MONITORING OF THE PAR RIVER AND ITS TRIBUTARIES

The monitoring group operates under the citizen science scheme run by the Westcountry Rivers Trust. Comments and opinions in this report are those of the authors only.

SEPTEMBER 2025

CONTENT	PAGES

A. OUR SEPTEMBER 2025 FINDINGS AT A GLANCE (SEE SECTIONS C TO I FOR FULL PICTURE)

1. Data

We sampled at 15 locations between 15th and 20th September 2025. The **red** highlighting shows results of concern. Unfortunately, it was impossible to monitor the Treskilling Stream.

CRITERIA	UPPER PAR (UPSTREAM OF CONFLUENCE WITH BOKIDDICK STREAM NEAR BLACK HILL CAR PARK) 5 TESTING LOCATIONS	LOWER PAR (FROM CONFLUENCE WITH BOKIDDICK STREAM TO SEA) 3 TESTING LOCATIONS	TRIBUTARIES OF UPPER PAR (EXCLUDING TRESKILLING STREAM THIS MONTH) 5 TESTING LOCATIONS	TRIBUTARIES OF LOWER PAR (POLMEAR & TYWARDREATH STREAMS) 2 TESTING LOCATIONS
TEMPERATURE ˚ CELSIUS (SHOULD NOT EXCEED 18˚ CELSIUS)	Mean 15.48 Median 15.8 Min 14.8 Max 16.1	Mean 16.73 Median 17 Min 16.1 Max 17.1	Mean 15.56 Median 16.1 Min 13.6 Max 17.2	Mean 16.75 Median 16.75 Min 16.5 Max 17
TOTAL DISSOLVED SOLIDS PPM (SHOULD NOT EXCEED 300 PPM)	Mean 95 Median 80 Min 62 Max 137	Mean **307** Median 135 Min 124 Max **662**	Mean 110 Median 81 Min 68 Max 192	Mean 149.5 Median 149.5 Min 126 Max 173
TURBIDITY (SHOULD BE <12 ON SECCHI TUBE. FOR AVERAGING ANY READING <12 IS COUNTED AS 0)	Mean 10.6 Median 14 Min 0 Max 24	Mean 10 Median 14 Min 0 Max 16	Mean 4 Median 0 Min 0 Max 20	Mean 16 Median 16 Min 0 Max 32
PHOSPHATES PPB (SHOULD NOT EXCEED 100 PPB)	Mean **200** Median 0 Min 0 Max **500**	Mean **833.33** Median **1000** Min **500** Max **1000**	Mean 0 Median 0 Min 0 Max 0	Mean 0 Median 0 Min 0 Max 0
NITRATES (SHOULD NOT EXCEED 50 PPM)	Mean 0 Median 0 Min 0 Max 0	Mean 0 Median 0 Min 0 Max 0	Mean 0 Median 0 Min 0 Max 0	Mean 0 Median 0 Min 0 Max 0
RIVERFLY SCORE (TRIGGER LEVEL AT LRM SHOULD BE ≥ 6)	Lower Par (Lady Rashleigh Mine). Score = 6. Trigger level = 6.			
KEY WILDLIFE (WRT KEY SPECIES ONLY* – FOR FULL LIST SEE SECTION I)		Riverfly nymphs.	Beaver lake.	Riverfly nymphs.
INVASIVE PLANTS	Himalayan Balsam, Japanese Knotweed		Himalayan Balsam, Japanese Knotweed	

***The WRT monitoring forms highlight: Water Vole; Heron; Dipper; Otter (live sighting); Kingfisher; Dragonflies/Damselflies; Mink; Grey Wagtail; Fish; 'Other' . Beavers aren't stipulated but could, for example, be considered a key species under 'Other'. It is in this latter category that indirect evidence of otters, such as spraint, is included.**

2. Key points

(a) Positive signs

(i) The ARMI Riverfly survey at Lady Rashleigh Mine in Luxulyan Valley met the trigger level.

(ii) Biodiversity on the Upper Bokiddick Stream seems to be on the increase, probably because of the influence of beavers on the habitat.

(b) Points of concern

(i) The first riverfly survey on the Tywardreath Stream, conducted on 23rd September 2025 by Simon Tagney and Brian Harrisson, failed to meet the trigger level; it was repeated on 25th with better results. As a result, the ARMI supervisor was informed and the Environment Agency was conducted on its Hotline (**0800 80 70 60**). The EA responded by saying that it would send an ecologist to investigate further. Simon has noted that in the last 15 years, when he has walked the banks of this stream regularly, its condition has deteriorated. Whereas in the past he used to see 'small trout, gudgeon and other 'silver' fish regularly, this year he has seen none.

(ii) Also on the Tywardreath Stream, between Par Stadium park and the railway station small plastic booms have been seen, evidently placed to restrict a brown coloured discharge. It has not been possible to find any more information about this. These were still in situ on 22nd October.

(iii) Phosphate levels have been high again on the main Par River downstream of SWW's St Austell North STW (a possible additional contribution from other sewerage arrangements may exist). This is likely to be the case until SWW takes measures to remove phosphates, which is not scheduled to take place until 2030.

(iv) Very high Total Dissolved Solids were recorded on the Lower Par at Par Beach slipway.

(v) Although the ARMI riverfly conducted at Lady Rashleigh Mine in Luxulyan Valley was narrowly exceeded. The range and number of nymphs was low.

(vi) The only watercourse within the Par catchment (Par River, Molinnis Stream, Carbis Stream, Bokiddick Stream, Tywardreath and Polmear Streams) that consistently comes out well in our tests is the Bokiddick.

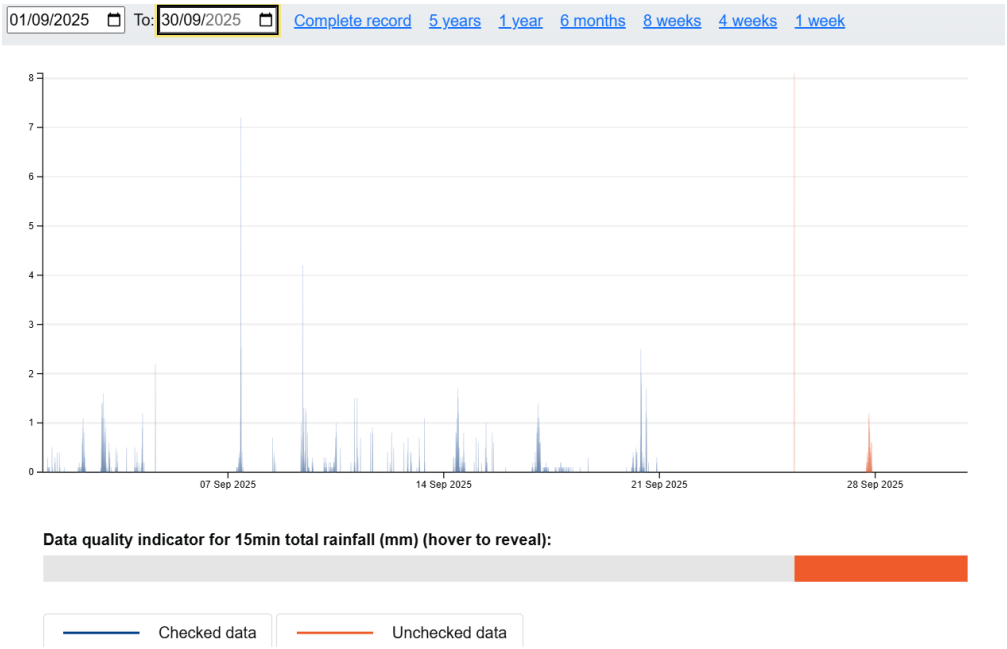
(c) Areas for further research

There is a discrepancy in the Total Dissolved Solids between, on the one hand the upper reaches of the Par and the Bokiddick Stream, where it is low, and the main Par River, the clay streams and the tributaries of the Lower Par, where it is higher. This is presumably due to human activity, both historical and current. What the impact is on local river health and biodiversity is unknown.

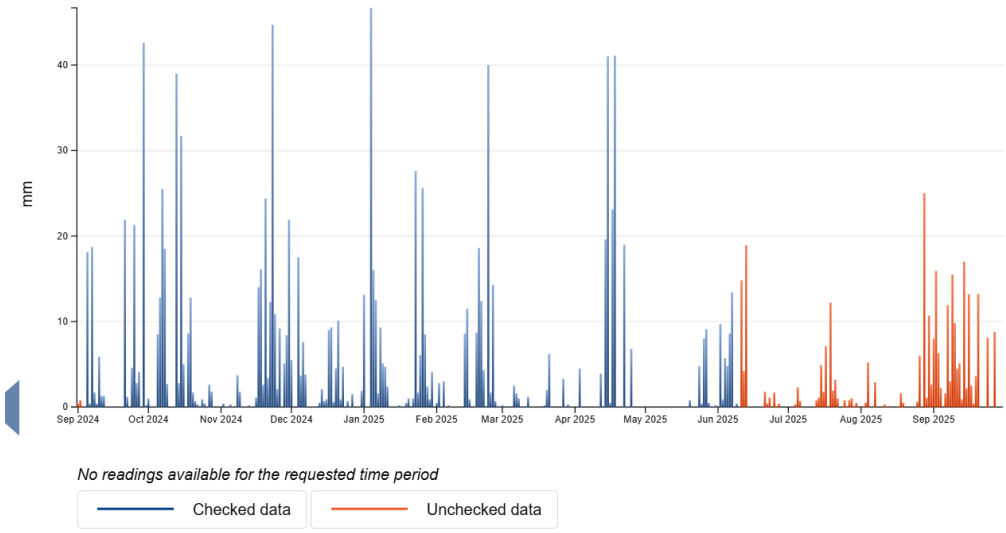
B. RAINFALL, RIVER LEVELS AND FLOW

1. Rainfall at Luxulyan (https://environment.data.gov.uk/hydrology/station/14aadf3c-3d4d-44b3-b26b-cf705827d00e_377323)

(a) September 2025



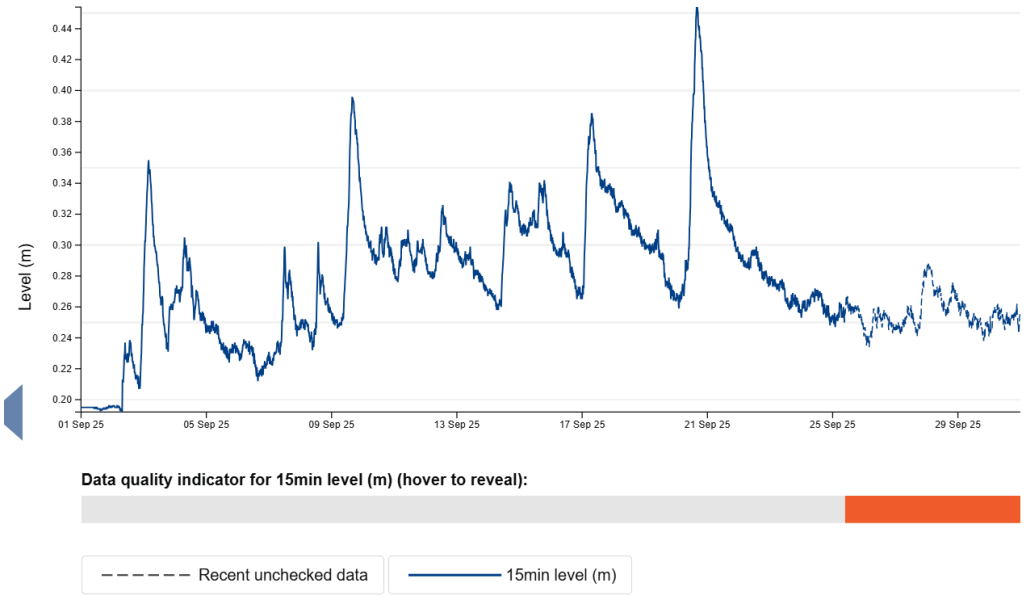
(b) From 1st September 2024 until 30 September 2025



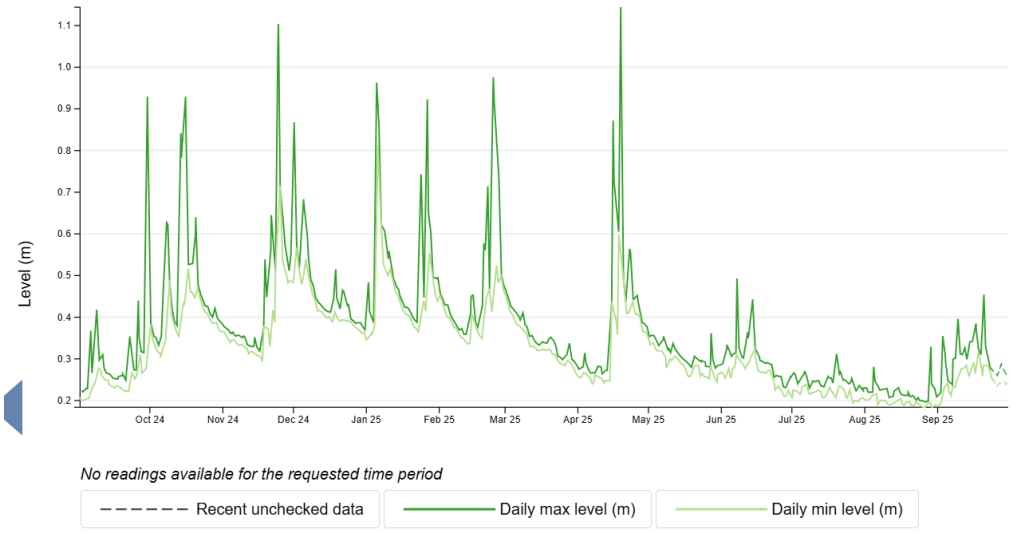
Ignore note about readings, this refers to 15 minute readings which won't show for an extended time period.

2. Par River levels at Luxulyan preceding and during surveys. Source: https://environment.data.gov.uk/hydrology/station/14aadf3c-3d4d-44b3-b26b-cf705827d00e

(a) September 2025



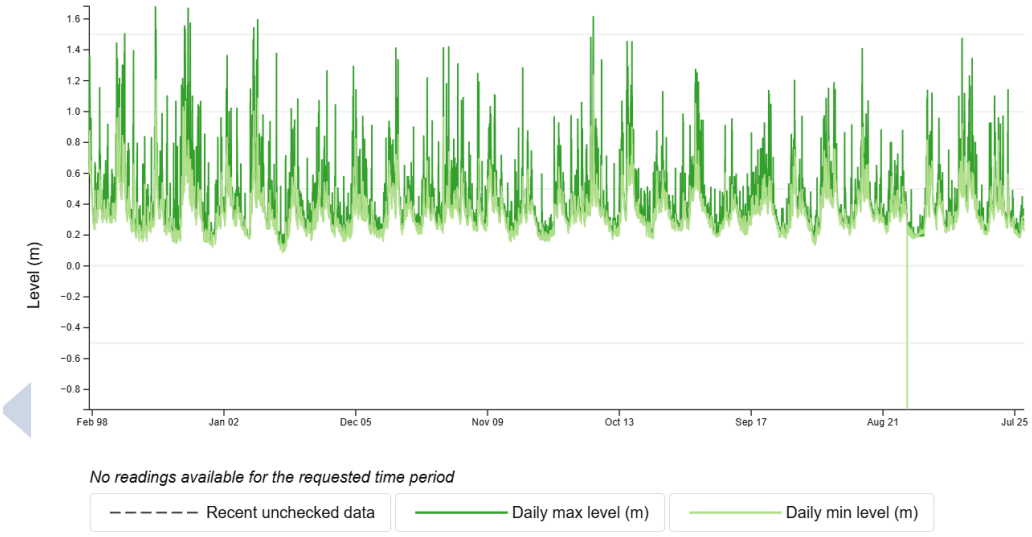
(b) From 1st September 2024 until 30 September 2025



(c) How levels at Luxulyan could affect nearby areas:

1.80m	Property flooding is possible above this level. One or more flood warnings may be issued
1.68m	Water reaches the highest level recorded at this measuring station (recorded on 19 December 1999)
1.40m	Low lying land flooding is possible above this level. One or more flood alerts may be issued
	This is the top of the normal range

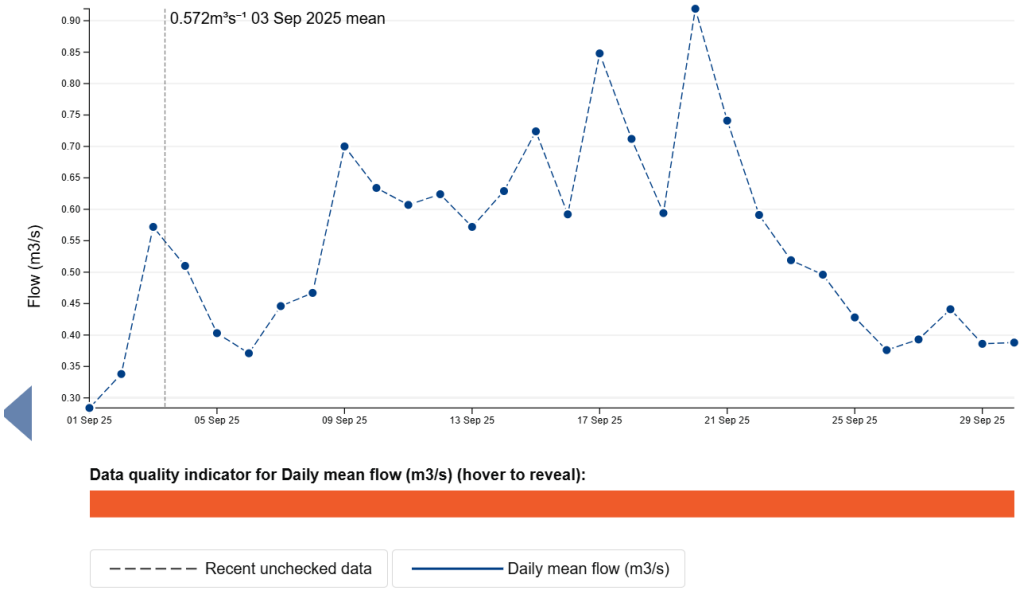
(d) Complete record of river levels at Luxulyan. Refer to level descriptions in previous section.



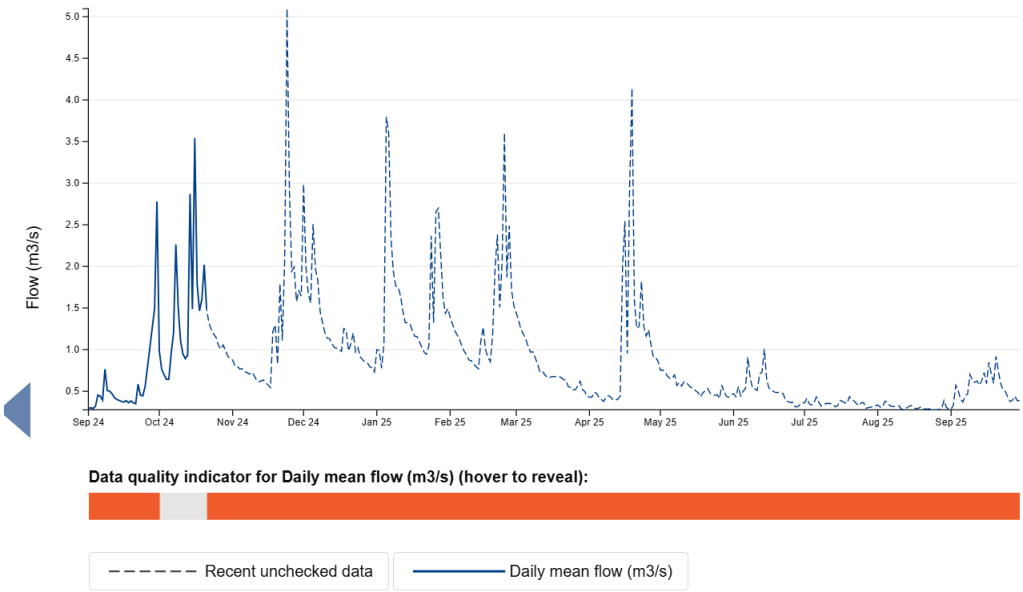
3. RIVER FLOW AT LUXULYAN (Daily Mean Flow in M3/s – cubic metres per second):

Source: https://environment.data.gov.uk/hydrology/station/d58ffa6f-8f0d-4626-b7a1-23de1774b470

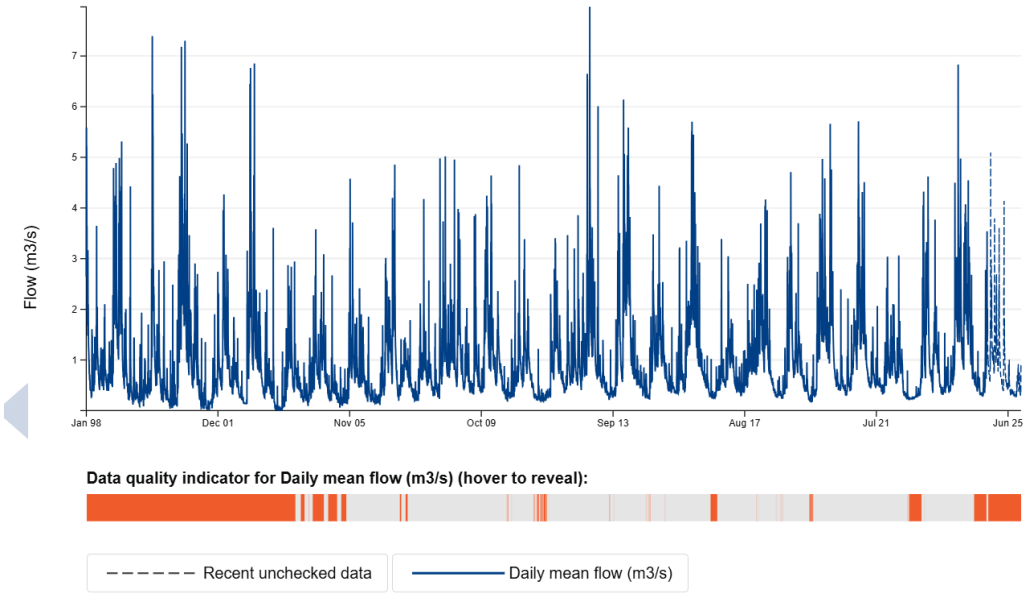
(a) September 2025 (N.B. Some data unchecked):



(b) From 1st September 2024 until 30th September 2025:



(c) Complete record of river flow at Luxulyan:



4. The graphs in sections 1 to 3 are taken from Hydrology Data Explorer (https://environment.data.gov.uk/hydrology/explore). Data for Luxulyan and Par St Andrews are used here. Other stations in the Par catchment include: Ponts Vale, Par Highways, Treesmill Dam Public Footpath, Treesmill Dam Marsh Villa Gardens, and St Blazey (rainfall only). It is possible to check daily Par River levels for Luxulyan, Ponts Vale and St Blazey Station Stream at St Blazey Station Road at: https://check-for-flooding.service.gov.uk/river-and-sea-levels/rloi/3159 .

C. SEPTEMBER 2025 MONITORING POINTS

This month monitoring occurred at 15 locations. The Treskilling Stream was not monitored. Monitoring points along the main Par River are shown in black. Those in red are on tributaries.
Source: https://magic.defra.gov.uk/MagicMap.aspx

LOCATION	PAR/TRIBUTARY	DATE/TIME	TYPE OF CHECK	MONITORED BY
Criggan Moors, Par River, SX 01882 61133	**PAR**	17/9/2025 8:55	CSI sample & Cartographer record.	Roger Smith
South of Minorca Lane, Par River, SX02668 59747	**PAR**	17/9/2025 8:10	CSI sampling. Cartographer record.	Roger Smith
Near Forkandles Farm, Molinnis Stream, SX 02460 59271	**SECONDARY TRIBUTARY (OF CARBIS STREAM)**	17/9/2025 10:25	CSI sample & Cartographer record.	Roger Smith
Carbis Stream SX 02834 59401	**TRIBUTARY**	17/9/2025 9:45	CSI sampling. Cartographer record.	Roger Smith
Lavrean, Par River SX 03134 59164	**PAR**	17/9/2025 10:30	CSI sampling. Cartographer record.	Roger Smith
Treskilling, Treskilling Stream, SX 04107 57726	**TRIBUTARY**	Not checked		
Luxulyan allotments, Par River, SX 04732 58045	**PAR**	17/9/2025 11:25	CSI sampling. Cartographer record.	Roger Smith
Cam Bridges, Par River, SX 05292 57454	**PAR**	17/9/2025 13:05	CSI sampling. Cartographer record.	Roger Smith
Trebell Green, Bokiddick Stream SX 0551960226	**TRIBUTARY**	15/9/2025 10:45	CSI sampling. Cartographer record.	Roger Smith
Corgee Moor, Bokiddick Stream SX 0593462167	**TRIBUTARY**	15/9/2025 11:25	CSI sampling. Cartographer record.	Roger Smith
Gatty's Bridge, Bokiddick Stream SX 05531 57953	**TRIBUTARY**	17/9/2025 15:30	CSI sampling. Cartographer record.	Joan Farmer
Treffry Viaduct, Par River, SX 05650 57179	**PAR**	17/9/2025 16:15	CSI sampling. Cartographer record.	Joan Farmer
Lady Rashleigh Mine, Par River, SX 06451 56509	**PAR**	17/9/2025 14:00	CSI sampling. Cartographer record. Riverfly.	Veronica Jones, Roger Smith
Treesmill, Tywardreath Stream, SX 08873 55385	**TRIBUTARY**	17/9/2025 10:45 Riverfly 23/9/2025 **&** 25/9/2025	CSI sampling. Cartographer record. Riverfly.	Maggie Tagney Riverfly: Simon Tagney & Brian Harrisson.
Par Beach slipway, SX 0776 53261	**PAR**	20/9/2025 14:06	CSI sampling. Cartographer record.	Brian Harrisson
Polmear Stream, Ship Inn SX 08749 53417	**TRIBUTARY**	18/9/2025 11:15	CSI sampling. Cartographer record.	Brian Harrisson

D. THIS MONTH IN PICTURES

1. Pollution in Tywardreath Stream (SX 07737 54104)

Photo: Simon Tagney

2. Pollution in Tywardreath Stream (SX 07737 54104)

Photo: Simon Tagney

3. Booms preventing spread of pollution on Tywardreath Stream (SX 07737 54104). These were still in situ on 22nd October 2025.

4. Approximate location of the pollution shown in photos 1 to 3 (SX 07737 54104).

5. The River Par just before it reaches the sea. What might be the impact on bathing water quality of the phosphate reading of 1000 parts per billion and Total Dissolved Solids of 662 parts per million?

6. Mayfly nymph found in ARMI riverfly survey in Tywardreath Stream

Photo: Simon Tagney

7. Olive nymphs found in ARMI riverfly survey in Tywardreath Stream

Photo: Simon Tagney

8. The Lower Par River at Treffry Viaduct. A much-visited spot but once again the phosphate level was very high and a smell was noticed. Note to foam flecks which are thought to derive from the treated effluent outfall at St Austell North STW in Luxulyan.

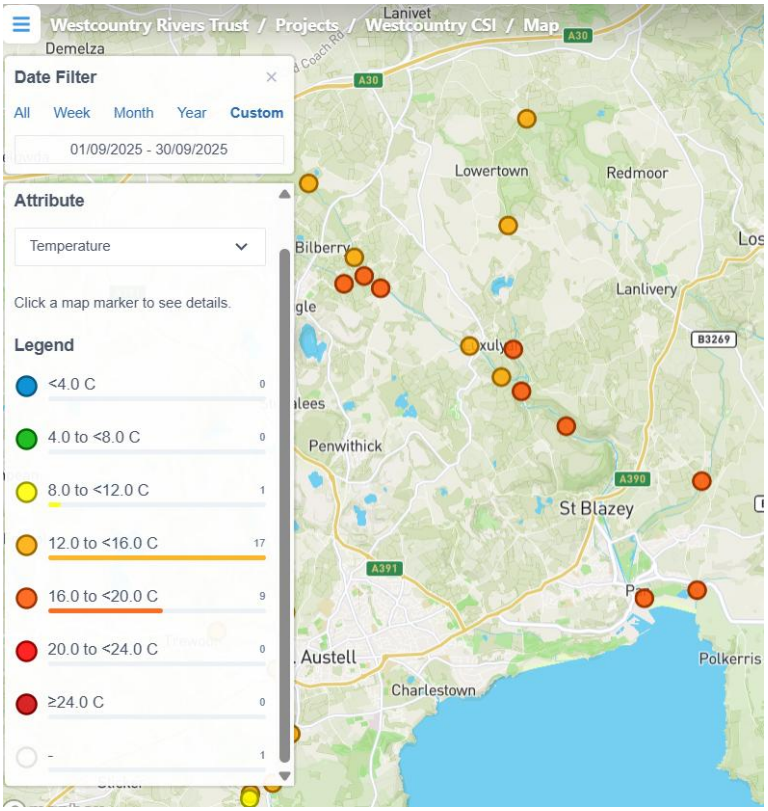
Photo: Joan Farmer

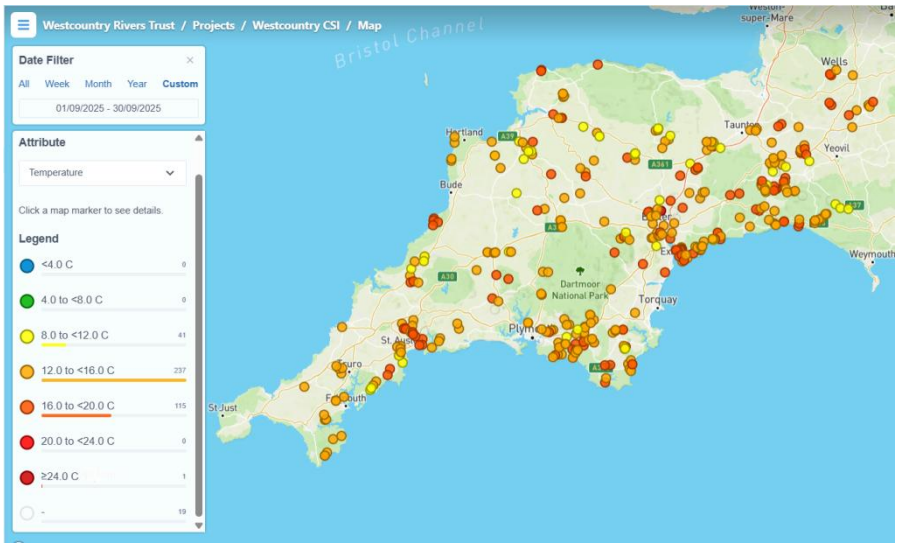
E. TEMPERATURE

1. This is the WRT's explanation of why this is monitored:

Temperature is a vital parameter within the river ecosystem. It controls many of the aquatic species life cycles. Temperature fluctuates with the seasons; however, you do get variation within that, particularly in small rivers and streams. Another important reason to measure temperature is to track the impact of our warming climate on our waterbodies.

Geographical comparison. Source: Cartographer.





Results September 2025

Results above the temperature at which fish and other organisms can function healthily will be shown in red. At present, 18 ˚Celsius is being used as the upper safe limit for fish and other creatures, although 20˚ Celsius has been suggested by WRT instead. The Yealm Estuary to Moor Project (YEM) in Devon considers that the upper safe level (USL) for temperature is 19.5 °C.

From December 2023 all readings have been taken with the new thermometer/TDS device. Previously, all Upper Par readings, except for Lady Rashleigh Mine, have been taken with the old device. There is a worrying discrepancy with the readings on the older devices.

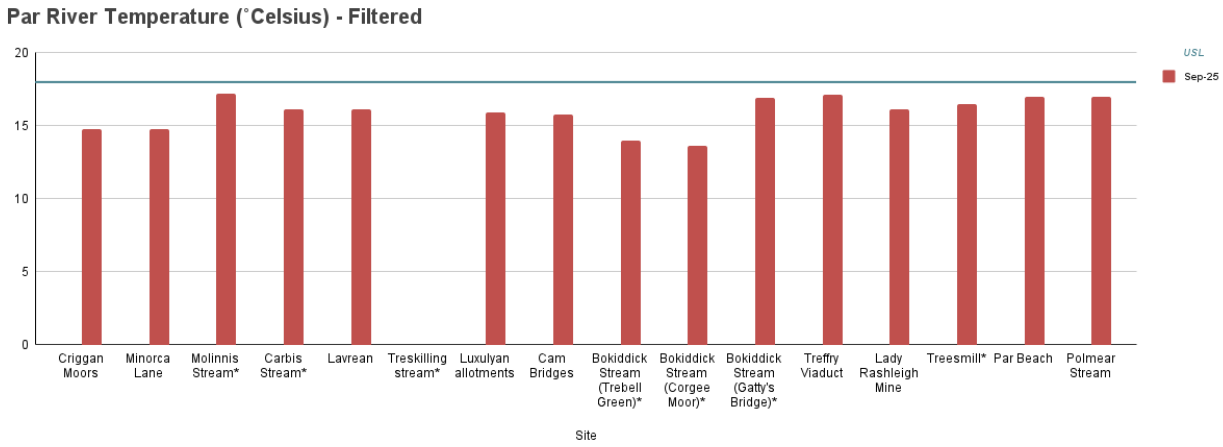
PAR RIVER/TRIBUTARY	LOCATION		Temperature ˚Celsius
Par	Criggan Moors, Par River, SX 01882 61133		**14.8**
Par	South of Minorca Lane, Par River, SX 02657 59788		**14.8**
Secondary tributary	Near Forkandles Farm, Molinnis Stream, SX 02460 59271		**17.2**
Tributary	Carbis Stream SX 02834 59401		**16.1**
Par	Lavrean, Par River SX 03134 59164		**16.1**
Tributary	Treskilling, Treskilling Stream, SX 04107 57726		**n/a**
Par	Luxulyan allotments, Par River, SX 04732 58045		**15.9**
Par	Cam Bridges, Par River, SX 05292 57454		**15.8**
Tributary	Trebell Green, Bokiddick Stream SX 0551960226		**14**
Tributary	Corgee Moor, Bokiddick Stream SX 0593462167		**13.6**
Tributary	Gatty's Bridge, Bokiddick Stream SX 05531 57953		**16.9**
Par	Treffry Viaduct, Par River, SX 05650 57179		**17.1**
Par	Lady Rashleigh Mine, Par River, SX 06451 56509		**16.1**
Tributary	Treesmill, Tywardreath Stream, SX 08873 55385		**16.5**
Par	Par Beach slipway, SX 0776 53261		**17**
Tributary	Polmear Stream, Ship Inn, SX 08749 53417		**17**

Colour coding:

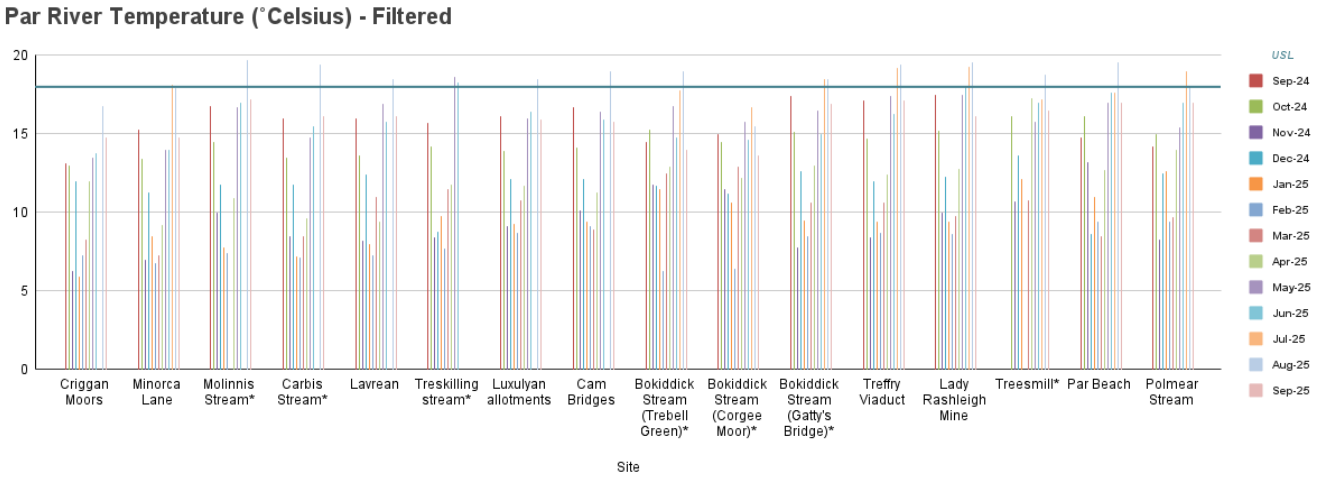
Upper Par	
Lower Par	
Bokiddick Stream	
Tributaries of Upper Par (China Clay-country streams)	
Tributaries of Lower Par	

3. Graphs

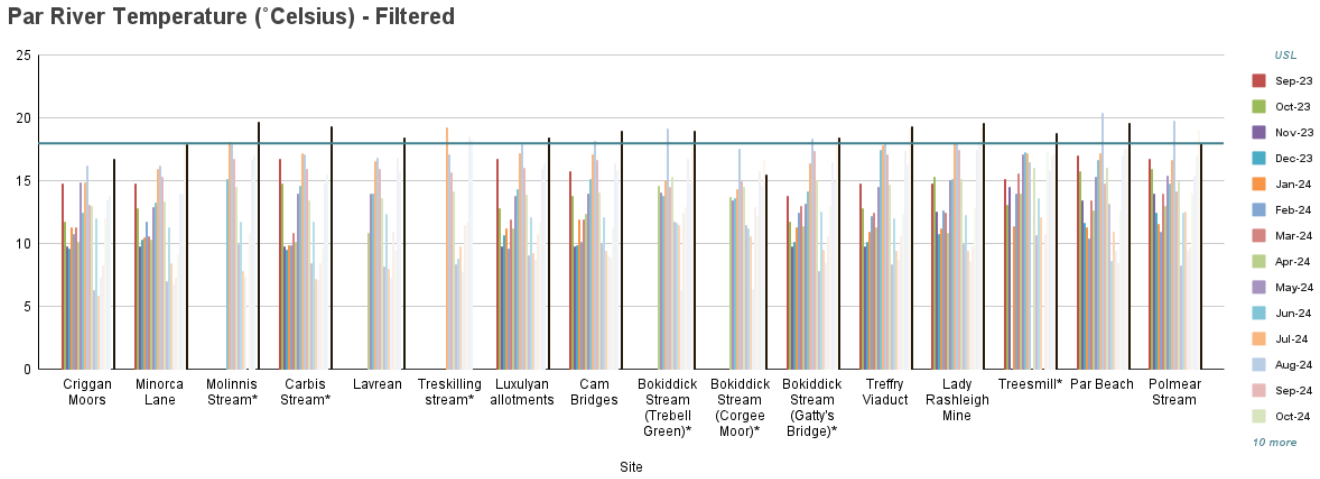
(a) This month:



(b) From 1st September 2024 until 30th September 2025:



(c) From 1st September 2023 until 30th September 2025:

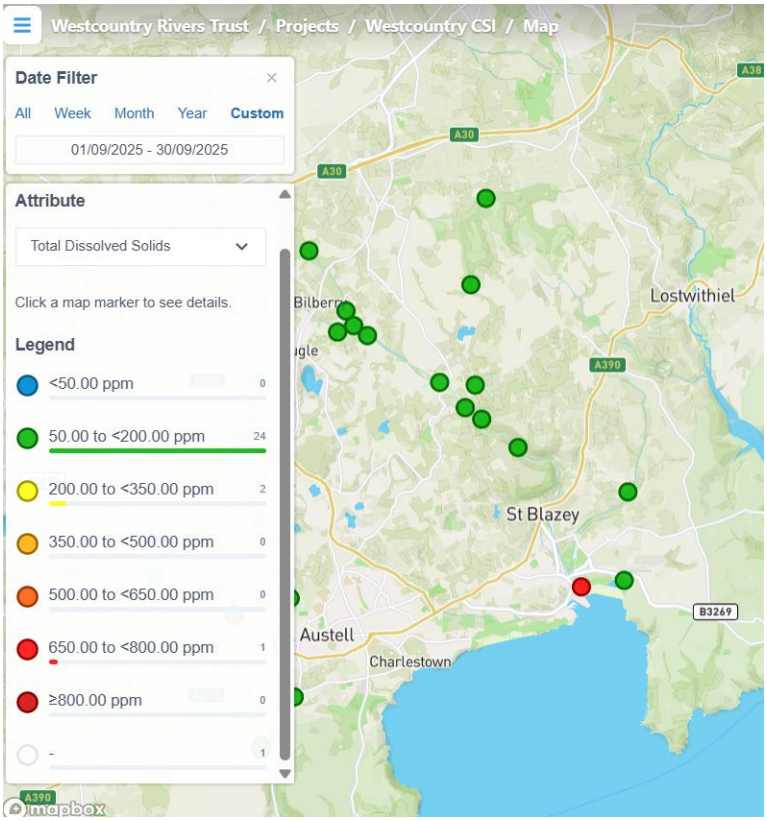


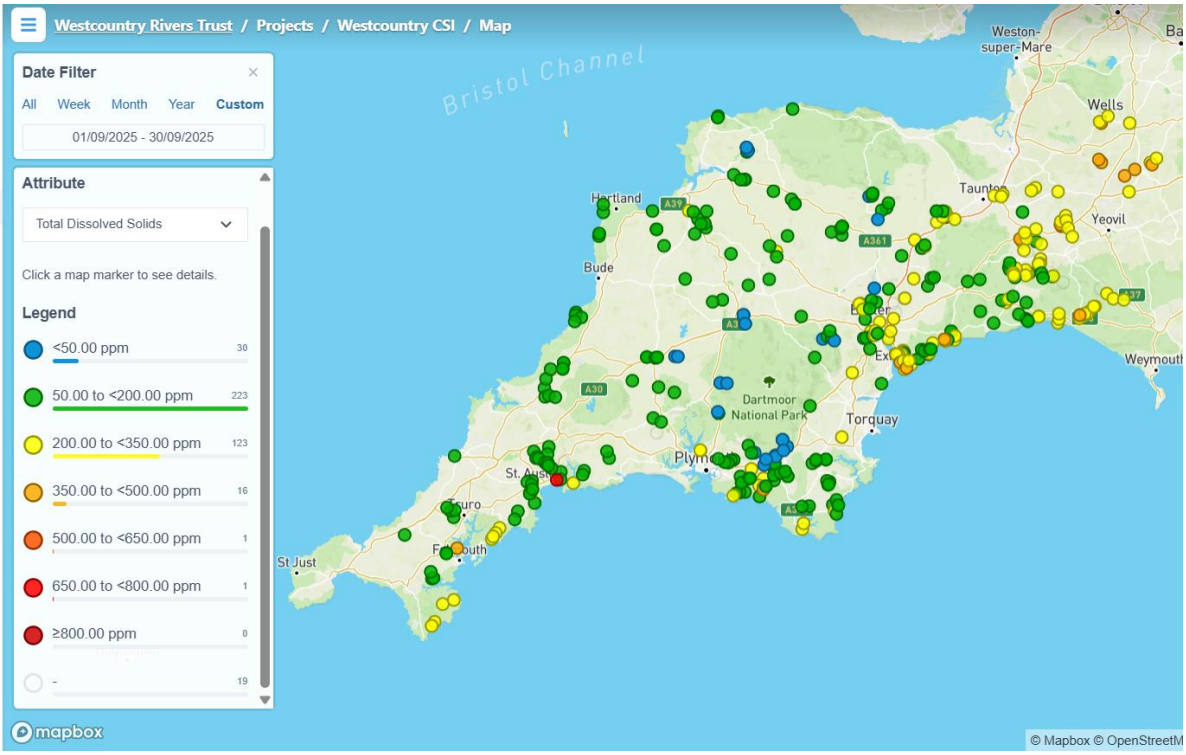
F. TOTAL DISSOLVED SOLIDS

1. We measure these in ppm (parts per million). This is the WRT's explanation:

Total Dissolved Solids (TDS) is directly related to the conductivity of the water. The more minerals, salts and metals that are dissolved in the water the more conductive it gets. Low levels of dissolved solids in waters such as those on Dartmoor near to the source of the river are a result of very low levels of input from the surrounding landscape. As the river runs down to the sea it collects material from many different inputs, some natural and some man-made such as farms, sewage plants, factories and residential areas. This typically increases the amount of solids dissolved in the water leading to a higher reading. Harmful pollution from things like sewage, slurry and factory discharge will usually elevate your TDS reading. However, some pollutants such as oil can lower conductivity; therefore it should be used as a general indicator of water quality not a specific measure of toxicity. Geology will influence the normal level of conductivity in a watercourse (e.g. Areas dominated by granite generally give a lower conductivity than those with limestone). Regular monitoring will allow the detection of changes in conductivity which can indicate pollution.

2. Geographical comparison. Source: Cartographer.





N.B. The score at Par Beach slipway was the highest in the West Country this month.

2. Results September 2025

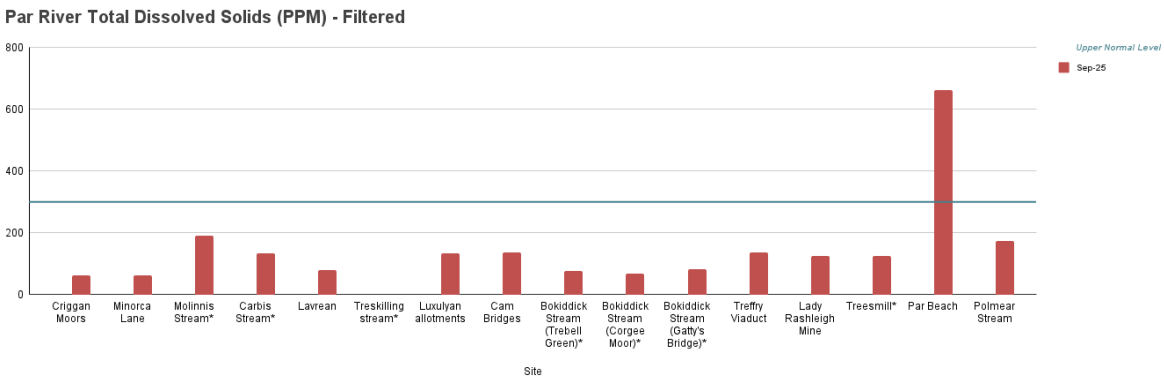
PAR RIVER/TRIBUTARY	LOCATION		Total Dissolved Solids PPM
Par	Criggan Moors, Par River, SX 01882 61133		**63**
Par	South of Minorca Lane, Par River, SX 02657 59788		**62**
Secondary tributary	Near Forkandles Farm, Molinnis Stream, SX 02460 59271		**192**
Tributary	Carbis Stream SX 02834 59401		**133**
Par	Lavrean, Par River SX 03134 59164		**80**
Tributary	Treskilling, Treskilling Stream, SX 04107 57726		**n/a**
Par	Luxulyan allotments, Par River, SX 04732 58045		**133**
Par	Cam Bridges, Par River, SX 05292 57454		**137**
Tributary	Trebell Green, Bokiddick Stream SX 0551960226		**76**
Tributary	Corgee Moor, Bokiddick Stream SX 0593462167		**68**
Tributary	Gatty's Bridge, Bokiddick Stream SX 05531 57953		**81**
Par	Treffry Viaduct, Par River, SX 05650 57179		**135**
Par	Lady Rashleigh Mine, Par River, SX 06451 56509		**124**
Tributary	Treesmill, Tywardreath Stream, SX 08873 55385		**126**
Par	Par Beach slipway, SX 0776 53261		**662**
Tributary	Polmear Stream, Ship Inn, SX 08749 53417		**173**

Colour coding:

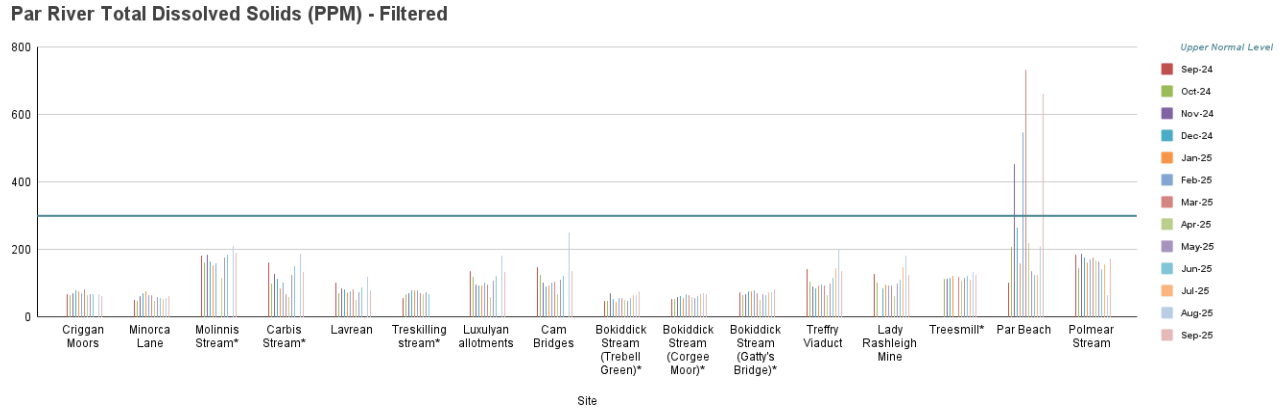
Upper Par	
Lower Par	
Bokiddick Stream	
Tributaries of Upper Par (China Clay-country streams)	
Tributaries of Lower Par	

3. Graphs

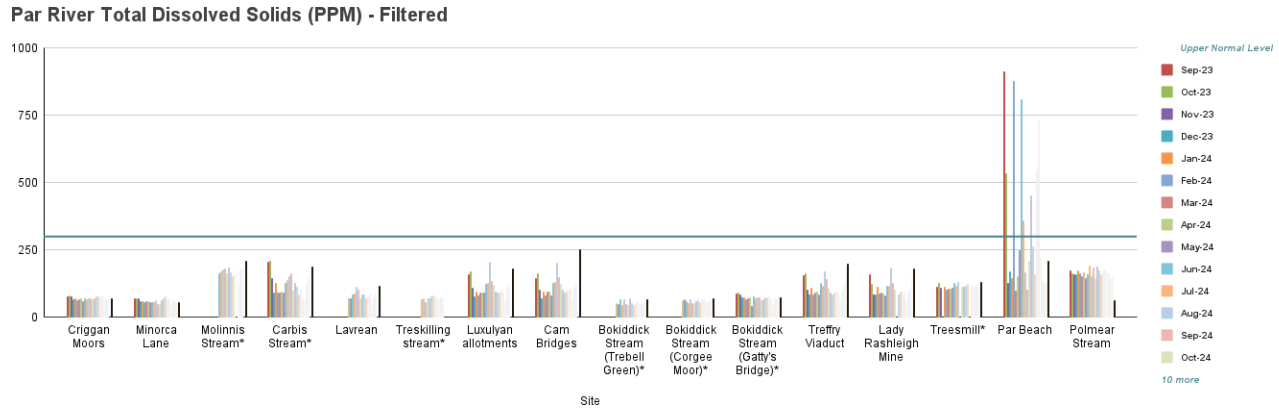
(a) This month:



(b) From 1st September 2024 until 30th September 2025:



(c) From 1st September 2023 until 30th September 2025:



G. TURBIDITY

1. This is the WRT explanation of this measure:

Turbidity tube is a measure of the optical clarity of the water. The more suspended particles in the water the lower the clarity and the higher the turbidity. You will often find your waterbody gets more turbid after heavy rainfall due to soil running off the fields and sediment being mixed into the water column. This loss of topsoil is both a problem for farmer and river. It can often contain chemicals from the fertiliser and pesticides used on the land. An increase in sediment level on the substrate of the river can cause smothering of habitat by removing light and oxygen. Aquatic wildlife such as the less mobile invertebrates and fish eggs struggle to survive in low oxygen conditions and without light, plants are unable to grow. It is a good idea to sample your river after different weather conditions to understand how it responds to rainfall or drought.

The Yealm Estuary to Moor Project (YEM) in Devon considers that the upper safe level (USL) for turbidity is 75 NTU = 25 mg/l.

2. Results September 2025:

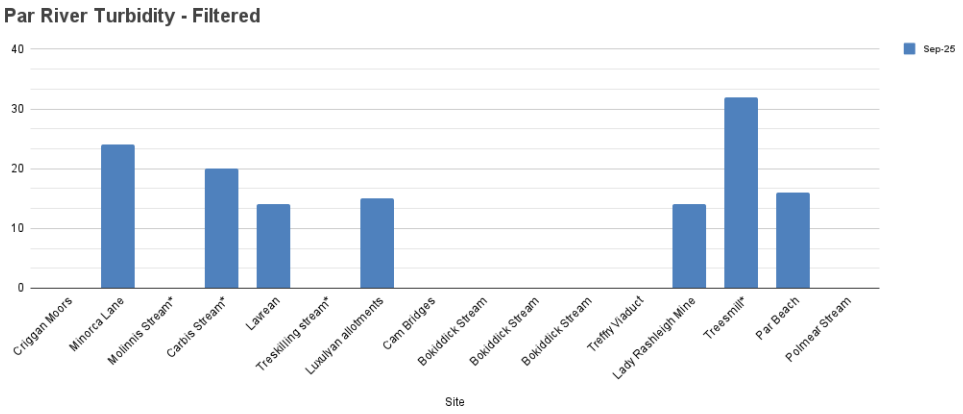
PAR RIVER/TRIBUTARY	LOCATION		Turbidity (NTU)
Par	Criggan Moors, Par River, SX 01882 61133		**<12**
Par	South of Minorca Lane, Par River, SX 02657 59788		**24**
Secondary tributary	Near Forkandles Farm, Molinnis Stream, SX 02460 59271		**<12**
Tributary	Carbis Stream SX 02834 59401		**20**
Par	Lavrean, Par River SX 03134 59164		**14**
Tributary	Treskilling, Treskilling Stream, SX 04107 57726		**<12**
Par	Luxulyan allotments, Par River, SX 04732 58045		**15**
Par	Cam Bridges, Par River, SX 05292 57454		**<12**
Tributary	Trebell Green, Bokiddick Stream SX 0551960226		**<12**
Tributary	Corgee Moor, Bokiddick Stream SX 0593462167		**<12**
Tributary	Gatty's Bridge, Bokiddick Stream SX 05531 57953		**<12**
Par	Treffry Viaduct, Par River, SX 05650 57179		**<12**
Par	Lady Rashleigh Mine, Par River, SX 06451 56509		**14**
Tributary	Treesmill, Tywardreath Stream, SX 08873 55385		**32**
Par	Par Beach slipway, SX 0776 53261		**16**
Tributary	Polmear Stream, Ship Inn, SX 08749 53417		**<12**

Colour coding:

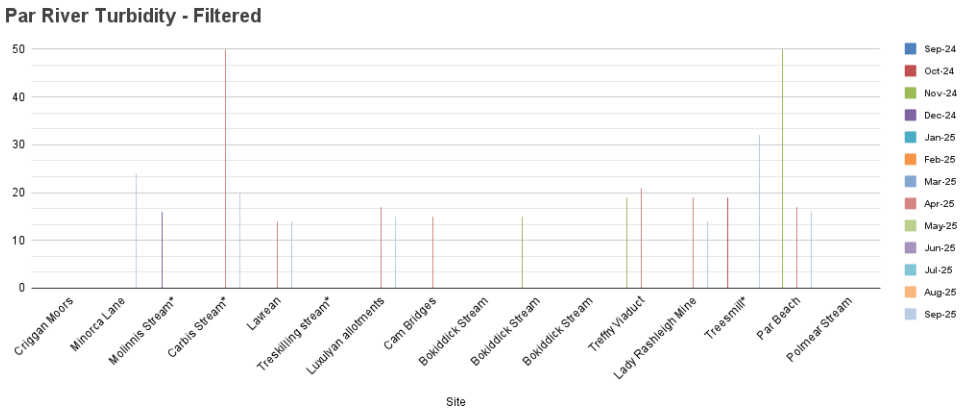
Upper Par	
Lower Par	
Bokiddick Stream	
Tributaries of Upper Par (China Clay-country streams)	
Tributaries of Lower Par	

3. Graphs

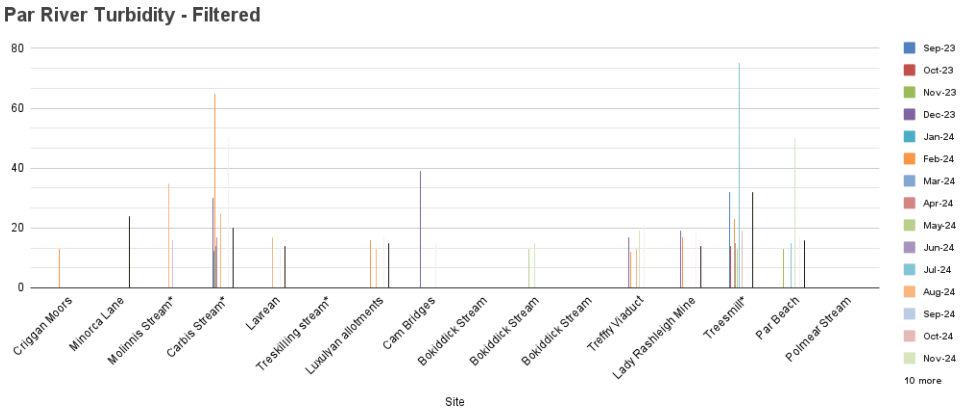
(a) This month:



(b) From 1st September 2024 until 30th September 2025:



(c) From 1st September 2023 until 30th September 2025:



H. PHOSPHATES

1. This is the WRT's explanation of this measure.

Phosphate occurs naturally within the river ecosystem, but in very low levels under 0.05 mg/l. Therefore, higher levels may indicate anthropogenic input. Phosphate is found in animal and human waste, cleaning chemicals, industrial runoff and fertiliser so this can be a good indicator of pollution. Having raised levels of phosphate can lead to increases in plant growth within the watercourse. This leads to a depletion of oxygen due to the plant's aerobic respiration during the night. Without oxygen aquatic species cannot survive and the river ecosystem collapses. (It is important to note that phosphate is taken up by plants. You may get a low reading but high plant growth, indicating eutrophication.) Ranges on phosphate diagnostic colour chart:

0 – 100 OK
200 – 300 HIGH
500 – 2500 – TOO HIGH

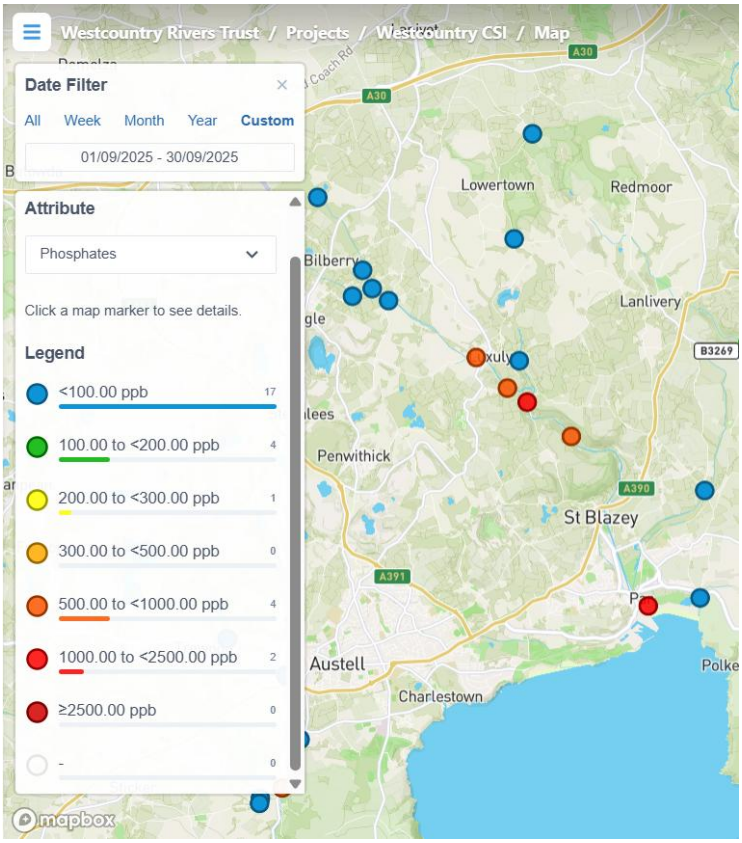
2. Results September 2025

Results in red show phosphate levels that are classified as 'High' (above the upper safe level). WRT advice is that this is 100 Parts per Billion (0.1 mg/l).

PAR RIVER/TRIBUTARY	LOCATION		Phosphates PPB
Par	Criggan Moors, Par River, SX 01882 61133		**0**
Par	South of Minorca Lane, Par River, SX 02657 59788		**0**
Secondary tributary	Near Forkandles Farm, Molinnis Stream, SX 02460 59271		**0**
Tributary	Carbis Stream SX 02834 59401		**0**
Par	Lavrean, Par River SX 03134 59164		**0**
Tributary	Treskilling, Treskilling Stream, SX 04107 57726		**n/a**
Par	Luxulyan allotments, Par River, SX 04732 58045		**500**
Par	Cam Bridges, Par River, SX 05292 57454		**500**
Tributary	Trebell Green, Bokiddick Stream SX 0551960226		**0**
Tributary	Corgee Moor, Bokiddick Stream SX 0593462167		**0**
Tributary	Gatty's Bridge, Bokiddick Stream SX 05531 57953		**0**
Par	Treffry Viaduct, Par River, SX 05650 57179		**1000**
Par	Lady Rashleigh Mine, Par River, SX 06451 56509		**500**
Tributary	Treesmill, Tywardreath Stream, SX 08873 55385		**0**
Par	Par Beach slipway, SX 0776 53261		**1000**
Tributary	Polmear Stream, Ship Inn, SX 08749 53417		**0**

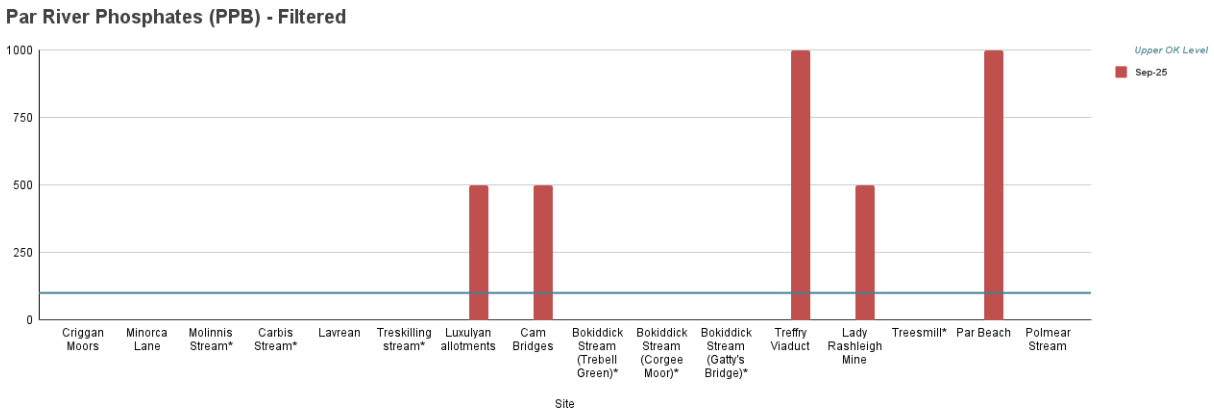
Colour coding:

Upper Par	
Lower Par	
Bokiddick Stream	
Tributaries of Upper Par (China Clay-country streams)	
Tributaries of Lower Par	

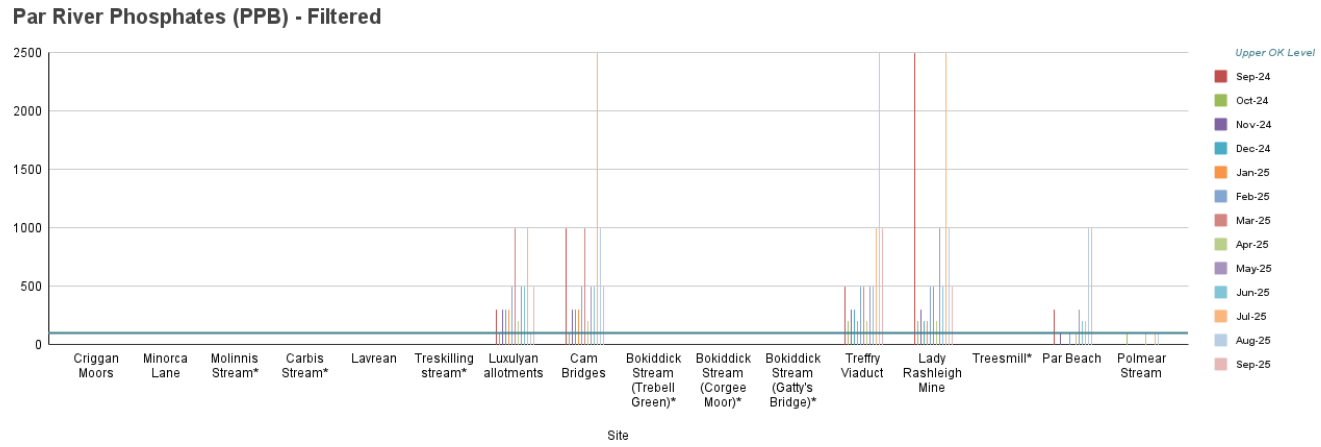


4. Graphs

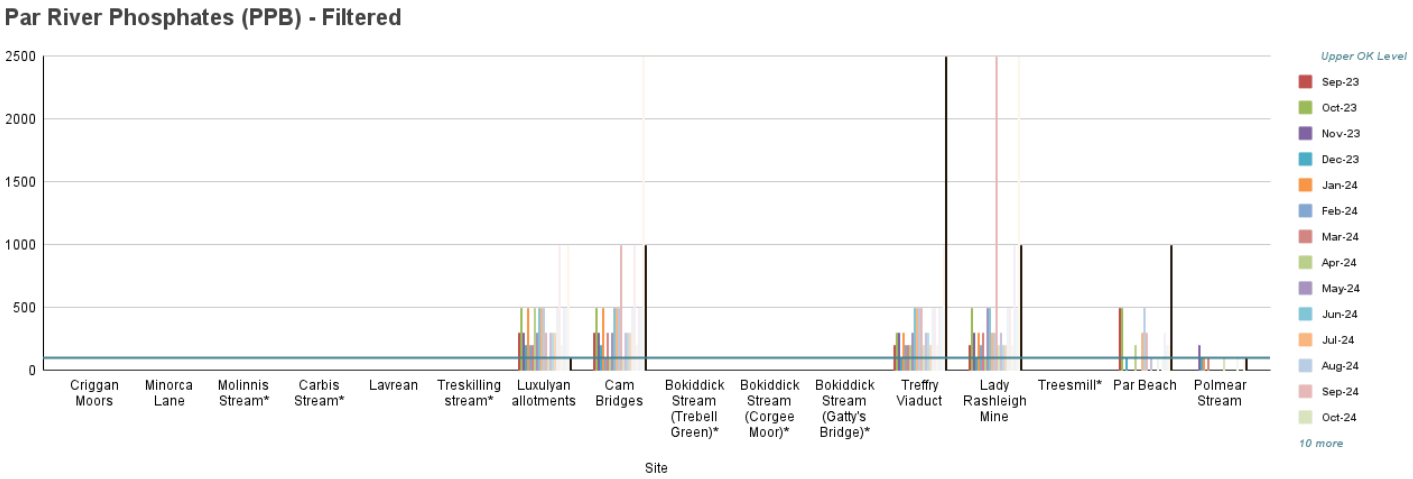
(a) This month:



(b) From 1st September 2024 until 30th September 2025:



(c) From 1st September 2023 until 30th September 2025:

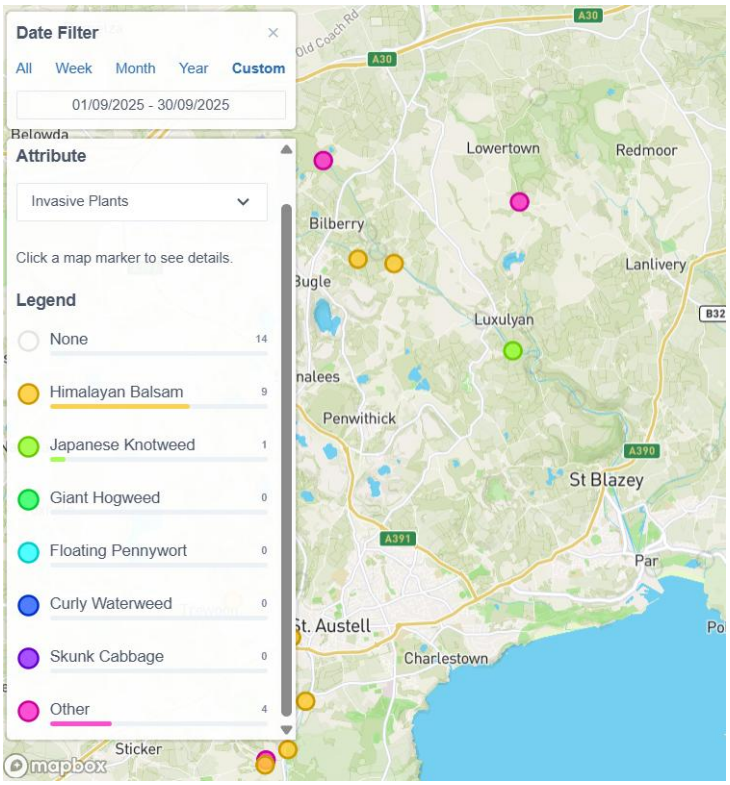


I. NITRATE

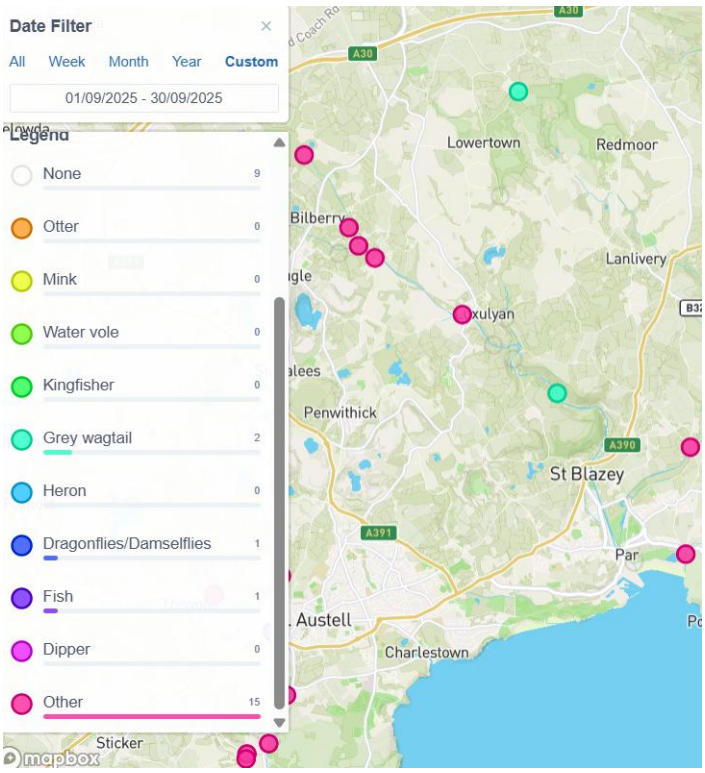
Nitrate testing began this month at all sites except Treesmill. Readings were all 0 PPM. Graphs will be generated once more results are available.

J. WILDLIFE & INVASIVE PLANTS

1. Invasive Plants sightings at the monitoring points included:



2. Wildlife spotted:



Wildlife & Invasive Plants sightings at the monitoring points included:

LOCATION	WILDLIFE NOTED		INVASIVE PLANTS NOTED
Criggan Moors, SX 01882 61133			
South of Minorca Lane, Par River, SX 02657 59788	**HEARD: Goldcrest.**		
Forkandles Farm, Molinnis Stream, SX 02460 59271	**HEARD: Robin, Long-tailed Tit, Chaffinch, Great Tit, Spotted Flycatcher.**		Japanese Knotweed Himalayan Balsam
Carbis Stream SX 02834 59401	**HEARD: Robin, Wren.**		None
Lavrean, Par River SX 03134 59164	**HEARD: Jay, Robin, Blue Tit, Chiffchaff, Wood Pigeon.**		Himalayan Balsam
Treskilling, Treskilling Stream, SX 04107 57726	**n/a**		n/a
Luxulyan allotments, Par River, SX 04732 58045	**HEARD: Rook, Magpie, Goldcrest, Great Tit, Long-tailed Tit, Robin.**		
Cam Bridges, Par River, SX 05292 57454			Hemlock Water Dropwort, Japanese Knotweed
Trebell Green, Bokiddick Stream SX 0551960226	**HEARD: Goldcrest, Bullfinch, Robin, Goldfinch, Treecreeper, Swallow.** **SEEN: Lake created by beaver dam and gnawed trees. Pond Skaters.**		
Corgee Moor, Bokiddick Stream SX 0593462167			Hemlock Water Dropwort
Gatty's Bridge, Bokiddick Stream SX 05531 57953			
Treffry Viaduct, Par River, SX 05650 57179			
Lady Rashleigh Mine, Par River, SX 06451 56509	**Riverfly nymphs (Cased Caddis, Flat-bodied Upwings, Olives, Stoneflies, Gammarus)**		
Treesmill, Tywardreath Stream, SX 08873 55385	**HEARD: Robin, Blackcap, Goldcrest, Blue Tit.**		
Par Beach slipway, SX 0776 53261			
Polmear Stream, Ship Inn, SX 08749 53417	**SEEN: Pond Skater.**		

The Merlin Bird ID app has been used to identify birdsong (https://merlin.allaboutbirds.org/) unless stated otherwise.

Colour coding:

Upper Par	
Lower Par	
Bokiddick Stream	
Tributaries of Upper Par (China Clay-country streams)	
Tributaries of Lower Par	

K. ARMI RIVERFLY SURVEYS ON LOWER PAR RIVER AND TYWARDREATH STREAM

Four of the group (Joan Farmer, Veronica Jones, Roger Smith, and Simon Tagney) have undertaken the training to carry out Riverfly Surveys under the Anglers' Riverfly Monitoring Initiative (https://www.riverflies.org/rp-riverfly-monitoring-initiative). In short, sampling for 8 riverfly groups is carried out using standardised methods with scores calculated for their abundance. Information is passed to ARMI and the ORKS database. If the score does not reach a trigger level (in our case trigger level was raised from 5 to 6 in May 2022), the Environment Agency must be informed immediately since it is highly likely to indicate that the water is polluted. Our group initially received approval to sample at two sites: Luxulyan allotments (SX 04743 58054) and Lady Rashleigh Mine (SX 06453 56500). We have decided, for the time being, to concentrate on the latter, but from May 2024 moved the kick-sampling site a few metres downstream of the bridge where conditions are safer and easier. This amended site is known as Lady Rashleigh 2 in the ARMI/ORKS record. Recently, Simon and Brian have started to look at a location on the Tywardreath Stream, at SX SX0887055340.

It is impossible to count every invertebrate so this counting method is used:

Abundance	Score	Estimated Number
1-9	1	Quick count
10-99	2	Nearest 10
100-999	3	Nearest 100
>1000	4	Nearest 1000

Results of survey on the Par River carried out by Veronica Jones and Roger Smith on 17th September 2025.

	SPECIES	NUMBER	CATEGORY
Trichoptera			
1	Cased Caddisfly	3	1
2	Caseless Caddisfly	0	0
Ephemeroptera 3 tails			
3	Mayfly (Ephemeridae)	0	0
4	Blue-winged olive (Ephemerellidae)	0	0
5	Flat-bodied up-wings (Heptageniidae)	4	1
6	Olives (Baetidae)	20	2
Plecoptera 2 tails			
7	Stoneflies	4	1
Gammaridae			
8	Freshwater Shrimp	10	2
			7

CATEGORY TOTAL	**6**
TRIGGER LEVEL	**7**

Results of survey on the Tywardreath Stream carried out by Simon Tagney and Brian Harrisson on 23rd September 2025.

	SPECIES	NUMBER	CATEGORY
Trichoptera			
1	**Cased Caddisfly**	**0**	**0**
2	**Caseless Caddisfly**	**0**	**0**
Ephemeroptera 3 tails			
3	**Mayfly (Ephemeridae)**	**1**	**1**
4	**Blue-winged olive (Ephemerellidae)**	**0**	**0**
5	**Flat-bodied up-wings (Heptageniidae)**	**0**	**0**
6	**Olives (Baetidae)**	**0**	**0**
Plecoptera 2 tails			
7	**Stoneflies**	**0**	**0**
Gammaridae			
8	**Freshwater Shrimp**	**90**	**2**
			3

CATEGORY TOTAL	**3**
TRIGGER LEVEL	**6**

Results of survey on the Tywardreath Stream carried out by Simon Tagney and Brian Harrisson on 25th September 2025.

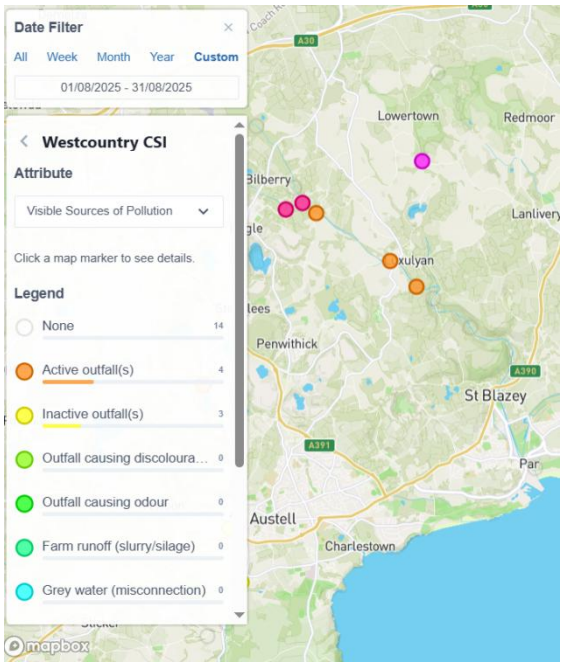
	SPECIES	NUMBER	CATEGORY
Trichoptera			
1	**Cased Caddisfly**	**0**	**0**
2	**Caseless Caddisfly**	**0**	**0**
Ephemeroptera 3 tails			
3	**Mayfly (Ephemeridae)**	**0**	**0**
4	**Blue-winged olive (Ephemerellidae)**	**0**	**0**
5	**Flat-bodied up-wings (Heptageniidae)**	**0**	**0**
6	**Olives (Baetidae)**	**3**	**1**
Plecoptera 2 tails			
7	**Stoneflies**	**0**	**0**
Gammaridae			
8	**Freshwater Shrimp**	**1300**	**23**
			4

CATEGORY TOTAL	**4**
TRIGGER LEVEL	**6**

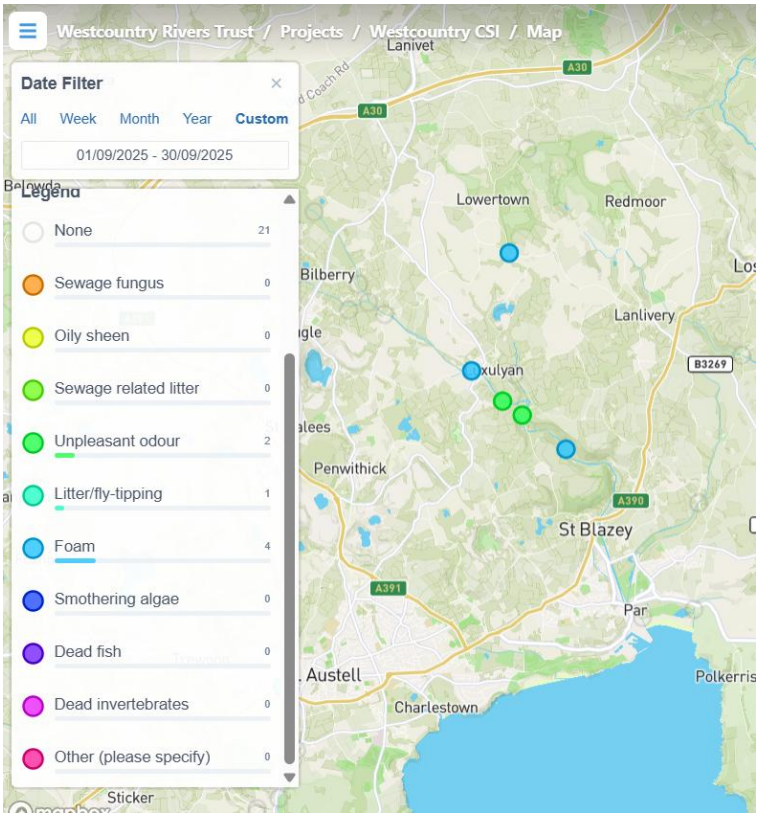
N.B. As stated above, the failure to meet the trigger level on the Tywardreath Stream twice prompted a telephone report to the Environment Agency who said that their ecologist would investigate.

L. POLLUTION SOURCES AND EVIDENCE

1. Visible sources of pollution (source: Cartographer)



2. Evidence of recent pollution:



LOCATION		EVIDENCE OF RECENT POLLUTION
Criggan Moors, SX 01882 61133		None
South of Minorca Lane, Par River, SX 02657 59788		None
Forkandles Farm, Molinnis Stream, SX 02460 59271		None but sewage smell downstream (CSO?)
Carbis Stream SX 02834 59401		None
Lavrean, Par River SX 03134 59164		Foam, smell upstream (CSO?)
Treskilling, Treskilling Stream, SX 04107 57726		n/a
Luxulyan allotments, Par River, SX 04732 58045		Foam, phosphate
Cam Bridges, Par River, SX 05292 57454		Foam, smell, phosphate
Trebell Green, Bokiddick Stream SX 0551960226		None
Corgee Moor, Bokiddick Stream SX 0593462167		None
Gatty's Bridge, Bokiddick Stream SX 05531 57953		None
Treffry Viaduct, Par River, SX 05650 57179		Foam, smell, phosphate
Lady Rashleigh Mine, Par River, SX 06451 56509		Foam, smell, phosphate
Treesmill, Tywardreath Stream, SX 08873 55385		None
Par Beach slipway, SX 0776 53261		Phosphate
Polmear Stream, Ship Inn, SX 08749 53417		None

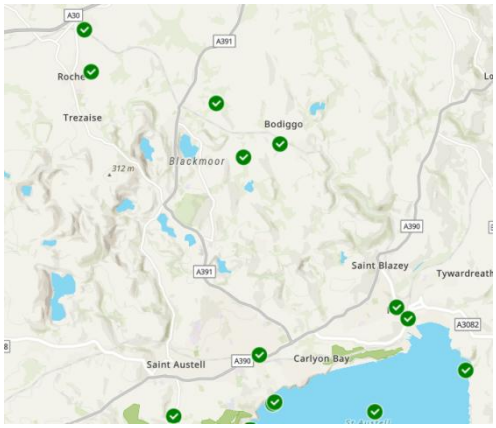
N.B. Although not noticeable at our monitoring points, there is a persistent smell of sewage in the vicinity of the Molinnis CSO even when there have been no reported discharges.

Colour coding:

Upper Par	
Lower Par	
Bokiddick Stream	
Tributaries of Upper Par (China Clay-country streams)	
Tributaries of Lower Par	

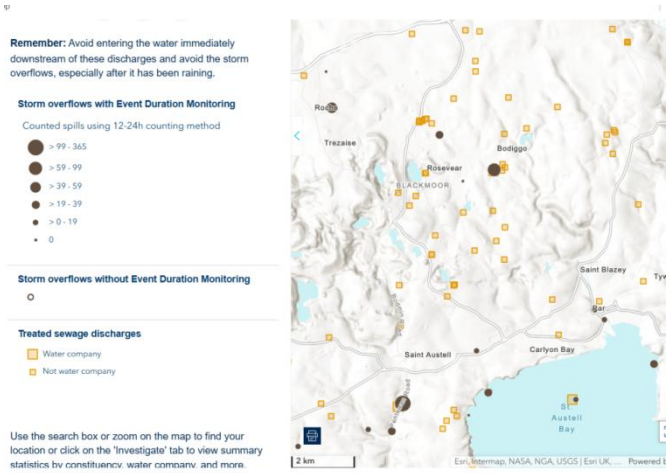
3. South West Water Storm Overflows

The Rivers Trust's sewage map (https://www.sewagemap.co.uk/) gives live information about discharges of sewage into rivers and the sea by water companies. (This is also provided by South West Water's WaterFit Live site: https://www.southwestwater.co.uk/storm-overflow-map).



This screenshot is for illustrative purposes only. Not all of the locations are in the Par River catchment.

It should be noted that there are also numerous private sewerage arrangements in the area but information about possible contamination of watercourses from these has not been found. The following screenshot shows the different facilities in the area (source: https://theriverstrust.org/key-issues/sewage-in-rivers)



(b) South West Water Storm Overflows in the Par River Catchment (updated June 2025):

The main overflows are (from source to sea along the catchment):

- Roche storm overflow (SWW1001)
- Molinnis storm overflow, Bugle (SWW0765)
- Rescorla storm overflow, Luxulyan (SWW0987)
- Luxulyan sewage treatment works settled storm overflow, St Austell (SWW0694)
- Tredenham Close storm overflow, Par (SWW1230)
- Par No2 pumping station overflow, Par (SWW0519)

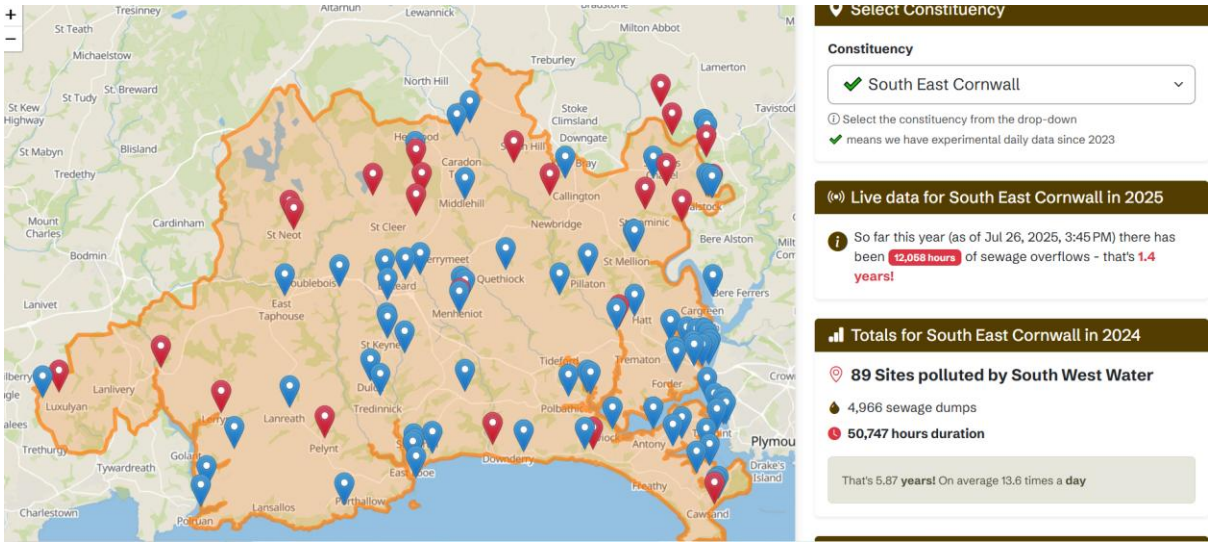
(c) SWW Storm Overflow spills July2025 (https://theriverstrust.org/sewage-map**)**. This **may not be accurate** because the map wasn't monitored regularly.

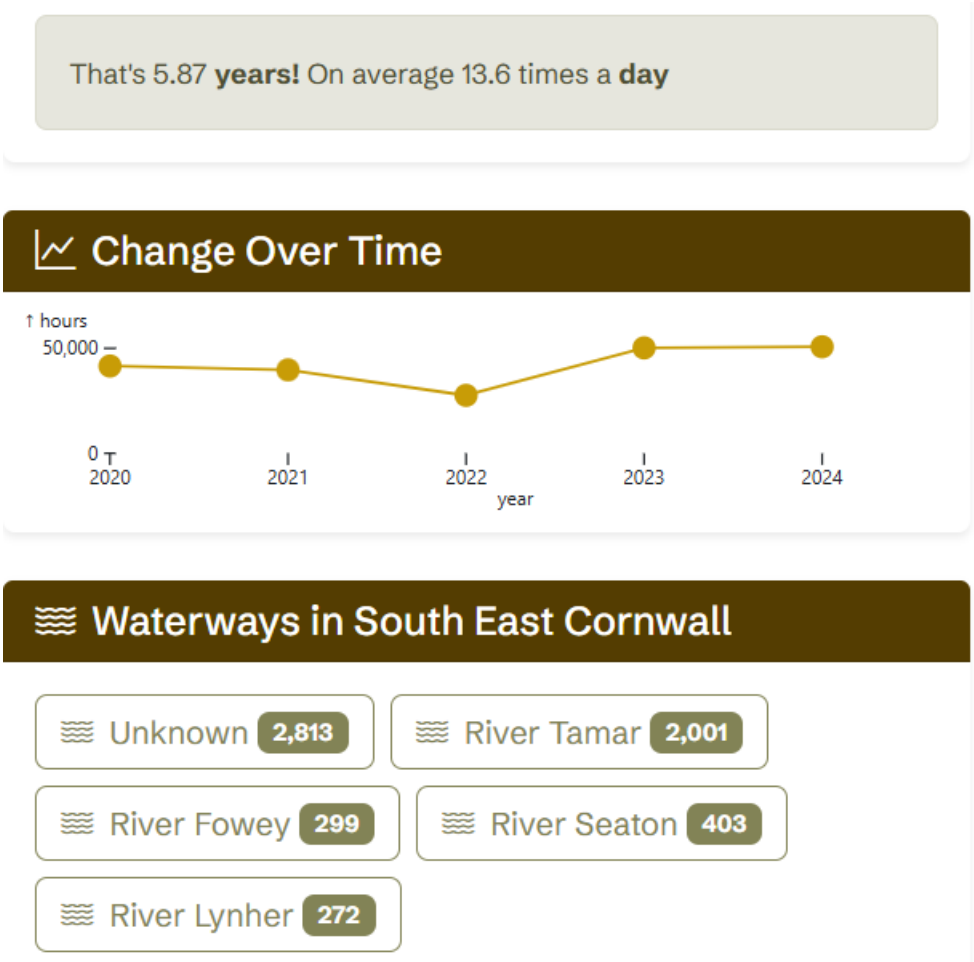
LOCATION/WATERCOURSE	SPILLAGES	TOTAL SPILLAGE DURATION JUNE 2025
Roche storm overflow (SWW1001) Into Par River	9th September 2025 from 11:09 to 11:11 10th September 2025 from 13:18 until 13:25 15th September 2025 from 14:38 until 14:47	2 minutes 7 minutes 9 minutes

Molinnis storm overflow, Bugle (SWW0765) Into tributary of Par River	8th - 9th September 2025 from 12:48 until 13:06	18 minutes
Rescorla storm overflow, Luxulyan (SWW0987) Into 'Tributary of Par Sands (S)' [sic]	28 August 2025 from 11:36 pm until 11:53 pm	17 minutes
Luxulyan sewage treatment works settled storm overflow, St Austell (SWW0694) Into Par River	17th September from 16:39 until 21:02	4 hours 23 minutes
Tredenham Close storm overflow, Par (SWW1230) Into St Blazey stream		
Par No2 pumping station overflow, Par (SWW0519) Into Par River		

(e) South West Water sewage spills by Parliamentary constituency

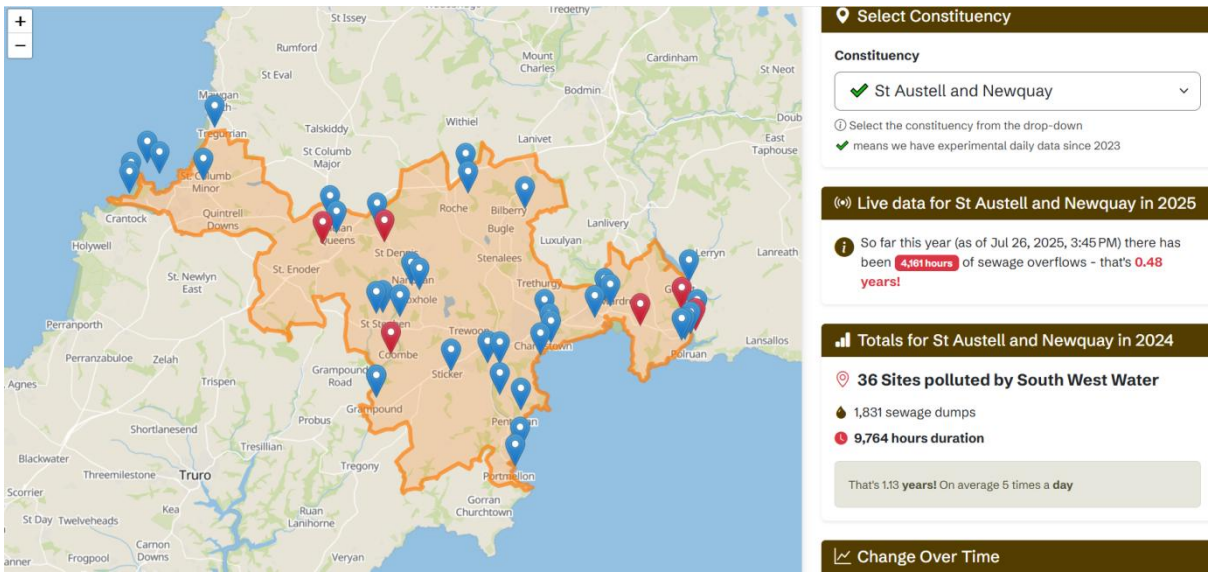
(i) South-East Cornwall (https://top-of-the-poops.org/constituency/south-east-cornwall **)**

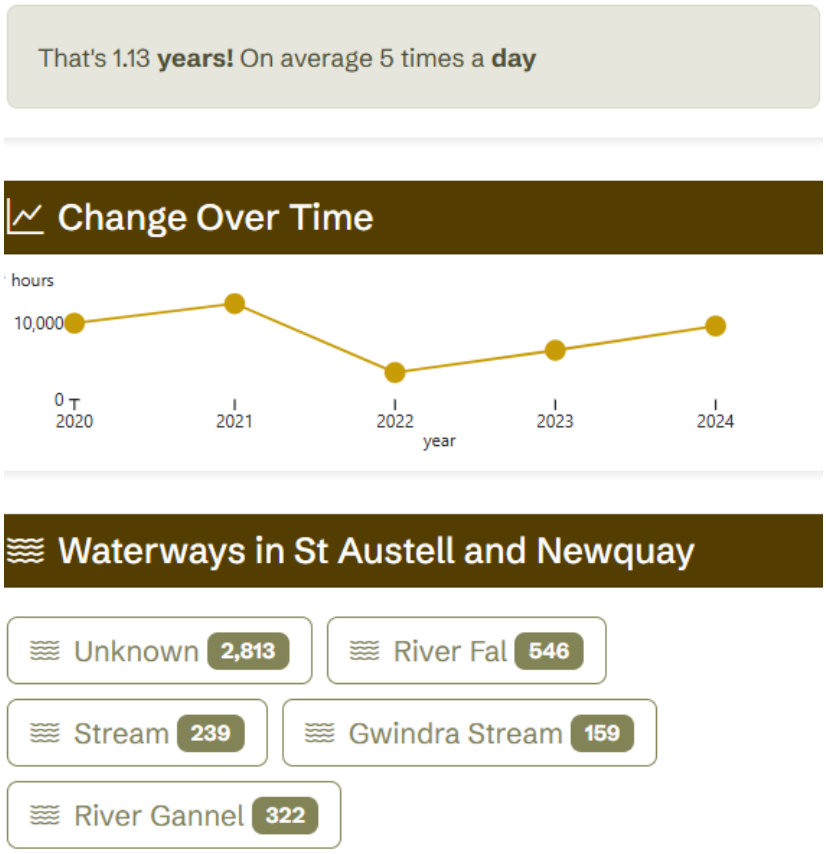




The Par/Luxulyan River will be included in 'Unknown'.

(ii) St Austell and Newquay





(iii) South-East Cornwall and St Austell and Newquay Parliamentary constituency sewage spills national rankings 2024.

	National rank	Sewage dumps	Change (dumps)	Duration (hours)	Change (hours duration)
SE Cornwall	**11/650**	**4966**	**↓ -738**	**50,747**	**↑ 530**
St Austell & Newquay	**129/650**	**1831**	**↑ 218**	**9,764**	**↑ 3223**

M. HOW TO REPORT RIVER POLLUTION

HOW TO REPORT RIVER POLLUTION

River pollution can now be reported **online** to the Environment Agency at: https://www.gov.uk/report-water-pollution .

Use this service to report water pollution in:

- rivers or the sea
- lakes or reservoirs
- canals
- smaller streams or watercourses (for example, a brook or culvert)

Water pollution can include:

- sewage
- waste, spills or leaks from farms
- waste, spills or leaks from factories or other industry
- spills or leaks from objects

If you're unable to use the online service, you can **call** the Environment Agency:

Environment Agency incident hotline

Telephone: **0800 80 70 60**

24-hour service

N. OUR GROUP AND SUPPORTERS

Monitoring is part of the Citizen Science programme run by the West Country Rivers Trust (WCRT) and is carried out monthly by volunteers, including Joan Farmer; Veronica Jones; Roger Smith; Simon Tagney; Maggie Tagney; and Brian Harrisson. They have received training from Lydia Ashworth, Junior Evidence and Engagement Officer of the West Country Rivers Trust (https://wrt.org.uk/project/become-a-citizen-scientist/). Results are logged on the Cartographer website. The support and advice given by Ross Tonkin, Lloyd Paynter, David Edwards, Claire and Gary Phillips, Jenny Heskett, Nick Taylor, Jeremy Roberts, Mat Bateman, Colin Pringle, Matt Healey, Simon Browning, Lydia Deacon, Jack Middleton, Anna Seal, Anna Crane, Zoe Connelly, Jade Neville, Lauren Jasper, Callum Lewis, Gwen Maggs, Oscar Miller and Sasha Pinto is greatly appreciated. The work carried out by the late Dave Burrell both in the field and in checking reports will not be forgotten. The interest and encouragement offered by Environment Agency officers, especially Lisa Best, Lisa Goodall, Layla Ousley, Jenny Davies, Leah Steward, Nicola Rogers, Peter Scobie, and Sally Turberville have been invaluable.

Report compiled by Roger Smith, 22nd October 2025