

# MONITORING OF THE PAR RIVER AND ITS TRIBUTARIES

The monitoring group operates under the citizen science scheme run by the Westcountry Rivers Trust. The Friends of Luxulyan Valley, The Friends of Par Beach, and the G7 Legacy Project for Nature Recovery have helped. Comments and opinions in this report are those of the authors and not necessarily shared by these organisations.

## SEPTEMBER 2023



Record TDS score at Par Beach slipway near where the river meets the sea. Photo: Brian Harrison

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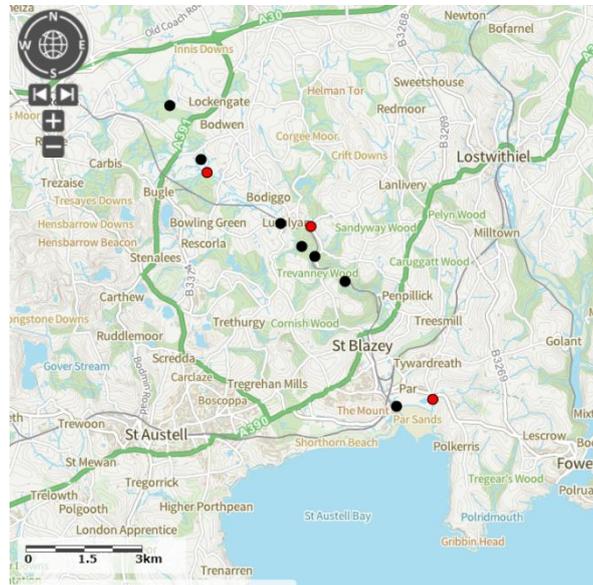
**A. OUR SEPTEMBER 2023 FINDINGS AT A GLANCE (SEE SECTIONS C TO J FOR FULL PICTURE)**

We sampled at 11 locations. The **red** highlighting shows points of concern.

CRITERIA	UPPER PAR (UPSTREAM OF CONFLUENCE WITH BOKIDDICK STREAM NEAR BLACK HILL CAR PARK) 4 TESTING LOCATIONS	LOWER PAR (FROM CONFLUENCE WITH BOKIDDICK STREAM TO SEA) 3 TESTING LOCATIONS	TRIBUTARIES OF UPPER PAR (CARBIS STREAM, BOKIDDICK STREAM) 2 TESTING LOCATIONS	TRIBUTARY OF LOWER PAR (POLMEAR STREAM) 2 TESTING LOCATIONS
TEMPERATURE (SHOULD NOT EXCEED 18° CELSIUS)	Average 15.46° Celsius	Average 15.53° Celsius	Average 15.3° Celsius	Average 16° Celsius
TOTAL DISSOLVED SOLIDS (SHOULD NOT EXCEED 300 PPM)	113.25 PPM	<b>409.66 PPM</b> (914 at Par Beach)	146 PPM	144 PPM
TURBIDITY (SHOULD BE <12 ON SECCHI TUBE. FOR AVERAGING ANY READING <12 IS COUNTED AS 11)	0	0	0	16
PHOSPHATES (SHOULD NOT EXCEED 100 PPB)	<b>150 PPB</b>	<b>300 PPB</b>	0 PPB	0 PPB
RIVERFLY TRIGGER LEVEL (SHOULD BE ≥ 6)	N/A	8 (1 location)	N/A	N/A
WILDLIFE EVIDENCE	Pond-skaters, otter spraint.	6 types of riverfly larvae (out of 8 sought), otter spraint, butterfly, mallard duck.	None	None
VISIBLE EVIDENCE OF POLLUTION	Foam	Foam, discoloured water in riverfly sampling water, odour (Par Beach)	DEBRIS	NONE

## B. SEPTEMBER 2023 MONITORING POINTS

This month monitoring occurred at 11 locations. 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	DATE	TYPE OF CHECK	MONITORED BY
Criggan Moors, Par River, SX 01882 61133	18/9/2023	CSI sample & Cartographer record.	Roger Smith
South of Minorca Lane, Par River, SX02668 59747	18/9/2023	CSI sampling. Cartographer record.	Roger Smith
Carbis Stream SX 02834 59401	18/9/2023	CSI sampling. Cartographer record.	Roger Smith
Luxulyan allotments, Par River, SX 04732 58045	18/9/2023	CSI sampling. Cartographer record.	Roger Smith
Cam Bridges, Par River, SX 05292 57454	18/9/2023	CSI sampling. Cartographer record.	Roger Smith
Gatty's Bridge, Bokiddick Stream SX 05531 57953	18/9/2023	CSI sampling. Cartographer record.	Joan Farmer
Treffry Viaduct, Par River, SX 05650 57179	18/9/2023	CSI sampling. Cartographer record.	Joan Farmer
Lady Rashleigh Mine, Par River, SX 06451 56509	18/9/2023	CSI sampling. Cartographer record. Riverfly.	Joan Farmer, Roger Smith
Treesmill, Tywardreath Stream, SX 08873 55385	22/9/2023	CSI sampling. Cartographer record.	Maggie Tagney
Par Beach slipway, SX 0776 53261	2/10/2023	CSI sampling. Cartographer record.	Brian Harrisson
Polmear Stream, Ship Inn SX 08749 53417	2/10/2023	CSI sampling. Cartographer record.	Simon Tagney

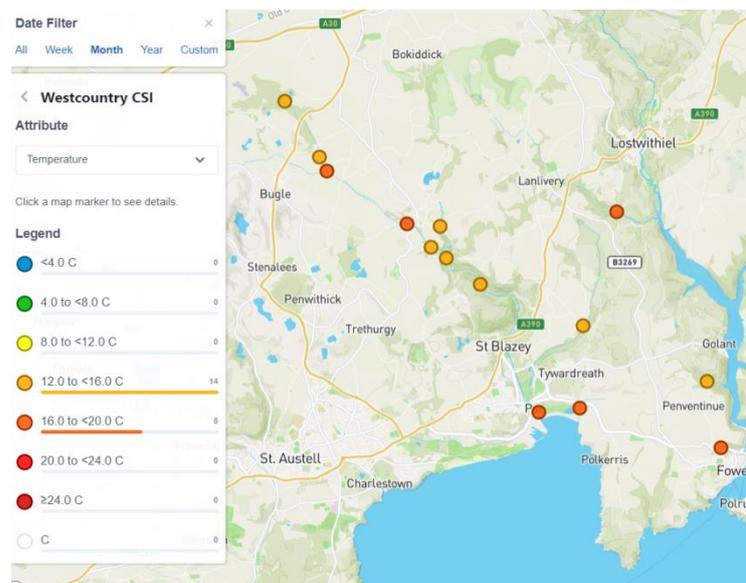
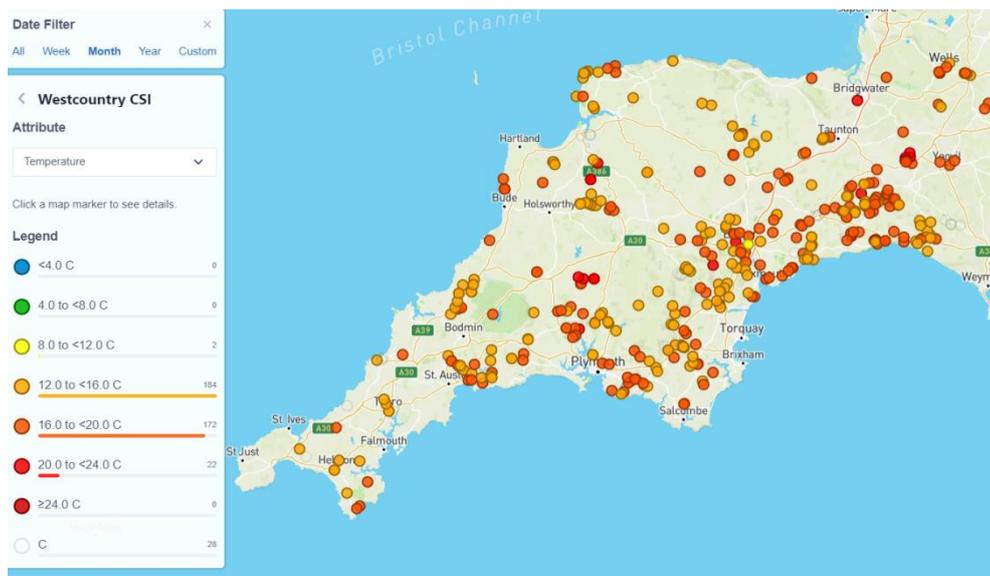
N.B. Two visits were made in early October but have been counted as part of the September monitoring cycle.

## C. 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.*

2. **Geographical comparison.** Source: Cartographer.



### 3. Results September 2023

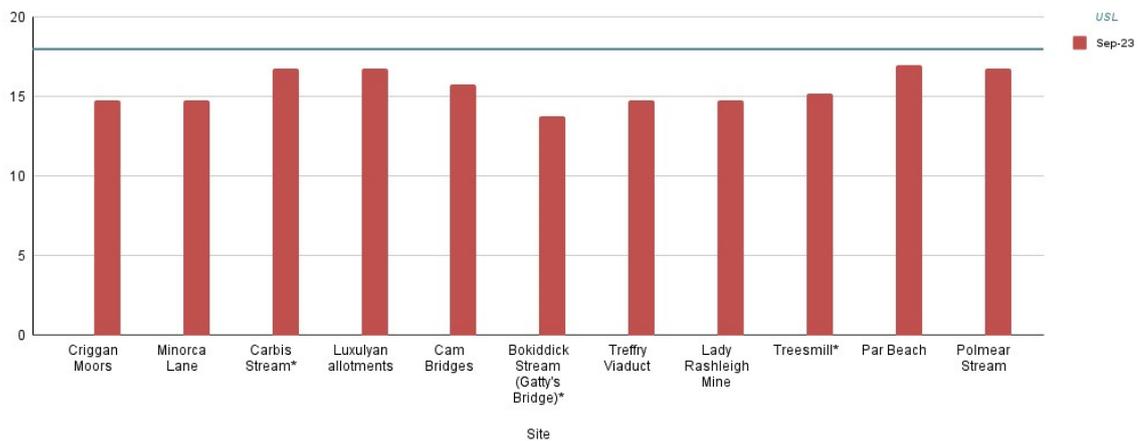
PAR RIVER/TRIBUTARY	LOCATION	Temperature °Celsius
Par	Criggan Moors, SX 01882 61133	14.8
Par	South of Minorca Lane, Par River, SX 02657 59788	14.8
Tributary	Carbis Stream SX 02834 59401	16.8
Par	Luxulyan allotments, Par River, SX 04732 58045	16.8
Par	Cam Bridges, Par River, SX 05292 57454	15.8
Tributary	Gatty's Bridge, Bokiddick Stream SX 05531 57953	13.8
Par	Treffry Viaduct, Par River, SX 05650 57179	14.8
Par	Lady Rashleigh Mine, Par River, SX 06451 56509	14.8
Tributary	Treesmill, Tywardreath Stream, SX 08873 55385	15.2
Par	Par Beach slipway, SX 0776 53261	17
Tributary	Polmear Stream, Ship Inn, SX 08749 53417	16.8

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 recently been suggested by WRT instead.

### 4. Graphs

#### (a) This month

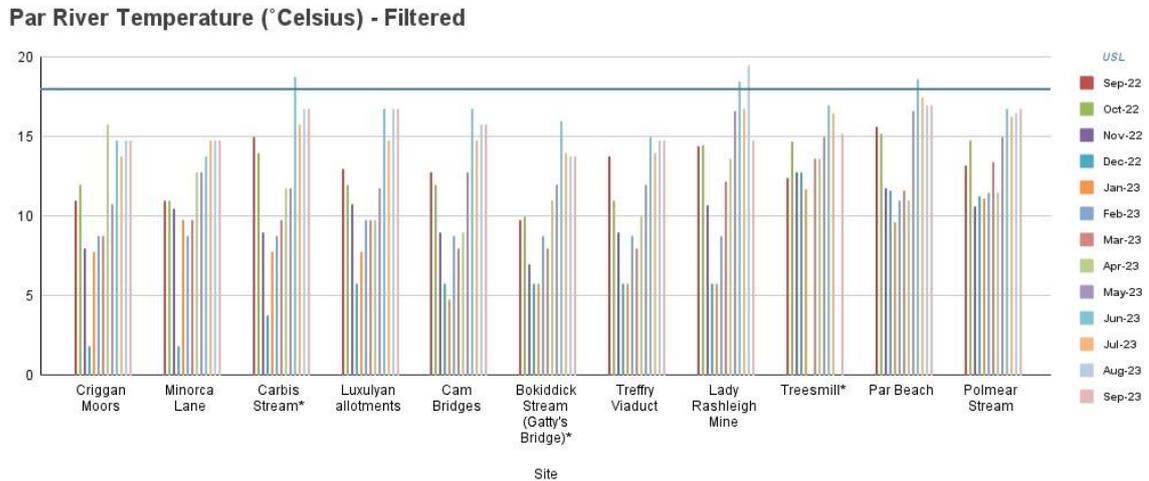
Par River Temperature (°Celsius) - Filtered



\*Indicates a tributary.

## (b) Historical

It is impossible to show all our records on a graph – a very long piece of paper would be required – so the results for the previous year will be shown instead.



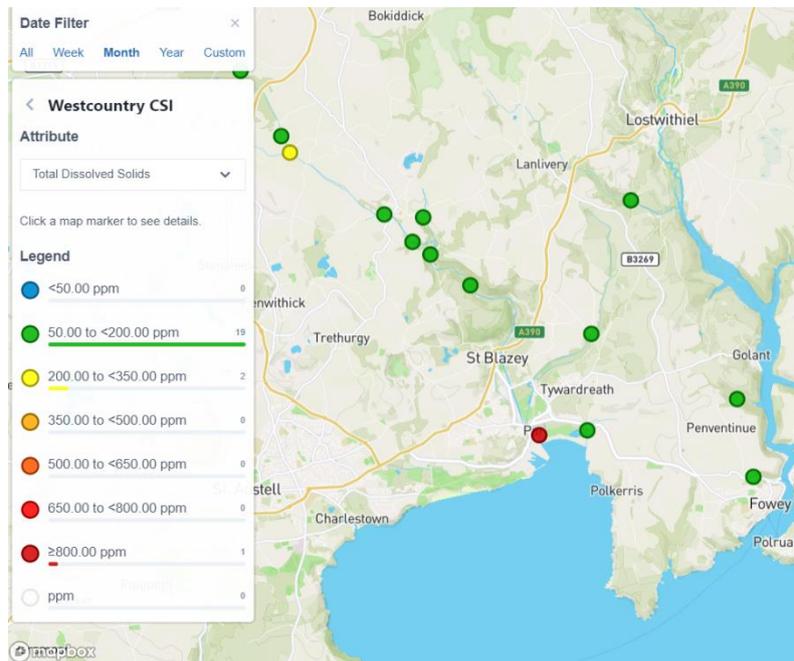
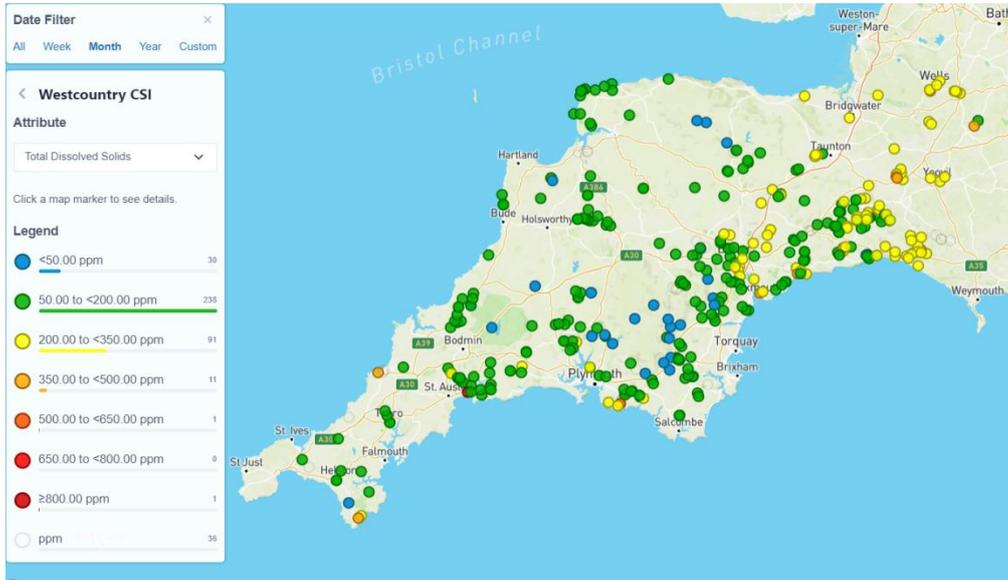
\*Indicates a tributary.

## D. 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.



## 3. Results September 2023

PAR RIVER/TRIBUTARY	LOCATION	Total Dissolved Solids PPM
Par	Criggan Moors, SX 01882 61133	79
Par	South of Minorca Lane, Par River, SX 02657 59788	70
Tributary	Carbis Stream SX 02834 59401	205
Par	Luxulyan allotments, Par River, SX 04732 58045	159
Par	Cam Bridges, Par River, SX 05292 57454	145
Tributary	Gatty's Bridge, Bokiddick Stream SX 05531 57953	87
Par	Treffry Viaduct, Par River, SX 05650 57179	157
Par	Lady Rashleigh Mine, Par River, SX 06451 56509	158
Tributary	Treesmill, Tywardreath Stream, SX 08873 55385	114
Par	Par Beach slipway, SX 0776 53261	<b>914</b>
Tributary	Polmear Stream, Ship Inn, SX 08749 53417	174

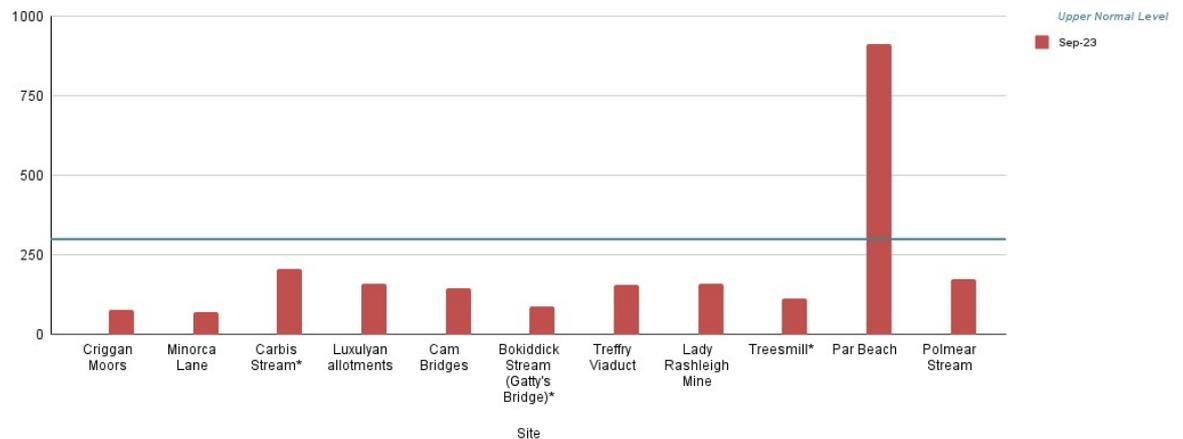
**Upper Normal Level**

The WRT advice for this river is that it should not exceed 300 ppb.

## 4. Graphs

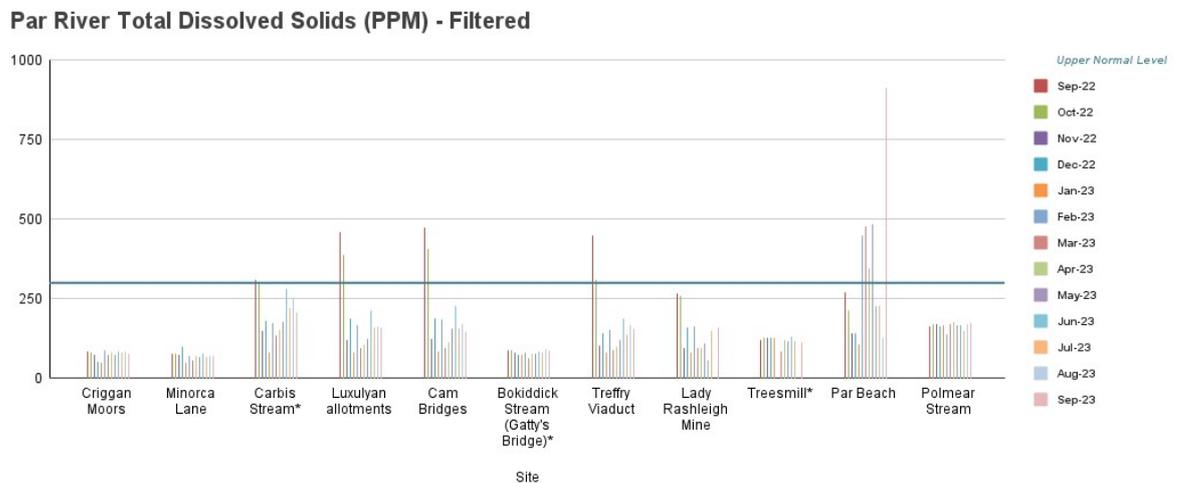
## (a) This month

Par River Total Dissolved Solids (PPM) - Filtered



## (b) Historical

It is impossible to show all our records on a graph – a very long piece of paper would be required – so the results for the previous year will be shown instead.

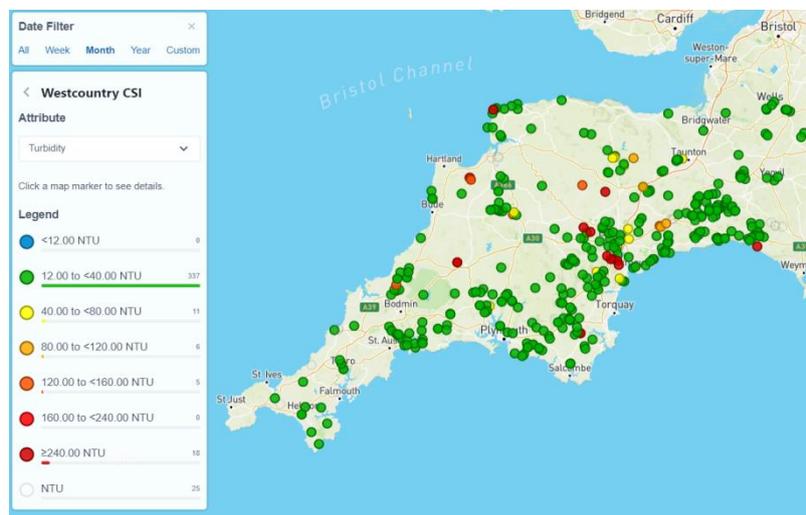


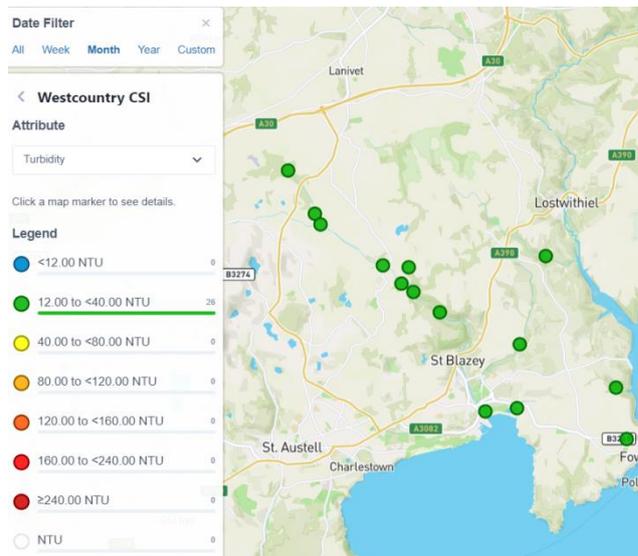
## E. TURBIDITY

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.*

2. **Geographical comparison.** Where scores are shown as 0, it means that the reading using the Secchi tube was <12. Source: Cartographer.



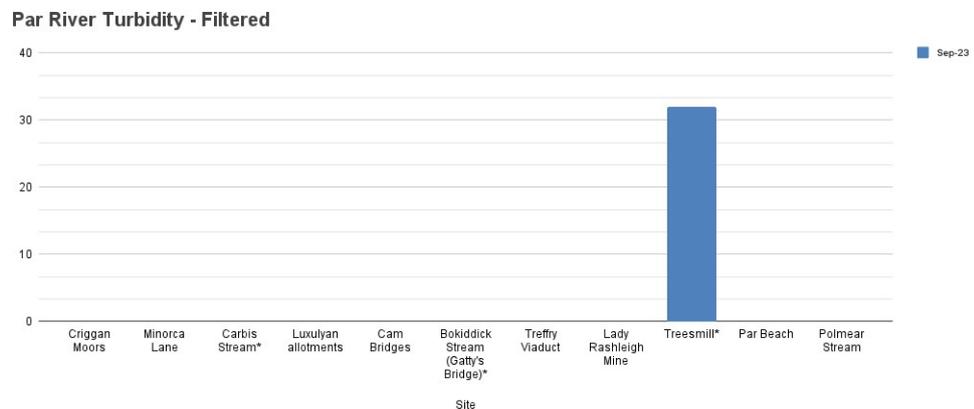


### 3. Results September 2023

PAR RIVER/TRIBUTARY	LOCATION	Turbidity
Par	Criggan Moors, SX 01882 61133	0
Par	South of Minorca Lane, Par River, SX 02657 59788	0
Tributary	Carbis Stream SX 02834 59401	0
Par	Luxulyan allotments, Par River, SX 04732 58045	0
Par	Cam Bridges, Par River, SX 05292 57454	0
Tributary	Gatty's Bridge, Bokiddick Stream SX 05531 57953	0
Par	Treffry Viaduct, Par River, SX 05650 57179	0
Par	Lady Rashleigh Mine, Par River, SX 06451 56509	0
Tributary	Treesmill, Tywardreath Stream, SX 08873 55385	32
Par	Par Beach slipway, SX 0776 53261	0
Tributary	Polmear Stream, Ship Inn, SX 08749 53417	0

### 4. Graphs

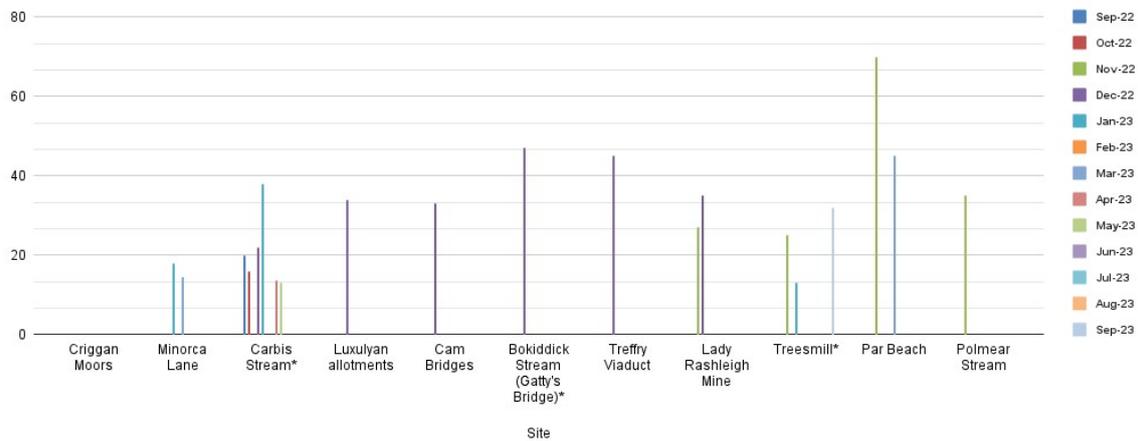
#### (a) This month



\*Indicates a tributary.

**(b) Historical**

It is impossible to show all our records on a graph – a very long piece of paper would be required – so the results for the previous year will be shown instead.

**Par River Turbidity - Filtered**

\*Indicates a tributary.

**F. 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.)*

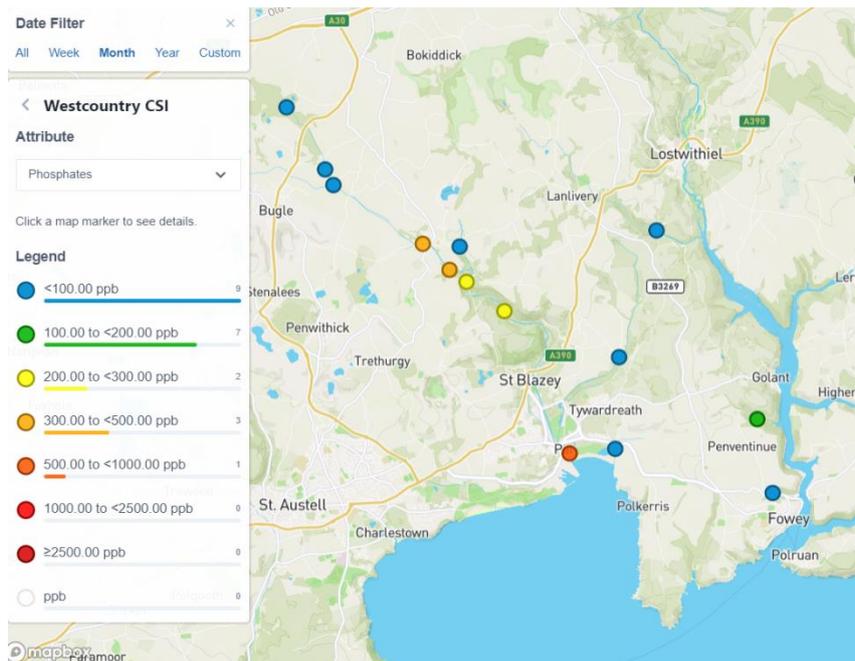
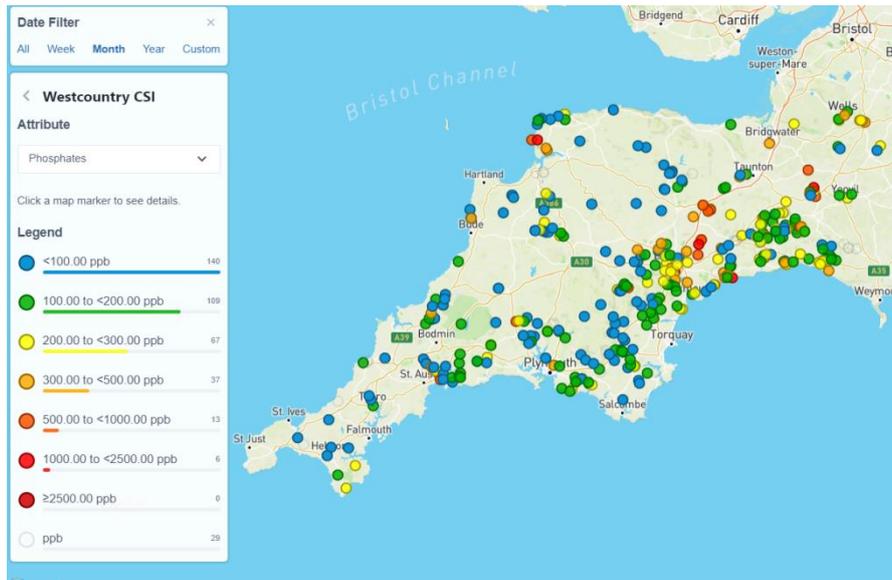
*Ranges on phosphate diagnostic colour chart:*

*0 – 100 OK*

*200 – 300 HIGH*

*500 – 2500 – TOO HIGH*

2. Geographical comparison. Source: Cartographer



### 3. Results September 2023

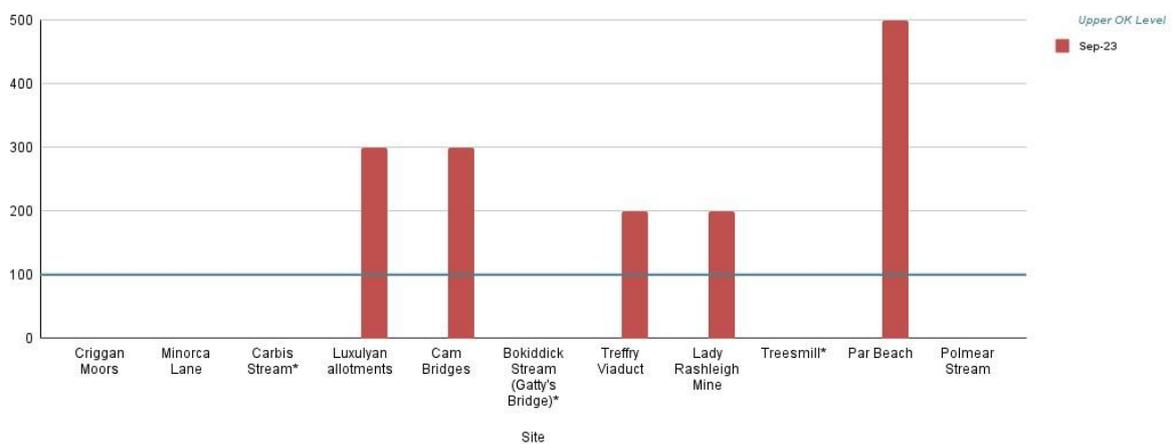
PAR RIVER/TRIBUTARY	LOCATION	Phosphates PPB
Par	Criggan Moors, SX 01882 61133	0
Par	South of Minorca Lane, Par River, SX 02657 59788	0
Tributary	Carbis Stream SX 02834 59401	0
Par	Luxulyan allotments, Par River, SX 04732 58045	300
Par	Cam Bridges, Par River, SX 05292 57454	300
Tributary	Gatty's Bridge, Bokiddick Stream SX 05531 57953	0
Par	Treffry Viaduct, Par River, SX 05650 57179	200
Par	Lady Rashleigh Mine, Par River, SX 06451 56509	200
Tributary	Treesmill, Tywardreath Stream, SX 08873 55385	0
Par	Par Beach slipway, SX 0776 53261	500
Tributary	Polmear Stream, Ship Inn, SX 08749 53417	0

Results in red show phosphate levels that are Too High (WRT advice).

### 4. Graphs

#### (a) This month

Par River Phosphates (PPB) - Filtered

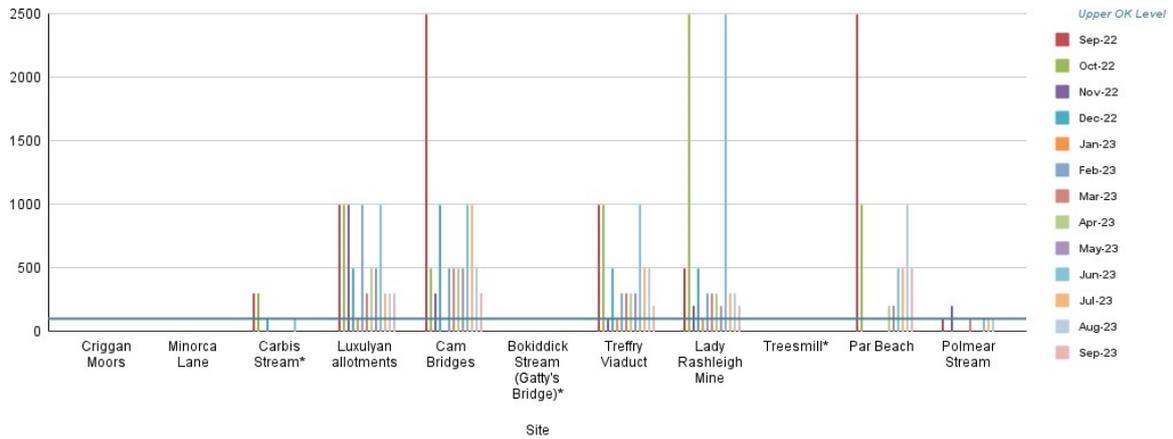


\*Indicates a tributary.

**(b) Historical**

It is impossible to show all our records on a graph – a very long piece of paper would be required – so the results for the previous year will be shown instead.

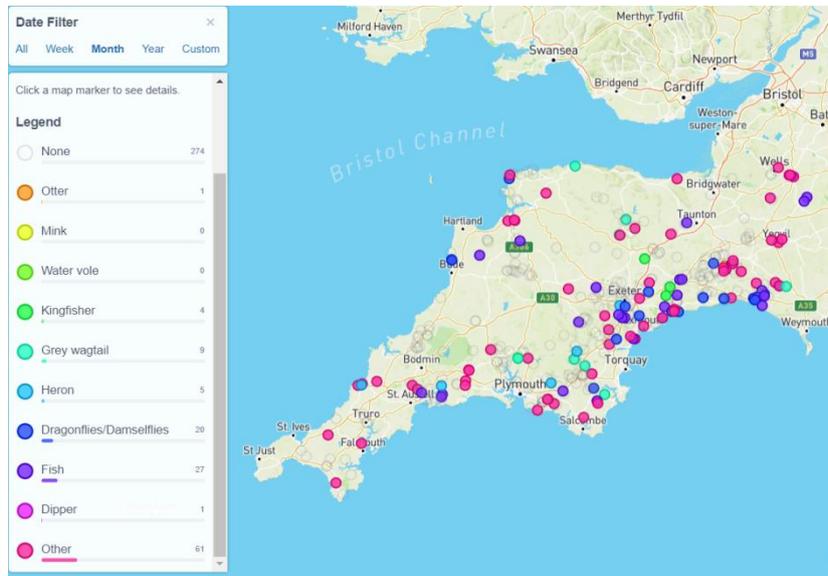
**Par River Phosphates (PPB) - Filtered**

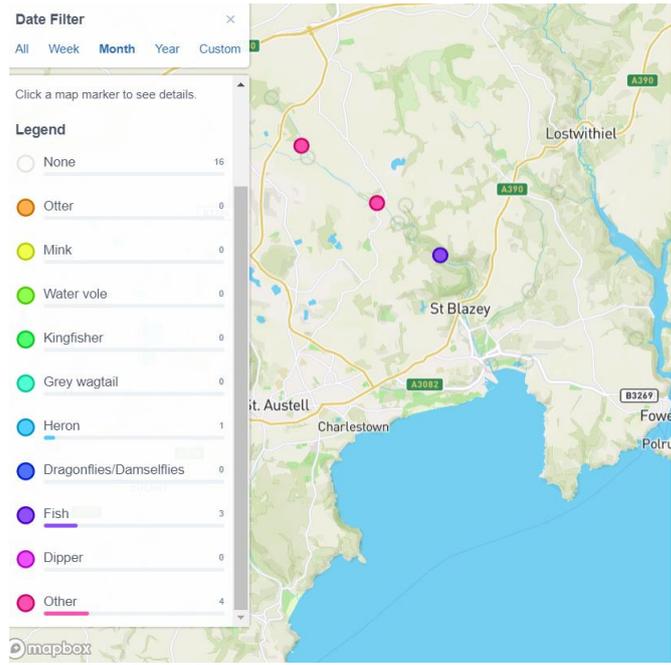


\*Indicates a tributary.

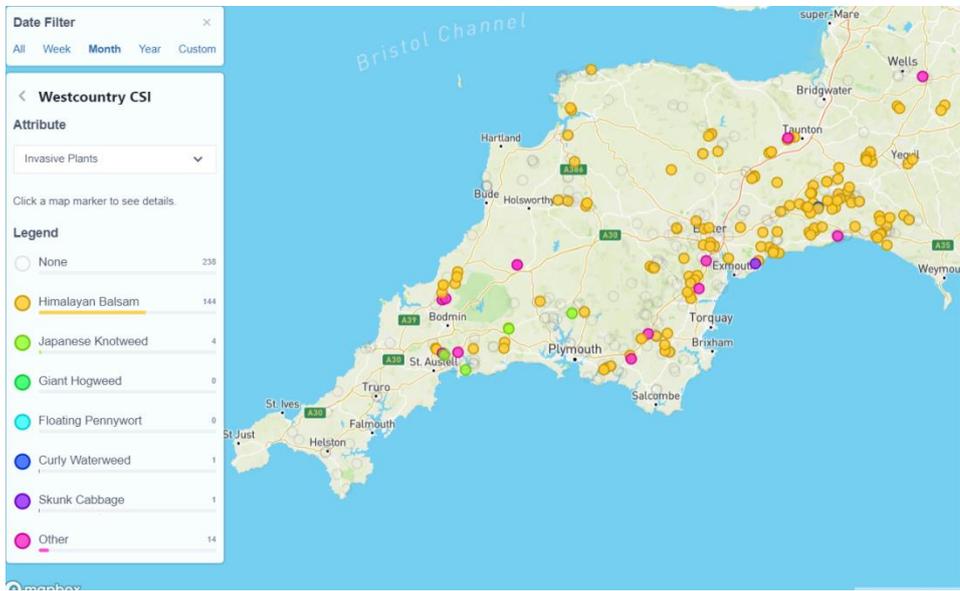
**G. WILDLIFE (FOR OTTER REPORT SEE SECTION I) & INVASIVE PLANTS**

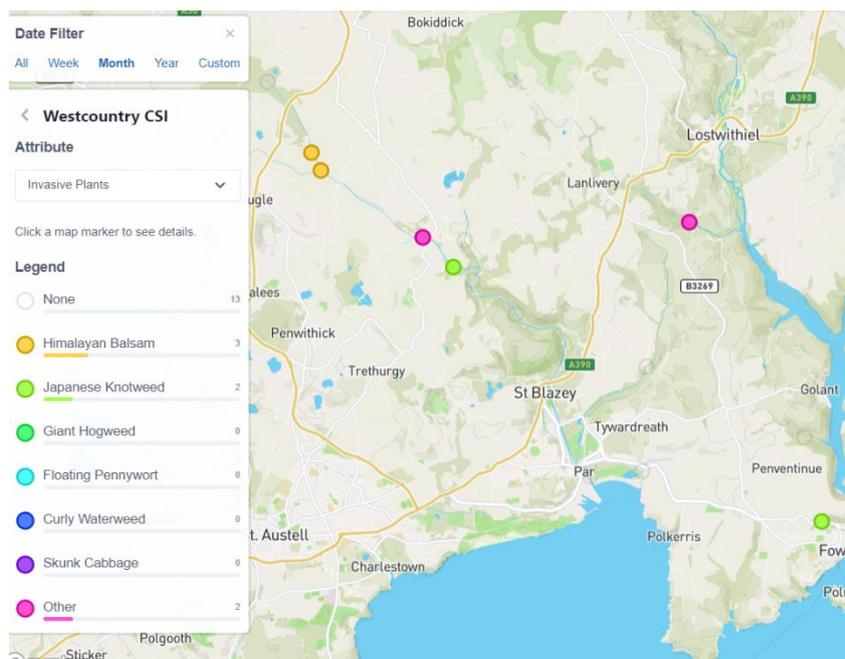
**(a) Wildlife maps**





**(b) Invasive plants maps**





(c) Wildlife & Invasive Plants sightings at the monitoring points included:

PAR RIVER/TRIBUTARY	LOCATION	WILDLIFE NOTED	INVASIVE PLANTS NOTED
Par	Criggan Moors, SX 01882 61133	None	None
Par	South of Minorca Lane, Par River, SX 02657 59788	Pond skaters	Himalayan Balsam
Tributary	Carbis Stream SX 02834 59401	None	Himalayan Balsam
Par	Luxulyan allotments, Par River, SX 04732 58045	Otter spraint	Hemlock Water Dropwort
Par	Cam Bridges, Par River, SX 05292 57454	None	Japanese Knotweed
Tributary	Gatty's Bridge, Bokiddick Stream SX 05531 57953	None	None
Par	Treffry Viaduct, Par River, SX 05650 57179	None	Hemlock Water Dropwort
Par	Lady Rashleigh Mine, Par River, SX 06451 56509	Butterfly. Fish. Otter spraint. Riverfly nymphs: Caseless Caddisfly, Blue-winged Olive, Olives, Flat-bodied Upwing, Stoneflies, and Freshwater Shrimps.	None
Tributary	Treesmill, Tywardreath Stream, SX 08873 55385	None	None
Par	Par Beach slipway, SX 0776 53261	Mallard duck.	None
Tributary	Polmear Stream, Ship Inn, SX 08749 53417	None	None

**H. OTTER SURVEY, SEPTEMBER 2023****1. SURVEY CONDITIONS**

<b>Date &amp; time</b>	18/9/2023
<b>Surveyors</b>	Roger Smith, Joan Farmer
<b>Areas surveyed</b>	Upper Par (Criggan Moors and Minorca Lane); Par River from STW to Cam Bridges; Par River from Treffry Viaduct to Lady Rashleigh Mine.
<b>Weather</b>	Heavy rain in previous 24 hours
<b>River level</b>	Average
<b>River flow</b>	Steady
<b>Water quality</b>	Phosphate readings 300 PPB at the highest (Luxulyan allotments), 300 at Cam Bridges, 200 at Treffry Viaduct and 200 at Lady Rashleigh Mine and 500 at Par Beach slipway. All readings zero upstream from the allotments.
<b>Other wildlife</b>	Pond skaters near Minorca Lane. Fish and riverfly nymphs at Lady Rashleigh Mine.

**2. EVIDENCE FOR OTTERS ✓**

<b>EVIDENCE</b>	<b>SEEN/ ORKS*</b>	<b>LOCATION</b>	<b>NOTES</b>
<b>Spraint - fresh</b>			
<b>Spraint – recent</b>			
<b>Spraint - old</b>	✓*  ✓*	SX 04747 58056 Luxulyan allotments, boulder in river. SX 06456 56498 Lady Rashleigh Mine – boulder in river	
<b>Anal jelly</b>			
<b>Sign heap</b>			
<b>Staining</b>			
<b>Tracks</b>			
<b>Path</b>			
<b>Slide</b>			
<b>Holt</b>			
<b>Hover</b>			
<b>Couch</b>			
<b>Live sighting</b>			
<b>Corpse</b>			

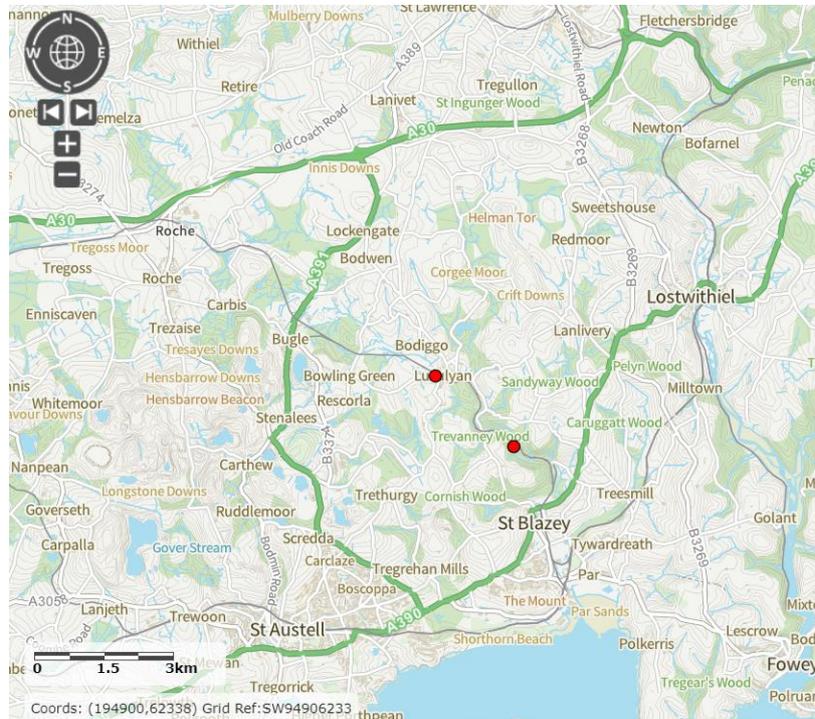
\*Report sent to ORKS: <https://ercis.org.uk/>

### 3. MAP

Red dots – definite evidence. Recorded on ORKS.

Black dots – possible evidence. Not recorded on ORKS.

Green dots – definite evidence but may have been recorded in the previous month, e.g. old spraint.



Source: <https://magic.defra.gov.uk/MagicMap.aspx>

### 4. PHOTOGRAPHS

#### (a) Spraint near Luxulyan allotments (Upper Par):



Old otter spraint at Luxulyan allotments, SX 04747 58056

**(b) Spraint on boulder at Lady Rashleigh Mine (Lower Par):**

Old otter spraint at Lady Rashleigh Mine, SX 06456 56498

**5. COMMENTS**

Few signs were found last month but spraint was found at two locations. Other possible locations, such as Pontois Mill, were not visited.

**I. ARMI RIVERFLY SURVEY**

Three of the group (Joan Farmer, Veronica Jones and Roger Smith) 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 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.

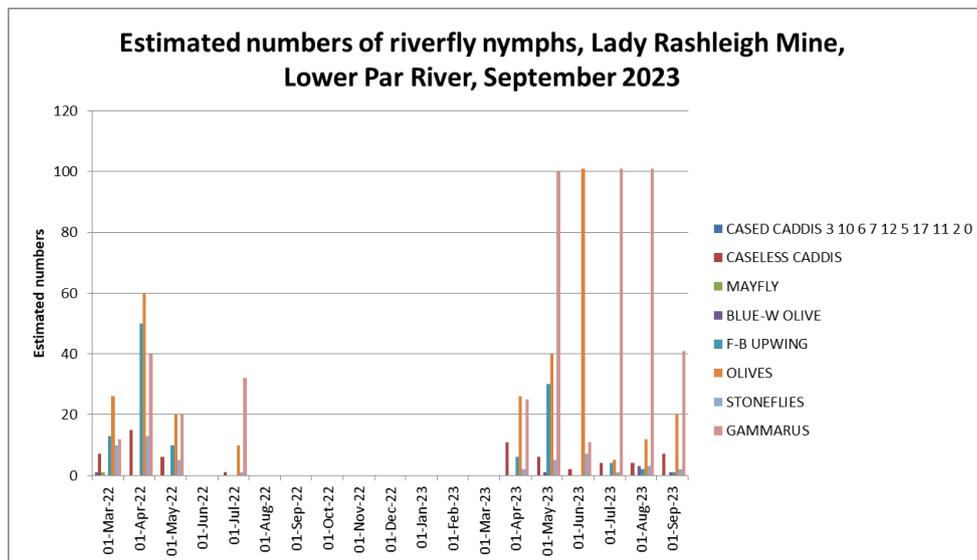
It is impossible to count every invertebrate so this counting method is used:

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

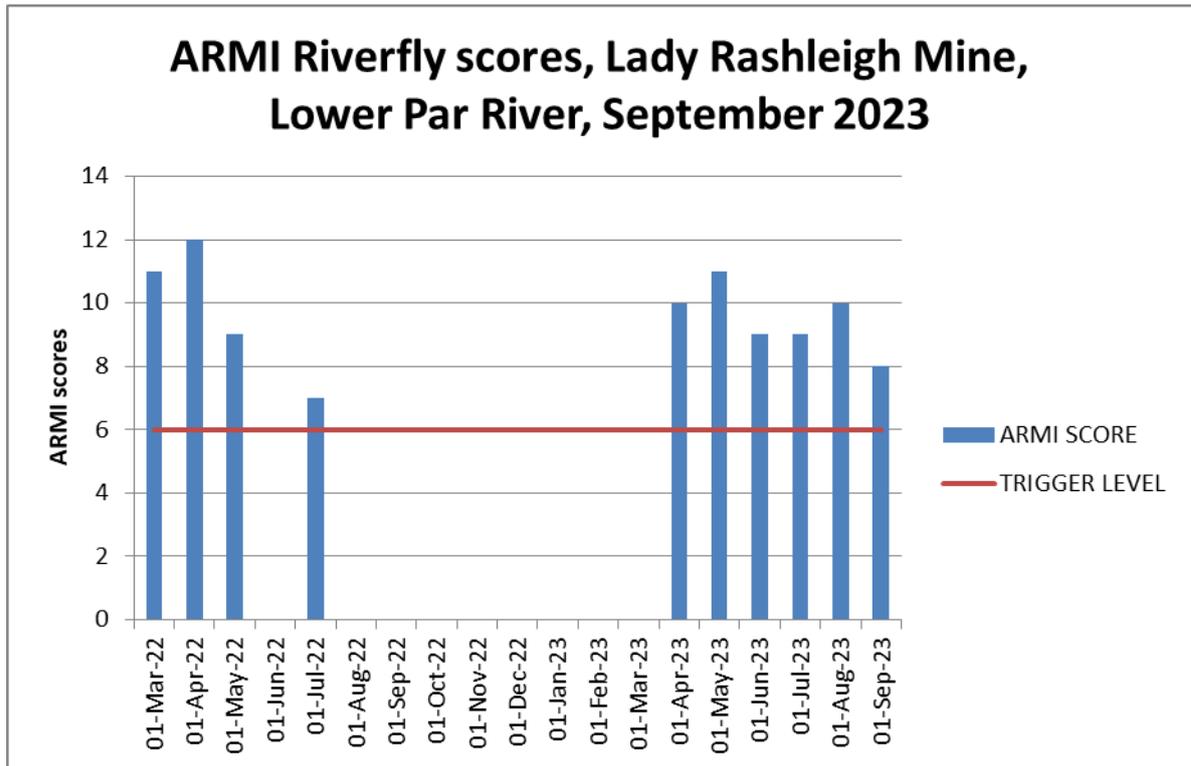
Results of survey at Lady Rashleigh Mine (SX 06451 56509) carried out by Joan Farmer and Roger Smith on 18<sup>th</sup> September 2023

	SPECIES	NUMBER	CATEGORY
<b>Trichoptera</b>			
1	Cased Caddisfly	0	0
2	Caseless Caddisfly	7	1
<b>Ephemeroptera 3 tails</b>			
3	Mayfly (Ephemeridae)	0	0
4	Blue-winged olive (Ephemerellidae)	1	1
5	Flat-bodied up-wings (Heptageniidae)	1	1
6	Olives (Baetidae)	20	2
<b>Plecoptera 2 tails</b>			
7	Stoneflies	1	1
<b>Gammaridae</b>			
8	Freshwater Shrimp	40+	2
			<b>8</b>

<b>CATEGORY TOTAL</b>	<b>8</b>
<b>TRIGGER LEVEL</b>	<b>6</b>



These are estimated numbers, especially when there are large numbers of a particular type. For example, there were more than 40 Gammarus but this has been recorded for the purposes of the graph as 41.



## J. DISCUSSION

### 1. Positive observations

- (a) Temperatures were below 18° Celsius, which we are using as the upper safe limit. Given record temperatures worldwide, and a rising trend, this is of some comfort.
- (b) Otter spraint was observed at 2 locations even though the survey area was less than usual.
- (c) The ARMI riverfly trigger level was exceeded.
- (d) The water in the Carbis Stream was unusually clear, without any trace of the china clay pollution usually seen there.



Unusually clear water on the Carbis Stream (SX 02834 59401)

## 2. Points of concern

(a) Readings at Par Beach slipway were very concerning: 914 parts per million for Total Dissolved Solids and 500 parts per billion for phosphates. Monitoring took place at low tide. We have been advised that a river like ours should not have Total Dissolved Solids exceeding 300 ppm.

Readings at this location are often high, exceeding 300 ppm 5 times since September 2022, yet never as high as this. It is unique in the entire West Country survey area for the last month, although some other coastal locations did record scores in excess of 350 ppm. The survey took place on a later date than the surveys upriver, so comparison with those TDS and phosphate scores can't be made.

(b) Phosphate scores from Luxulyan allotments downstream were 'High' (WRT categorisation).

(c) Flecks of foam are usually seen downstream from St Austell North STW. This is assumed to come from the treated effluent outfall. On 18<sup>th</sup> September more foam than usual was seen. Additionally, after washing off stones during the riverfly sampling (after the kick-sample had been taken) we noticed how dirty the water was, as the photo shows:



This may have been a result of the heavy rain in the previous 24 hours. That said, we have conducted riverfly sampling using the same method after periods of heavy rain but have never noticed such discolouration of the water.

(d) Despite finding otter spraint and the target number of riverfly nymphs, wildlife sightings were low again. This may be down to a lack of expertise, or the fleeting nature of visits to each monitoring point, but it is disappointing, especially since some areas such as Luxulyan Valley would seem to be promising habitats.

(e) Following the last report in August a resident of Luxulyan, with experience of working for South West Water, got in touch to remark on a smell at Cam Bridges (SX 05292 57454) that he attributed

to the presence of sewage in the water. Subsequently, anecdotal evidence from others with relevant environmental expertise, has confirmed this opinion. In the past, those of us who have monitored at this location have noticed a smell but could not offer any explanation, thinking it to be natural. In future, it will have to be recorded. It wasn't noticeable during this month's visit. Possibly, it is a result of turbulence as the river flows over a weir just upstream from Cam Bridges.

### **3. Areas of doubt**

(a) A number of concerns (phosphate and ammonia levels, our bacteria-testing trial, the smell at Cam Bridges, the unresolved situation at the sewage pumping station near Luxulyan and the recent works that have started at St Austell North STW) prompted a letter to SWW, which was sent on 12<sup>th</sup> September 2023. A reply has been promised. This is not to say or imply that all of the river's problems are caused by the actions of South West Water; that would be simplistic. However, it is hoped that a better understanding of the situation will result from their reply. The letter can be read in section K.

(b) As yet, no feedback has been received from WRT about the efficacy of the bacteria-testing trial.

(c) Our concerns about the inconsistency in temperature and TDS readings between the old and new instruments issued to volunteers remains.

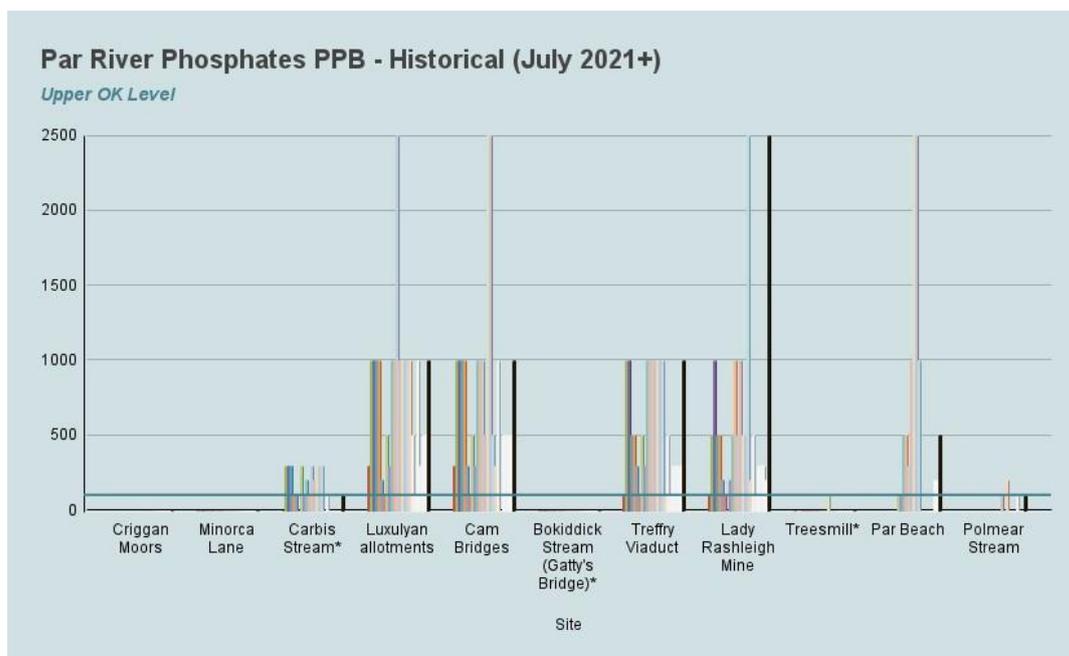
## **K. LETTER TO SOUTH WEST WATER, 12<sup>TH</sup> SEPTEMBER 2023**

### **Re. South West Water St Austell North STW and Luxulyan sewage pumping station**

I am a customer of South West Water, as well as being part of a group carrying out citizen science river-monitoring in the Par/Luxulyan River catchment under a scheme run by the Westcountry Rivers Trust. I am hoping you will be able to provide me with information regarding the sewage treatment works and the pumping station at Luxulyan and the impacts on the water quality in the river.

#### **1. Phosphates and ammonia entering the Par River**

We have consistently detected excessive levels of phosphate in our sampling downstream from the STW at Luxulyan (St Austell North STW). The following graph shows phosphate samples taken from the river since July 2021. Locations with an asterisk are for tributaries so may be ignored. The monitoring point at Luxulyan allotments is approximately 400 metres downstream from the treated effluent outfall at the STW. Our advice is that levels of phosphate exceeding 100 parts per billion are harmful and may lead to eutrophication.



The Environment Agency has been able to confirm that the St Austell North STW is a source of elevated levels of phosphate and ammonia and Defra has identified the Lower Par River in this report: [Urban waste water treatment: identification of sensitive areas notice 2023 schedule - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/news/urban-waste-water-treatment-identification-of-sensitive-areas-notice-2023-schedule). As the population equivalent of the area has exceeded 10,000, it means that a suitable level of treatment is required. Although there are no firm plans yet, something will be done in the 2025-2030 cycle, which is great news.

Could you please tell me:

- Is the current renovation being carried out at St Austell North STW including work to reduce levels of phosphate and ammonia in the Lower Par River?
- Will the current renovation reduce pollution of the river in any other way, for example by stopping or reducing the use of the CSO, which according to the Rivers Trust Sewage Map (<https://theriverstrust.org/sewage-map>), spilled 36 times for a total of 574.84 hours in 2022?

## 2. Bacteria

Our citizen science group has undertaken a trial to monitor levels of E.coli and Total Coliforms in the Par River. This used testing kit produced by a U.S. company called Aquagenx, with judgements based on US environmental standards for recreational bathing waters, so not directly applicable to this country. However, our findings (which I would be happy to share) presented a prima facie case for concern about bacteria levels. The EA monitoring, which is far more authoritative, also indicates high levels of E.coli and Intestinal Enterococci in the Par River.

While I would not suggest that SWW treatment works are solely responsible for this, please could you tell me what measures are currently taken to prevent harmful bacteria being discharged into the river and what plans, if any, you have to reduce levels of harmful bacteria in the water discharged into the river?

### **3. SWW pumping station (SX 0503 5790) and discharge point (your grid reference: SX 0504 5783) near Luxulyan**

In May 2021, I contacted SWW about the pumping station downstream from St Austell North STW and a pipe and concrete headwall that had fallen into the river nearby (correspondence reference: South West Water reply case 9773631). You advised me that you had a permit to discharge sewage at this point and kindly sent me a copy of the permit. According to your reply, 'Luxulyan SPS was checked via telemetry and was operating as normal.' You also wrote: 'Thank you for the photos of the pipe and headwall, these have now been passed for repair.'

Please can you answer these questions?

(a) Is the sewage pumping station still operating? It no longer appears on The Rivers Trust's Sewage Map (<https://theriverstrust.org/sewage-map>).

(b) If the sewage pumping station continues to operate, has the electronic monitoring shown any sewage discharges into the river since 2021?

(c) I know from the landowner that your colleagues have made a number of visits to the site but the collapsed pipe and headwall remain in the river. When will they be removed?

### **4. River smell at Cam Bridges (SX 05292 57454)**

Recently a member of the public who once worked for South West water reported that the river at Cam Bridges (which is about 1200 metres downstream from St Austell North STW and about 500 metres downstream from the discharge point near the pumping station) had a distinct smell of sewage, an observation that others have made at various times. Are you able to offer an explanation please?

I realise that I have asked for a lot of information. South West Water is, I am sure, committed to the improvement of water quality in rivers and the sea, so I hope that these questions will be of constructive use in gaining a better understanding of how to make things better. If it would be of any use I would be more than happy to share our monthly reports with you.

Regards,

Roger Smith

## **L. 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 Dave Burrell; Joan Farmer; Veronica Jones; Sue Perry; 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, Chloe Lake, David Edwards, Claire and Gary Phillips, Jenny Heskett, Nick Taylor, Jeremy Roberts, Mat Bateman, Colin Pringle, Matt Healey, Simon Browning, Lydia Deacon, Layla Ousley, Eva Edgeworth, Jack Middleton, Anna Seal, Jade Neville, Nicola Rogers and Callum Lewis is greatly appreciated. The interest and

encouragement offered by Environment Agency officers, especially Lisa Best, Lisa Goodall and Peter Scobie, have been invaluable.

**Report compiled by Dave Burrell, Joan Farmer and Roger Smith, October 2023**