

Prosiect Pedair Afon LIFE

Four Rivers for LIFE Project



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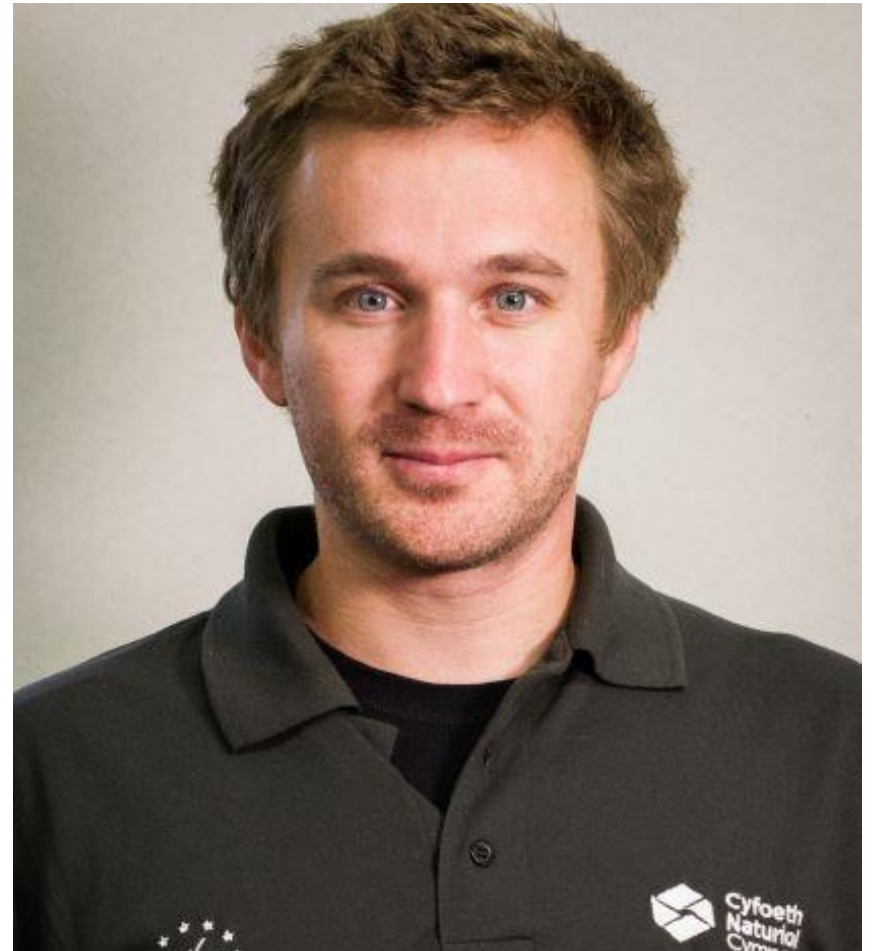
Duncan Dumbreck

River Restoration Officer

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07815 977561

In post since 5th September



How did I get here?

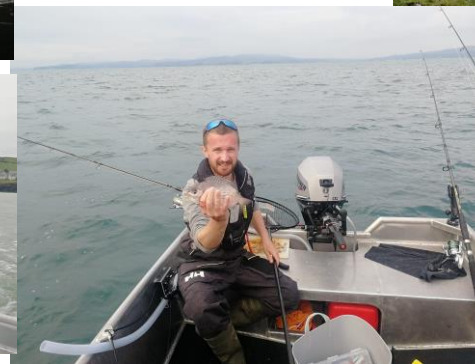
Committee member of
Aberystwyth Angling
Association

Volunteer with the West
Wales Rivers Trust

Farming background.

Degree in Marine Biology

Formerly a welder/fabricator



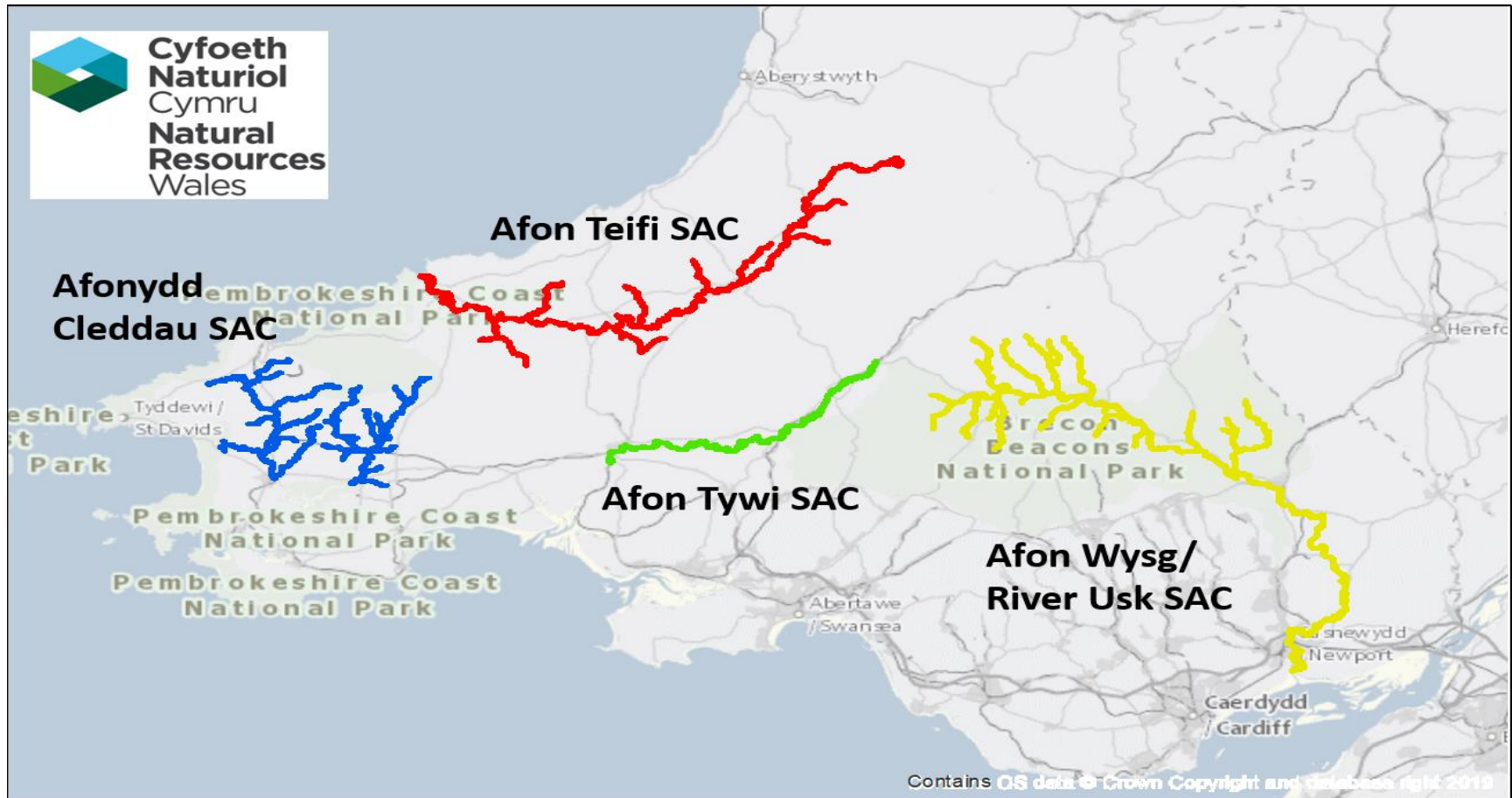
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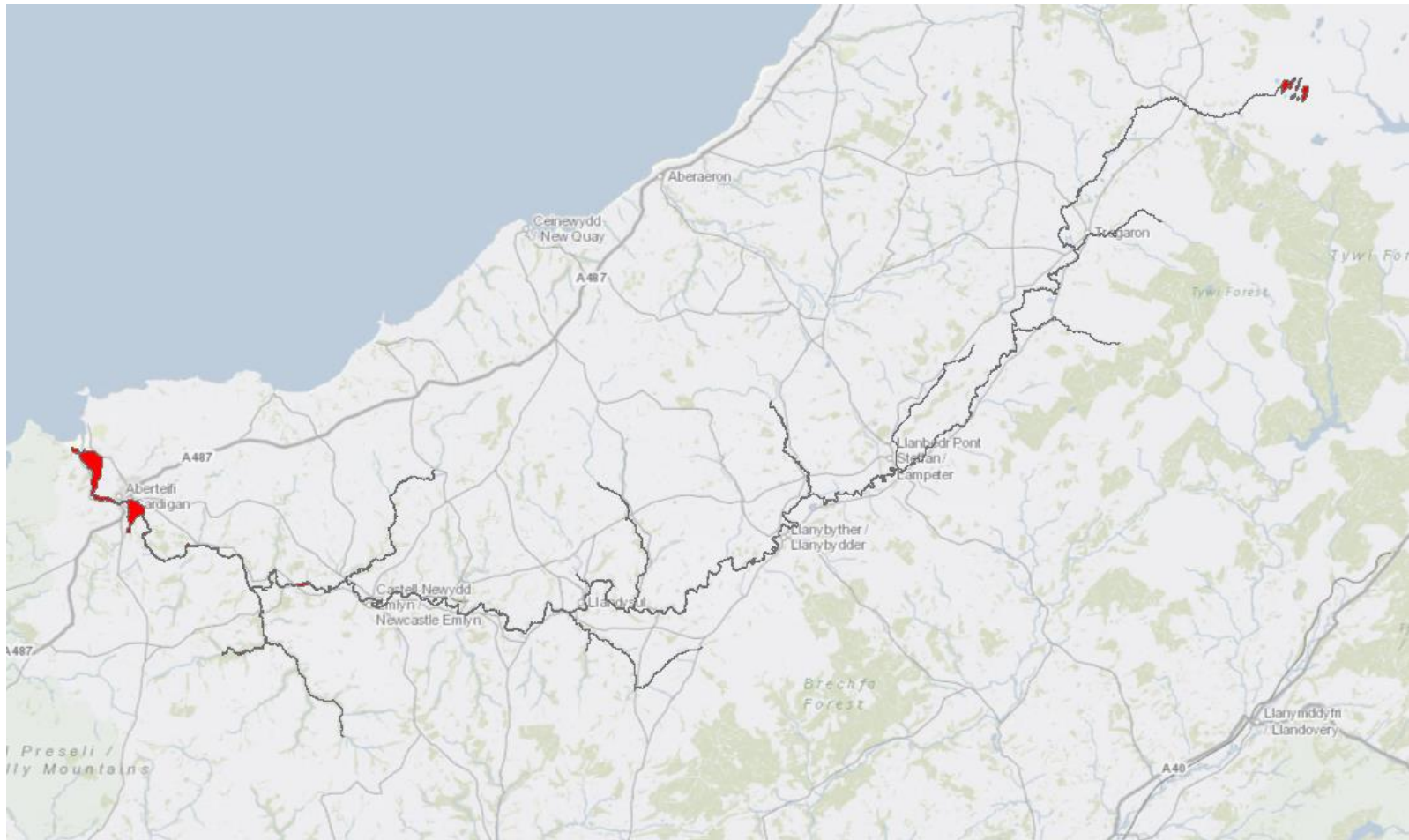


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4 Rivers for LIFE

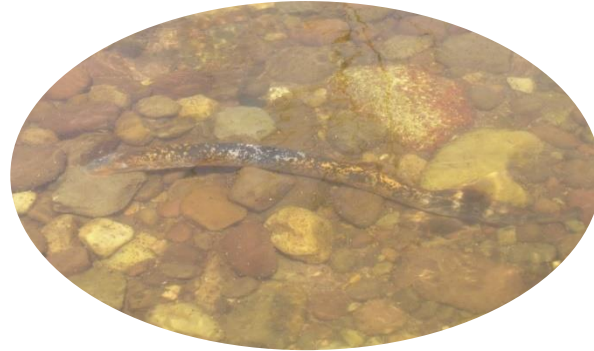


Afon Teifi:SAC Species/Habitats



Target species

Sea, river and brook lamprey



Atlantic salmon

Bullhead



Freshwater pearl mussels

Otters



Ranunculus habitat

Key partners

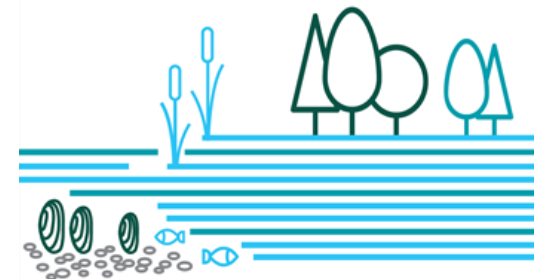


Co-financiers



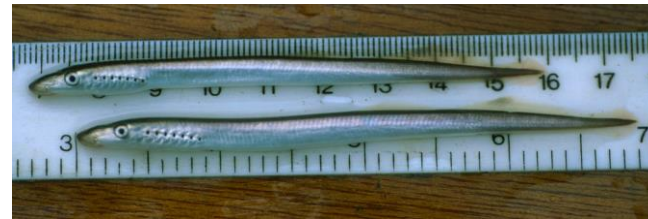
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Associate Beneficiaries



C1: Constraints to Migration

Impacts on most species



Barriers



C1: Constraints to Migration

12 barriers to be addressed:

- Luckily not a major issue on the Teifi!
- A lot of individual unique challenges.

Utilities: Gas, Water, Sewerage

Historic Features/Monuments

Flooding Risk

Erosion/Risk to assets

Fishery impacts

Water Abstraction Rights

Risks to Wildlife

Migratory Barriers

Historic features/monuments that need preserving.

Crickhowell Bridge



Flood Risk

Erosion/Risk to
assets

Migratory Barriers

Utilities: Gas, Water, Sewerage

Menasgin weir



Erosion/Risk to assets

Flooding Risk

Migratory Barriers

Utilities: Gas, Water, Sewerage

Historic Features/Monuments

Brecon Weir



Erosion/Risk to assets

Water Abstraction Rights

Flooding Risk

Getting it right:

Piped-bridge on the Usk



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



Getting it right!



Getting it right:

Piped-bridge on the Usk

Fish migration, less energetic expense to get past means more energy for egg production.

More habitat availability upstream, means more juvenile recruitment.

Sediment continuity, gravel moves through naturally.



C.2 Restoring riverine processes

Boulder introduction on all rivers

Woody material introduction on all rivers

**1,000 tonnes of gravel introduction
on the Usk**

**Focus on creating Fresh water pearl mussel
habitat for re-introduction sites**

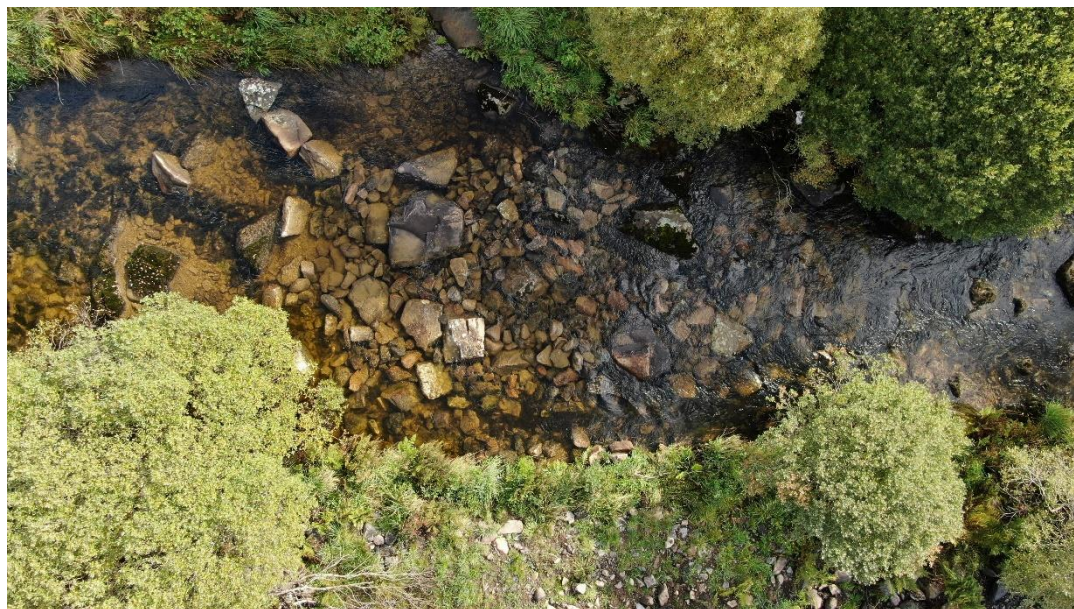


Historic Dredging



Boulders and Gravel





Before



After

Benefits

Increased habitat diversity

Surface roughness increasing oxygenation.

Raising water levels

Slowing water down

Improved spawning substrate

Habitat connectivity

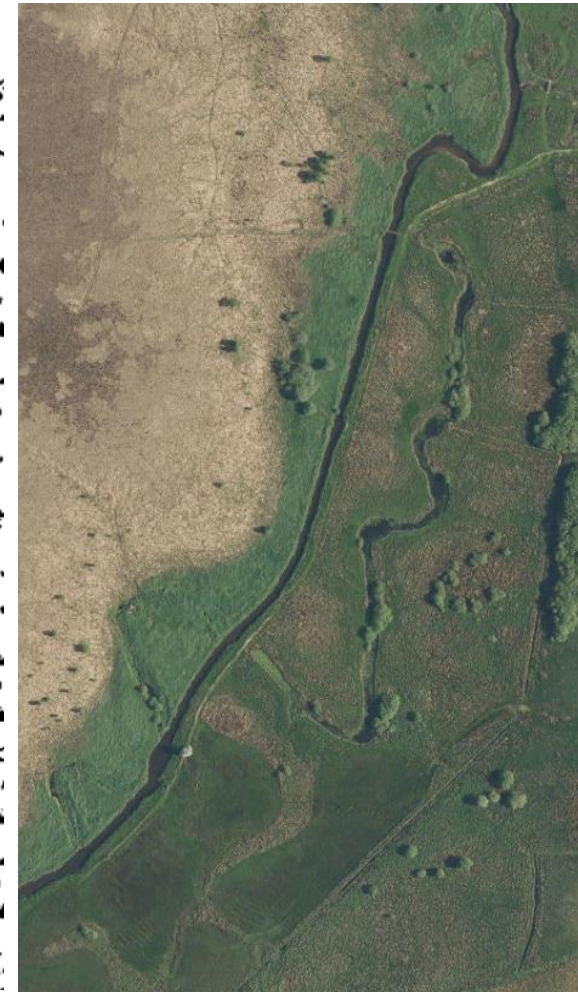
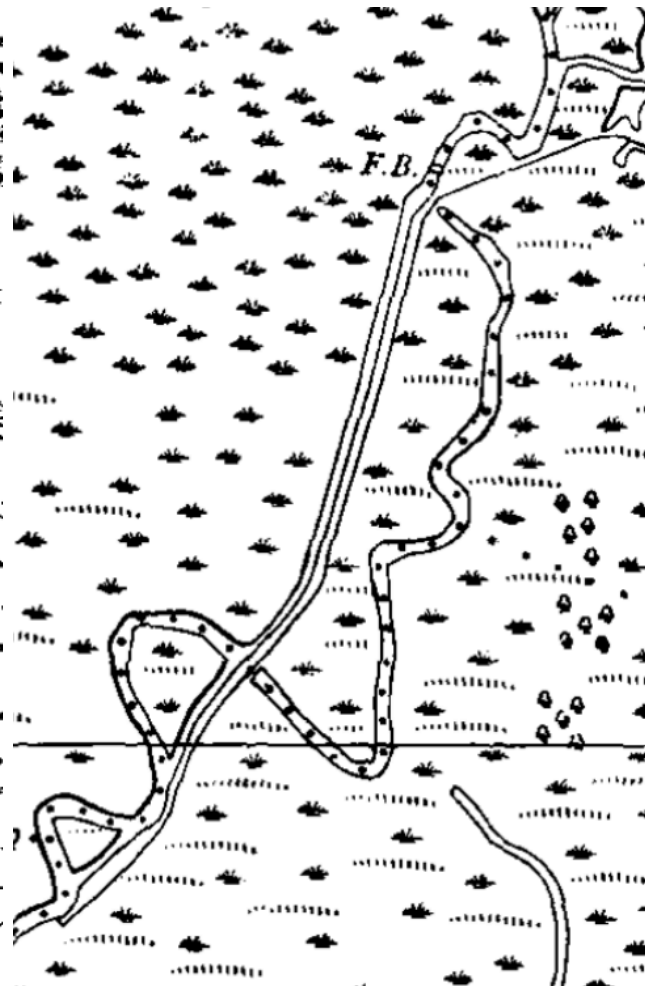
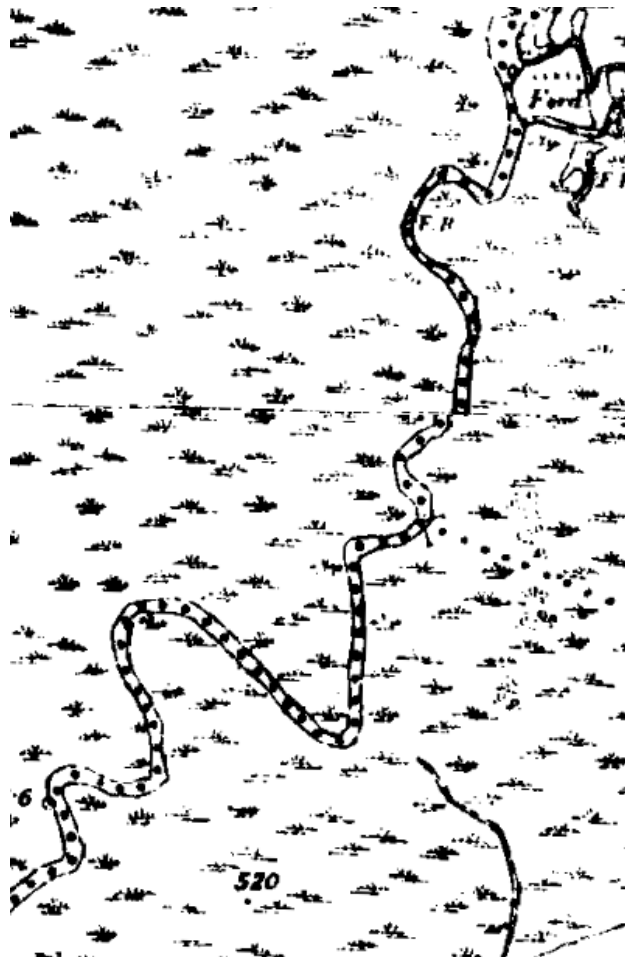


C3: Re-meandering and floodplains

- **Teifi**
 - Remeandering: restoring the river to its original paleochannel.
- **Usk and Tywi**
 - Floodplain meadows
 - Wetland creation, ponds, scrapes
- **Cleddau**
 - River-floodplain re-connection at Haverfordwest
 - Remeandering and restoration of wetland features in Llangloffan fen



Looking Back





C.4 Riparian corridors

Restoring 100km of riparian habitat across 4 catchments

- Fencing to create 10m buffer strip along river banktop
- Native broadleaf trees to be planted
- Strong link to in river habitat.



C.5 Land management

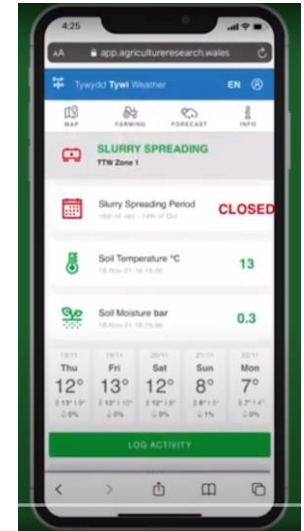
Focus on reducing nutrients, plastics and sediments

Land Management improvements across 35,000 Ha

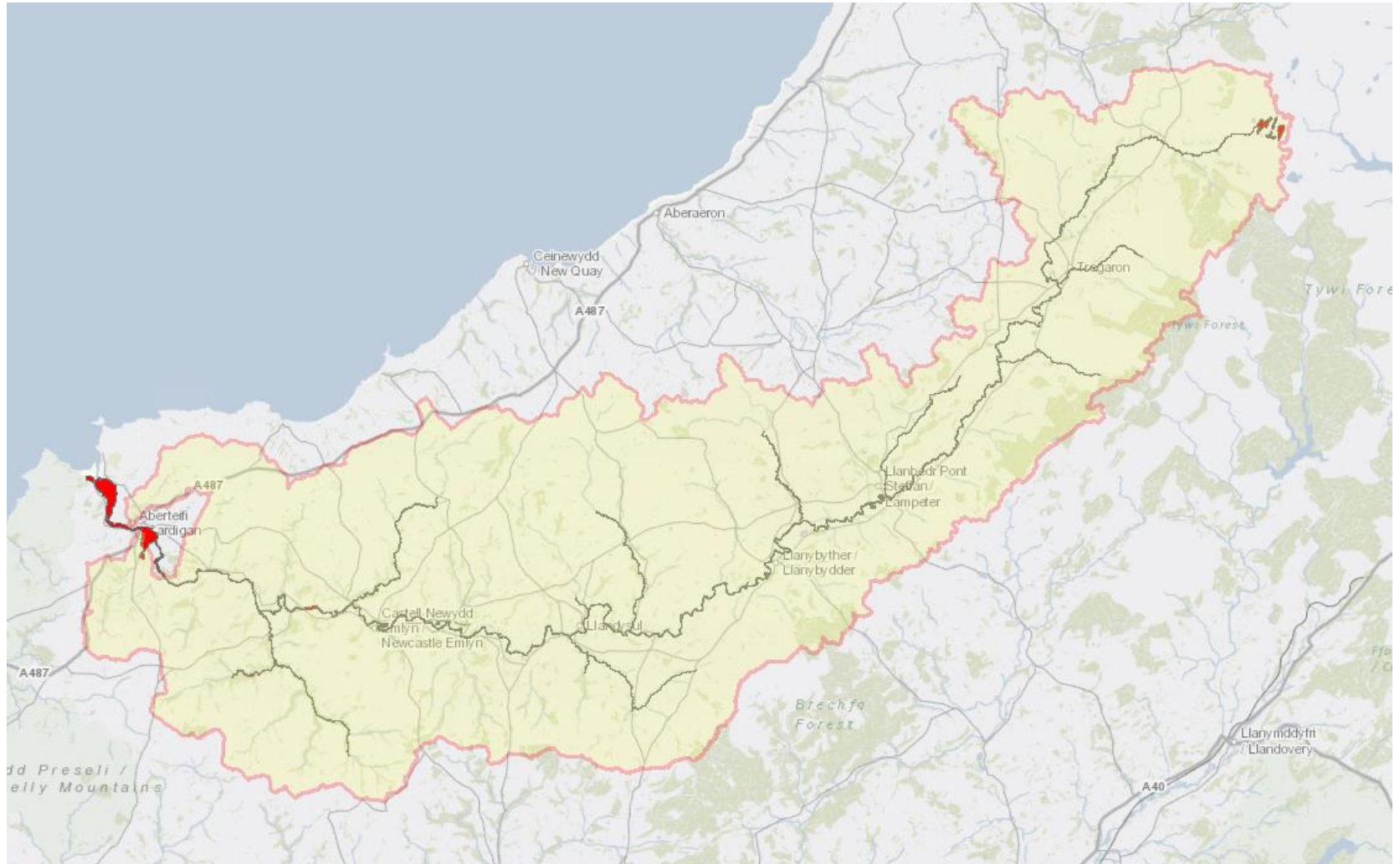
Target of 350 farms for engagement and interventions

Agrisgop Groups in each catchment

Weather Station project – installing stations and using app



Teifi Catchment Map



C.6 Freshwater Pearl Mussel re-introduction

Re-establish viable populations of critically endangered freshwater pearl mussels in South Wales

Finding adults in-river to breed from

Rearing 30,000 juveniles in NRW hatchery

Creating suitable areas of habitat

Releasing 1,000 a year by the end of the project



C.7 Control of Invasive Alien Species

Significantly reduce the impact of invasives targeting:

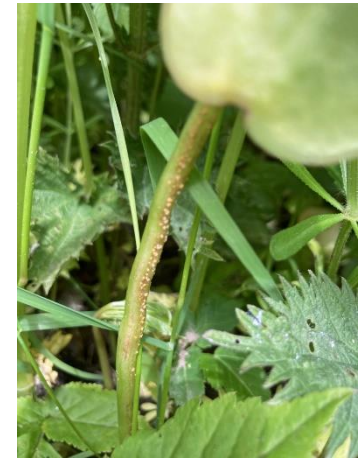
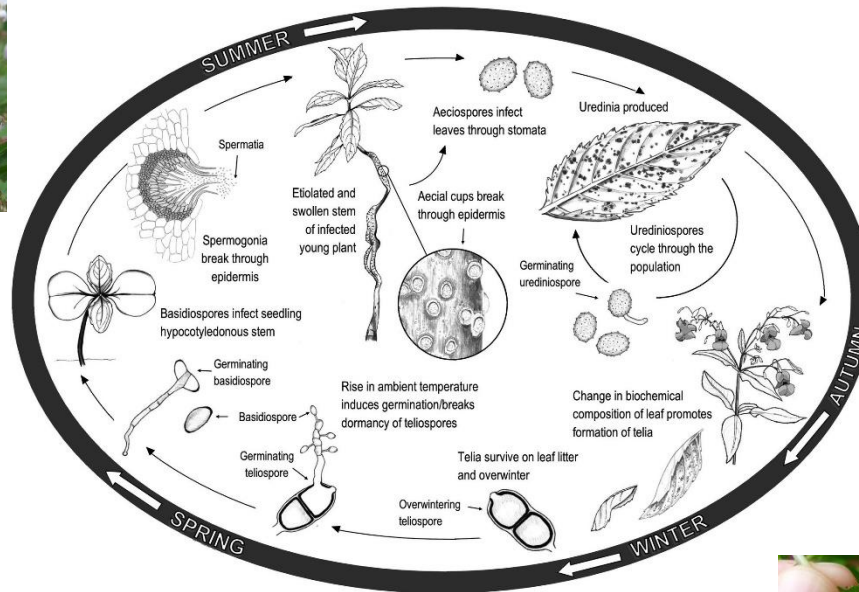
- Himalayan balsam (Control and rust fungus trials)
- Japanese knotweed
- Giant hogweed
- American skunk cabbage

Aim is to bring down the upper limit of invasives

Supporting local action groups



Himalayan Balsam Rust Trials



D Monitoring of project actions

Ecological monitoring of target species including:

- Electrofishing surveys
- Shad tracking
- Hydroacoustic surveys
- Kick sampling
- Water quality testing
- Habitat surveys
- Trialling of redox



Socio-economic impacts monitoring

- Impacts on local communities and economy

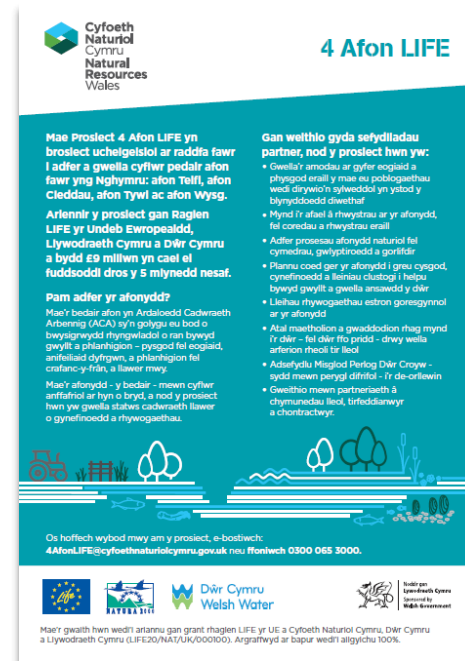
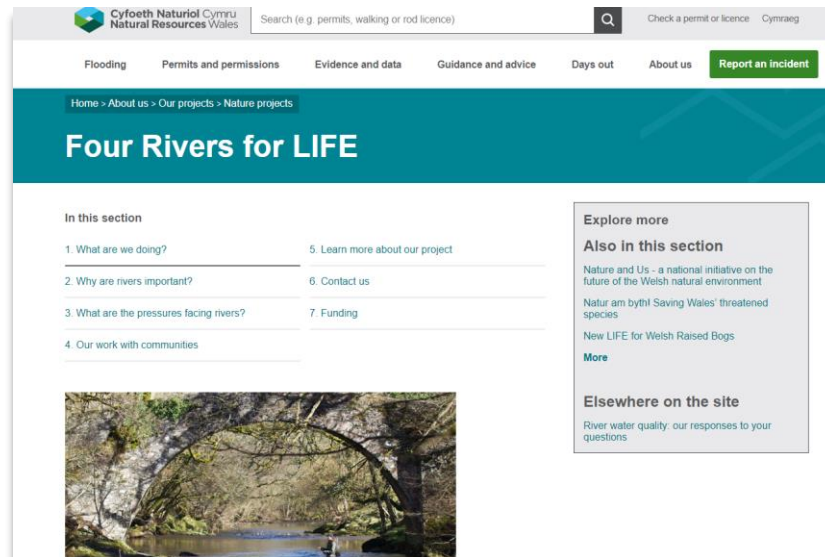
Communications and Engagement

Social media and website

Engagement / Events

Sharing best practice

Newsletter – coming next year!



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#4RiversforLIFE

Diolch Many thanks



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