

# RIVER DISCOVERY ZONE



## PROGRAMME 2024

Thurs 16th, Fri 17th and Sat 18th May, 2024



**HERALDS of  
the RIVERS**

Follow them to the  
River Discovery Zone.

Corner of Avenue K  
and Road 7

# OUR EXHIBITIONS



Come and talk to the groups who are “Doing something about it”.

## DEVON RIVER MANIFESTO

- Voting for River Health

## CATCHMENT GROUPS

- Launch bid for Devon River Champions website
- Avon River Champions
- Friends of the River Exe
- Friends of the Dart

## MONITORING

- **In-Situ**  
Real time pollution monitoring
- **Applied Genomic**  
e-DNA water testing
- **Avon Fishing Association**  
Fri 17th - CSI kick sampling for aquatic invertebrates demo

## RESEARCH into USE

- **Plymouth Marine Laboratory**  
Research towards sustainable climate-neutral farming systems
- **Seaweed Generation**  
Real time aquatic pollution and biodiversity monitoring

## PLASTIC POLLUTION

- **Til The Coast is Clear CIC**  
Volunteers for river and coast cleans

## NATURE BASED SOLUTIONS

- **Force4 Nature**  
Volunteers working with farmers to prevent pollution by building leaky dams and planting trees.
- **Upstream Thinking**  
SWW catchment project to reduce pressure on water treatment systems and protect our rivers.

## RIVER REFLECTIONS

- **South Devon Story Tellers**  
Sat 18th May - enchanting stories of pixies that inhabit our rivers
- **Bath Spa University**  
Draw around river critter templates and a draw/write and stick along the river with your reflections about your river.

- **Riverfull of Stories**  
Sit a while and listen to recordings made by artist Laura Denning, of people’s river reflections.
- **Letters to Devon Rivers**  
Write your personal Letter to our rivers in Devon in a handmade book. They are listening to you.

## OCEAN DISCOVERY ZONE

- **Seadream Environment CIC**  
Marine research into use. Featuring seagrass monitoring projects



# DEVON RIVER MANIFESTO

## Its an Election Year!

This your chance to vote on key actions that will help restore our rivers to Good Ecological status by 2030

All voters will be invited to add their signatures to a petition to **Devon MPs** requesting them listen our demands for Devon Rivers.

**Signatories** will be invited to place a sticker against 8 manifesto promises that they want from their prospective MPs at the next General Election

The prioritised Devon River Manifesto demands will be brought together at the end of the Devon County Show as a Devon **River Manifesto** in an **illustrated manuscript roll** that will be presented to all our **MPs in Devon.**

If we can get the funding to launch the Devon River Champions - the results will be posted there! (see page 5)

In the meantime all enquiries should come to Louise Wainwright [info@south-devon-river-champions.org](mailto:info@south-devon-river-champions.org)

## Ecological status of Rivers in Devon

**HIGH** (none)  
**GOOD** 64 water bodies (21%)  
**MODERATE** 191 water bodies (63%)  
**POOR** 45 water bodies (15%)

Environment Agency Catchment data on Ecological status of Rivers Aug 2023



Rivers Trust data on Combined Sewer Overspills



## DEVON RIVER MANIFESTO DEMANDS

- 1. We want GOOD Ecological Status by 2030**  
Fact - The current Government pushed back targets for all rivers to achieve Good Ecological Status from 2027 to 2063
- 2. SEWAGE TREATMENT we want adequate treatment facilities before paying dividends & bonuses**  
Fact - The current Government ordered OFWAT to consider water company profitability before imposing fines
- 3. ENVIRONMENT AGENCY We want budgets restored with powerful mandate**  
Fact Government has reduced EA budgets by 50% in past decade
- 4. WATER COMPANIES To become Public Benefit Corporations**  
B Corp – allowed to make a profit but the Environment comes first
- 5. AGRICULTURE RUN-OFF We need to fund farmers to retrofit solutions**  
Nationally - 40% river pollution from agriculture, 36% from water companies. Post Brexit – two fifths of farmers earn less than £25,000 income each year and 15 per cent of all farms make a loss.
- 6. PLANNING AUTHORITIES - Must control pollution from new developments**  
Lords defeated Government attempts to scrap the Nutrient Neutrality Scheme that controls sewage pollution from new developments.
- 7. ROAD DRAINAGE funded to prevent pollution of rivers and farmland**  
National Highways and local authorities are responsible for road drainage and urban diffuse pollution causing 18% failure to achieve Good Ecological status of rivers in England
- 8. ANNUAL CATCHMENT EA REPORTS shared in easy-to-understand format**  
Catchment groups are funding analysis of EA data on rivers from hugely complex spreadsheets. Analysis of historic EA data by a community group of a Devon river (designated MODERATE ecological status) revealed E.coli levels 10 to 100 times above Upper Safe Limit since 2005...and there has been no improvement.

Cant attend the Devon County Show ?  
Ask us for a 'Postal Vote'  
[info@south-devon-river-champions.org](mailto:info@south-devon-river-champions.org)





# DEVON RIVER CHAMPIONS

## Launch Appeal

We are launching an appeal at the River Discovery Zone for sponsors and stakeholders to support the development of a new website directory (**Devon River Champions**) that signposts all the community river catchment groups in Devon and showcases county-wide work to restore the health of our rivers by 2030. We will then be 'connected' by more than just a website.

This will replace the **South Devon River Champions website** that only signposted the websites and links for groups in South Devon. Check out the format of SDRC website and get in touch if you can contribute sponsorship or have a group that you would like to add to the website if we can get it funded.  
info@south-devon-river-champions.org

If successful in fundraising - Devon River Champions will feature at the Devon County Show in the Ocean Discovery Zone...and then in the River Discovery Zone marquee in 2026.

We aim to signpost in one place, all the specialist teams able to help us improve health of our rivers and wildlife in the moors, valleys, rivers and shoreline of Devon.

We will aim to provide an annual review of projects and issues relating to rivers in Devon - through the free digital magazine on this website. **'Voices of Devon Rivers'**

We need £10,000 to set up and organise the website and social media links.  
www.south-devon-river-champions.org  
info@south-devon-river-champions.org

### How will this benefit Rivers?

The general public is largely unaware of the work that organisations are doing to restore health to our rivers - particularly for their local rivers.

By signposting catchment groups throughout the County, we can make it easier for people to find and support their local catchment groups and to set one up - if there is not a local catchment group.

The website will signpost useful information that will inform and inspire community action to monitor, restore and protect our rivers.



@avonriverchampions

## Catchment Community

We connect people who support our aims. Community groups, parish councils, farmers & landowners, businesses and individuals in all parishes in the Avon River catchment - South Brent, North Huish, Diptford, Loddiswell, Aveton Gifford, Bantham & Thurlestone and Bigbury. A monthly e-newsletter (**Avon River Voices**) - keeps us all up to date.

We Team up with the **River Gara** catchment (Blackawton & Stoke Fleming, East Allington, Slapton) and the **Kingsbridge Salcombe Estuary** (Kingsbridge Town, West Alvington, Malborough, Slapton, Frogmore & Sherford, Charleton, South Pool, East Portlemouth)

We have a team of **River Guardians** who coordinate local monitoring and activities in different sections of the rivers



Citizen scientists from the Kingsbridge Salcombe Estuary, River Gara and River Avon are trained by Westcountry Rivers Trust to take water quality samples from rivers.

### How will this benefit Rivers?

Catchment groups ensure that all upstream and downstream issues and events are joined up and meaningful.

Catchment groups have a more powerful lobby and influence than most individuals. And its a lot more fun doing things together.



**Collaboration**

**Minimising pollution**

Through constructive engagement and collaboration

**Improving biodiversity**

Scientific evidencing and data sharing

**Empowering Communities**

Scientific evidence and data sharing

Connect with a community passionate about the River Dart to support and address challenges it faces.

Whether you love nature, exploring, swimming, boating, or simply adore the Dart, join us to contribute your support, skills, and enthusiasm.



**Working Together**



The Exe Main catchment is predominantly rural and agricultural, with population centres in Exeter and Tiverton. The Creedy and West Exe catchment is mostly grass pasture, while the Clyst and Culm catchment has a higher proportion of pigs, poultry, and some light industry.

The catchment includes many nationally and internationally important wildlife sites including the Exmoor Heaths Special Area of Conservation and the East Devon and Blackdown Hills Areas of Outstanding Natural Beauty. Areas of the upper Exe catchment are also important spawning areas for Atlantic Salmon, a species of significant conservation concern within the UK.



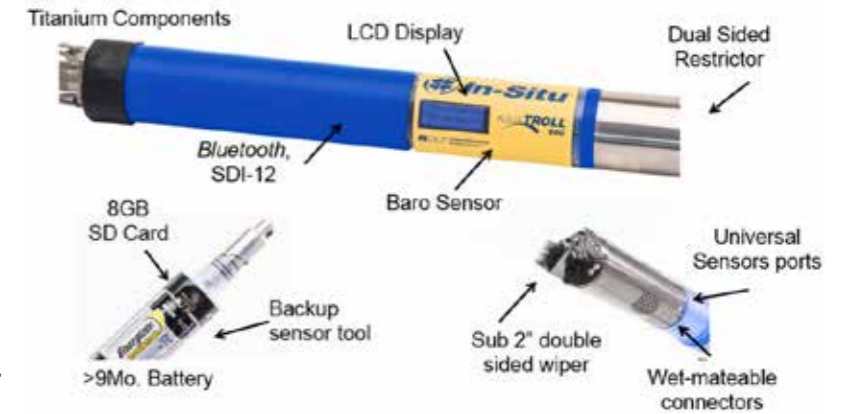
The Aqua TROLL 600 is a customizable, powerful multiparameter sonde. It combines industry-leading water quality sensors with revolutionary smartphone mobility, allowing you the ability to collect and analyze data using the VuSitu Mobile App on your mobile device.

Rugged in groundwater and corrosion-resistant in surface water, the Aqua TROLL 600 delivers accurate data in an easy-to-use, customizable instrument.

Features include a quick-read LCD status screen for visual indicators of overall readiness, battery life, internal log, and sensor status, as well as integrated Bluetooth® connection for wireless data access, and an onboard micro SD card for data backup and download. Low power consumption with 9+ months of battery life, and advanced antifouling to protect all sensors, make it perfect for challenging environments and long-term deployments in fresh and salt water applications.

The Aqua TROLL 600 features self-compensating turbidity, optical RDO, and level, and comes in vented and non-vented options.

It is the only multiparameter sonde to have a sub-2 inch passive and active antifouling system for all sensors, including conductivity. Every detail has been engineered for maximum accuracy and minimum hassle. This flexible, data-ready sonde easily integrates with telemetry systems and our new HydroVu Data Services platform for real-time feedback on all your remote water monitoring sites. Access to your data has never been this easy.



Water quality sonde suited for all your applications – fresh water, salt water, long-term deployment, short-term testing, low-flow sampling, and everything in-between.

**How will this benefit Rivers?**  
Some catchments have formed inter-parish council Water Quality Groups to fund the purchase of real time monitoring equipment such as the In-Situ sonde. Bringing this technology to the attention of community groups will keep them informed of real-time events.

Man-power: 1 person/day x 3 days



# DNA ANALYSIS

## WHOPOOD in my River?

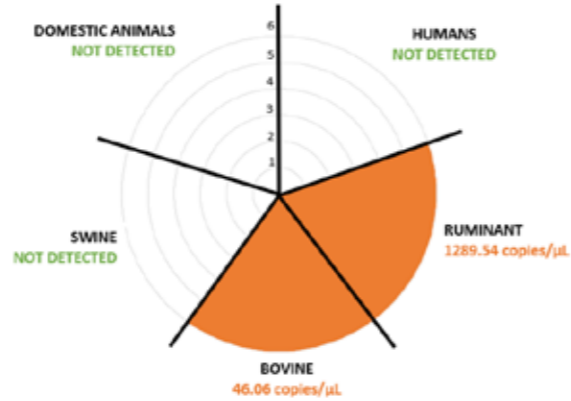


a) Enterococci Faecal Contamination



Sample ID: Water\_DC\_North+\_Middle\_Ponds

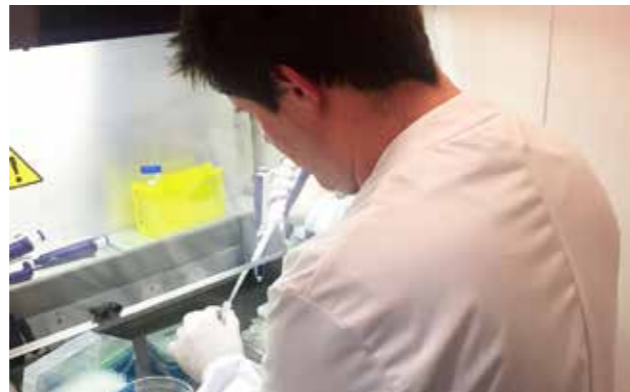
b) Sources of Contamination



Do you want to know if the E.coli in your river water sample from animal or human faecal contamination?

Applied Genomics are able to provide sampling equipment and laboratory analytical services that will determine the source so that remedial action is more focussed.

DNA fingerprinting of E.coli in river water samples, distinguishing sources from animals and humans will be showcased.



### How will this benefit Rivers?

Awareness of DNA analysis and its ability to distinguish E.coli from animal or human faeces, enables local government and community groups to focus limited resources to engage with those responsible for the local river pollution issues.

Man-power: 1 person/day x 3 days



## Riverfly Partnership

Empowering citizens to protect their rivers  
The Riverfly Partnership is a dynamic network of organisations, representing anglers, conservationists, entomologists, scientists, water course managers and relevant authorities, working together to: protect the water quality of our rivers; further the understanding of riverfly populations; and actively conserve riverfly habitats.

### How will this benefit Rivers?

Kick sampling is a useful method for local citizen scientists to measure the biological health of a river. It reinforces public engagement with rivers.

It is relevant to practical school curriculum activities, and enhances our knowledge of the river health.



## Avon Fishing Association

John Roberts, Chair of the Avon Fishing Association is a verified Riverfly citizen scientist investigator who monitors the aquatic invertebrates of the Association's river area. John will demonstrate the methods and the equipment used to undertake kick-sampling in rivers and provide information on sampling kits and further training.





Seaweed Generation's mission is to mitigate and remove carbon emissions using seaweed.

We believe that the wonders of seaweed can be coupled with technology for ocean rehabilitation of biodiversity, removal of pollution, and deacidification, that will also create a fantastic base biomass for food, animal feed, fertiliser, plastics, fuel, carbon removal, and much much more.

Our focus is on creating technology and infrastructure that can make this a reality. At heart, we are inventors, who believe that automation, robotics, data and a little imagination can hold the key to a scalable and sustainable future for seaweed aquaculture and for the planet.”

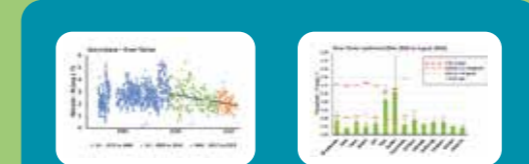


# AgZero+ towards sustainable, climate neutral farming

Research supporting the UK's transition towards home-grown food production that is sustainable, carbon-neutral and has a positive effect on nature.

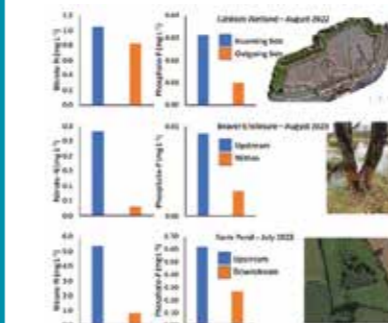


Work includes the Tamar and Exe catchments in order to understand the flow of carbon and nutrients between land and the ocean, here we share some of our findings.



Nitrate and phosphate are essential for plant growth but can cause problems when present in high concentrations. Nutrients in the Tamar have decreased over the last two decades, but some rivers are still not in a good condition.

Interventions to reduce the flow may help in reducing the downstream nutrient load



Plymouth Hoe and the Tamar estuary





### Whaley on Tour!

Whaley will be outside the River Discovery Zone to raise awareness of river and marine plastic pollution.



Come and talk to the 'Til the Coast is Clear team about how to contribute all their work including to **Plastic-Free Bigbury Bay\***.

In the past 5 years Till the Coast is Clear, with the support of its sponsors, partners and volunteers has cleared over 25 tons of plastic pollution from the South Devon coast. Significant amounts of plastic pollution found on the coast is via our river networks and estuaries.



\* Thanks to Devon County Councillor Rufus Gilbert for sponsorship for Plastic Free Bigbury Bay.



### Force4Nature

The Force4Nature project connects local volunteer teams with new existing nature regeneration initiatives happening in their community.



As a participant, you can dip in and out of volunteering to suit your availability and the emphasis is very much on getting outside in good company to do important hands-on work in a purposeful but totally relaxed way.

The F4N volunteer teams provide a; friendly, motivated and increasingly experienced and well equipped work force to projects large and small that are actively giving nature the helping hand it needs to recover and once again thrive.

The teams venture out every week to a wide variety of projects, all of which are, in one way or another, working

#### How will this benefit Rivers?

This exhibit will signpost the opportunities for the public 'do something' positive to support landowners and farmers in their endeavours to protect the river from agricultural run-off and rebuild habitats in riparian catchment zones



- Planted 1000's of tree
- sown wild flower meadows
- built leaky dams
- established new hedgerows
- community orchards
- built no dig veggie beds
- revitalised forest school areas
- put up bird boxes
- and much more.





## Working with Farmers

Farmyard manure, artificial fertilisers, herbicides and pesticides used on the land can end up in rivers, wreaking havoc on habitats and the quality of the water. Bad raw-water quality means more intensive and expensive treatment is required to get it to drinking-water standards.

Our multi-award-winning catchment-management scheme, Upstream Thinking, applies natural solutions to reduce this agricultural impact on biodiversity and water quality.

It does so whilst supporting farmers and the rural economy, by providing long-term resilience to climate change. Some of the activities include:

- **Installing waterside fencing**
- **Building ponds**
- **Improving farm tracks**
- **Increasing slurry storage**
- **Planting trees & buffer strips to filter runoff**



## Our Pledge

Reduce our impact on rivers by 2025, by one third and put forward plans to target zero harm by 2030

Reduce spills from storm overflows to an average of 20 per year by 2025

Maintain our excellent bathing water quality standards, all year round, so that everyone can enjoy our 860 miles of coastline, whatever the time of year

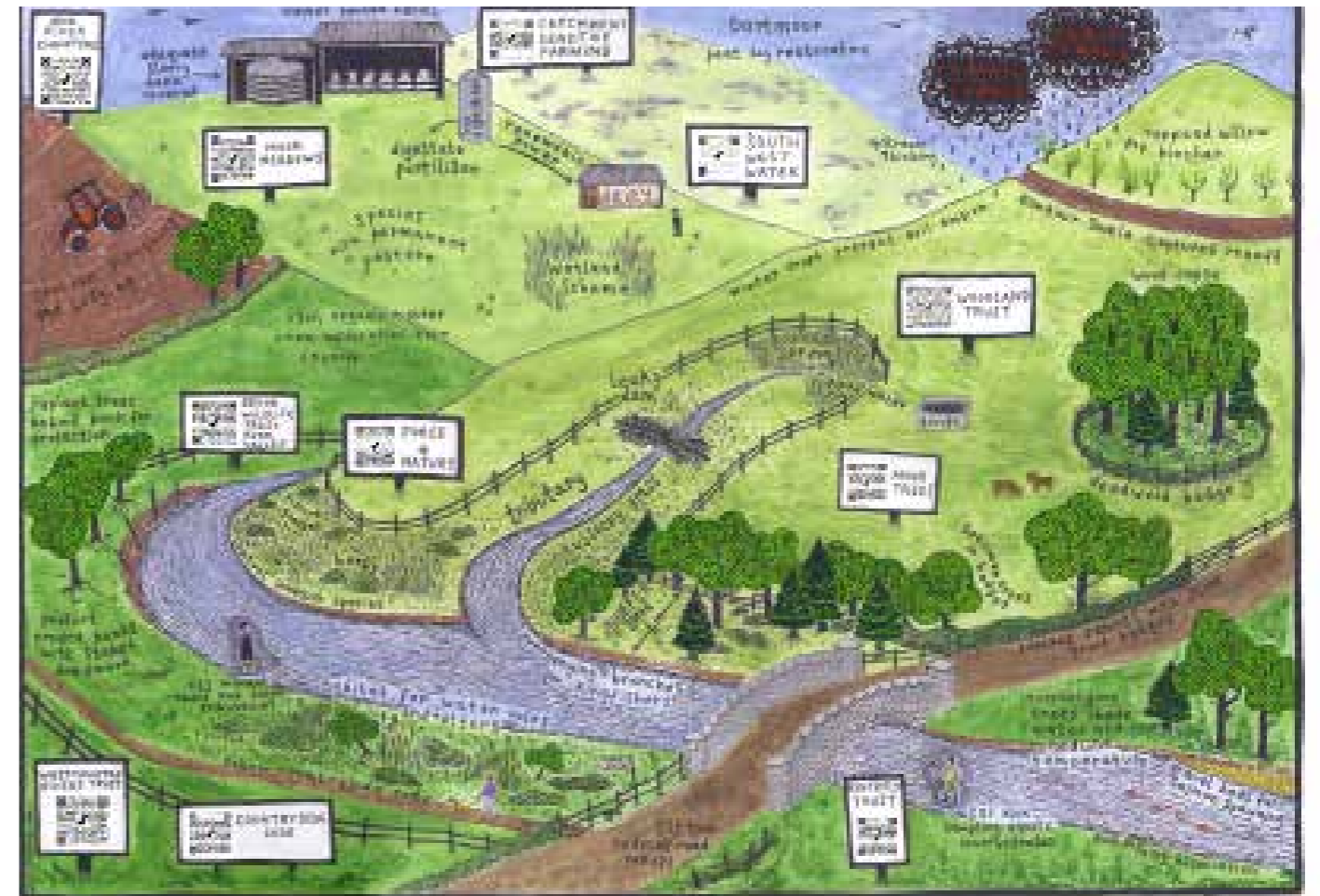
Deliver zero serious pollutions by 2025, and target a year on year reduction in all pollutions



### How will this benefit Rivers?

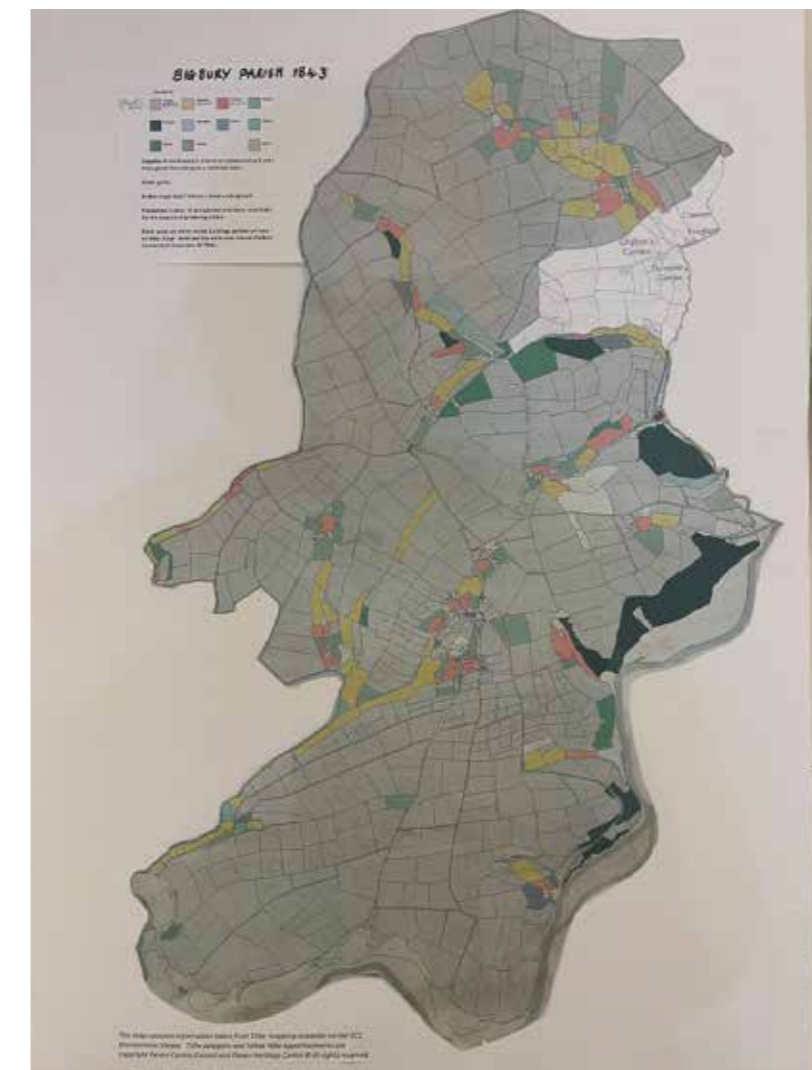
This exhibition will highlight the positive actions households, landowners and councils can take to reduce their impact on river water quality.

It demonstrates the positive work being undertaken by South West Water



Created by **Meri Bucknall** and **Louise Wainwright**

**Nature Based Solutions** to Agricultural run-off and the organisations that offer advice and support to implement the changes needed.



Our changing landscapes

Landscape scale solutions to **carbon sequestration**  
**biodiversity**  
**protecting rivers**  
**from run-off**

Created by **Jan Davies**  
**BIGBURY MAP PROJECT**  
Comparing Tithe Maps 1843 and current land-use - we can estimate how habitats have changed as a result of changing agricultural patterns.

# RIVER REFLECTION ZONE



To listen, make yourself comfortable on the headphones and press 'play' on the MP3 player provided. Alternatively, scan the QR code



For more information visit <https://lauradenning.com/intra-actions/>



## Riverfull of Stories

A Riverfull of Stories by artist **Laura Denning**, collects anecdotes, memories and reflections from local residents within the **River Erme** catchment.

This sound journey starts at the mouth of the river, at Mothecombe, then meanders upstream through **Holbeton, Kingston, Modbury, Ermington, Harford** and onto the **moor**.

A playful celebration of voices then leads into a cascade back down from the moor, visiting these communities once more before returning to the beach at Mothecombe.

People of all ages have contributed. This project has been undertaken in collaboration with the River Erme Councils (the 6 town and Parish councils whose catchment includes the River Erme) and the South Devon River Champions.

A Riverfull of Stories forms part of an ongoing oral history/ social participation project that over time aims to include stories from the Yealm, Avon, and Dart Rivers.

## LETTERS TO DEVON RIVERS

Write your own Letter to Devon Rivers in a lovingly made, hand-bound book created by Charlotte Wainwright of Wainwright Bookbinding.

Reflection Zone and send a message from the heart to our rivers. They are listening! Speak to them.



Find a quiet corner in the

# RIVER REFLECTION ZONE

## Saturday 18th May - River Storytelling



### South Devon Storytellers

is a collective of passionate storytellers, based in Devon who meet monthly in Totnes sharing myths, folktales and all kinds of traditional stories.

We host **performance nights** and offer **storytelling workshops** in Totnes and across wider South Devon.

### We are...

**Inez Aponte** [www.crazybeautiful.world](http://www.crazybeautiful.world)

Inez is a warm and vibrant performer with a background in dance, visual art and theatre improvisation

**Sara Hurley** [www.sarahurley.co.uk](http://www.sarahurley.co.uk)

Sara is a storyteller, story maker, facilitator and community artist. With story at the heart of her work, she loves to engage people with each other, history, health, well-being and the natural world through storytelling.

**Lisa Schneidau** [www.lisaschneidau.co.uk](http://www.lisaschneidau.co.uk)

Lisa uses traditional story to explore our complex relationship with nature past, present and future. Lisa is the author of Botanical Folk Tales of Britain and Ireland and its two companion books on woodlands and rivers.

**Clive Pig** [www.clivepig.co.uk](http://www.clivepig.co.uk)

Clive is an author and international storyteller. His storytelling is theatrical and interactive, combining music and song, rhythm and rhyme.

**Henry Everett** [www.henryeverett.com](http://www.henryeverett.com)

Henry is an author, poet and storyteller who seeks out local fairy tales that connect wonder, people and place.

**Ronnie Conboy** [www.ronnieconboy.co.uk](http://www.ronnieconboy.co.uk)

Ronnie is a storyteller and performer based in Totnes. Drawing on a long career in healthcare, she has worked with Story for corporate education and wellbeing.

Contact us at [southdevonstorytellers@gmail.com](mailto:southdevonstorytellers@gmail.com)



@SouthDevonStorytellers  
[www.sdstorytellers.co.uk](http://www.sdstorytellers.co.uk)



Featuring: **Lisa Schneidau**. Sponsored by **Bath Spa University**



## River Myths & Folktales

Speaker's Corner will feature professional Devon storytellers on Friday and Saturday during the County Show, provided by **South Devon Storytellers**.

They will enchant and inspire visitors to the marquee with traditional stories about rivers from Devon, the British Isles and from all over the world.

These stories will help listeners to connect with the meanings and values of rivers in our lives, and introduce some of the magical river creatures from our world mythology, from dragons and monsters to magical fish and the faerie folk.

This will be a family appropriate, multi generational space, to engage a broad range of people, with Rivers continually at its heart.

# FUN ZONE

## RIVER CRITTER TREASURE HUNT



Search our Exhibitions to find these River Friends and read their special message to you.

**Learn the fun way!**



## PHOTO PEEP BOARD

Search our Exhibitions to find these River Friends and read their special message to you.

**Learn the fun way!**



# Kid's River Stories



River critters

templates  
crayons

Streams of **river**  
**paper**

Sponsored by  
Bath Spa University

# Ocean Discovery Zone



In 2024 the small but perfectly formed Ocean Discovery Zone will feature the work of Seadream Environment and their pioneering research progress using a combination of an aerial and underwater drones used for the survey of Devon's shallow intertidal and coastal water habitats.

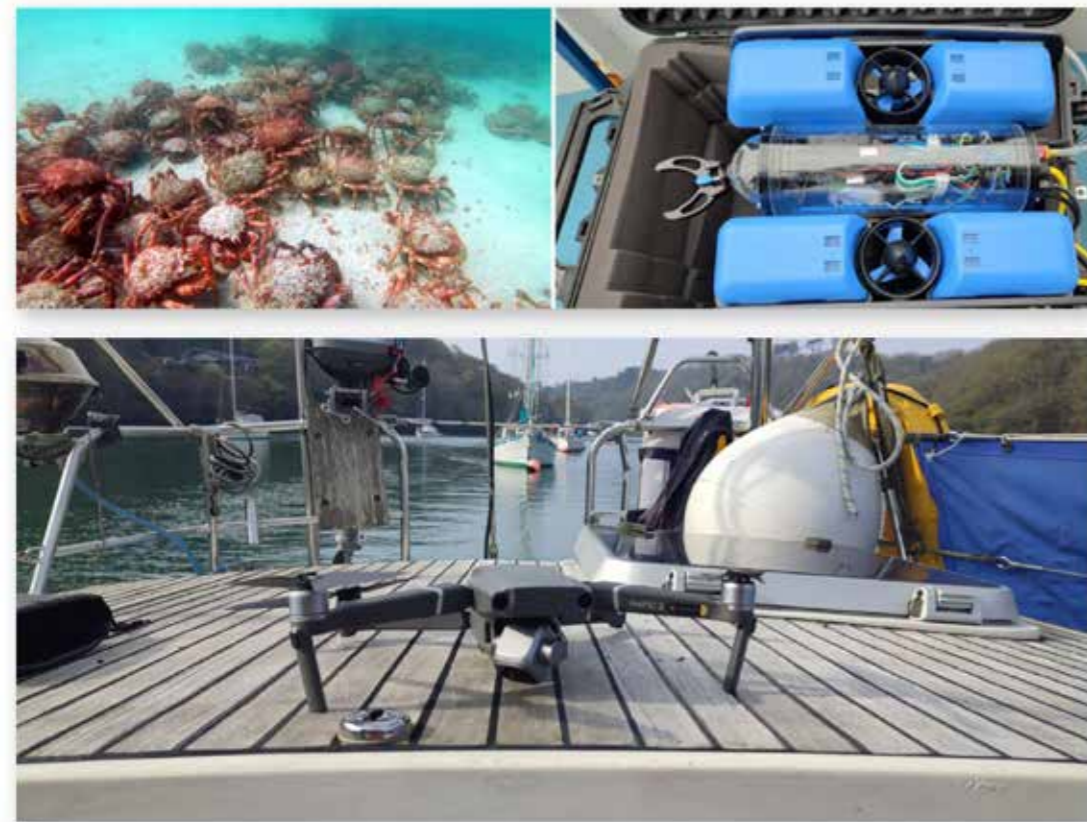
Seadream Environment is a scientist led Charity Incorporated

Organisation (CIO), whose mission is to:

Promote the conservation and protection of the environment and biodiversity.

Research environmental problems, indicators and solutions.

Facilitate positive environmental activities.



## How will this benefit Rivers?

Estuaries are the intermediate zone where sea and rivers meet. This exhibit showcases the research being undertaken to understand the issues facing seagrass meadows, the impact of water users and the effect of pollution on their health.



# Our Sponsors

Many thanks to the **Devon County Show Committee** for providing artists, community groups, organisations and researchers the opportunity to use the large marquee at the Devon County Show and for their support and encouragement.

Thanks to the many **volunteers, community groups, organisations** who set aside the time to develop a most informative and engaging River Discovery Zone.

Special thanks to **Dr Sally Sutton** and **Dr Laura Denning** for creative inspiration for Discovery Zone.

Much gratitude to our Steward **Dr Juliette Jackson** for her guidance and support.

Thanks to **Vinny Lee** for designing and creating the templates for the **Heralds of the Rivers capes** and to **Rachel Bucknall** for making two of the capes.

**Jan Davies**, historical researcher, prepared the **Bigbury Maps** of the parish in pre-Industrial times and compared them to current land-use to help conversations about restoration of habitats by 2030.

Artist **Meri Bucknall** produced the detailed sketch on Nature-based solutions that help reduce agricultural run-off.

We are grateful for the following who supported this grassroots endeavour, with what funds they had to offer. They helped to bring the plight of our rivers and the potential solutions to the attention of the communities in Devon.

- **Devon Country Council** - Cllr Rufus Gilbert (Locality Fund)
- **South Devon River Champions**
- **Bath Spa University**
- **South Hams District Council** - Cllr Lee Bonham Locality Fund

**Louise Wainwright and Alan Kirk**  
South Devon River Champions  
[www.south-devon-river-champions.org](http://www.south-devon-river-champions.org)  
[info@south-devon-river-champions.org](mailto:info@south-devon-river-champions.org)





Created by Charlotte Wainwright and  
Louise Wainwright

How many rivers in  
Devon can you  
name and find?

[info@south-devon-river-champions.org](mailto:info@south-devon-river-champions.org)