing woodlands & create more flower-rich grassland

Protect important habitats -
Priorities peat land/grassland/hedgerows

Land managers, farmers & gamekeepers believe predator control is key to wild life management and is a bullet that should be bitten. The cosy idea that predators have no effect on wildlife is wrong and has done huge damage to the valley's fauna

Eradicate rhododendron from all natural / semi-natural & modified habitats and encourage garden owners to destroy it! Eradicate invading conifers onto open moorland

Broadleaved woodland creation and management. Management and protection of other key semi-natural habitats

Ensure farming and forestry practice is modified to be more ecological sustainable

Protection and buffering of protected sites

Enrolling public forest lands in to restoration projects particularly to support strategic link - corridors- with other restoration projects

Maintain management of sand dunes.

Threats from invasive species and man made river developments (weirs/hydro electric)

Support restoration of PAWS by NRW, especially in areas more accessible / visible to local communities

Record existing woodland and state of existing woodland. Connect biodiverse areas

Inappropriate planting of conifers. Intensive agricultural in uplands.

Plant broadleaves, reduce sheep grazing, map existing woodland assessing health, regeneration & diversity

Mixed grazing should be encouraged

Reduce grazing, increase trees and permanent planting (not just forestry) biodiversity and flood protection

Targeted action to improve priority species & habitats, e.g. blanket bog and birds such as marlins & hen harrier

Plan for sea level rise with managed retreat

Remove C.A.P. Payments for uneconomic grazing. Revert to upland native forests

There is too much emphasis on glamorous reintroductions of exotics & predators . Curlews, lapwing etc. partridge, black game & grouse were all present as breeding populations until the 60s/70s. Red squirrel were the norm until the early 60s. Why is there no programme to help them return?

Improving the water environment

We want to see a reduction in pollution from land use activities and old mines; less flooding and a fewer barriers to fish migration. **You said....**



Improve water quality by addressing upstream diffuse pollution

Increase areas of wetland

Flood management

Restoration of floodplain

Dumping rubbish at sea should be unacceptable

Control Japanese Knotweed & Himalayan Balsam

Scallop dredging too damaging & destructive

Fish populations in streams and rivers are at very low levels, especially non-migratory salmonoids

If it doesn't reach the bottom of the hill, it won't flood the valley. Create wild areas

Manage the upland peat and forestry to [prevent] water run off and [improve] Carbon Sequestration.

Less intensive farming operations. Riverbanks often grazed / access to the water's

More tree planting at appropriate locations

Encourage better water retention in uplands & mid-catchment

Maintain existing flood management to a satisfactory level

Improving the water environment

Identify upstream areas that can replace [salt] marsh & mudflats

Saltmarsh creation, Protection of lowland peat

Jet skis should be controlled

Regenerate watercourse banks, restrict grazing of these banks

Allow regeneration with native tree species (removing Sitka Spruce) and reduce drainage. This will provide flood mitigation & biodiversity

River restoration projects, particularly in lowland areas where historically straightened

Potential flooding due to the more efficient drainage in uplands and in middle catchment, allied to weather extremes

Ditches on Borth Bog area could be managed better to help with flooding issues

Create more freshwater and brackish wetlands as sea level rises

Helping communities become more sustainable

We want to see healthy, thriving communities using their natural environment, taking more exercise, having with a lower carbon footprint and eating more local food.
You said...



Save the town-it is falling apart. Engage the community
Maximising economic benefit from Angling Tourism

Our resources should be used for the benefit of the population. Dyfi Valley must not become an isolated "reservation" where tourists can view a quaint old fashioned peasant culture

Support renewables in appropriate areas

Reuse of dilapidated buildings

Renewable energy must be considered as a must, there must be a "proper" Wales wide energy policy.

Use should be made of the now mostly fenced off native woodlands for firewood etc.

Why are people re-roofing with Spanish slates?

I would like to see the common land in Llancynfelyn managed as an area of willow woodland for fuel biomass. I think there is also opportunity for small scale wind turbines in communities like Llancynfelyn

I'm very supportive of renewable energy including wind farms

Include people - the discussion - making progress, and listen to them

Farm and village scale windmills and water turbines should be the NORM. Every original water mill not used now is a wasted resource

Access to wood fuel processing equipment for start up / new businesses would greatly help

Reintroduction of system for local people to take firewood from NRW plantations

Encourage solar & wood burning as energy supply rather than wind turbines

By definition, culture & heritage is for locals. Schools are hugely important in this context

Welsh culture/language - often incomers dictate environmental agenda - support sustainable agriculture

Need for it to be Financially viable for locals to live in the area

Locally grown fruit, vegetables and meat is more available at markets, community shop, farmers' markets but not supermarkets (except coop)

The present rate of consumption of resources and deterioration in natural resources is unsustainable and ecosystems are failing already

Add lots of farm turbines and solar

Greater interface between farmers and community growing projects

Increase the proportion of local self-reliance in food, timber and economic activities

More available information on culture and heritage and changes to the landscape

The "Green Diaspora" must listen and learn and not seek to lecture "teaching granny to suck eggs" is counterproductive and must be avoided

Provide a direct, fast, safe to cycle lane along main roads linking major towns e.g. Machynlleth, Aberystwyth, Newtown, Dolgellau etc. Cycle commuters need FAST routes (not Sustrans scenic routes which are fine for tourists)

We need better Public transport links across the valley from N- S

Greater community access to land for horticultural production

CC development plan says it promotes renewable energy schemes and should DO that

Helping communities become more sustainable

Improving opportunities for people to connect with the outdoors

We want to see better, more and more diverse outdoor recreation, tourism, education and heritage opportunities for local people and visitors. **You said...**

Improving opportunities to connect with the outdoors

<p>Wales lags behind Scotland and other parts of the UK in offering fishing shooting, stalking. The Dyfi Valley could rival e.g. Exmoor for world class game shooting</p> <p>Get providers of outdoor recreation involved in consultation</p> <p>Improved access - trusting people who use the countryside for recreation to act responsibly</p> <p>Improved access to certain areas e.g. woodlands. More opportunities for educational activities</p> <p>Open access agreement (similar to Scotland) where people using the area for recreation were trusted to act responsibly</p>	<p>Rebuilding the uplands should act as a large tourist draw</p> <p>Tourist information presence back to the Dyfi Valley Area</p> <p>Promote sustainable tourism.</p> <p>Protect areas from over-use</p> <p>Wales lags behind Scotland and other parts of the UK in offering fishing shooting, stalking. The Dyfi Valley could rival e.g. Exmoor for world class game shooting</p> <p>Get providers of outdoor recreation involved in consultation</p> <p>Improved access - trusting people who use the countryside for recreation to act responsibly</p> <p>Improved access to certain areas e.g. woodlands. More opportunities for educational activities</p> <p>Open access agreement (similar to Scotland) where people using the area for recreation were trusted to act responsibly</p>	<p>More natural sites [available] for school visits, research projects, visitors, (especially children's) experience of wildlife/ natural world</p> <p>Well maintained rights of way and permissive paths - support for landowners to keep them open.</p> <p>Reinstatement & sustainable management of rights of way (existing). Market area's scenic beauty, having reinstated existing rights of way add appropriate provision of new multi-use paths</p> <p>Reinstate & improve / open bridleways and other rights of way in the area</p> <p>Problems over conflicting uses i.e. Tourism /Conservation/Flood defences</p>	<p>When people are immersed in an experience and are involved and have ownership in the process, they gain better understanding</p> <p>Excessive tourism can cause problems in parts of the area</p> <p>Completion of cycle-way between Derwenlas and Glandyfi</p> <p>Restoration and Re-Wilding' projects supported could bring increased visitors and tourists revenue</p> <p>Would like to see more research into creating and improved cycle path network and clearing public rights of way, if this can be coordinated with the highways authority</p>	<p>Provide more activities for multi-use off-road facilities (e.g. develop horse riding events etc., biking / horse-riding routes)</p> <p>I would like to see the Dyfi Valley promoted as an entity - I feel we suffer from being on the edge of 3 Counties</p> <p>Educational opportunities introducing people to the landscape, their roots and heritage. Encouraging a sense of responsibility</p> <p>Keep a good footpath & access regime. Some are defunct and unlikely to be much used and might be better closed</p>
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Building capacity to implement the vision

We want to see more collaboration between local people, landowners, third sector organisations and statutory organisations. **You said....**



Please note the maps below are strategic in nature. More detailed work would be needed on any specific projects, based on these maps, to consider matters such as conflicts of interest between users, legal requirements and general suitability.

Opportunities to connect people to the outdoors, help communities become more sustainable and support health and tourism

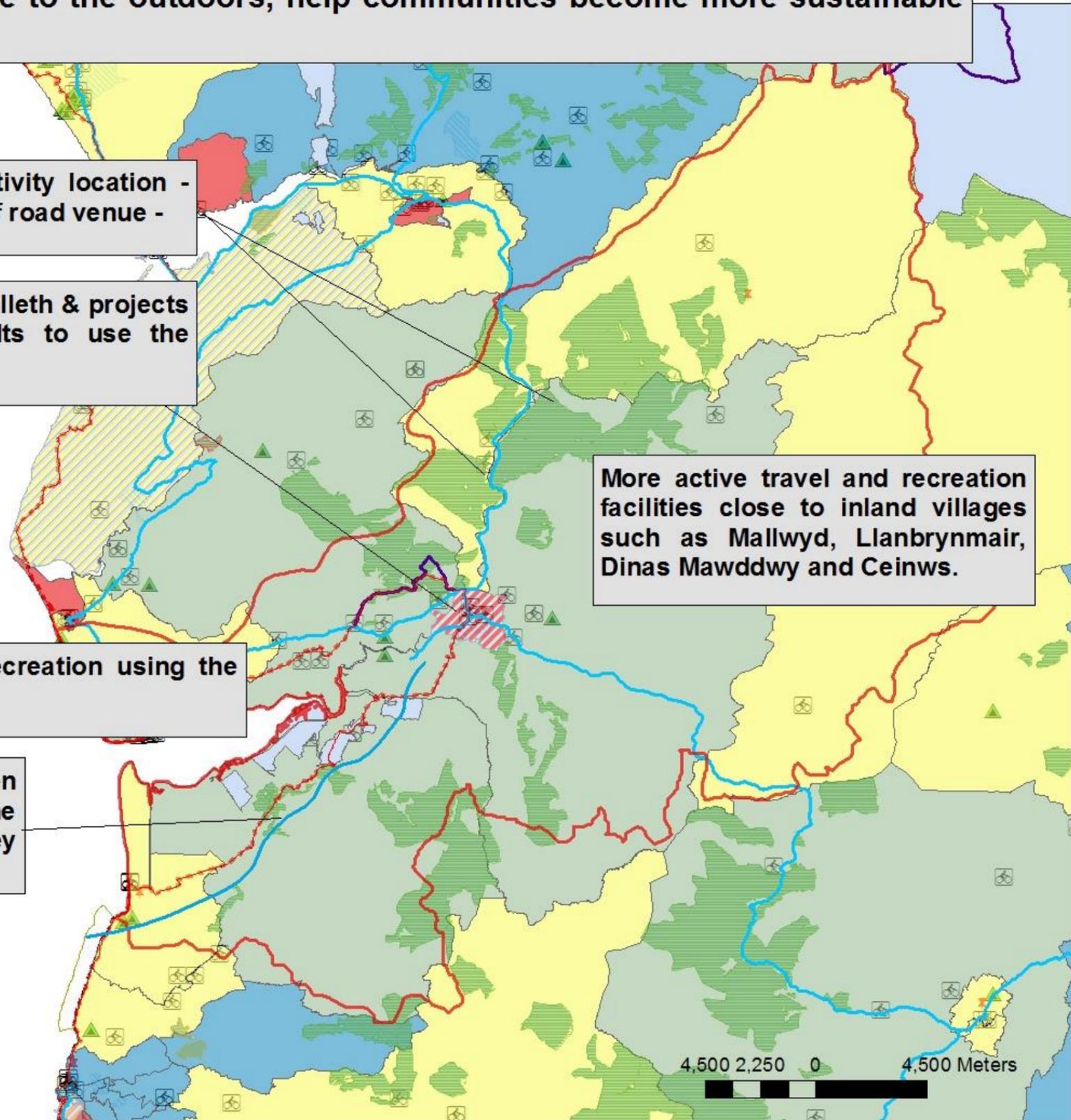
Develop the Dyfi forest as a multi - activity location - biking, horse riding, walking, possible off road venue -

More active travel in and around Machynlleth & projects to encourage young people and adults to use the outdoors.

More active travel and recreation facilities close to inland villages such as Mallwyd, Llanbrynmair, Dinas Mawddwy and Ceinws.

More water based recreation using the estuary

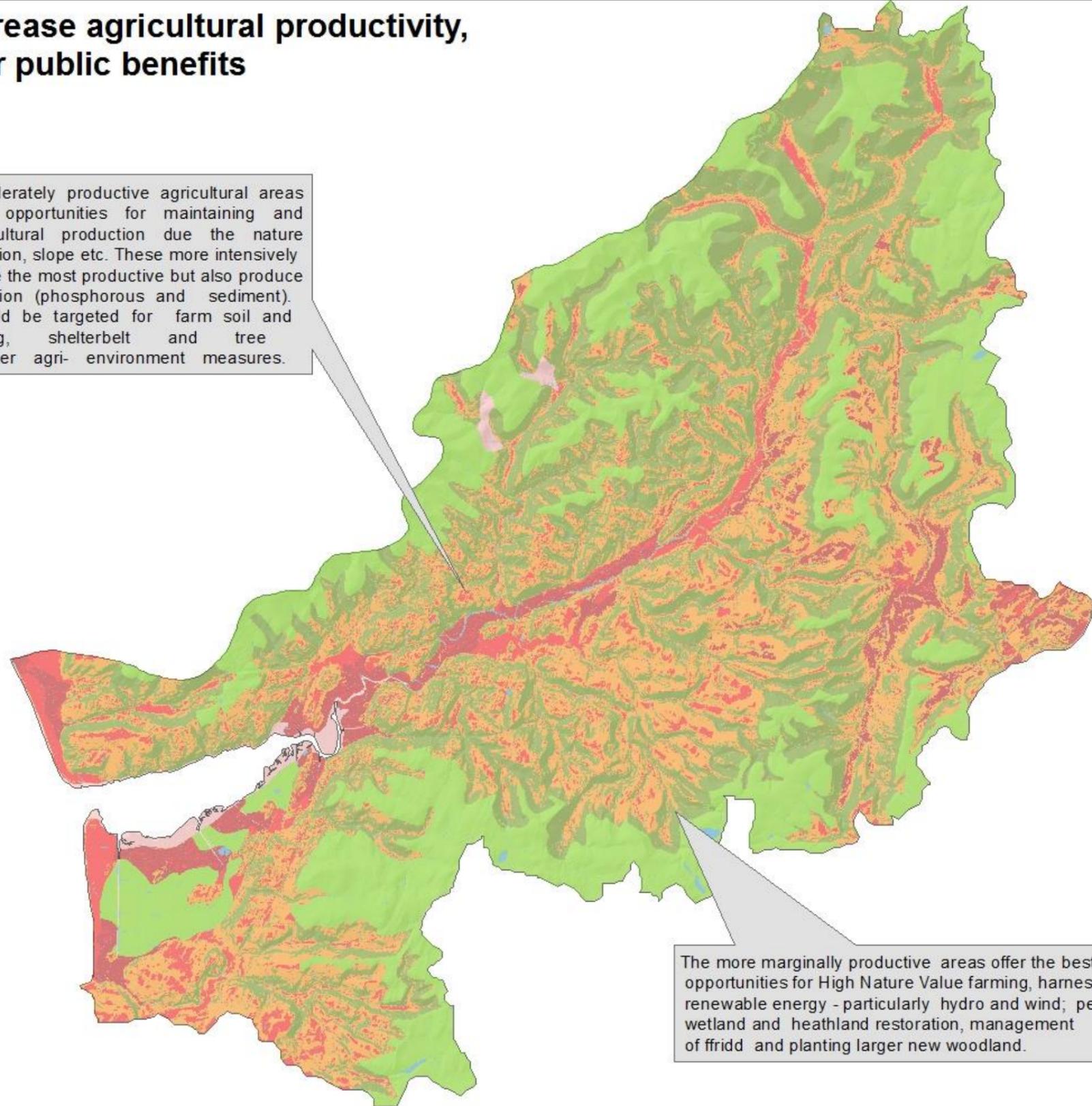
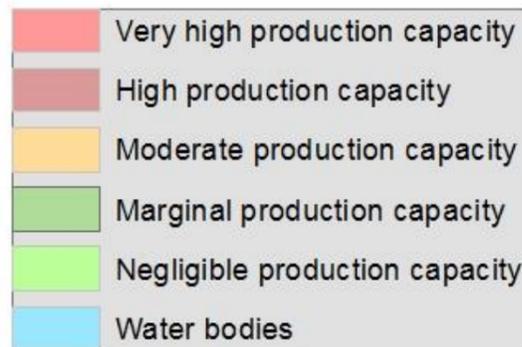
Active travel route / Cycleway between Borth & Machynlleth. Also linking the Dyfi junction station with the Osprey centre.



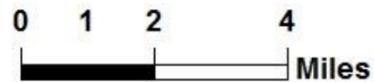


Opportunities to maintain/ increase agricultural productivity, improve resilience and deliver public benefits

The high and moderately productive agricultural areas offer the best opportunities for maintaining and increasing agricultural production due the nature of their soils, elevation, slope etc. These more intensively managed areas are the most productive but also produce more diffuse pollution (phosphorous and sediment). These areas should be targeted for farm soil and nutrient planning, shelterbelt and tree plantin and other agri- environment measures.



The more marginally productive areas offer the best opportunities for High Nature Value farming, harnessing renewable energy - particularly hydro and wind; peatland, wetland and heathland restoration, management of ffridd and planting larger new woodland.



Opportunities to connect and improve the natural environment

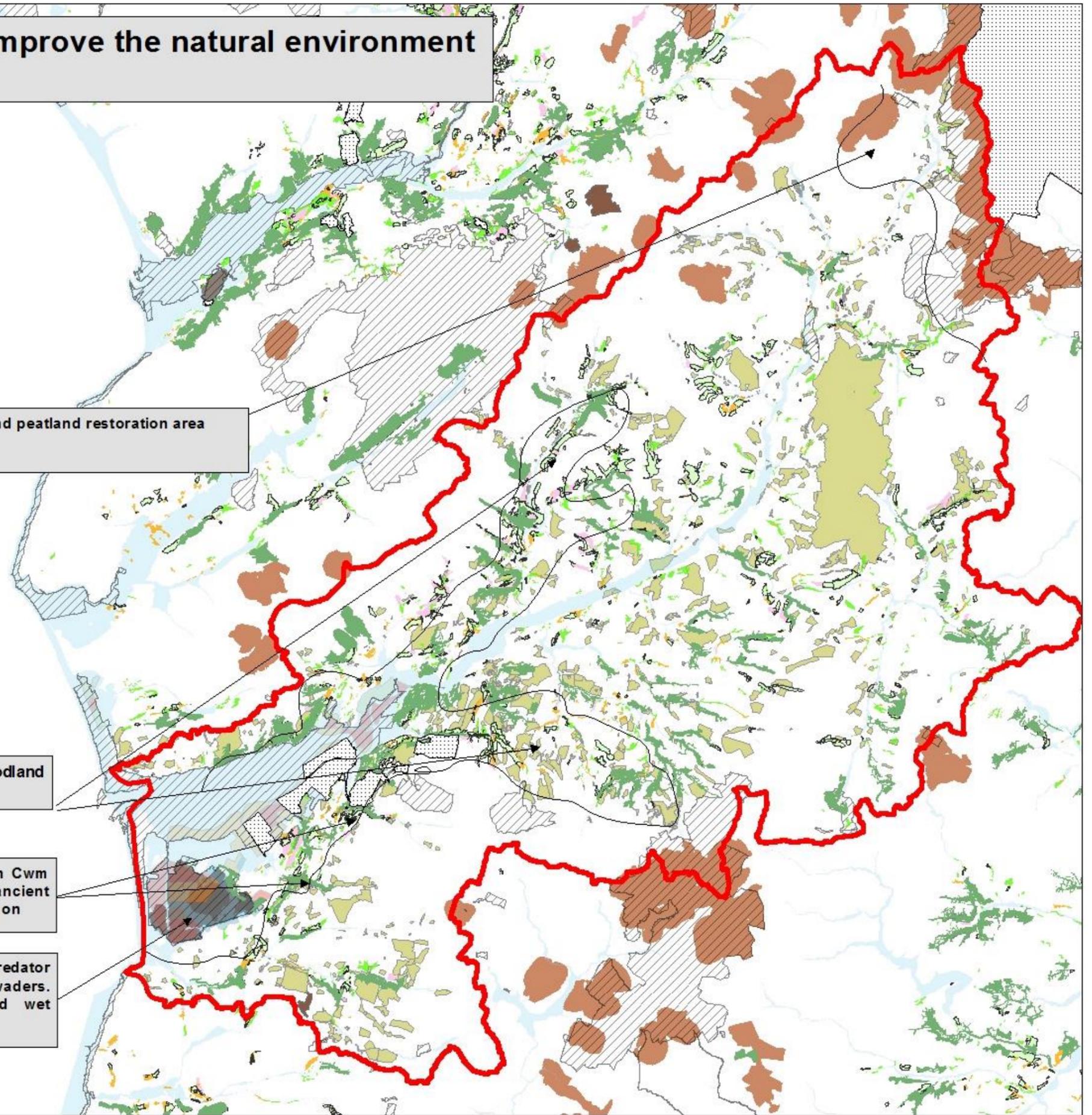


Key upland peatland restoration area

Key areas for grassland/ heathland and woodland restoration and expansion

Management and linking of woodland SSSI's in Cwm Einion and Cwm Clettwr and linking to other ancient woodlands through new planting and Plantation on

Peatland restoration and managemnt & predator control for waders. Identify new sites for waders. Riparian management, stock exclusion and wet woodland planting in the floodplain.





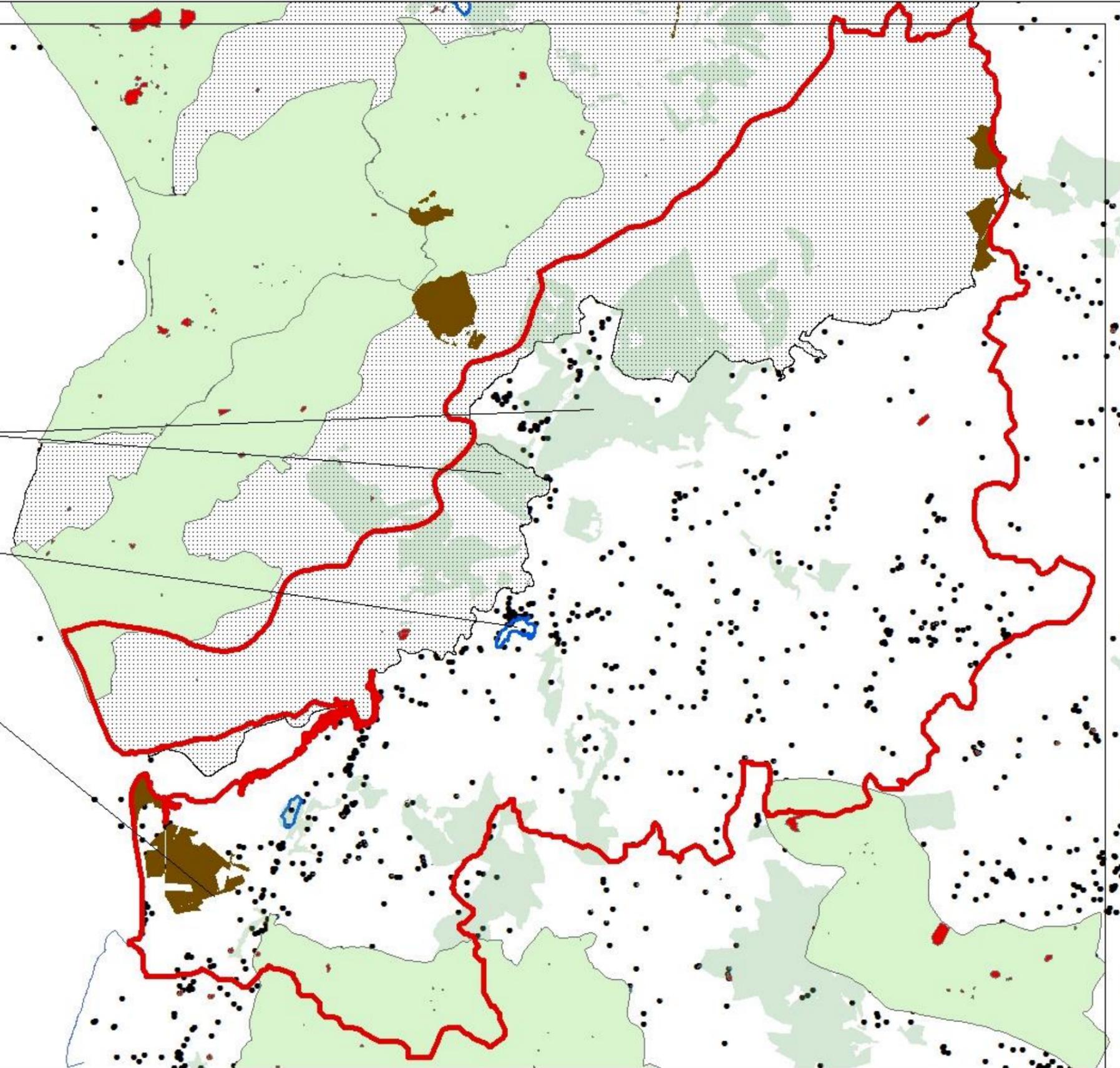
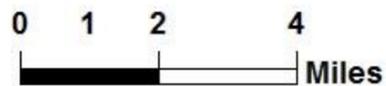
Legend

- Scheduled Ancient Monuments.lyr
- Ex-CCW Landholdings.lyr
- Historic Landscape Areas.lyr
- Ex-FCW Landholdings.lyr
- Historic Parks and Gardens
- National Parks
- Royal Commission Ancient Historic Monuments

Opportunities in NRW managed forest areas to interpret the historic environment as part of recreational trail development.

Opportunities for better management and interpretation of Scheduled ancient monuments, Ancient Historic monuments, Historic Parks and Gardens. Lots of opportunities to link to the Wales Coast Footpath, National trail & National Cycle trail.

Build on Hydro citizenship project and film to improve historic interpretation of Cors Fochno and the recently discovered Roman trackway. Improve interpretation of dolmens and stone circles, remains of forts, mines, ancient trackways & historic buildings.



Opportunities to increase Carbon storage, biodiversity and flood regulation

© Hawlfraint a hawliau cronfa ddata'r Goron 2014.
Rhif Trwydded yr Arolwg Ordnans 100019741.



Legend

PEAT_TOTAL_PEA_TLAND_Clip

SOIL_TYPE

- Deep peaty soil
- Modified deep peaty soil

cstockclass

Classified carbon stock

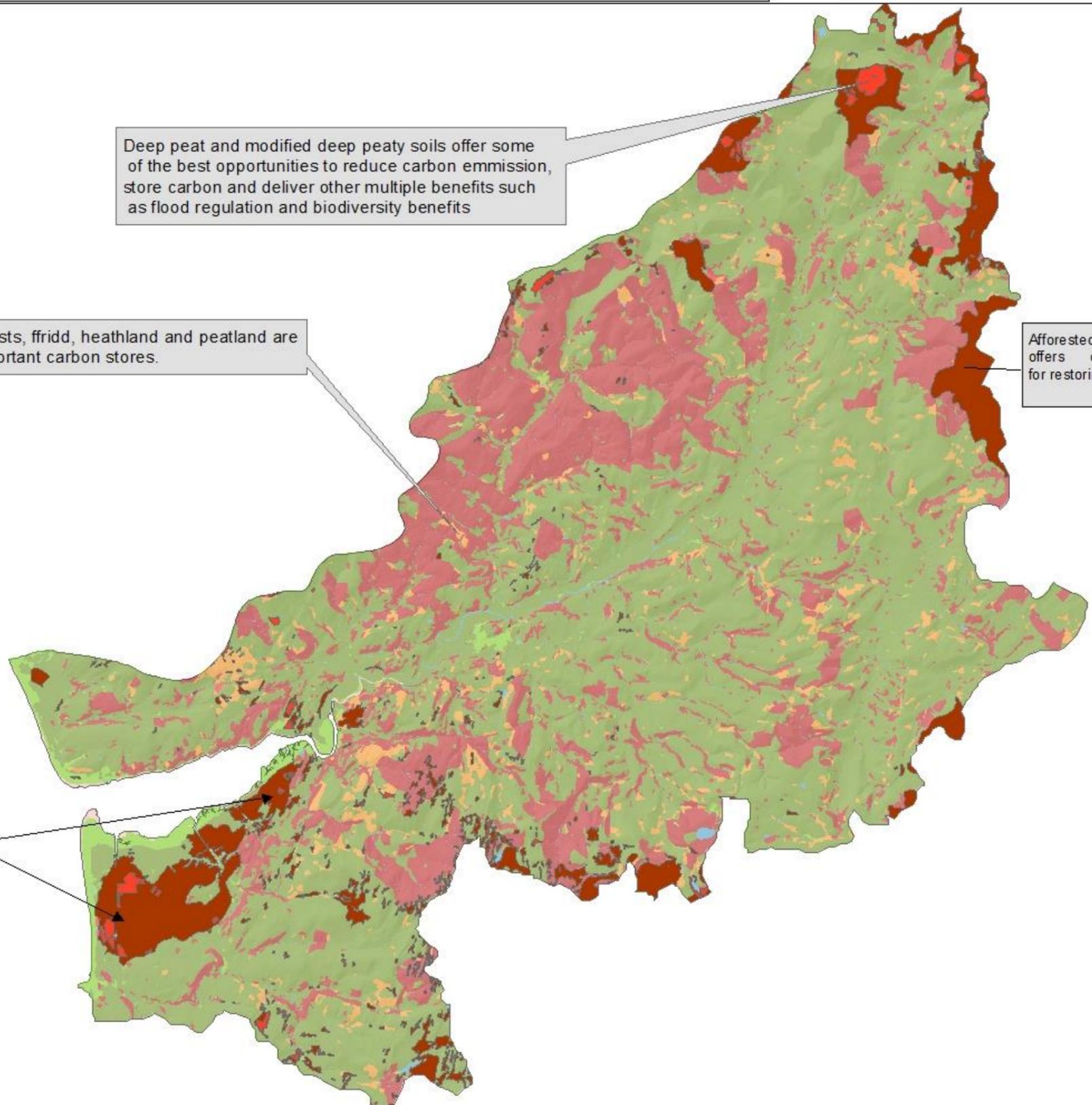
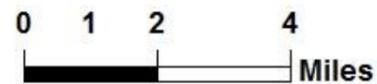
- Very high existing carbon
- High existing carbon
- Moderate existing carbon
- Low existing carbon
- Very low existing carbon
- Water bodies
- Dyfi_Catchment

Forests, ffridd, heathland and peatland are important carbon stores.

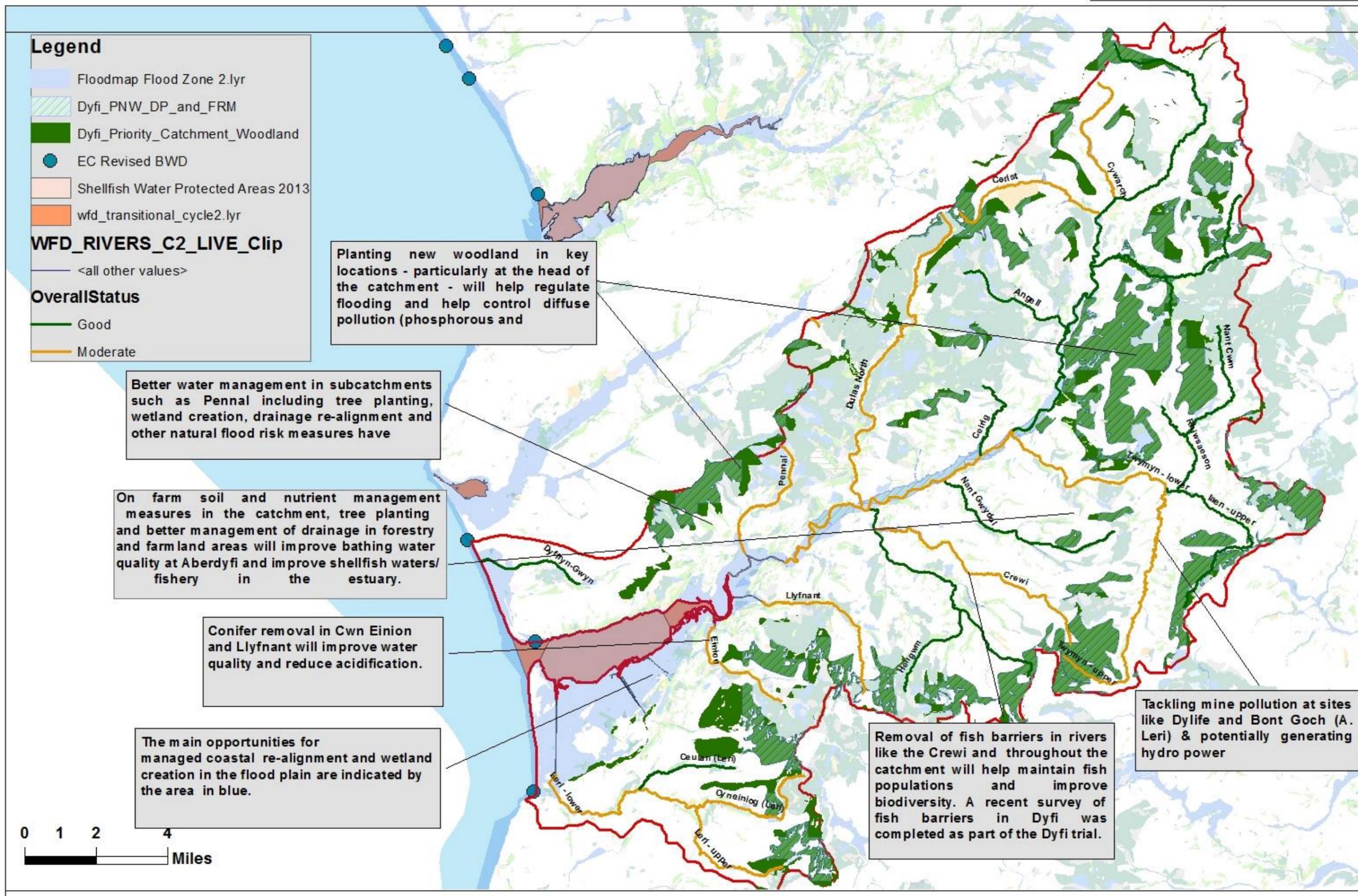
Deep peat and modified deep peaty soils offer some of the best opportunities to reduce carbon emission, store carbon and deliver other multiple benefits such as flood regulation and biodiversity benefits

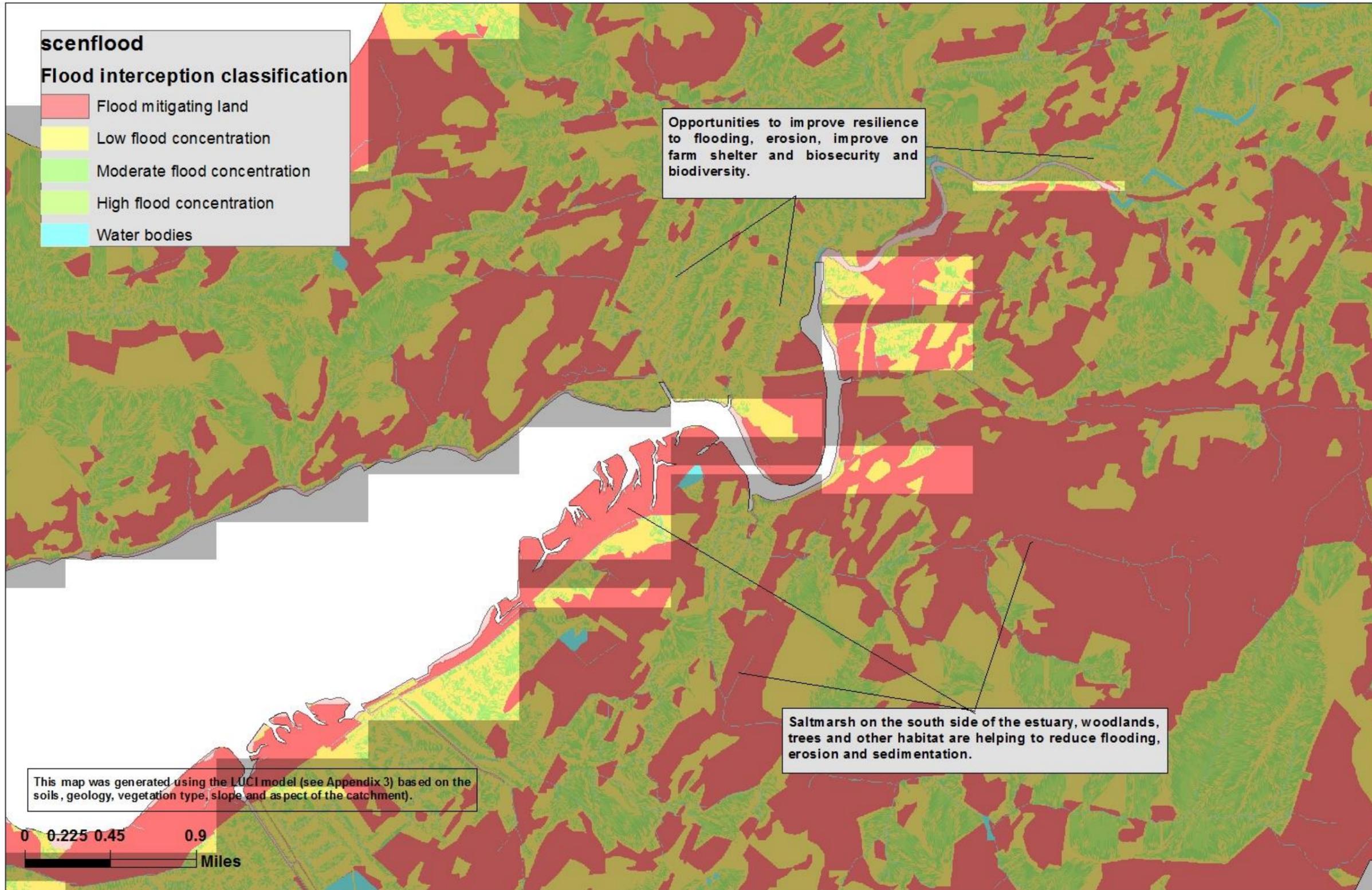
Afforested Deep peat offers opportunities for restoring peatland

The Lowland peatland of Cors Fochno and sites on the South side of the Dyfi are the priority areas for maintaining and improving carbon storage in the Dyfi.



Opportunities increase woodland cover and deliver multiple benefits







Opportunities to improve biodiversity, recreation/ access and flood storage in the coastal area

Legend

- Sustrans National Route.lyr
- Wales coastal path
- WOOD Lowland and upland core network
- <all other values>

Species

- Curlew
- Lapwing
- Redshank
- Snipe

Ancient_woodland_inventory 2011

Category

- Ancient Semi Natural Woodland
- Restored Ancient Woodland Site
- Plantation on Ancient Woodland Site
- Ancient Woodland Site of Unknown Category
- Dyfi_Catchment

Opportunities to extend loops from the national cycle trail into surrounding valleys such as the NRW managed Pennal forest.

Opportunities to enhance water based recreation such as canoe trails on the estuary & potentially using the railway line for return journeys. Access and associated agreements and infrastructure would be required.

Opportunities to enhance management for breeding waders, respore peat and improve interpretation of the Roman trackway discovered on the edge of Cors Fochno.

The south side of the Dyfi is a key area for ancient woodland restoration and connecting woodland areas to link protected sites such as CwmEinion SAC and Cwm Clettwr SSSI.

Opportunity for new active travel routes
a) between Borth and Machynlleth
b) between Dyfi junction station and the Osprey centre

