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Session 2 – Natural and Historic Environment:

John Harrison
Severn Estuary Partnership Chair



PARTNERIAETH MOR HAFFREN
SEVERN ESTUARY PARTNERSHIP

The logo for the Bristol Avon Catchment Partnership is located in the top left corner. It features a dark teal rectangular background with a wavy, stylized river graphic in shades of green and blue. The text "Bristol Avon" is written in a white, sans-serif font, with "Catchment Partnership" in a smaller font below it.

Bristol Avon
Catchment Partnership

The background of the slide is a scenic photograph of the Bristol Avon river valley. The Clifton Suspension Bridge is visible in the distance, spanning the river. On the right bank, a hillside is covered with colorful, multi-story residential buildings. The sky is a clear, bright blue with some light clouds. The overall scene is a mix of natural beauty and urban development.

Bristol Avon Catchment to Coast

Severn Estuary Forum
October 2022





Bristol Harbourside



Land Yeo, Gordano Valley



The logo for Bristol Avon Catchment Partnership features a dark blue rectangular box with white text. Below the text are stylized, wavy lines in shades of green and blue, representing water. The background of the entire page is a blurred photograph of a river with green foliage on the banks.

Bristol Avon
Catchment Partnership

Vision:

“For all rivers and water habitats in our catchment to be nature-rich, resilient and enjoyed by current and future generations.”

1

Enhance people’s enjoyment and connection with the water environment

2

Improve water quality

3

Restore and enhance biodiversity and ecological connectivity

4

Adapt and build resilience to a changing climate

Steering Group



Co-hosts



Delivery Partners



WILD TROUT TRUST





Catchment Based Approach



Opportunities for collaboration



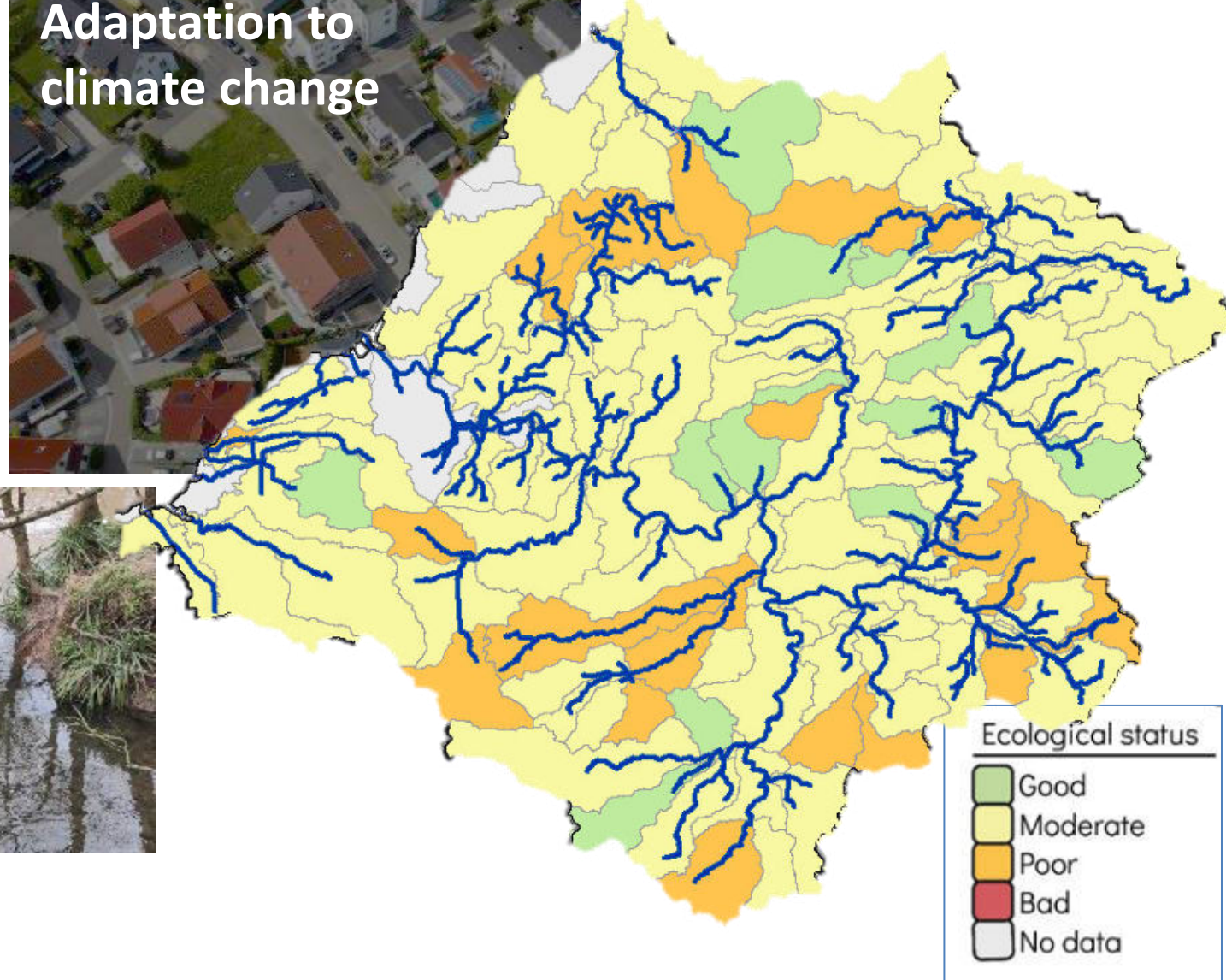
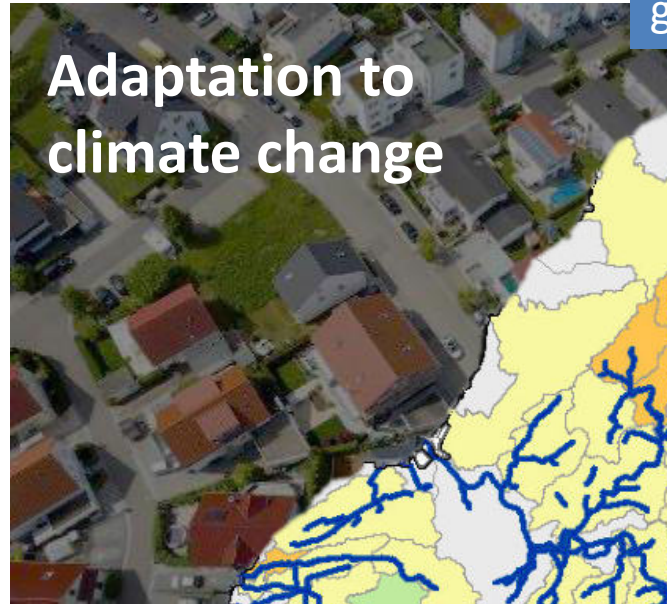
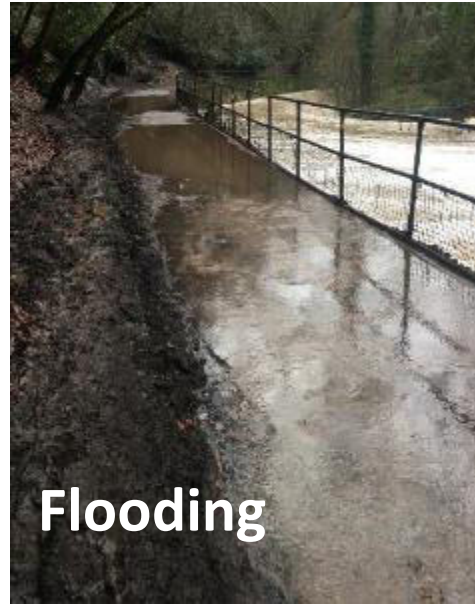
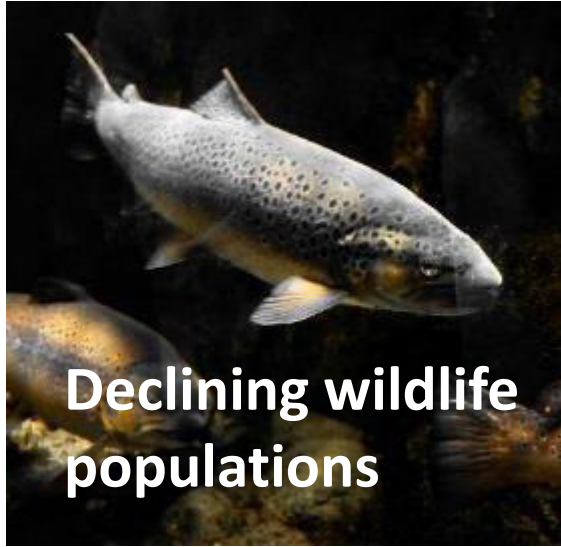
POLICY
Hinkley C/
CoBA/
Stewardship

TECHNICAL
Water Quality
Fish/Ecology
Access &
Enjoyment

DELIVERY
Partnership
Projects &
Programmes

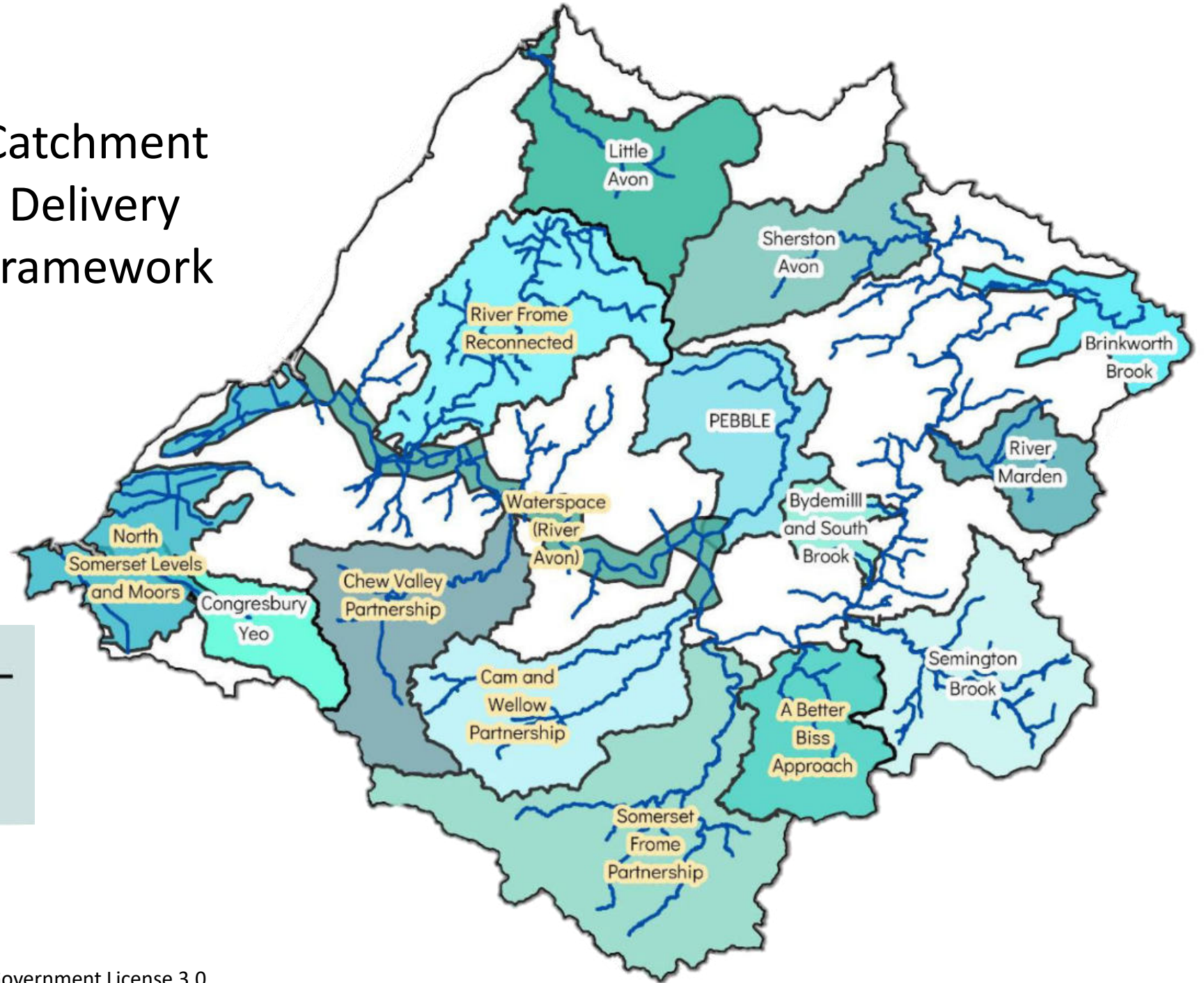
What are the challenges?

Only 12% of the waterbodies reached good ecological status in WFD





Catchment Delivery Framework



Key

- Partnership Programmes
- Partnership Projects
- Main rivers

Catchment Partnership Fund

Since 2015, the Catchment Partnership fund has:

Funded 33 projects

New Community Fund: 4 projects in 2022

Contributed £217,000 in funding

Secured £279,000 in match funding



Photo credit: BART



Photo credit: WWT



Photo credit: BART



Photo credit: FWAG SW



Delivering for you



Bath & North East Somerset Council



Unlocking funding

Defra Funding

*Bristol Frome
Innovation
Programme
(~£6 million)*



**Green Recovery
Fund**

*WaterSpace-
Bath RiverLine
(~£2 million)*



**Local Nature
Recovery
Strategies**



West of England Nature Partnership
Joining up the dots for nature

Environmental Land Management Scheme (ELMs)

**Water Industry National
Environment Programme**

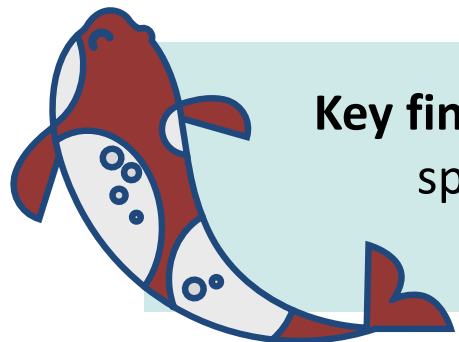
Wessex Water
YTL GROUP



What are the aims of Fish Recovery Strategy?



1. Freshwater fish present and in healthy populations numbers across the catchment
2. Healthy populations of migratory fish present, reaching the spawning headwaters in the tributaries
3. Good diversity of coarse fish (freshwater fish)- inhabiting the warmer and stiller waters characteristic of the lower reaches of the Bristol Avon



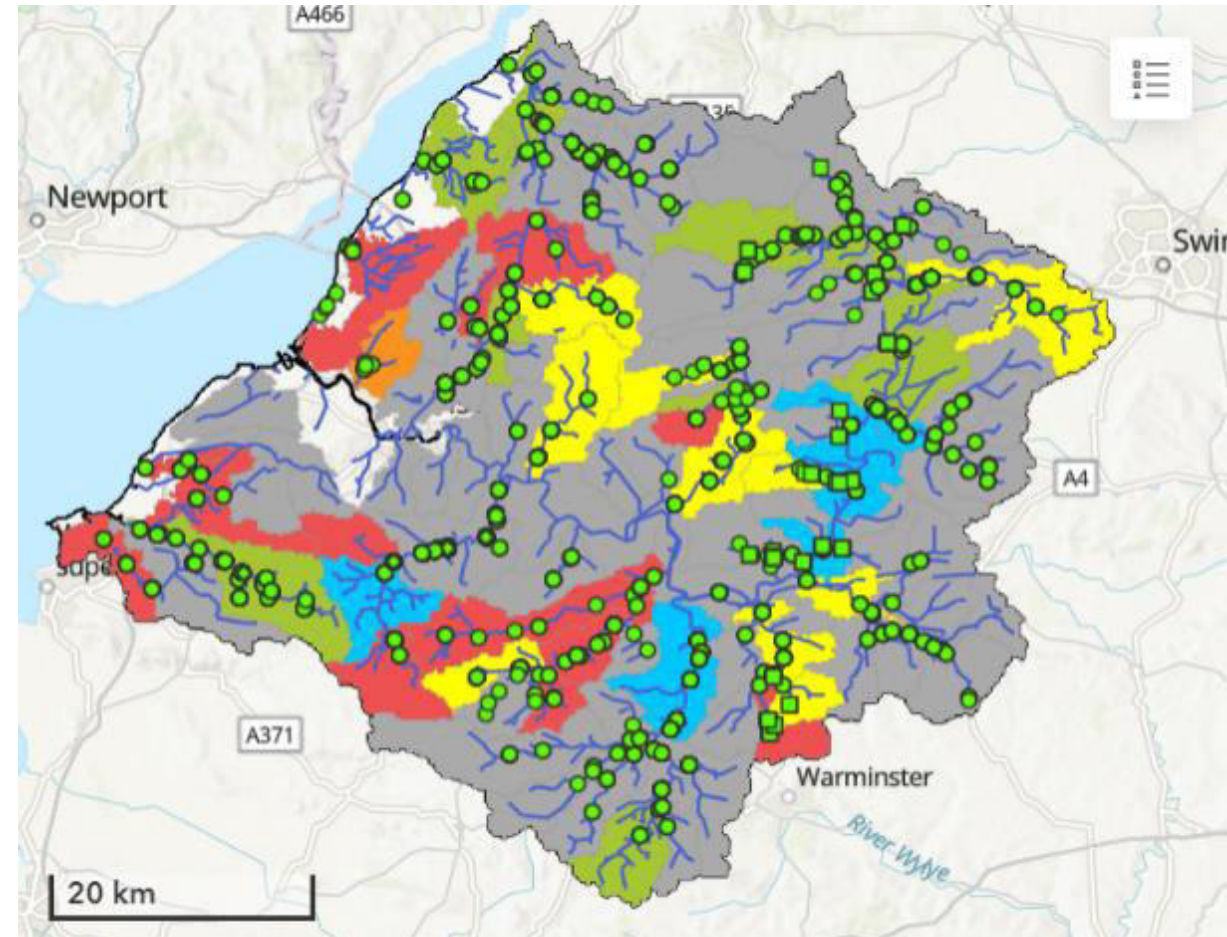
Key finding: Severn Estuary SSSI/SAC migratory fish species found in Bristol Harbour via eDNA surveys (Feb and June 2022)



Brown Trout, Credit: Hunter Brumels

Why do we need to act now?

- Fish play a key role in the recovery of nature-maintaining freshwater ecosystems
- Fisheries statistics published annually by the Environment Agency show that salmon are 'at risk' in 93% of the rivers in England
- Growing pressure on rivers and freshwater/marine environments
- Now is the time to act to save our fish and rivers- vital that we understand what fish are present and where they are

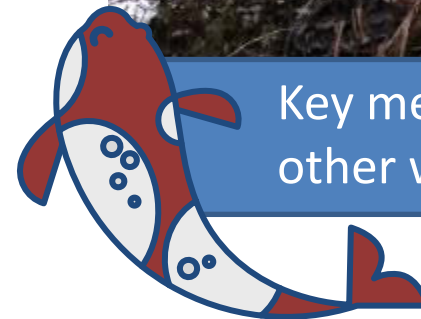


Fish Survey Data Points & WFD Fish Classifications (2019)

Proposed Bristol Avon Flagship Projects



1. Barrier Removals- e.g. to unlock headwaters for Atlantic Salmon in the River Chew catchment
2. Restoration of key spawning site in key headwater habitats
3. Creation of a new 'River Nature Reserve' - engaging with local action/river groups
4. Development of a River Education Centre
5. Support for River Apprentice Schemes



Key message: How can we learn from other work around the Severn Estuary?

Weir on River Chew, BART



Bristol Avon
Catchment Partnership

Thank you

www.bristolavoncatchment.co.uk





FLAT HOLM

A Walk Through Time

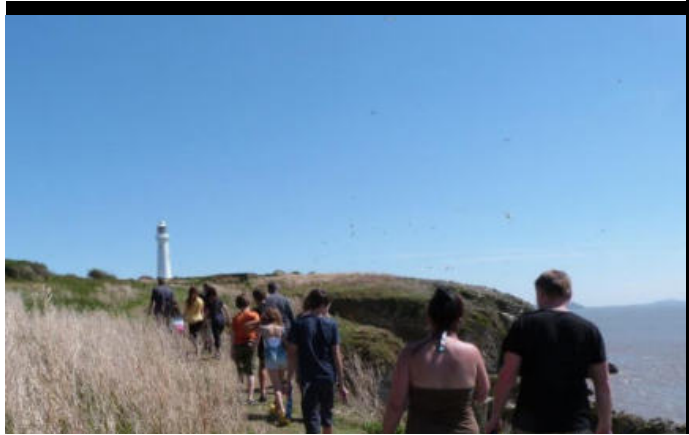
Engaging Audiences with Heritage and Nature



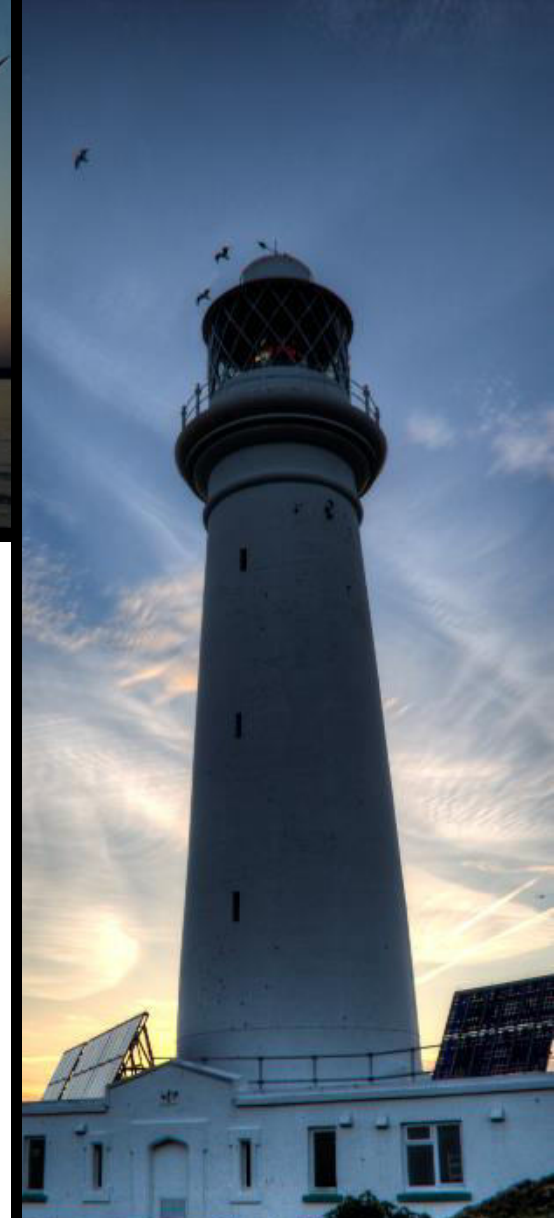
**CRONFA
DREFTADAETH
HERITAGE
FUND**

The Project – Our Themes

- Nature
- Heritage
- People



- We aim to...
 - restore and enhance key island buildings
 - enhance and maintain the island's habitats and biodiversity
 - create opportunities to bring stories alive for the public and for them to take a "Walk Through Time" in Flat Holm's history both on and off the island
 - re-engage Cardiff and the wider region with this forgotten island's heritage





Engaging with people

Our target audiences

- Formal learners
- Leisure learners
- Youth groups
- Volunteers
- Health and wellbeing
- Day trippers

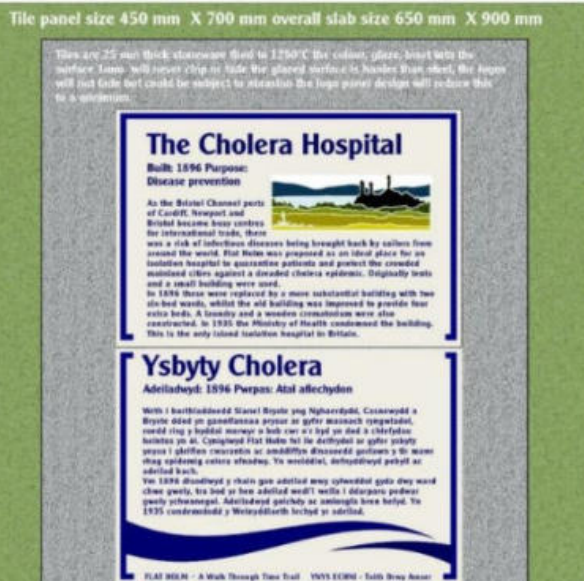


YNYS ECHNI
Taith Drwy Amser

FLAT HOLM
A Walk Through Time



Engaging with people



Spreading the Word

- Updated guided tour and training
- specialist day visits
- self-guided tour
- Mainland interpretation panels
- specialist day visits
- Sculpture at Cardiff Barrage

Engaging with people

Residential experiences

- Family nature weekends
- Creative “leisure-learning” weekends
- Wellbeing weekends
- New activities for young people



Engaging with people

On the island - Volunteering

Expanded pattern and range of volunteering experiences on the island to include

- long term internships
- group task-and-finish projects
- working holidays

Woody's Lodge

- Improving island infrastructure
- Improving wellbeing



Engaging with people

Off-island activities

- Community programme
- Schools workshops
- Large scale events
- Theatre – young people
- Volunteering



Online events

- ArtStation creating an Interactive website with binaural recordings, poetry, podcasts, the island sensory experience
- Photography projects
- Increased Social Media Presence
- Volunteer “alumni” network





How you can support us

- Following us on social media and sharing/liking posts
- Contact us or provide our contact information to groups that you think may want to be involved in the project
- Share the “lessons learned” from your own engagement activities
- Get involved in our Flat Holm celebration days
- Get involved through day trips/residentials/volunteering

Get in Touch

Social Media

 www.facebook.com/Flatholm

 [@flatholmers](https://twitter.com/flatholmers)

 [flatholmisland](https://www.instagram.com/flatholmisland)

[#MyFlatHolm](https://www.instagram.com/flatholmisland)

[#NationalLotteryHeritageFund](https://www.instagram.com/flatholmisland)

Email:

Tim Orrell, NLHF Project Manager
Tim.Orrell@cardiff.gov.uk

Stacey Richards, Community
Engagement Officer
Stacey.richards3@cardiff.gov.uk



Website

www.flatholmisland.com

[BBC One - Countryfile, Flat Holm](https://www.bbc.com/1/program/countryfile)



Comisiwn Brenhinol
Henebion Cymru
Royal Commission on the Ancient
and Historical Monuments of Wales

CBHC | RCAHMW

Severn Estuary Partnership Forum
12th October 2022

The Maritime Archaeology of the Severn Estuary in the National Monuments Record of Wales

Dr Julian Whitewright
Senior Investigator (Maritime)
Julian.Whitewright@rcahmw.gov.uk



Today

- Maritime Archaeology
- Maritime Archaeology at The RCAHMW
 - The 'maritime' in the National Monuments Record of Wales
 - The Severn Estuary in the NMRW
 - National & Local Records
- Marine Planning & Archaeology in Wales
 - Development pressures on the Marine Historic Environment
- Concluding Thoughts

Maritime Archaeology

“Mention underwater archaeology and most people think of shipwrecks that only intrepid divers can explore. Although shipwrecks capture the imagination, they are a small part of Wales’s marine historic environment. Just as remarkable are our submerged and intertidal landscapes, which can date back thousands of years. Traces of people from this distant past survive as footprints fossilised in peat or clay deposits alongside timber trackways and settlements.”

(CADW, 2020, Managing the Marine Historic Environment of Wales)



Mesolithic Footprint, Goldcliff (Image: Living Levels)

“The marine historic environment can be defined as places under the sea and in the intertidal zone where evidence for human activity is preserved. Here, this means historic remains found below the high water mark. This can include the upper tidal reaches of rivers as well as the coast itself.”

(CADW, 2020, Managing the Marine Historic Environment of Wales)

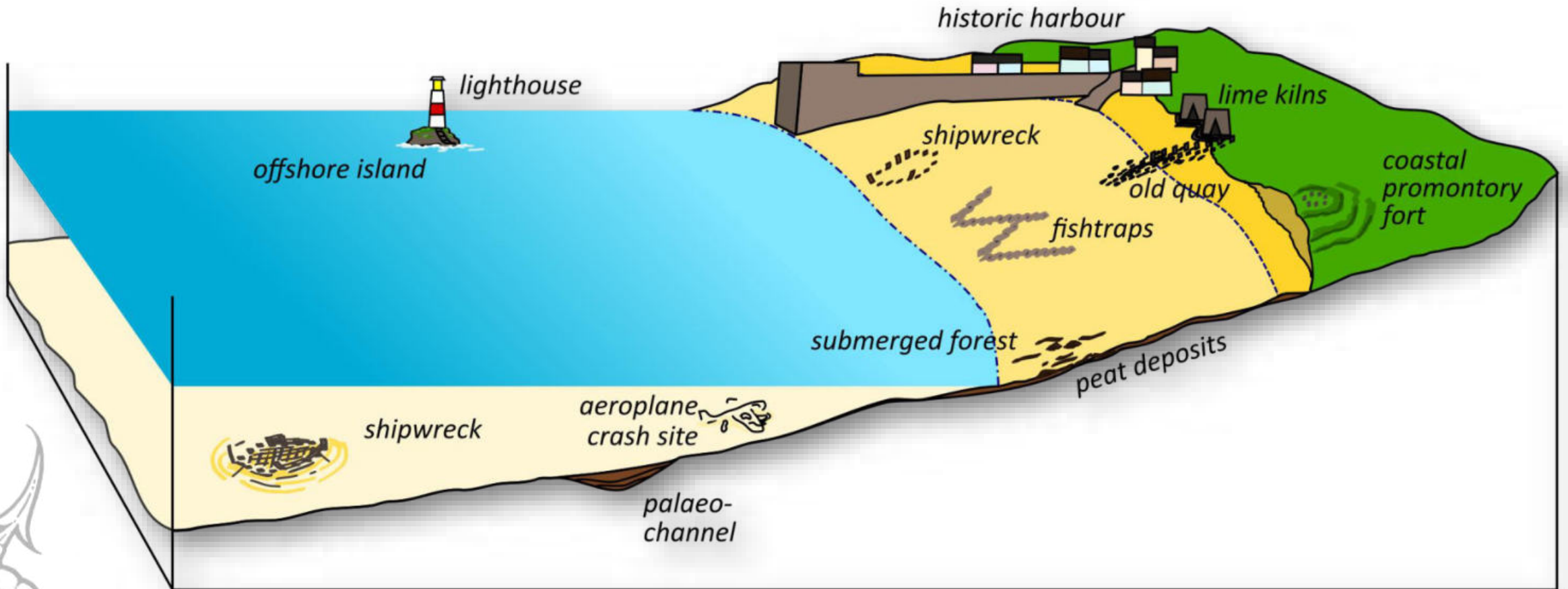
of Wales)



Unnamed Wreck, NPRN 410461, Wentlooge



Maritime Archaeology: Site Types



The RCAHMW and Maritime Archaeology

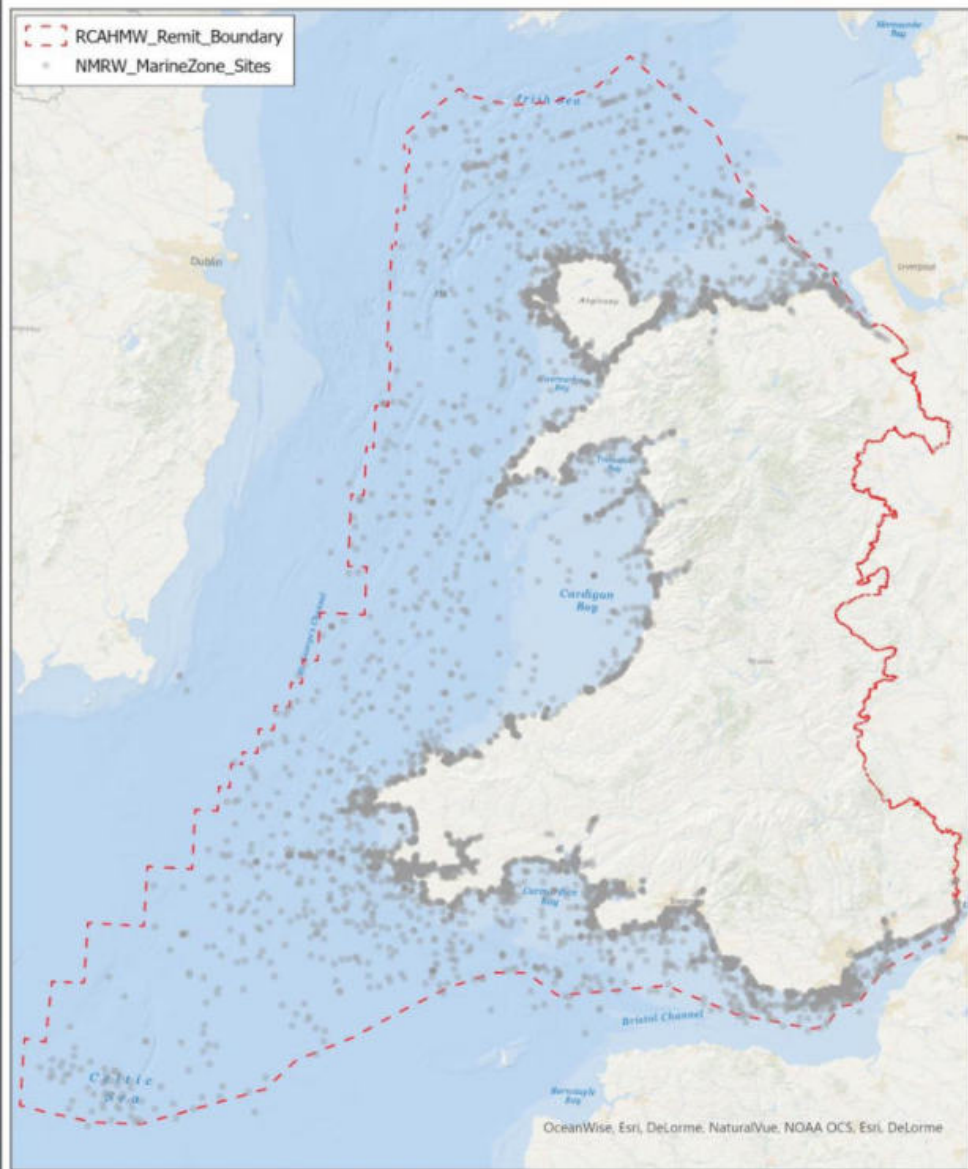
- The Royal Commission on the Ancient and Historical Monuments of Wales (RCAHMW) was established in 1908.
- Primary remit to collate, maintain and enhance a sites and monuments record for Wales; terrestrial and marine.

Our maritime/marine work entails:

- Contribution to, and enhancement of, the maritime element of the National Monument Record of Wales (NMRW) through survey, investigation, recording, monitoring etc, etc.
- Fulfilling RCAHMW's role as a statutory consultee for marine licenses within Wales.
- Dissemination and Public Engagement of RCAHMW work on Wales' maritime archaeology.
- Research to develop new/better/improved ways to survey, research, catalogue, interpret, manage and understand Wales' maritime archaeology.



National Monuments Record of Wales: Marine Records



Marine/Maritime Records

- Wales comprises c. **21,000km²** of land...
... c. **32,000km²** of Sea
... c. **2,700km** of coastline
- The National Monuments Record of Wales (NMRW) includes the records, and associated archive material of marine and maritime sites.
- **8000+** entries below/beyond the high water mark



Mesolithic Fish Trap, Goldcliff
(image: Living Levels)

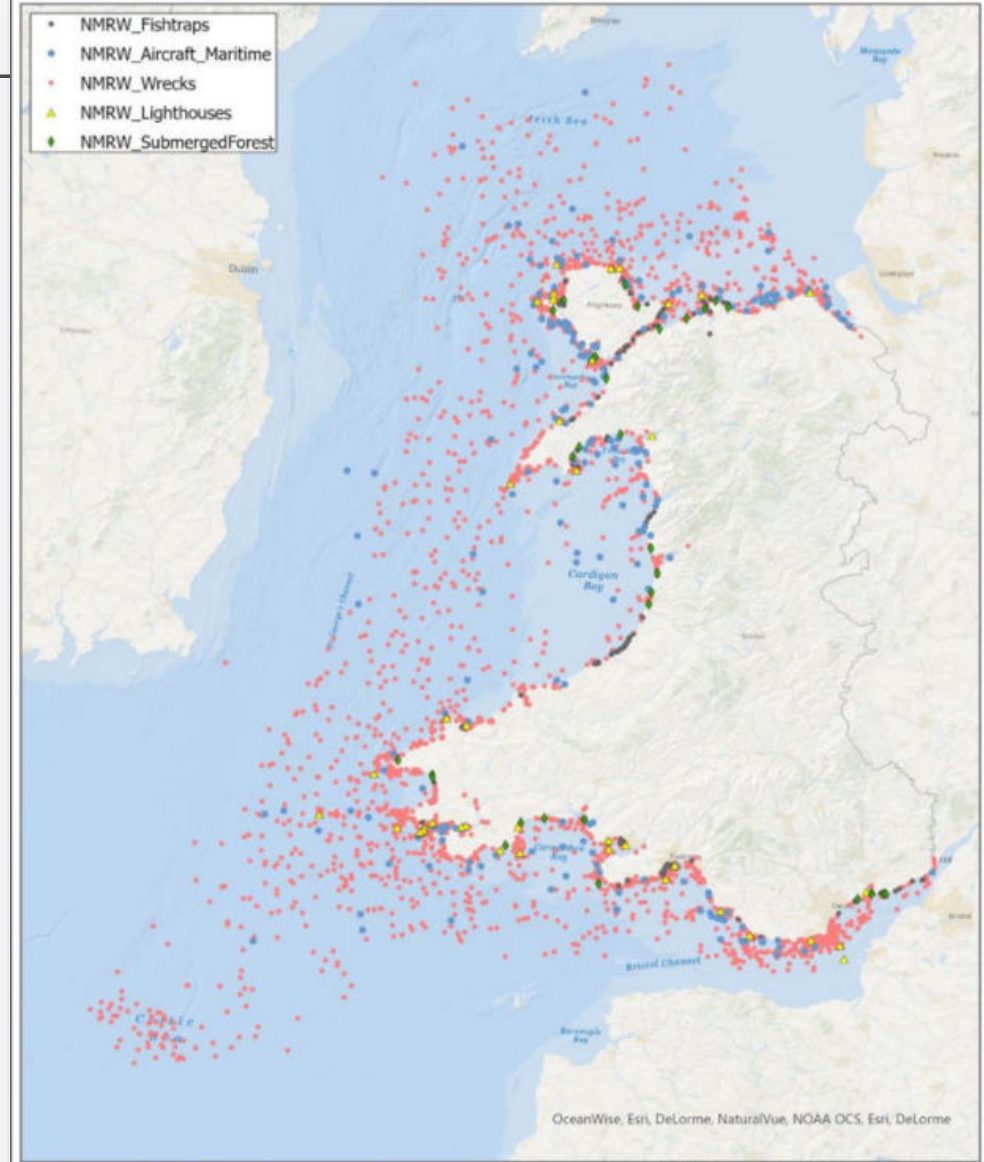
Marine/Maritime Records

- c. 5,500 documented wreck losses
- 361 Aircraft/aircraft crash sites
- 204 Fish trap sites
- 151 Anchorages
- 53 Lighthouses
- 30 Submerged forests
- And.... 3 sets of Stepping Stones

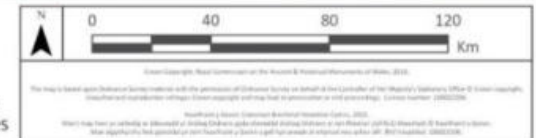
NPRN 440, Magor Pill medieval wreck
(image: National Museum of Wales)



National Monuments Record of Wales: Marine records

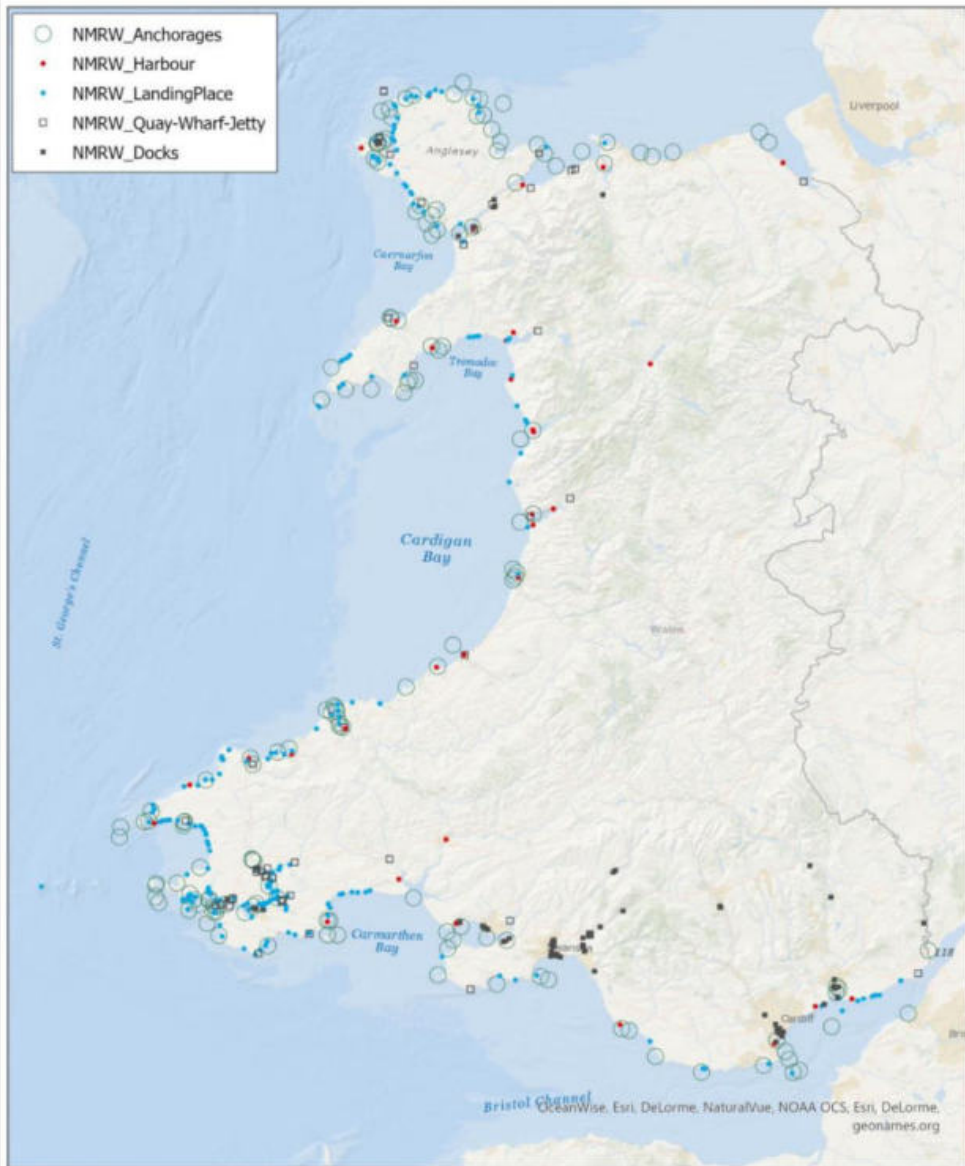


Comisiwn Brenhinol
Henebion Cymru
Royal Commission on the Ancient
and Historical Monuments of Wales





NMRW: Sites of anchorages, harbours etc



Comisiwn Brenhinol
Henebion Cymru
Royal Commission on the Ancient
and Historical Monuments of Wales



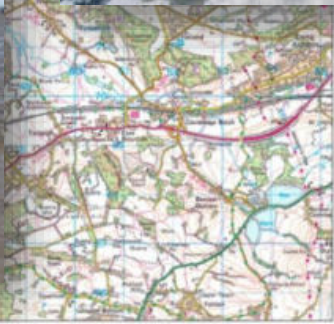
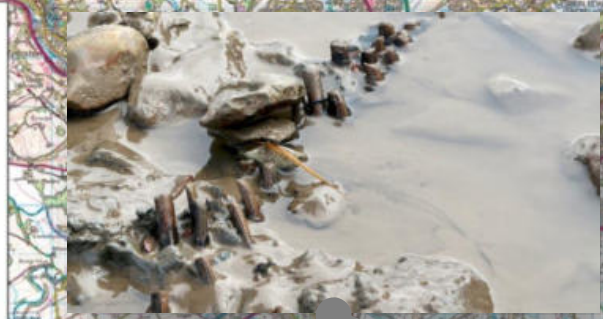
Marine/Maritime Records

- The NMRW also includes records related to ports, harbours, docks, landing places, anchorages, etc.
- Further sites with a 'maritime' character can be identified in the coastal margin:
 - Lime Kilns, Promontory Forts, Industrial sites, etc.



NPRN 94873, Sudbrook Promontory Fort

NMRW and the Severn Estuary





National
or
Local
Records?

Room for
improvement in the
NMRW!

Marine Planning

- The RCAHMW is a statutory consultee for marine license applications within Wales.
- This tasks us with assessing the impact (or not) of marine development (in all its forms) on cultural heritage below high water...
- ..and ensuring that appropriate action is taken in line with SOC_05 of the **Welsh National Marine Plan**.

- Responding to marine planning requires up to date baseline information on the historic environment.



WNMP Policy SOC_05: Historic assets

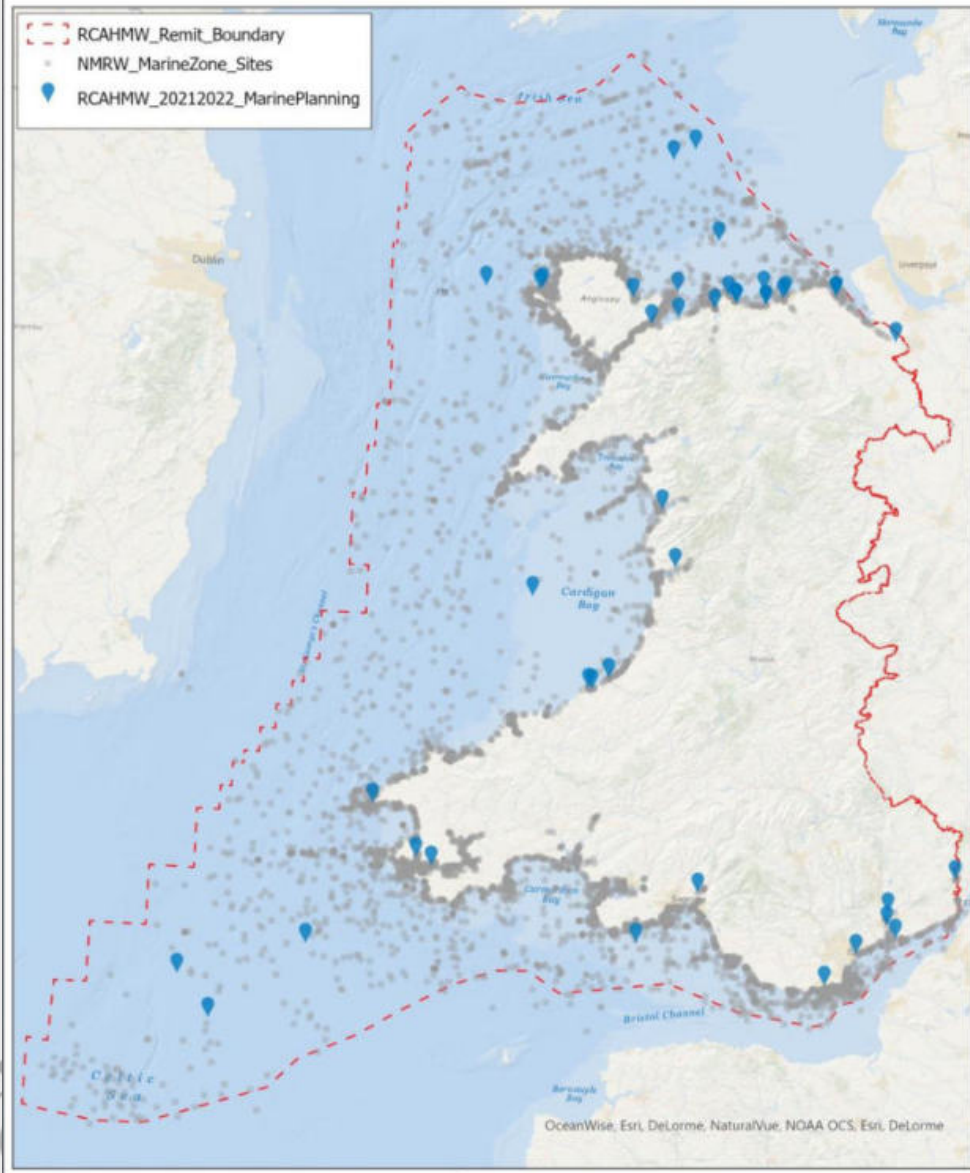
Proposals should demonstrate how potential impacts on historic assets and their settings have been taken into consideration and should, in order of preference:

- avoid adverse impacts on historic assets and their settings; and/or*
- minimise impacts where they cannot be avoided; and/or*
- mitigate impacts where they cannot be minimised.*

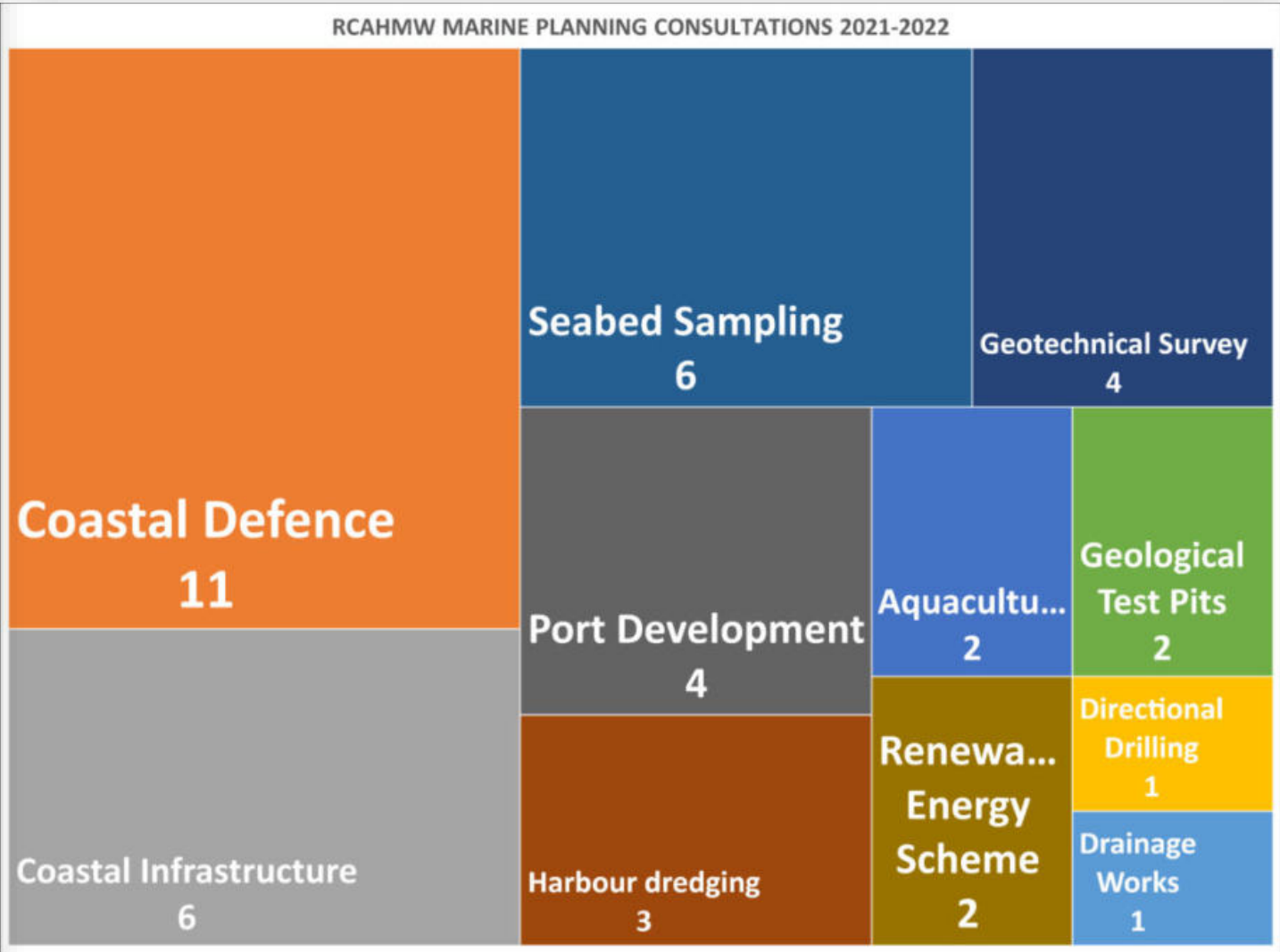
If significant adverse impacts cannot be avoided, minimised or mitigated, proposals must present a clear and convincing case for proceeding.

Opportunities to enhance historic assets are encouraged.

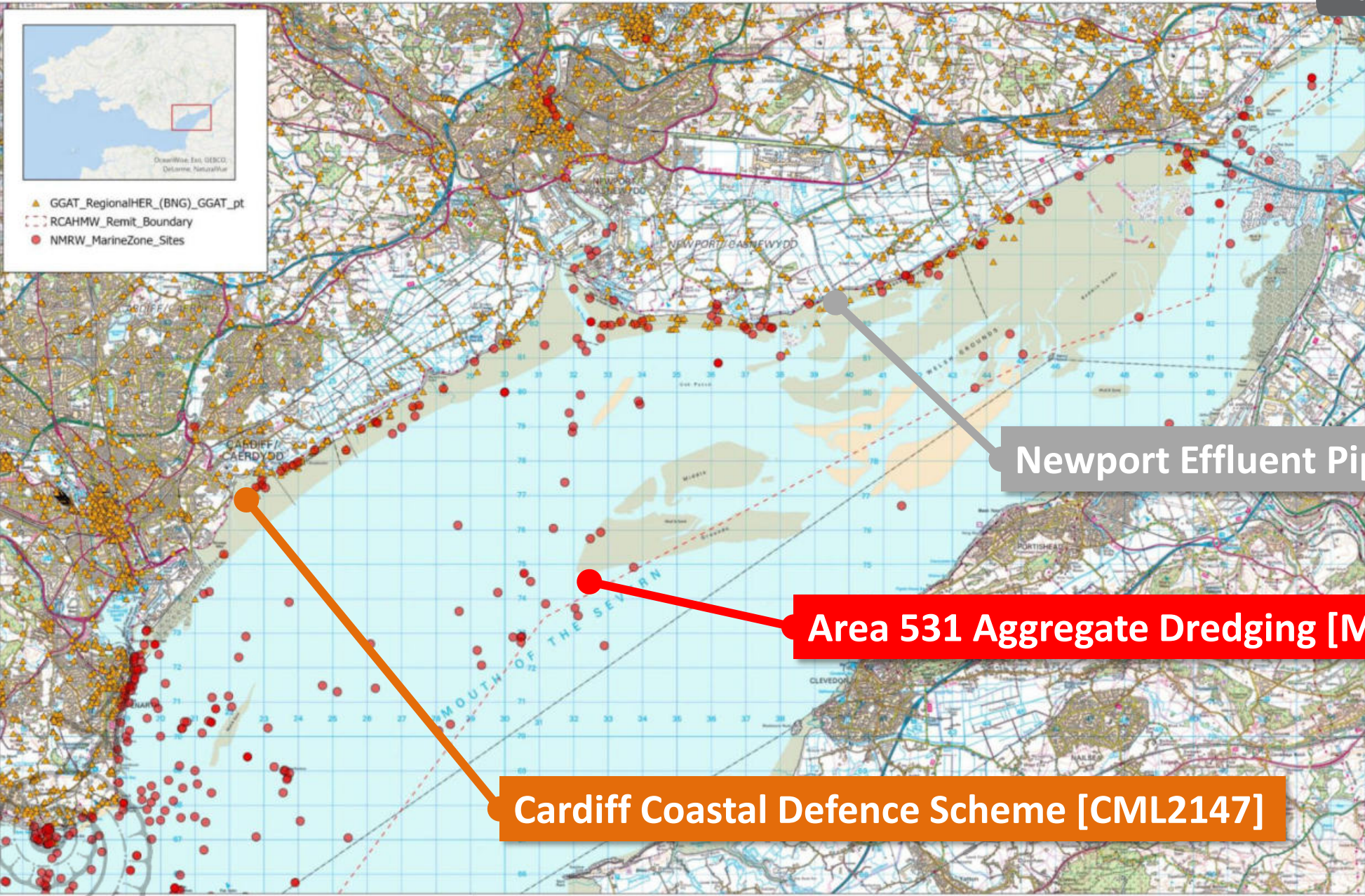
RCAHMW Marine Planning Consultation: 2021-2022



Marine Planning: 2021/2022



Development Pressure on the Historic Environment



Newport Effluent Pipe [CML2222]

Area 531 Aggregate Dredging [MMML1984]

Cardiff Coastal Defence Scheme [CML2147]

Concluding Thoughts

- The northern side of the Severn Estuary includes a hugely rich, varied, and well-preserved archaeological landscape.
- This includes some of the most nationally significant examples of some site types in Wales.
- But, there is demonstrable room for improving our records of this landscape at a national level.
 - Liaison between interested parties is critical for achieving this.
- Enhancing our records maintains the link between effective planning for the marine historic environment and the baseline information that informs the marine planning process.

Severn Estuary Partnership Forum
12th October 2022

Thank You / Diolch

Dr Julian Whitewright

Senior Investigator (Maritime)

Julian.Whitewright@rcahmmw.gov.uk



Noddir gan
Lywodraeth Cymru
Sponsored by
Welsh Government

Citizen Science and Volunteering at Severn Rivers Trust

Alice Moore – Volunteering Officer

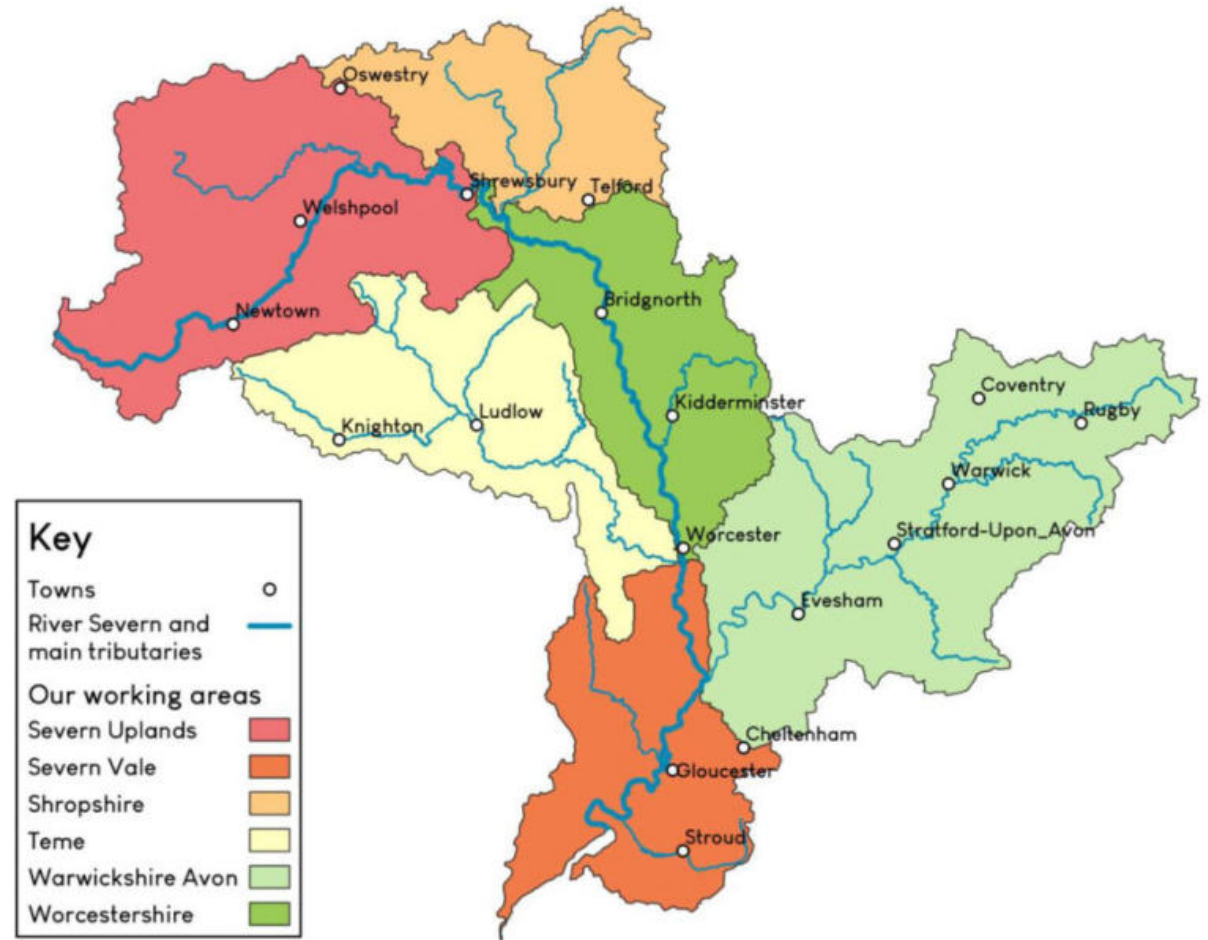


SEVERN
RIVERS TRUST

Severn Rivers Trust



- Conservation charity set up in 2008
- One of 60 Rivers Trusts in the UK
- Cover the whole of the River Severn
- The catchment covers an area of 11,420 km²
- We carry out river restoration and land management work alongside community engagement





The Concept of Citizen Science

What: Public participation, and collaboration, in scientific research

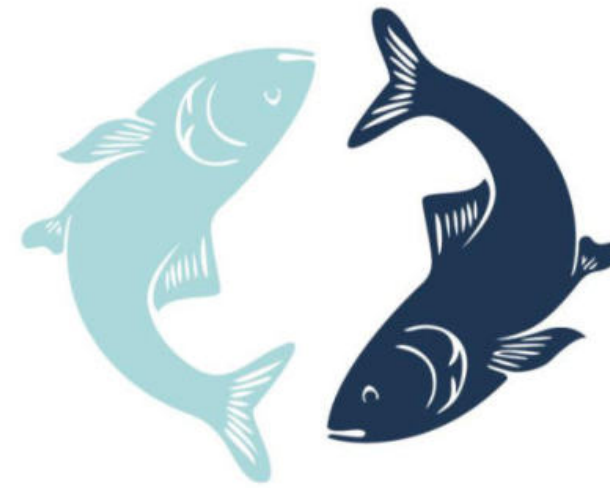
Who: Anyone

Why: Helps advance data collection and scientific understanding



Citizen Science as part of Unlocking the Severn

- Collect data to make a population run estimate
- Identify and observe spawning locations
- Verify the preference of species through eDNA



**UNLOCKING
THE SEVERN**



Shad Migration Monitoring



- Direct observations at Upper Lode weir in Tewkesbury
- Historic notch allows fish passage
- Facilitate independent volunteering

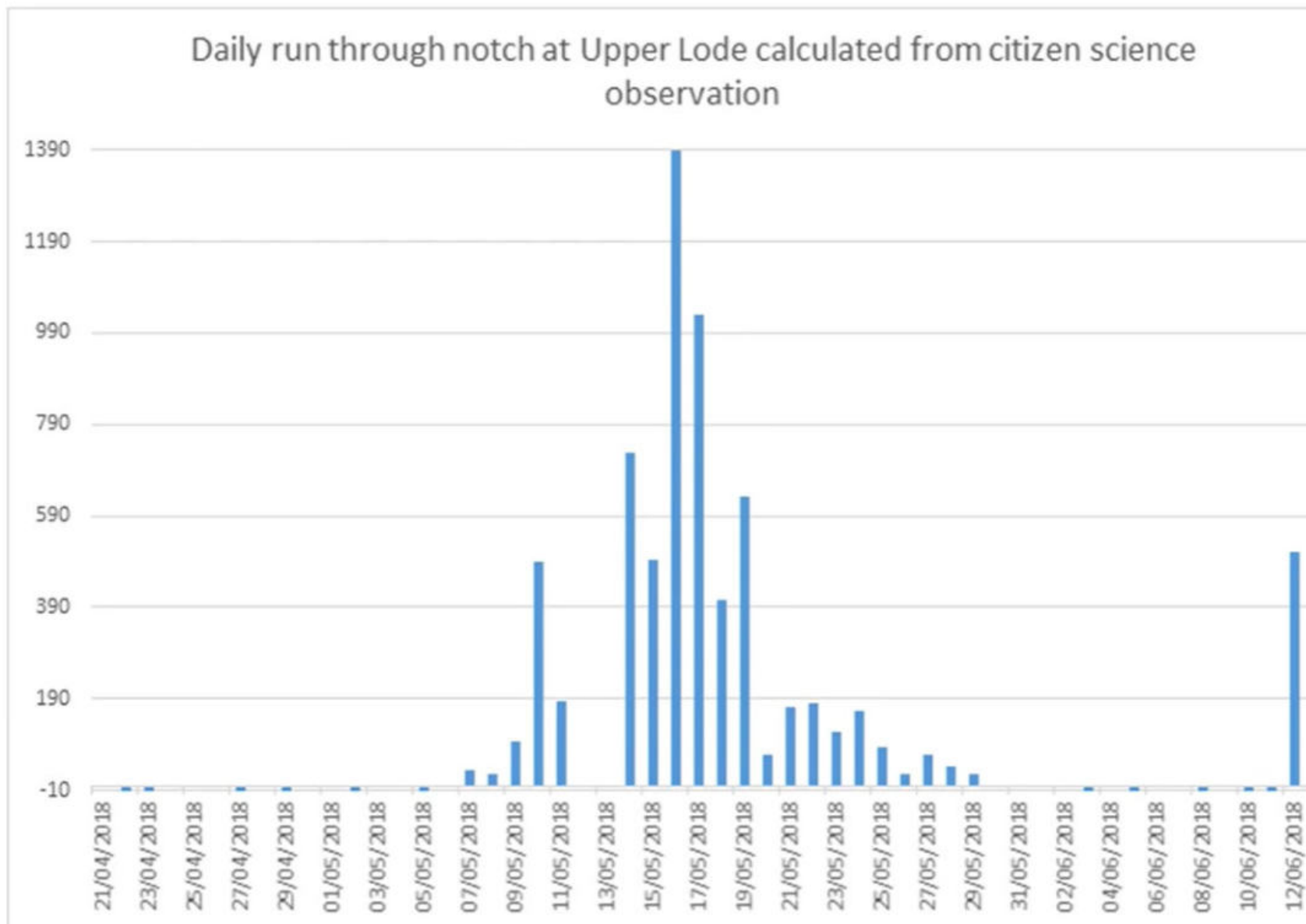




Recording Time and Conditions	Shad successfully passing upstream through the notch (<u>migrating upstream</u>)	Shad successfully passing downstream through notch (<u>migrating downstream</u>)	Notes/ Other Species observed
Date: Cloud Cover: Water Clarity: Start time: End Time:			
Date: Cloud Cover: Water Clarity: Start time: End Time:			
Date:			



- 2018 daily run data



Online Monitoring

- Remotely analysing video footage
- C. 10,000 videos watched online



How many shad swam upstream in this video?

Type the number here (Eg. 5)

Did you see anything interesting?

Type any comments you have about the video here



Young Citizen Scientists

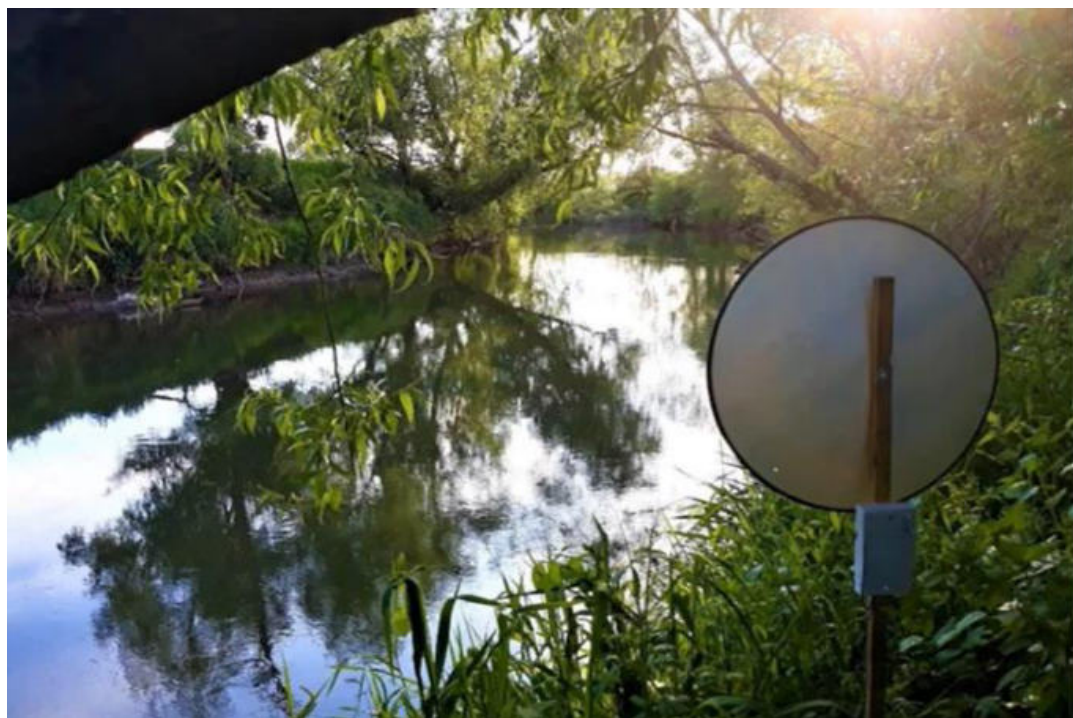
- In 2018 and 2019 we ran school visits to Upper Lode (7-11 year olds)
- Took part in direct observation counts
- Proved good for engaging children that were prone to distraction





Shad Spawning Monitoring

- Peak spawning time is between 11pm and 2am
- Circling activity creates a distinctive splashing sound which allows for detection and monitoring
- Combination of audiomoths and volunteer observations used





eDNA Sampling

- Verify the presence of species through genetic material collected in river samples



Practical Volunteering



- Practical conservation tasks
- Invasive species removal
- River cleans





Reflections

- Large scale data collection
- Increase local understanding and appreciation of the shad run and more broadly about fish, river health and barrier to migration
- Allowed new opportunities
- Remote opportunities were more accessible
- Range of opportunities was key



Looking Ahead

- Catchment Systems Thinking Cooperative
- Shad run 2023
- SMART Rivers
- Tree planting
- River Cleans





Thank you

volunteering@severnrivertrust.com

