

MONITORING OF THE PAR RIVER AND ITS TRIBUTARIES

The monitoring group operates under the citizen science scheme run by the Westcountry Rivers Trust. Comments, opinions and errors in this report are those of the author(s) only.

APRIL 2026

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A. OUR APRIL 2026 FINDINGS AT A GLANCE (SEE SECTIONS C TO I FOR FULL PICTURE)

1. Data

We sampled at 16 locations between 15th and 18th April 2026. The **red** highlighting shows results of concern.

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) 6 TESTING LOCATIONS	TRIBUTARIES OF LOWER PAR (POLMEAR & TYWARDREATH STREAMS) 2 TESTING LOCATIONS
TEMPERATURE ° CELSIUS (SHOULD NOT EXCEED 18° CELSIUS)	Mean 11.86 Median 11.9 Min 11.5 Max 12.1	Mean 12.86 Median 13 Min 12.5 Max 13.1	Mean 12.1 Median 11.9 Min 11.5 Max 13.2	Mean 14.4 Median 14.4 Min 14.2 Max 14.6
TOTAL DISSOLVED SOLIDS PPM (SHOULD NOT EXCEED 300 PPM)	Mean 80.4 Median 74 Min 59 Max 107	Mean 373.66 Median 91 Min 89 Max 941	Mean 87.33 Median 66 Min 53 Max 157	Mean 137 Median 137 Min 114 Max 160
TURBIDITY (SHOULD BE <12 ON SECCHI TUBE. FOR AVERAGING ANY READING <12 IS COUNTED AS 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	Mean 0 Median 0 Min 0 Max 0
PHOSPHATES PPB (SHOULD NOT EXCEED 100 PPB)	Mean 200 Median 0 Min 0 Max 500	Mean 433.33 Median 500 Min 300 Max 500	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)	Lady Rashleigh Mine (Lower Par) = 10.			
KEY WILDLIFE (WRT KEY SPECIES ONLY* – FOR FULL LIST SEE SECTION I)	Heron	Heron	Beaver lake.	
INVASIVE PLANTS	Hemlock Water Dropwort	Hemlock Water Dropwort, Japanese Knotweed	Hemlock Water Dropwort	Hemlock Water Dropwort

*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) An ARMI riverfly survey was carried out on the Lower Par River at Lady Rashleigh Mine with a score of 10, exceeding the trigger level of 10.
- (ii) There were some pleasing wildlife sightings, including herons on the Upper and Lower Par.
- (iii) There were fewer sewage spills as a result of lower rainfall.

(b) Points of concern

- (i) South West Water's responses (section L) to questions regarding the impact of sewage on the river but the answers do not inspire optimism, at least not in the short term.
- (ii) Phosphate levels on the lower section of the Upper Par, and the Lower Par, were too high.
- (iii) A Total Dissolved Solids score of 941 Parts per Million was recorded on the Lower Par at Par Beach Slipway. The Upper Safe Level is considered to be 300 PPM. Readings at this location are taken at low tide to minimise the impact of salinity.

(c) Areas for further research

- (i) The reasons for the high TDS reading at Par Beach Slipway are unknown to us; hopefully, an explanation will be found.
- (ii) The impact of sewage spills into the river (admittedly not high this month) is not known. What types of bacteria are present, and at what levels? Is it safe for the public to enter the river, for example in Luxulyan Valley where dog walkers supervise their pets' use of the water? To what extent is the river reducing bathing water quality at Par Beach? Are the lengthy sewage spillages, especially from St Austell North STW in Luxulyan, contributing to antimicrobial resistance? While the latter point might seem alarmist, it should be remembered that this is recognised as a potential risk factor by the country's Chief Scientist. In *Pilot surveillance of antimicrobial resistance in river catchments in England: summary* (Environment Agency, 24 October 2024, <https://www.gov.uk/government/publications/pilot-surveillance-of-antimicrobial-resistance-in-river-catchments-in-england/pilot-surveillance-of-antimicrobial-resistance-in-river-catchments-in-england-summary>) the Chief Scientist noted that 'AMR is a significant global concern for human, animal, plant and environmental health. Whilst the impacts of resistance are mostly felt in healthcare or agricultural settings, the environment can play an important role in the development and transmission of resistance'. The conclusion was:

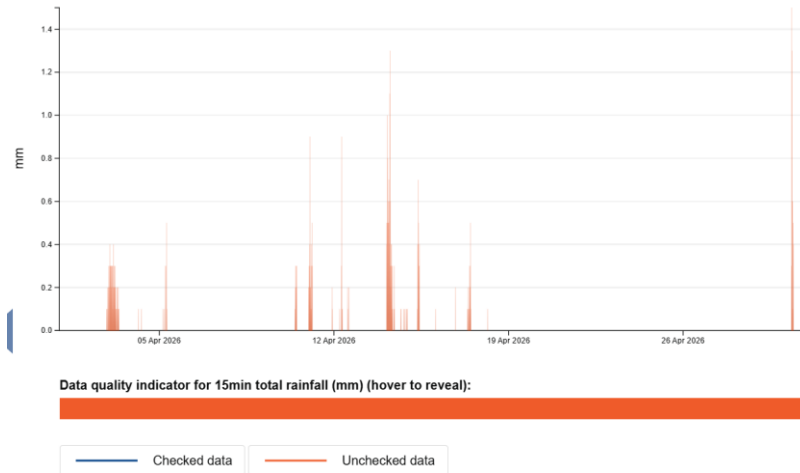
Antimicrobial resistant microorganisms, resistance genes and antimicrobial substances were detected in all three of the rivers and across all sites that were sampled, although the levels detected varied across locations and through time. The pilot showed how a set of different methods could be applied in monitoring of environmental AMR. It was notable that likely human derived AMR dominated in two of the three trial rivers (Trent and Coquet) despite their different land use and population settings. Future environmental surveillance should

take into consideration that AMR levels within a stretch of a river may be influenced by multiple upstream sources of differing nature.

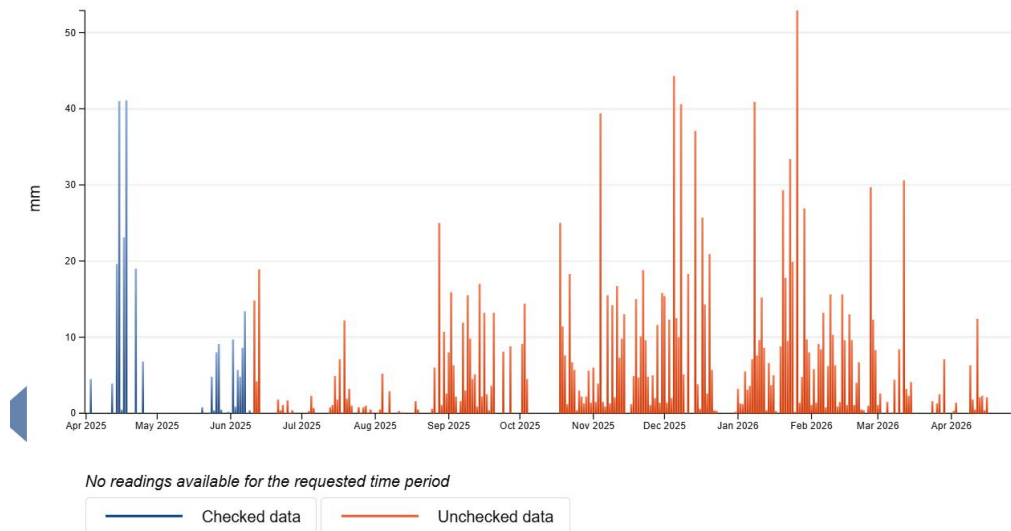
B. RAINFALL, RIVER LEVELS AND FLOW

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

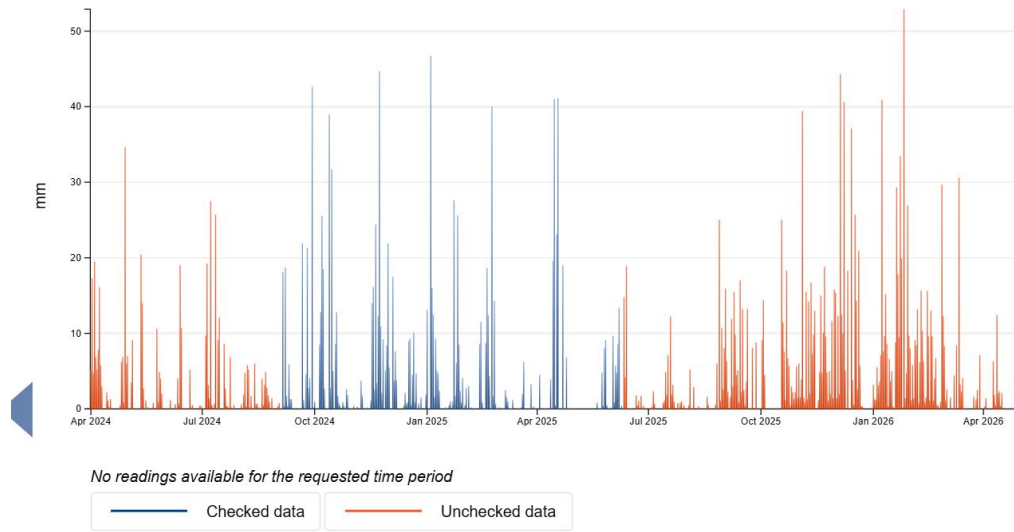
(a) April 2026



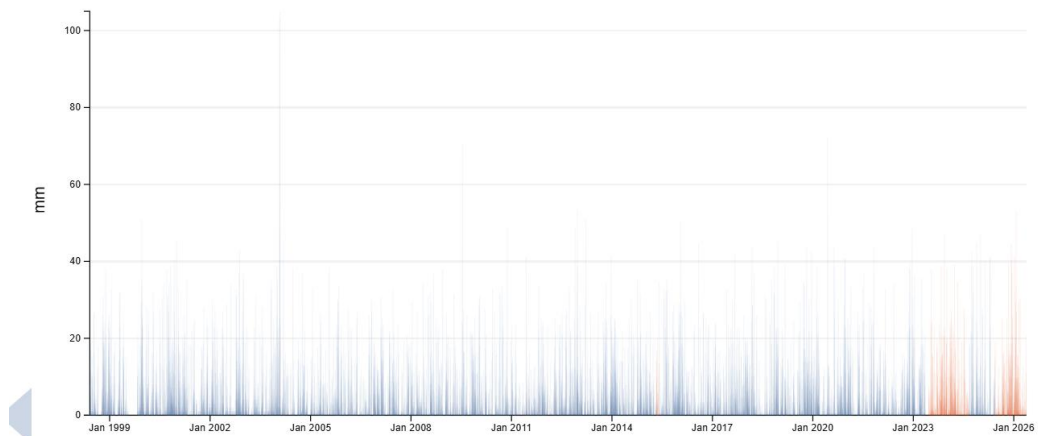
(b) From 1st April 2025 until 30th April 2026



(c) From 1st April 2024 until 30th April 2026:



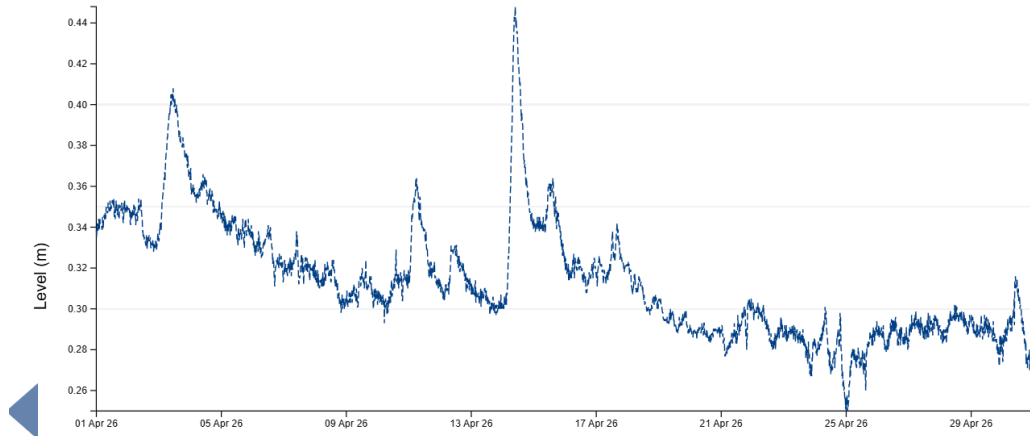
(d) Complete record



2. Par River levels at Luxulyan preceding and during surveys. Source:

<https://environment.data.gov.uk/hydrology/station/14aadf3c-3d4d-44b3-b26b-cf705827d00e>

(a) April 2026

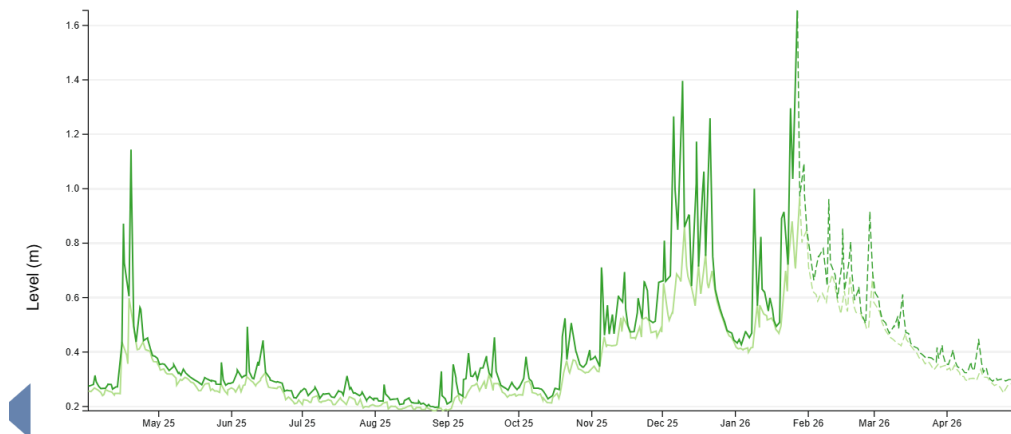


Data quality indicator for 15min level (m) (hover to reveal):



----- Recent unchecked data ——— 15min level (m)

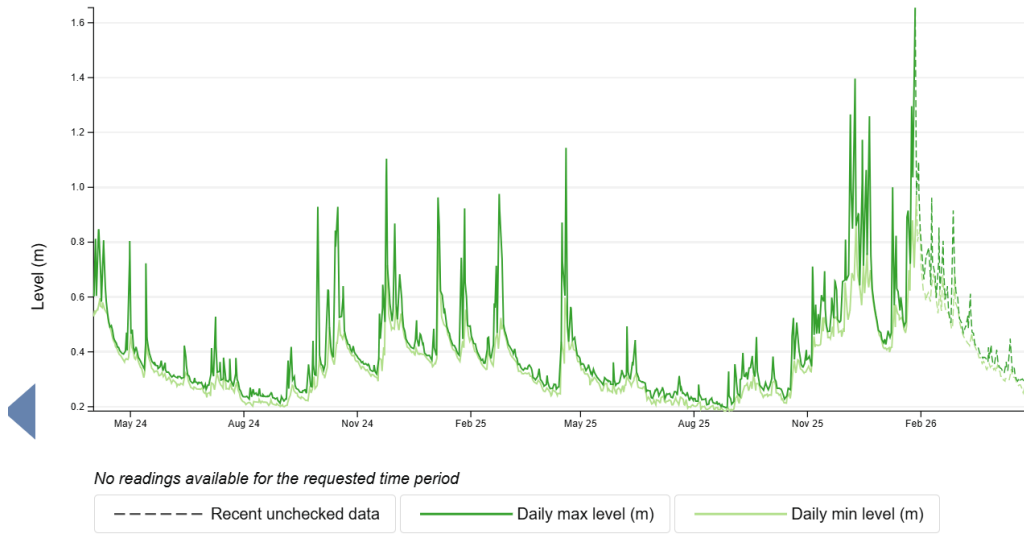
(b) From 1st April 2025 until 30th April 2026:



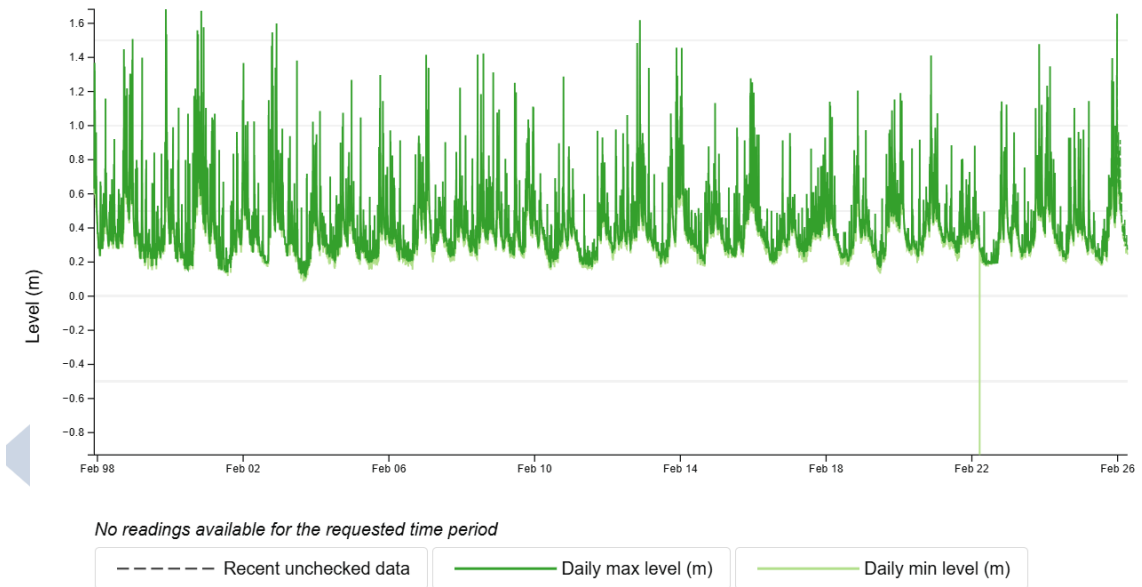
No readings available for the requested time period

----- Recent unchecked data ——— Daily max level (m) ——— Daily min level (m)

(c) From 1st April 2024 until 30th April 2026



(d) Complete record



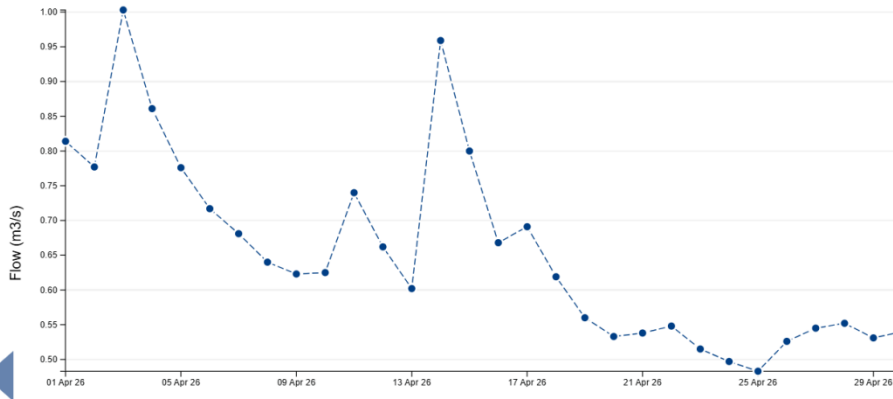
(e) How levels at Luxulyan could affect nearby areas:

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

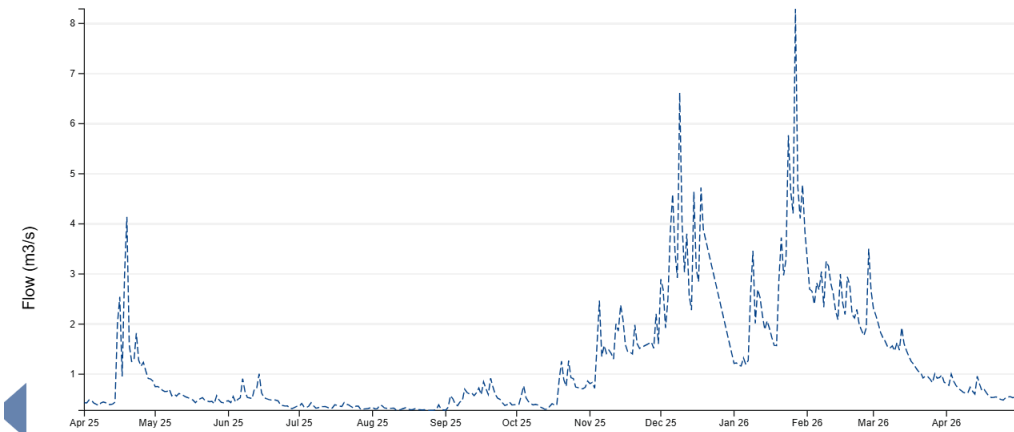
3. RIVER FLOW AT LUXULYAN (Daily Mean Flow in M3/s – cubic metres per second):

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

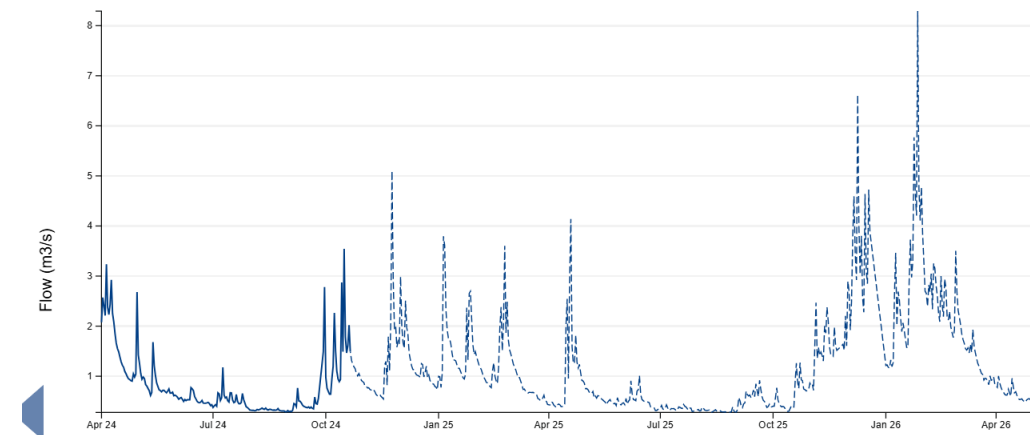
(a) April 2026

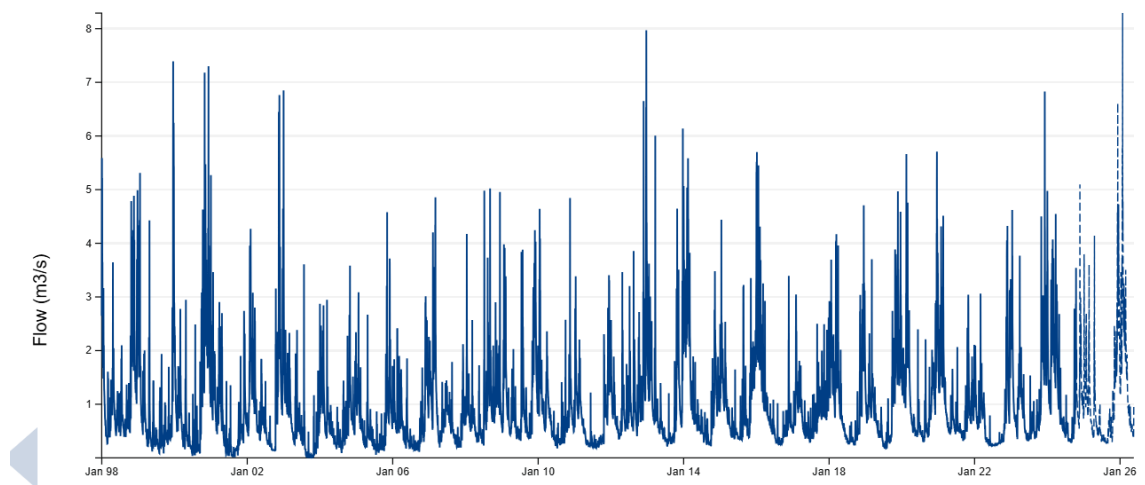


(b) From 1st April 2025 until 30th April 2026



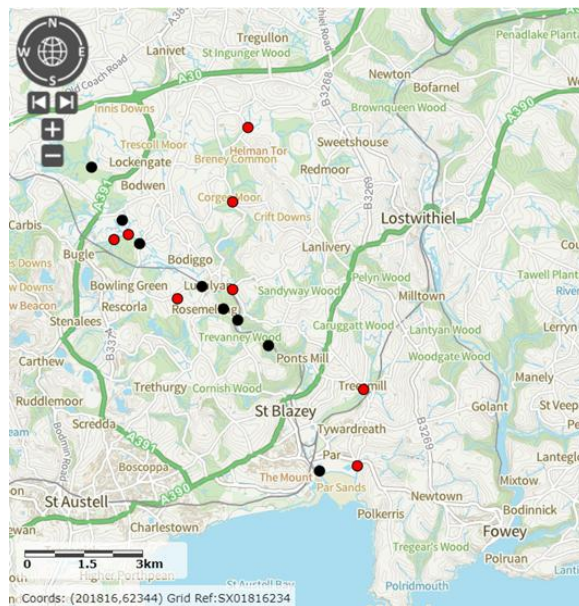
(c) From 1st April 2024 until 30th April 2026



(d) Complete record**C. APRIL 2026 MONITORING POINTS**

This month monitoring occurred at 16 locations.

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	15/4/2026 8:55	CSI sampling. Cartographer record	Roger Smith
South of Minorca Lane, Par River, SX02668 59747	PAR	15/4/2026 8:15	CSI sampling. Cartographer record.	Roger Smith
Near Forkandles Farm, Molinnis Stream, SX 02460 59271	SECONDARY TRIBUTARY (OF CARBIS STREAM)	15/4/2026 9:40	CSI sample & Cartographer record.	Roger Smith
Carbis Stream SX 02834 59401	TRIBUTARY	15/4/2026 8:00	CSI sampling. Cartographer record.	Roger Smith
Lavrean, Par River SX 03134 59164	PAR	15/4/2026 10:00	CSI sampling. Cartographer record.	Roger Smith
Treskilling, Treskilling Stream, SX 04107 57726	TRIBUTARY	15/4/2026 10:35	CSI sampling. Cartographer record.	Roger Smith
Luxulyan allotments, Par River, SX 04732 58045	PAR	15/4/2026 10:55	CSI sampling. Cartographer record.	Roger Smith
Cam Bridges, Par River, SX 05292 57454	PAR	15/4/2026 11:20	CSI sampling. Cartographer record.	Roger Smith
Trebell Green, Bokiddick Stream SX 0551960226	TRIBUTARY	18/4/2026 10:40	CSI sampling. Cartographer record.	Roger Smith
Corgee Moor, Bokiddick Stream SX 0593462167	TRIBUTARY	18/4/2026 10:05	CSI sampling. Cartographer record.	Roger Smith
Gatty's Bridge, Bokiddick Stream SX 05531 57953	TRIBUTARY	15/4/2026 16:45	CSI sampling. Cartographer record.	Joan Farmer
Treffry Viaduct, Par River, SX 05650 57179	PAR	15/4/2026 16:20	CSI sampling. Cartographer record.	Joan Farmer
Lady Rashleigh Mine, Par River, SX 06451 56509	PAR	15/4/2026 14:30	CSI sampling. Cartographer record. Riverfly sampling.	Veronica Jones, Roger Smith, Joan Farmer, Arthur Andrews
Treesmill, Tywardreath Stream, SX 08873 55385	TRIBUTARY	18/4/2026 12:30	CSI sampling. Cartographer record. Riverfly.	Maggie Tagney
Par Beach slipway, SX 0776 53261	PAR	15/4/2026 13:00	CSI sampling. Cartographer record.	Brian Harrisson
Polmear Stream, Ship Inn SX 08749 53417	TRIBUTARY	15/4/2026 13:00	CSI sampling. Cartographer record.	Simon Tagney

D. THIS MONTH IN PICTURES

1. Aquatic plants are beginning to emerge. This is on the Upper Par and may be Sparganium emersum (European bur-reed or unbranched bur-reed).



2. The historic legacy of pollution by the china clay industry can be seen in the thick bank deposits in the Par River and some of its tributaries. This is at Lavrean on the Upper Par.



3. The Bokiddick Stream at Gatty's Bridge.



Photo: Joan Farmer

4. The Lower Par at Treffry Viaduct is often visited by people and animals but given sewage pollution and high phosphate levels, is it safe to go in the water?



Photo: Joan Farmer

5. Following the heavy winter rain repairs to the bank and footpath at Treemill have taken place.



Photo: Maggie Tagney

6. The Polmear Stream was low and slow this month.



Photo: Simon Tagney

7. Low tide on the Lower Par at Par Beach slipway. Mysteriously and worryingly, the Total Dissolved Solids score was very high.



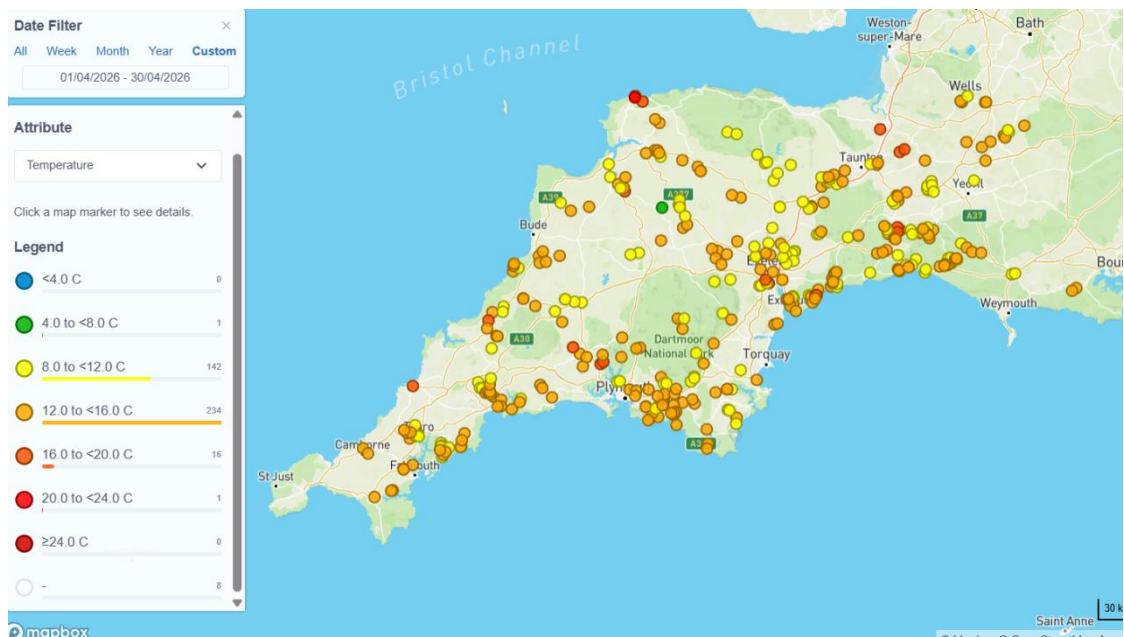
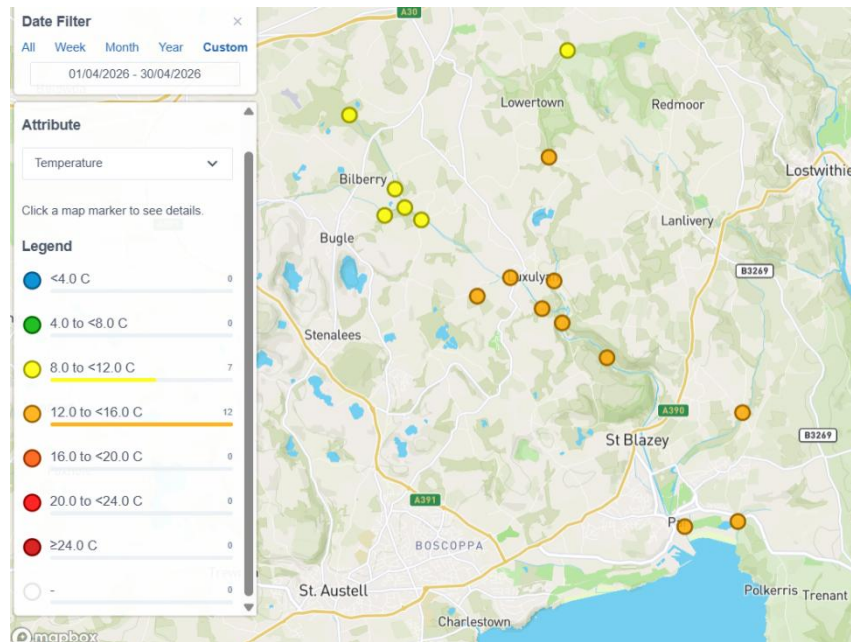
Photo: Brian Harrison

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 April 2026

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.

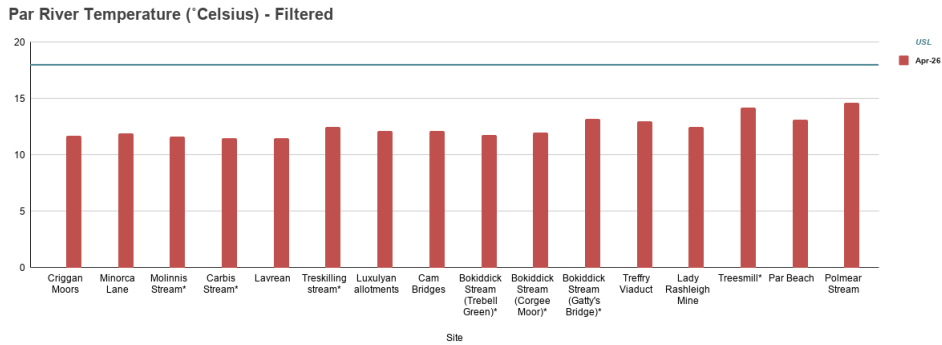
PAR RIVER/TRIBUTARY	LOCATION		Temperature °Celsius
Par	Criggan Moors, Par River, SX 01882 61133		11.7
Par	South of Minorca Lane, Par River, SX 02657 59788		11.9
Secondary tributary	Near Forkandles Farm, Molinnis Stream, SX 02460 59271		11.6
Tributary	Carbis Stream SX 02834 59401		11.5
Par	Lavrean, Par River SX 03134 59164		11.5
Tributary	Treskilling, Treskilling Stream, SX 04107 57726		12.5
Par	Luxulyan allotments, Par River, SX 04732 58045		12.1
Par	Cam Bridges, Par River, SX 05292 57454		12.1
Tributary	Trebell Green, Bokiddick Stream SX 0551960226		11.8
Tributary	Corgee Moor, Bokiddick Stream SX 0593462167		12
Tributary	Gatty's Bridge, Bokiddick Stream SX 05531 57953		13.2
Par	Treffry Viaduct, Par River, SX 05650 57179		13
Par	Lady Rashleigh Mine, Par River, SX 06451 56509		12.5
Tributary	Treesmill, Tywardreath Stream, SX 08873 55385		14.2
Par	Par Beach slipway, SX 0776 53261		13.1
Tributary	Polmear Stream, Ship Inn, SX 08749 53417		14.6

Colour coding:

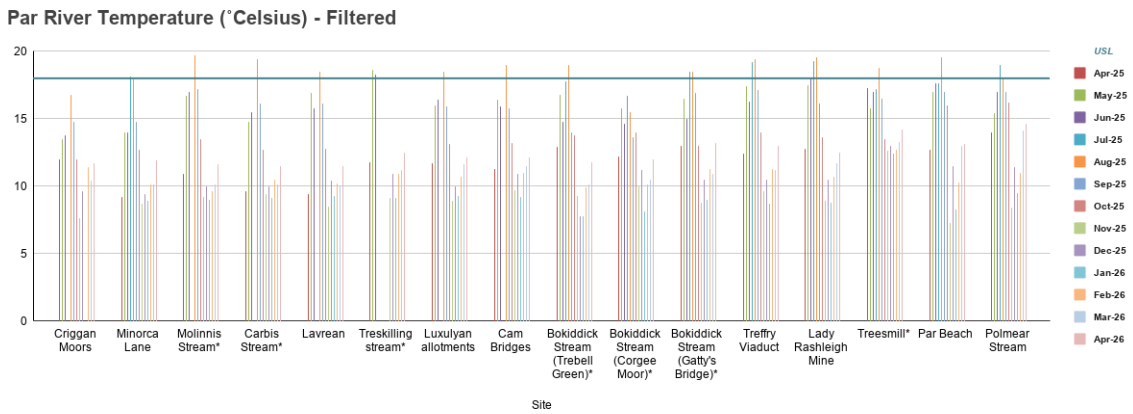
Upper Par	
Lower Par	
Bokiddick Stream	
Tributaries of Upper Par (China Clay-country streams)	
Tributaries of Lower Par	

3. Graphs

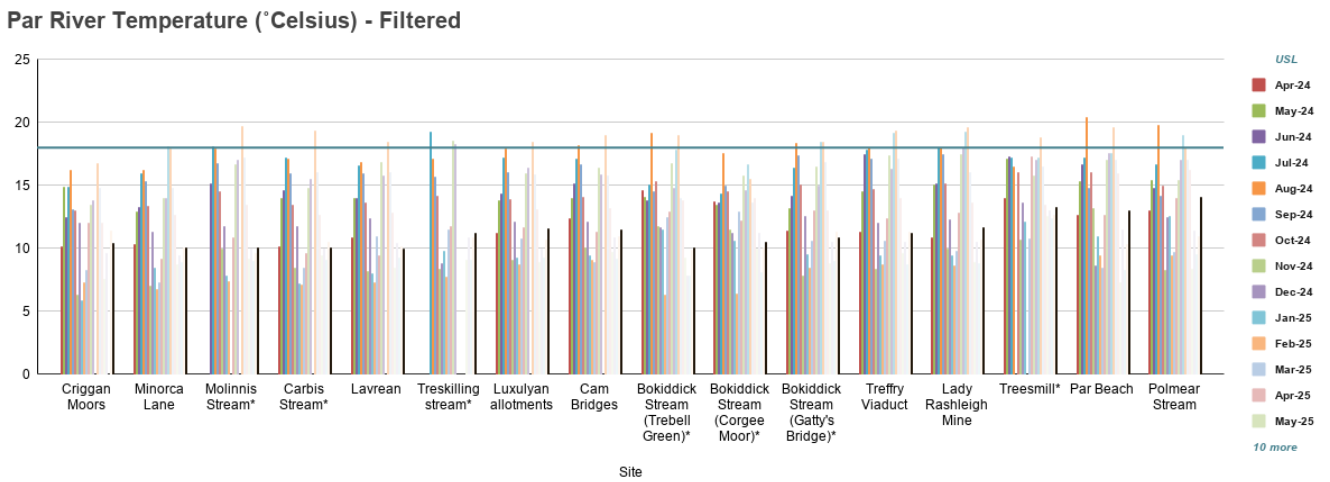
(a) This month:



(b) From 1st April 2025 until 30th April 2026:



(c) From 1st April 2024 until 30th April 2026:

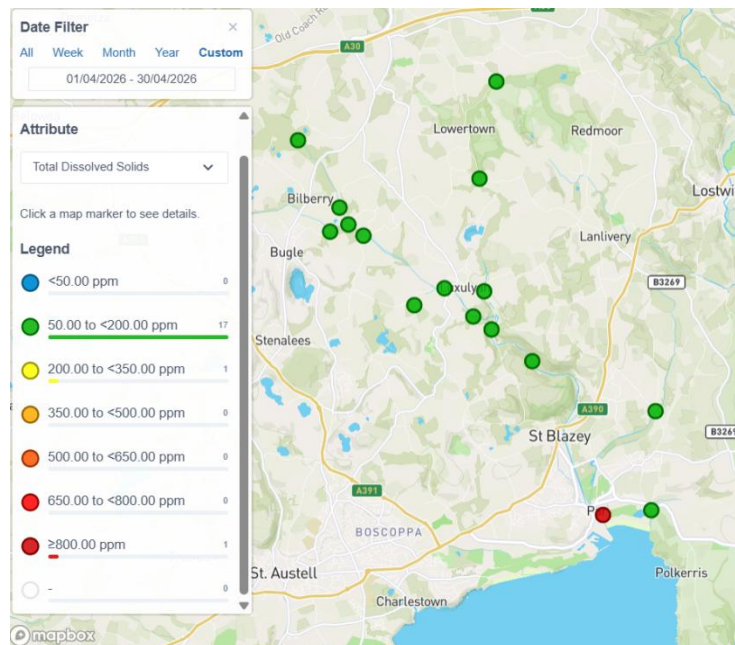


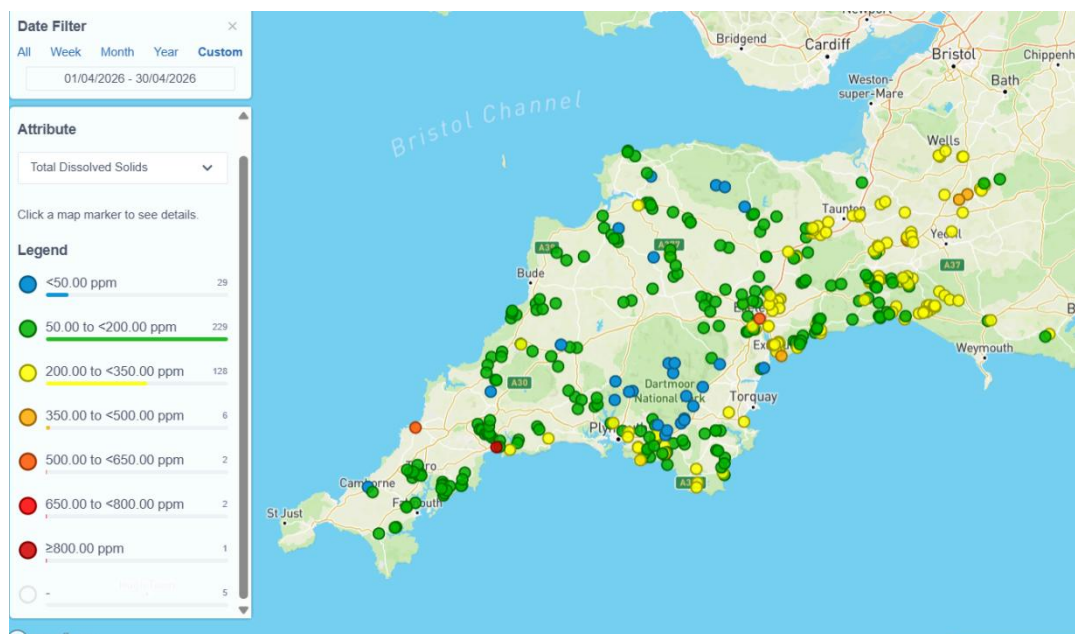
F. TOTAL DISSOLVED SOLIDS

1. We measure these in ppm (parts per million). The Yealm Estuary to Moor Project (YEM) in Devon considers that the upper safe level (USL) for TDS is 300 PPM. 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 April 2026

PAR RIVER/TRIBUTARY	LOCATION		Total Dissolved Solids PPM
Par	Criggan Moors, Par River, SX 01882 61133		64
Par	South of Minorca Lane, Par River, SX 02657 59788		59
Secondary tributary	Near Forkandles Farm, Molinnis Stream, SX 02460 59271		157
Tributary	Carbis Stream SX 02834 59401		120
Par	Lavrean, Par River SX 03134 59164		74
Tributary	Treskilling, Treskilling Stream, SX 04107 57726		66
Par	Luxulyan allotments, Par River, SX 04732 58045		107
Par	Cam Bridges, Par River, SX 05292 57454		98
Tributary	Trebell Green, Bokiddick Stream SX 0551960226		53
Tributary	Corgee Moor, Bokiddick Stream SX 0593462167		62
Tributary	Gatty's Bridge, Bokiddick Stream SX 05531 57953		66
Par	Treffry Viaduct, Par River, SX 05650 57179		89
Par	Lady Rashleigh Mine, Par River, SX 06451 56509		91
Tributary	Treesmill, Tywardreath Stream, SX 08873 55385		114
Par	Par Beach slipway, SX 0776 53261		941
Tributary	Polmear Stream, Ship Inn, SX 08749 53417		160

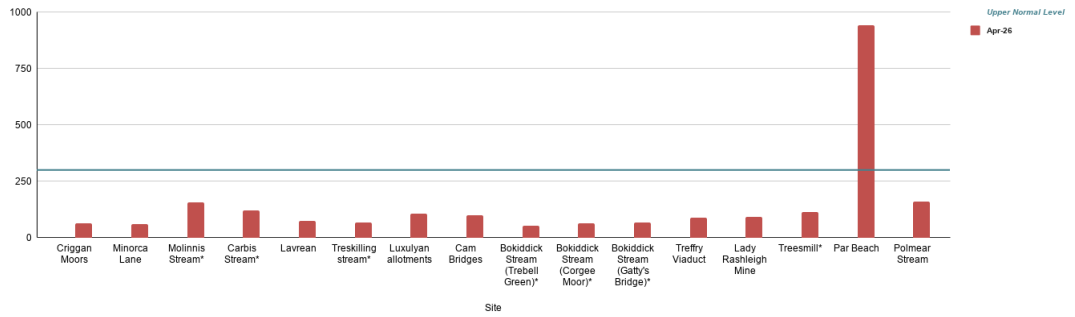
Colour coding:

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

3. Graphs

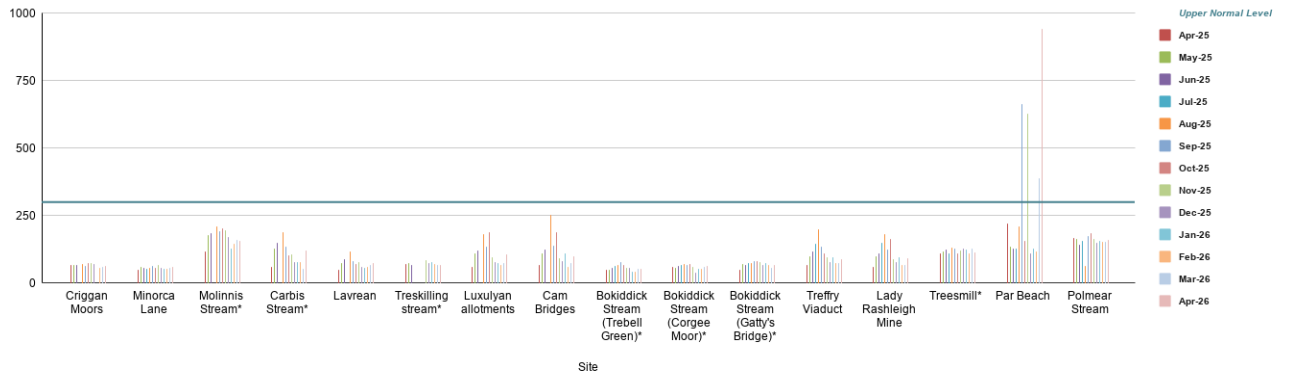
(a) This month:

Par River Total Dissolved Solids (PPM) - Filtered



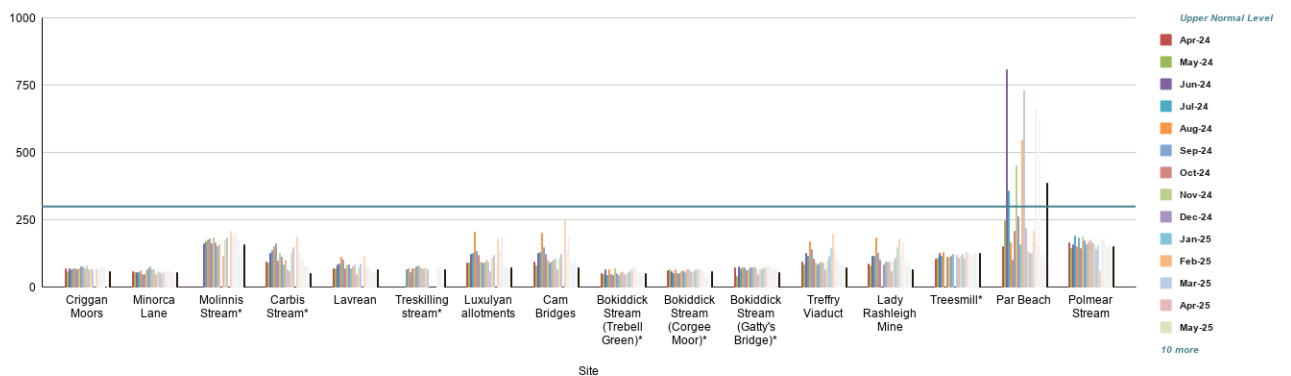
(b) From 1st April 2025 until 30th April 2026:

Par River Total Dissolved Solids (PPM) - Filtered



(c) From 1st April 2024 until 30th April 2026:

Par River Total Dissolved Solids (PPM) - Filtered

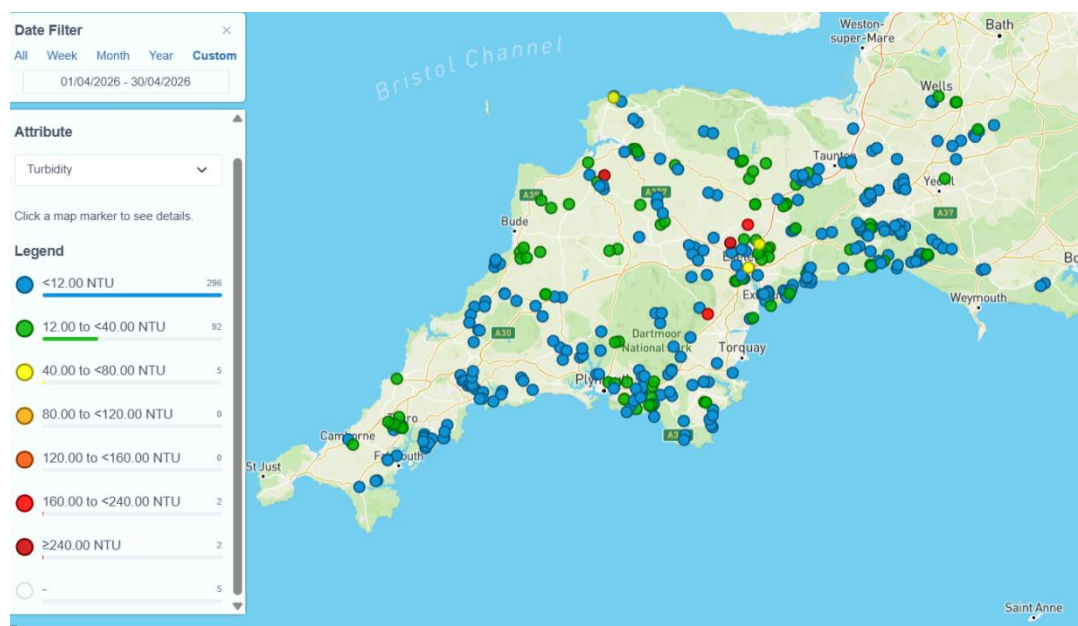
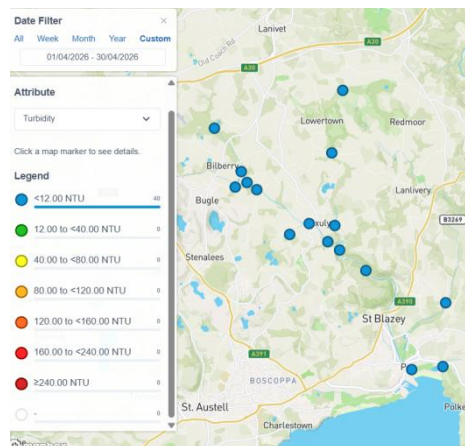


G. TURBIDITY

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. Geographical comparison. Source: Cartographer.



3. Results April10 2026:

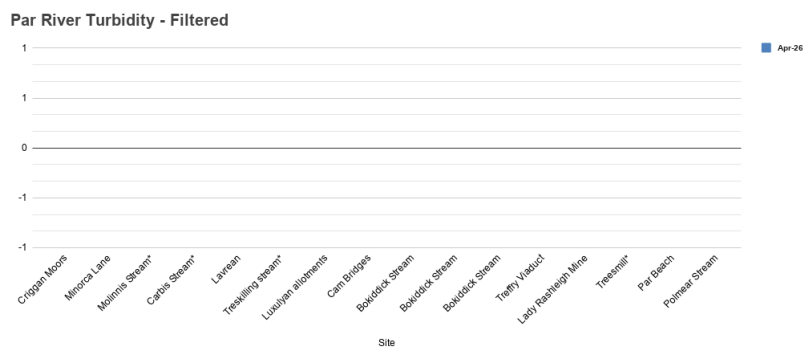
PAR RIVER/TRIBUTARY	LOCATION		Turbidity (NTU)
Par	Criggan Moors, Par River, SX 01882 61133		<12
Par	South of Minorca Lane, Par River, SX 02657 59788		<12
Secondary tributary	Near Forkandles Farm, Molinnis Stream, SX 02460 59271		<12
Tributary	Carbis Stream SX 02834 59401		<12
Par	Lavrean, Par River SX 03134 59164		<12
Tributary	Treskilling, Treskilling Stream, SX 04107 57726		<12
Par	Luxulyan allotments, Par River, SX 04732 58045		<12
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		<12
Tributary	Treesmill, Tywardreath Stream, SX 08873 55385		<12
Par	Par Beach slipway, SX 0776 53261		<12
Tributary	Polmear Stream, Ship Inn, SX 08749 53417		<12

Colour coding:

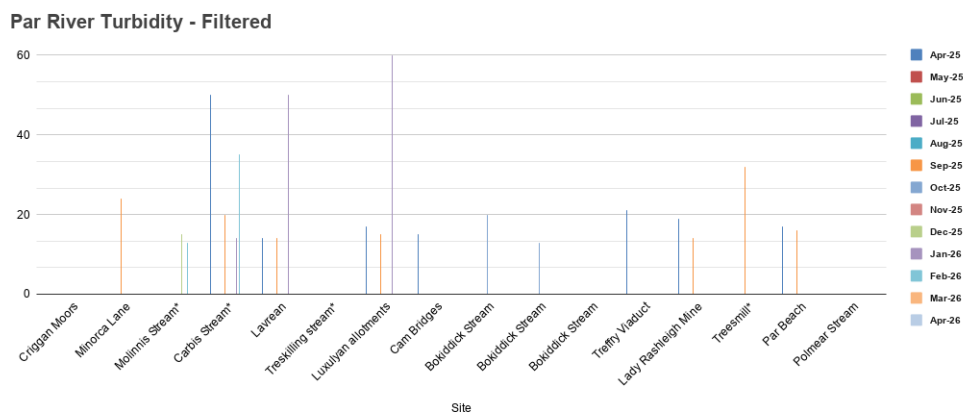
Upper Par	
Lower Par	
Bokiddick Stream	
Tributaries of Upper Par (China Clay-country streams)	
Tributaries of Lower Par	

4. Graphs

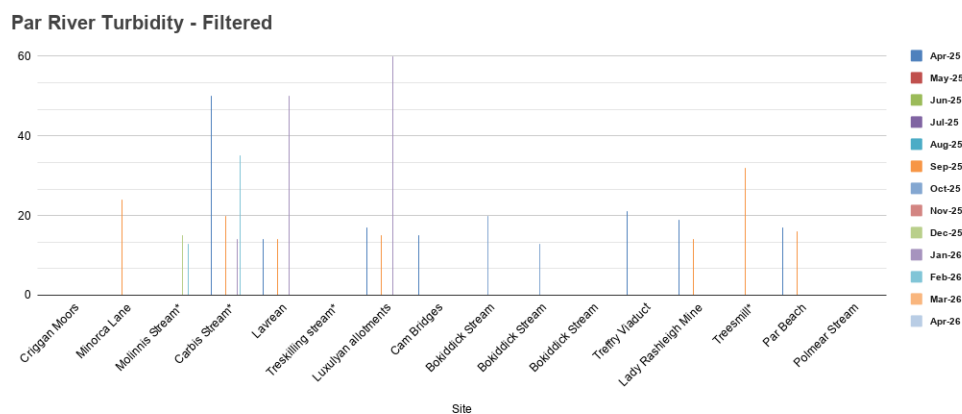
(a) This month:



(b) From 1st April 2025 until 30th April 2026:



(c) From 1st April 2024 until 30th April 2026:



H. PHOSPHATES

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

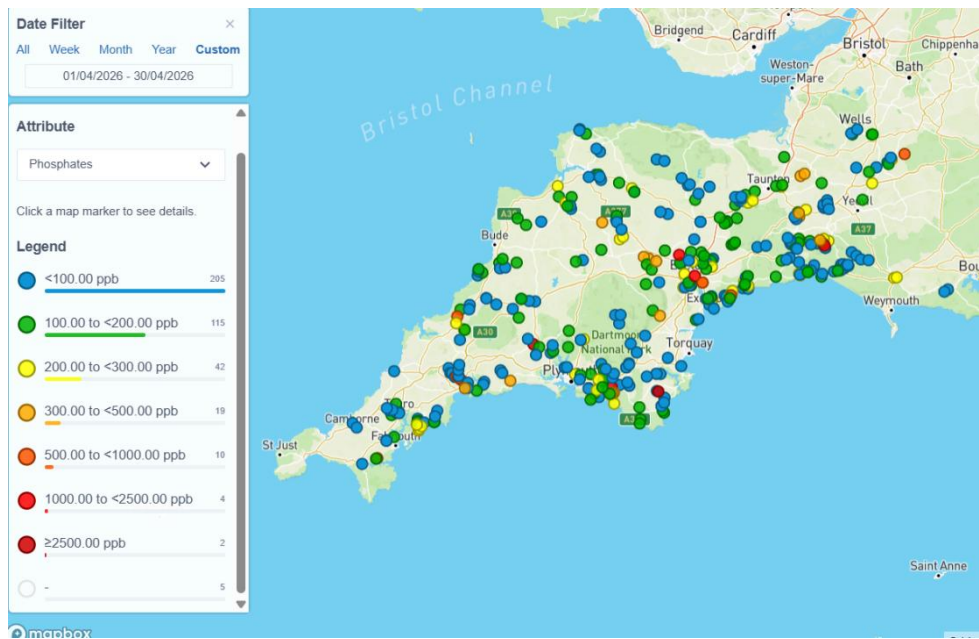
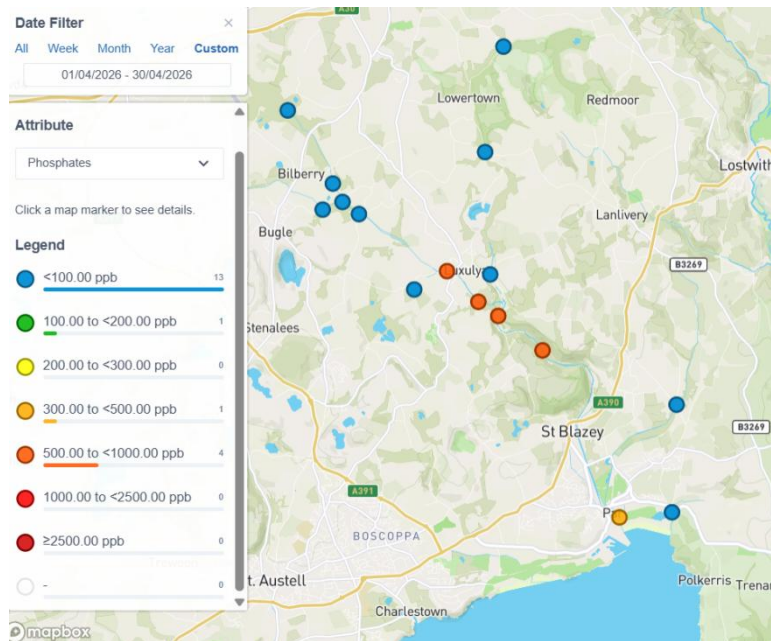
Phosphate occurs naturally within the river ecosystem, but in very low levels under 0.05 mg/l. Therefore, higher levels may indicate anthropogenic input. Phosphate is found in animal and human waste, cleaning chemicals, industrial runoff and fertiliser so this can be a good indicator of pollution. Having 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. Geographical comparison. Source: Cartographer.



3. Results April 2026

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).

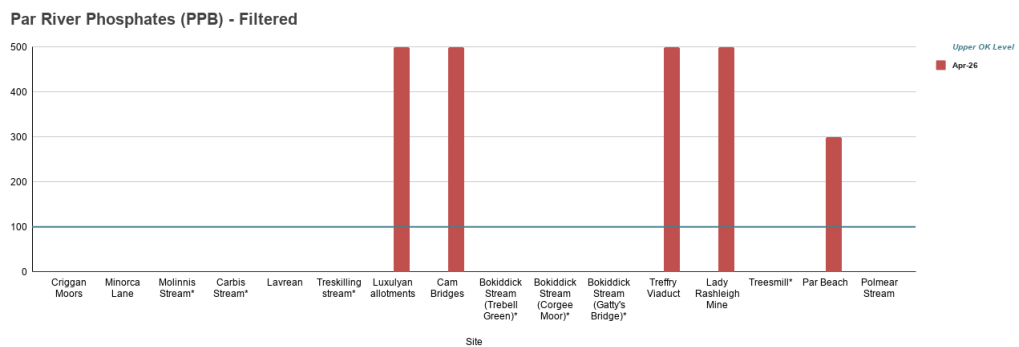
PAR RIVER/TRIBUTARY	LOCATION		Phosphates PPB
Par	Criggan Moors, Par River, SX 01882 61133		0
Par	South of Minorca Lane, Par River, SX 02657 59788		0
Secondary tributary	Near Forkandles Farm, Molinnis Stream, SX 02460 59271		0
Tributary	Carbis Stream SX 02834 59401		0
Par	Lavrean, Par River SX 03134 59164		0
Tributary	Treskilling, Treskilling Stream, SX 04107 57726		0
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		500
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		300
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	

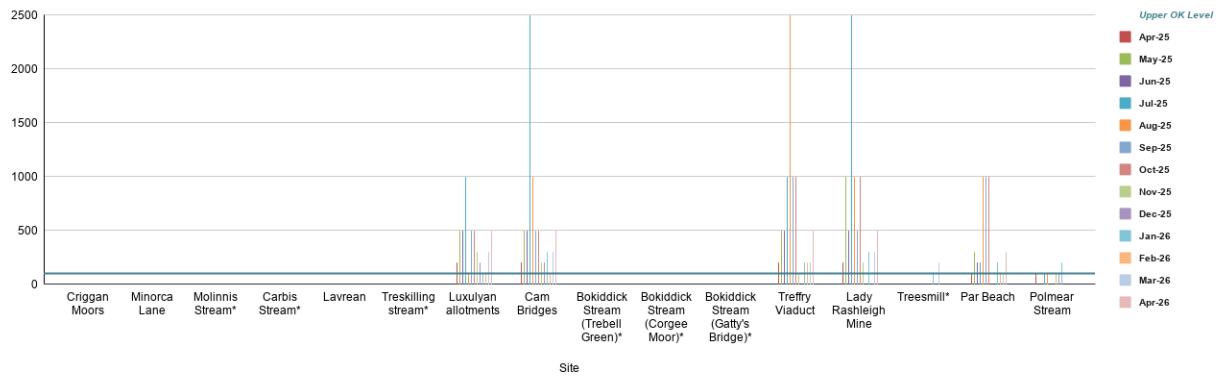
4. Graphs

(a) This month:



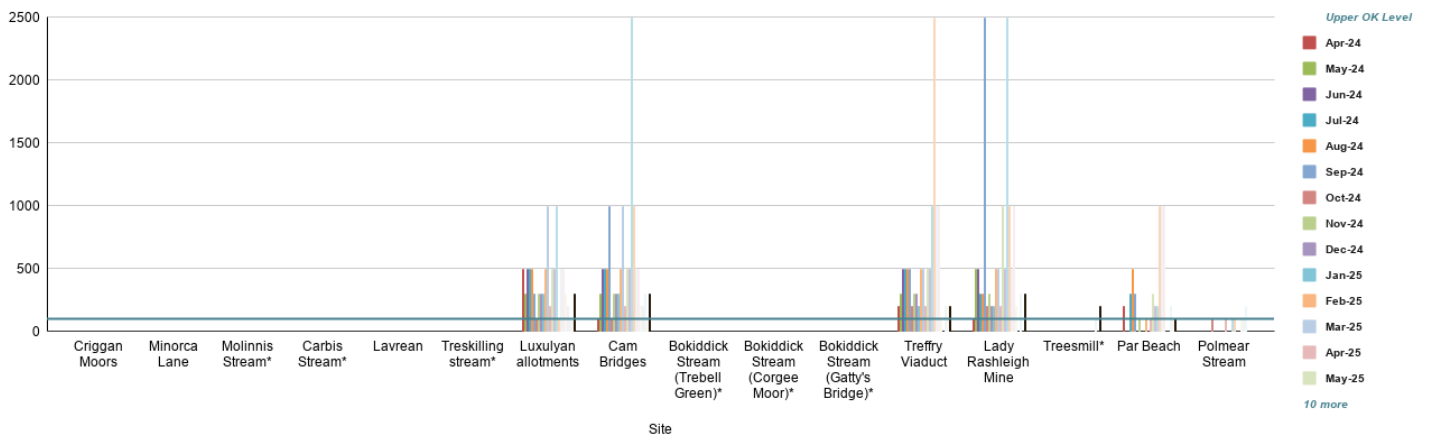
(b) From 1st April 2025 until 30th April 2026:

Par River Phosphates (PPB) - Filtered



(c) From 1st April 2024 until 30th April 2026:

Par River Phosphates (PPB) - Filtered

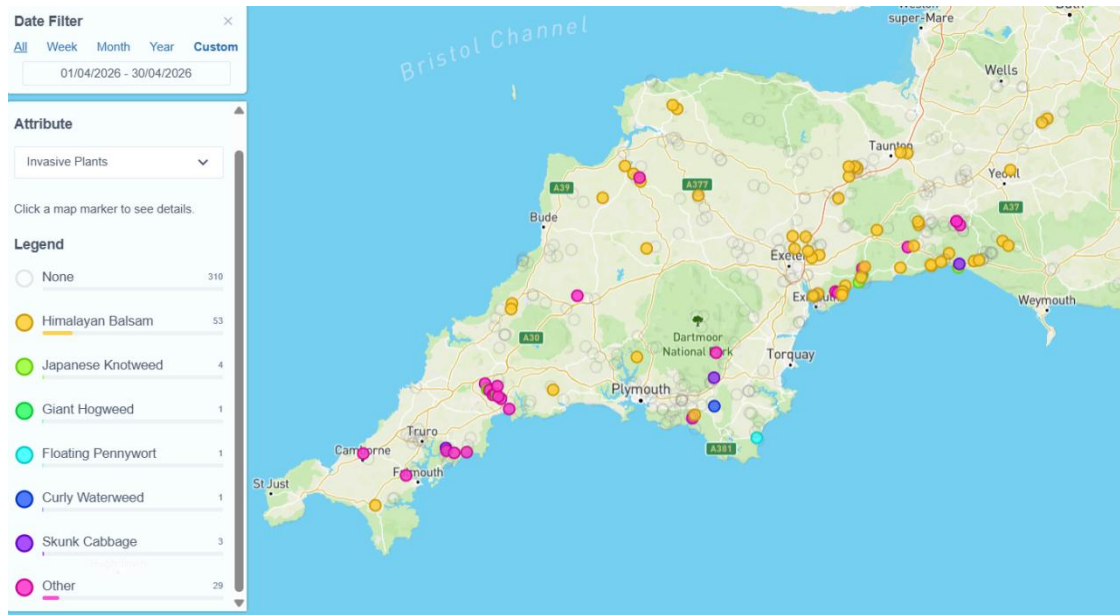
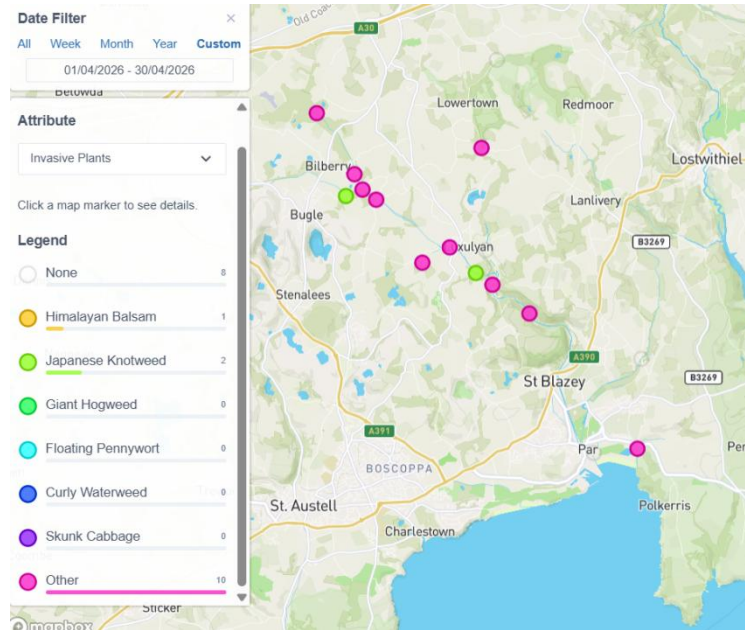


I. NITRATE

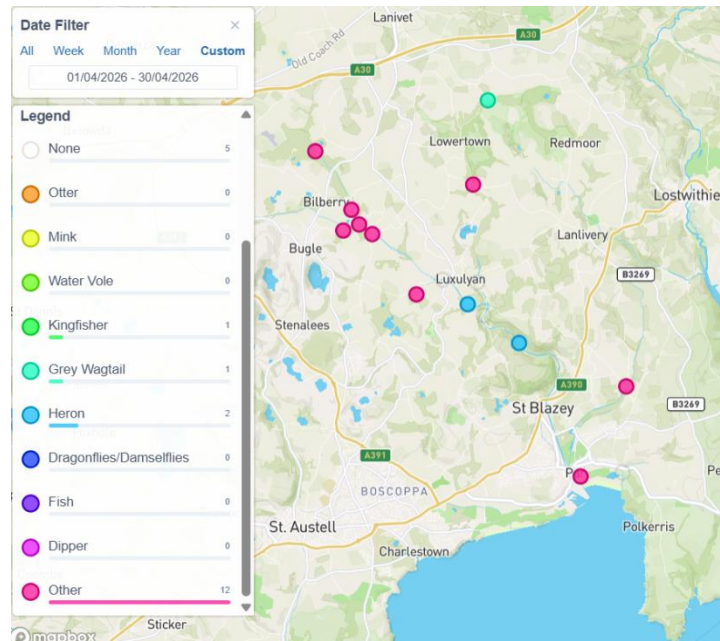
Nitrate results were recorded at all sites except Gatty's, Treffry Viaduct, and Polmear. Readings were all 0 PPM.

J. WILDLIFE & INVASIVE PLANTS

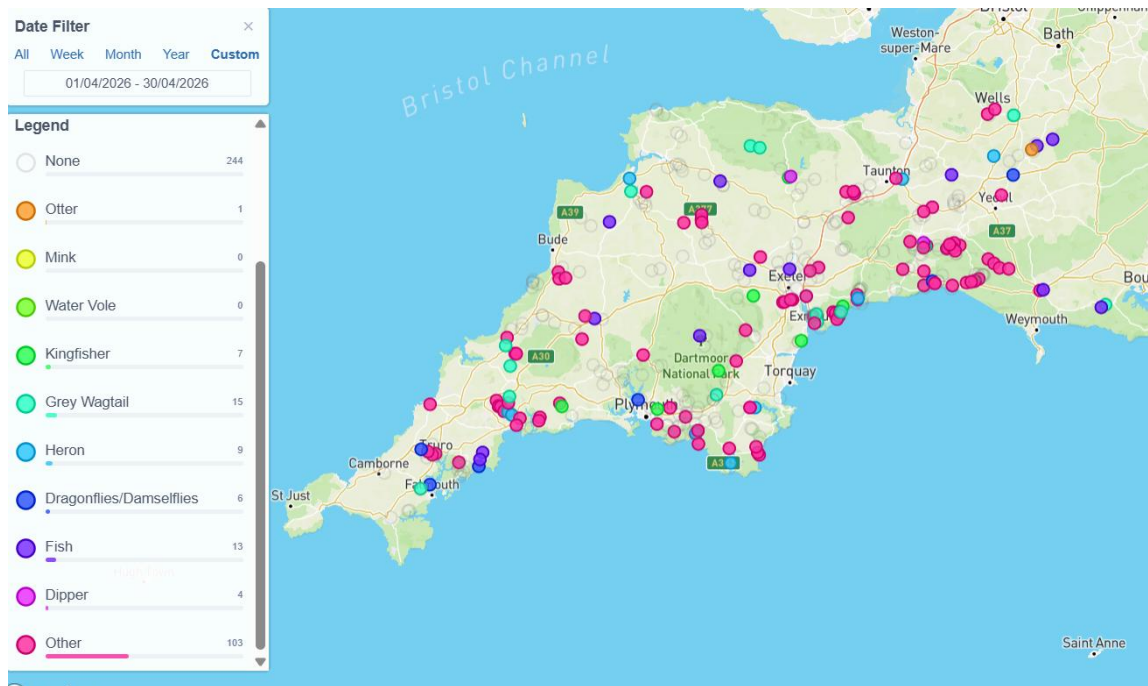
1. Invasive Plants sightings at the monitoring points included:



2. Wildlife spotted:



Inexplicably, the map shows a Grey Wagtail on the Upper Bokiddick; it should be 'Other' to reflect the lake created by beavers.



Wildlife & Invasive Plants sightings at the monitoring points included:

LOCATION	WILDLIFE NOTED		INVASIVE PLANTS NOTED
Criggan Moors, SX 01882 61133	HEARD: Chiffchaff SEEN: Roe deer		Hemlock Water Dropwort
South of Minorca Lane, Par River, SX 02657 59788	HEARD: Blue Tit, Wren, Wood Pigeon, Geese, Greenfinch, Coal Tit, Willow Warbler, Robin, Chiffchaff, Mallard, Carrion Crow, Blackcap SEEN: Deer tracks, Mallards		Hemlock Water Dropwort
Forkandles Farm, Molinnis Stream, SX 02460 59271	HEARD: Chiffchaff		Japanese Knotweed, Hemlock Water Dropwort
Carbis Stream SX 02834 59401	HEARD: Robin, Wren, Blackcap, Chiffchaff		Hemlock Water Dropwort
Lavrean, Par River SX 03134 59164	HEARD: Chiffchaff		Hemlock Water Dropwort
Treskilling, Treskilling Stream, SX 04107 57726	HEARD: Chiffchaff		Hemlock Water Dropwort
Luxulyan allotments, Par River, SX 04732 58045			Hemlock Water Dropwort
Cam Bridges, Par River, SX 05292 57454	HEARD: Chiffchaff, Wren SEEN: Heron		Hemlock Water Dropwort, Japanese Knotweed
Trebell Green, Bokiddick Stream SX 0551960226	SEEN: Beaver lake, squirrel HEARD: Wren, Robin, Chiffchaff, Blackcap, Great Tit, Bullfinch, Linnet, Wood Pigeon		
Corgee Moor, Bokiddick Stream SX 0593462167	HEARD: Wren, Blue Tit, Blackbird, Chiffchaff, Wood Pigeon, Willow Warbler, Robin		Hemlock Water Dropwort
Gatty's Bridge, Bokiddick Stream SX 05531 57953			Hemlock Water Dropwort
Treffry Viaduct, Par River, SX 05650 57179			Hemlock Water Dropwort
Lady Rashleigh Mine, Par River, SX 06451 56509	SEEN: Heron; riverfly nymphs (Cased Caddis, Caseless Caddis, Flat-bodied Upwing, Olives, Stoneflies, Gammarus).		Hemlock Water Dropwort
Treesmill, Tywardreath Stream, SX 08873 55385	HEARD: Long-tailed Tit, Great Tit, Blue Tit, Dunnock, Wood Pigeon, Nuthatch, Greenfinch, Chaffinch, Wren, Blackbird, House Sparrow, Robin, Green Woodpecker, Chiffchaff, Rook		
Par Beach slipway, SX 0776 53261	Wood Pigeon		
Polmear Stream, Ship Inn, SX 08749 53417			Hemlock Water Dropwort

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

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.

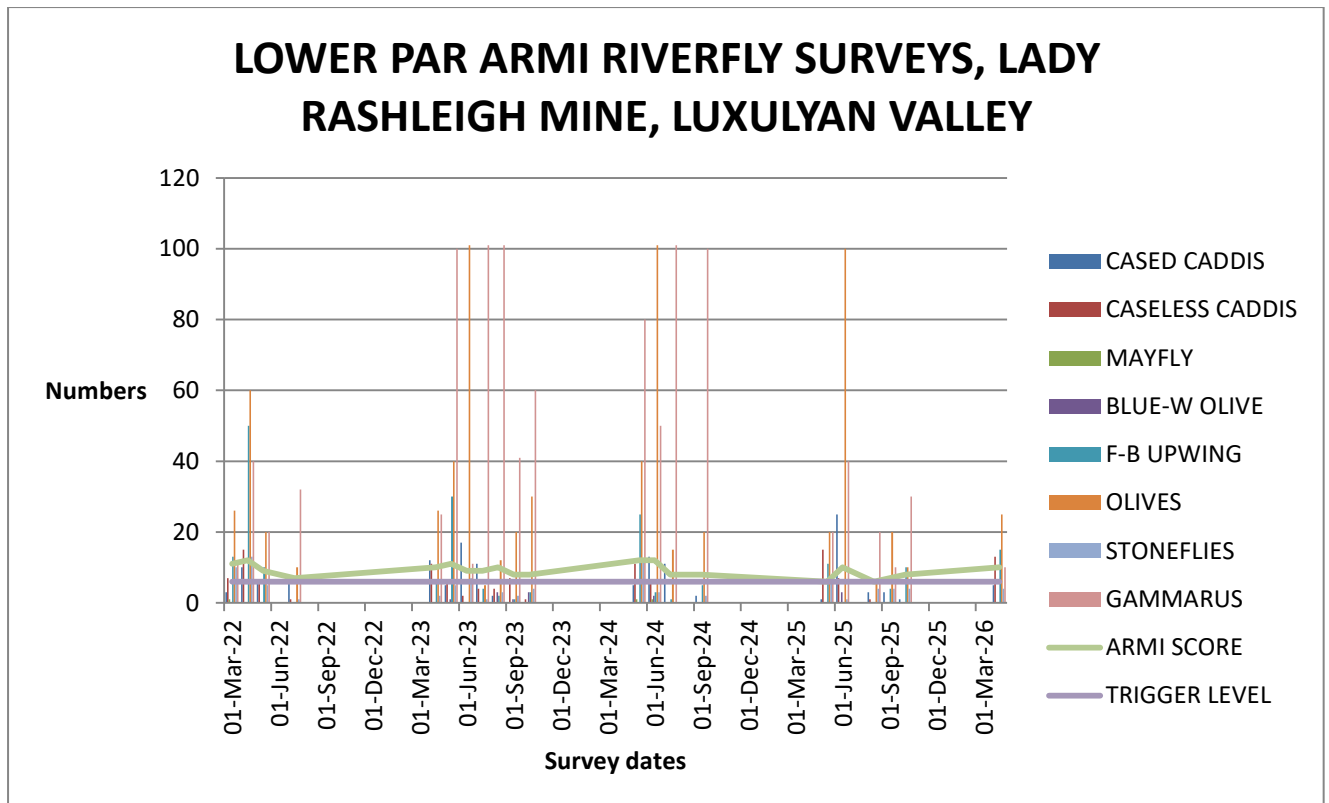
It is impossible to count every invertebrate so this counting method is used:

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 Joan Farmer, Veronica Jones, Arthur Andrews and Roger Smith on 15th April 2026.

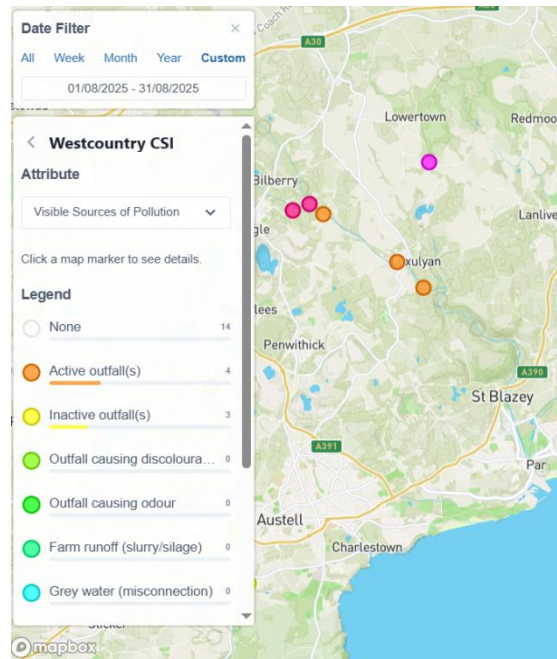
	SPECIES	NUMBER	CATEGORY
Trichoptera			
1	Cased Caddisfly	5	1
2	Caseless Caddisfly	13	2
Ephemeroptera 3 tails			
3	Mayfly (Ephemeraidae)	0	0
4	Blue-winged olive (Ephemerellidae)	0	0
5	Flat-bodied up-wings (Heptageniidae)	15	2
6	Olives (Baetidae)	25	2
Plecoptera 2 tails			
7	Stoneflies	4	1
Gammaridae			
8	Freshwater Shrimp	10	2
			10

CATEGORY TOTAL	6
TRIGGER LEVEL	10

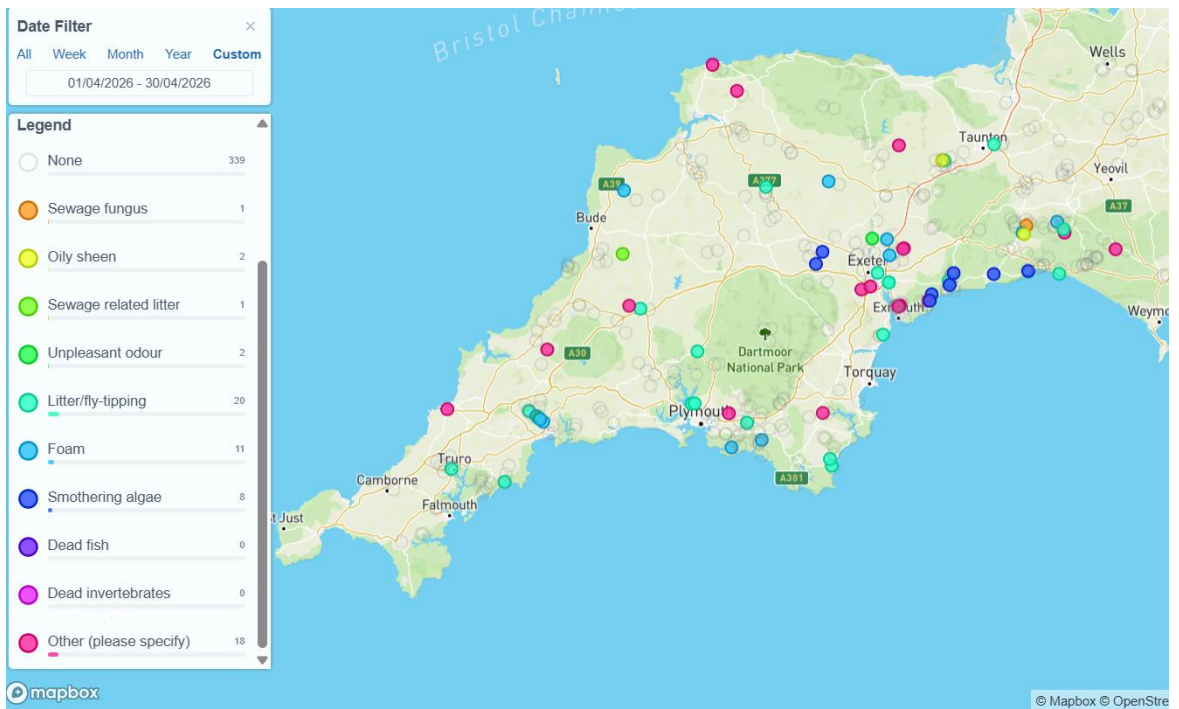
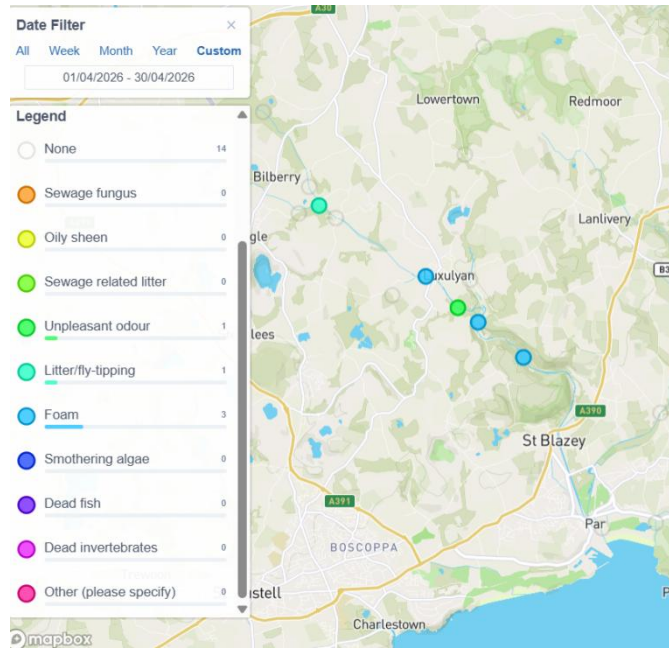


L. POLLUTION SOURCES AND EVIDENCE

1. Visible sources of pollution (source: Cartographer)



2. Evidence of recent pollution:



LOCATION		EVIDENCE OF RECENT POLLUTION
Criggan Moors, SX 01882 61133		
South of Minorca Lane, Par River, SX 02657 59788		Litter
Forkandles Farm, Molinnis Stream, SX 02460 59271		
Carbis Stream SX 02834 59401		
Lavrean, Par River SX 03134 59164		
Treskilling, Treskilling Stream, SX 04107 57726		
Luxulyan allotments, Par River, SX 04732 58045		Filtered sewage (?), foam, phosphates
Cam Bridges, Par River, SX 05292 57454		Smell, foam, filtered sewage (?), phosphates
Trebell Green, Bokiddick Stream SX 0551960226		
Corgee Moor, Bokiddick Stream SX 0593462167		
Gatty's Bridge, Bokiddick Stream SX 05531 57953		
Treffry Viaduct, Par River, SX 05650 57179		Filtered sewage (?), foam, phosphates
Lady Rashleigh Mine, Par River, SX 06451 56509		Phosphates, foam, filtered sewage (?)
Treesmill, Tywardreath Stream, SX 08873 55385		
Par Beach slipway, SX 0776 53261		Filtered sewage (?), phosphates
Polmear Stream, Ship Inn, SX 08749 53417		

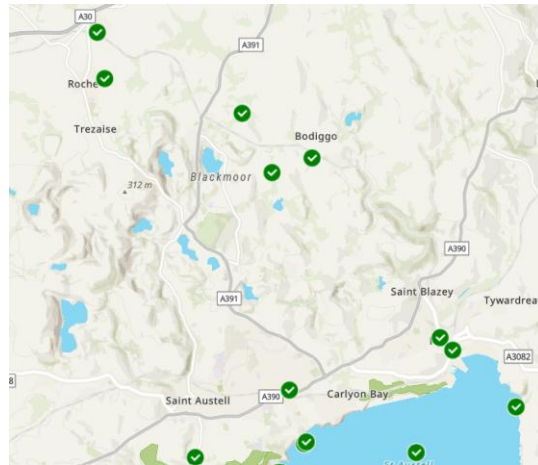
N.B. Although not noticeable at our monitoring points, there is a persistent smell of sewage in the vicinity of the Molinnis CSO even when there have been no reported discharges.

Colour coding:

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

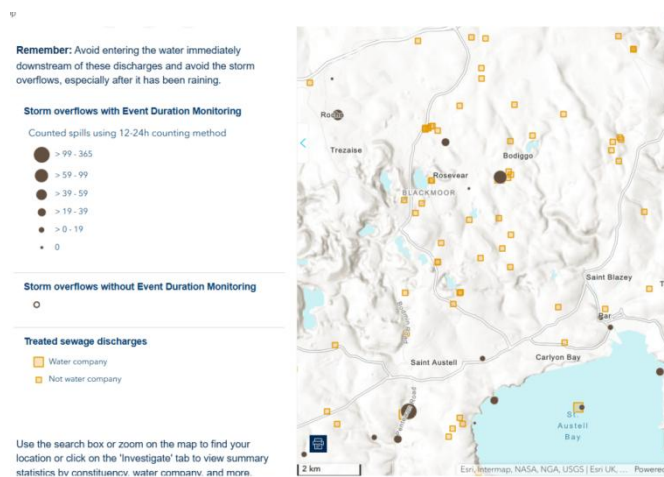
3. South West Water Storm Overflows

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>)



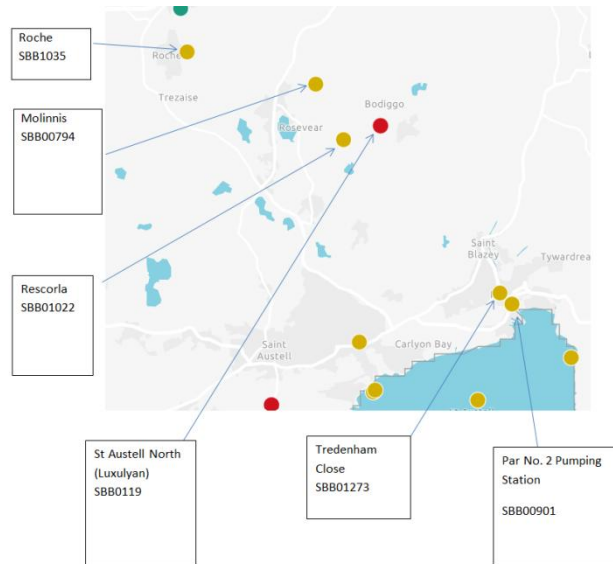
(b) South West Water Storm Overflows in the Par River Catchment (updated December 2025):

The main overflows are (from source to sea along the catchment). The identification numbers have been updated:

- Roche storm overflow (SBB01035)
- Molinnis storm overflow, Bugle (SBB00794)

- Rescorla storm overflow, Luxulyan (SBB01022)
- Luxulyan sewage treatment works settled storm overflow, St Austell (SBB0119)
- Tredenham Close storm overflow, Par (SBB1273)
- Par No2 pumping station overflow, Par (SBB01273)

This information has been taken from the *Surfers Against Sewage* discharge website: <https://datahq.sas.org.uk/sewage-data-hq/> and The Rivers Trust’s site: <https://theriverstrust.org/sewage-map> .



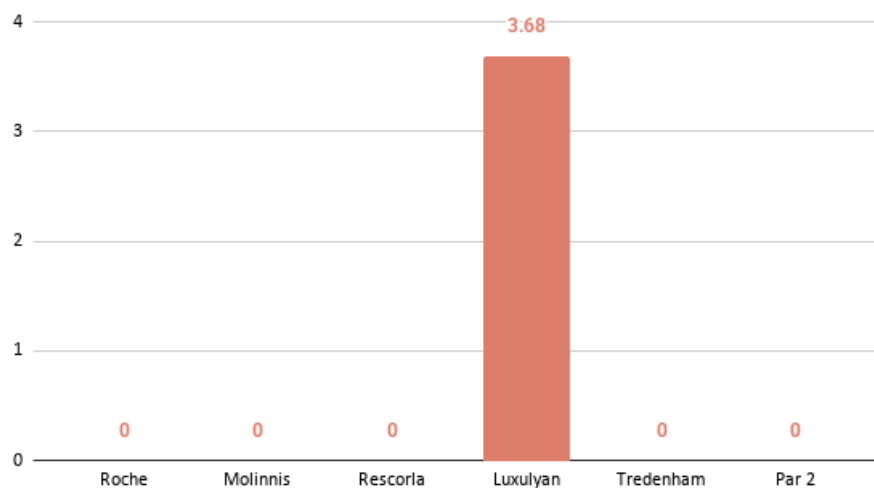
(c) Graphs:

Data has been taken from <https://datahq.sas.org.uk/sewage-data-hq/>.

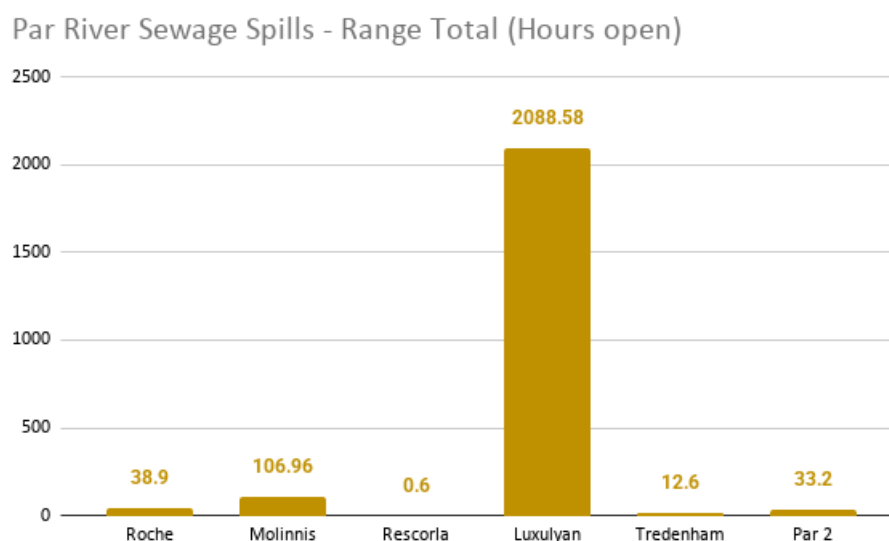
Any errors are the fault of the compiler of this report. Results are indicative, not definitive.

(i) April 2026:

Par River Sewage Spills - Month Summary (Hours open)



(ii) From 1st December 2025 until 30th April 2026:



The St Austell North (Luxulyan) CSO was also offline for maintenance for 18 hours and 8 minutes between the 29th and 30th April 2026.

(d) Response from South West Water dated 23rd April 2026 to questions submitted in March 2026:

Request for Environmental Information

Thank you for your request for information, received by South West Water (“SWW”) on 2 March 2026, which is included below for reference.

The information you have requested is covered by the Environmental Information Regulations 2004 (“the Regulations”) and SWW has a duty to make environmental information that it holds available on request, unless one of the exceptions contained within the Regulations applies.

SWW’s Response

Question 1: What action is South West Water currently taking, or planning to take, to reduce spills from these 6 storm overflows: Roche storm overflow (SBB01035); Molinnis storm overflow, Bugle (SBB00794); Rescorla storm overflow, Luxulyan (SBB01022); Luxulyan sewage treatment works settled storm overflow, St Austell (SBB0119); Tredenham Close storm overflow, Par (SBB1273); Par No2 pumping station overflow, Par (SBB01273)?

We can confirm that the dates for all current and planned work for the requested assets is published on our website, on our WaterFit Live page. This can be found here: Storm overflow map | WaterFit Live | South West Water. We can confirm that we are currently carrying out large scale catchment investigations to locate groundwater infiltration to the sewer network. Following these investigations, we will follow up with rehabilitation works to infiltration.

Question 2: Is St Austell North STW currently able to deal with the sewage being received or does it have to remove waste by road tanker for treatment elsewhere, such as Nanstallon?

The Sewage Treatment Works (“STW”) you have referred to within this request is otherwise and more commonly known as Luxulyan STW. We can confirm that Luxulyan STW is able to deal with the sewage received to the site, and that no sewage is removed by tanker. Sewage from a catchment of this size cannot be removed by tanker as the flow rates are too great to allow this to occur. However, solids produced at the site during the treatment process are referred to as sludge. Sludge is a different product to sewage and is a byproduct that is generated during the treatment of sewage. Not all STW sites have sludge processing facilities, so sludge is tankered from STW sites to an appropriate sludge treatment centre. We can confirm that sludge is removed from Luxulyan STW and it taken to Par to be treated.

Question 3: If St Austell North STW is unable to deal with current demands, is this due to increased demands from new housing (such as at West Carclaze Garden Village, near Penwithick), heavy rainfall, groundwater infiltration, a lack of investment, or a combination of two or more factors (and if so, which)?

As detailed above, Luxulyan STW is able to deal with the current demand.

We would also like to confirm that Luxulyan STW has had recent investment, with a 300m³ storm tank installed at the site in March 2021. Further, Luxulyan STW is included in SWW’s business plan for a phosphorous reduction scheme during investment period Asset Management Period 8 (2025-2030) (“AMP 8”). Investment at this site will reduce the contributions of phosphorous in line with a revised permit to be applied by the Environment Agency by 2030. If a major **upgrade is required to accommodate these changes, SWW would submit a Supply & Demand (“S&D”)** request in our PR29 Business Plan. At present, there is no current S&D driver for Luxulyan in for AMP 8.

Question 4: What measures are taken by South West Water to deal with sewage that is spilled through storm overflows, including screening, monitoring, and removal (or treatment) of chemical and bacterial composition?

We can confirm that these Storm Overflows are screened and monitored.

Question 5: What measures are taken by South West Water to deal with treated effluent that is discharged through outfalls, including screening, monitoring, and removal (or treatment) of chemical and bacterial composition?

Treated effluent will be treated biologically to reduce the levels of potential pollutants to levels consistent with the permit imposed by the Environment Agency (“EA”), and within the limits appropriate from various Regulations as applicable. These will generally include screening, settlement and treatment, together with disinfection (by Ultraviolet Radiation) where these regulations stipulate. Untreated (‘spill’) flows may be screened, and may be further settled, as stipulated in the individual permits for those discharges. Permits for these are done at an individual level and will have been issued by the EA in line with the regulations at the time of issue.

Question 6: What checks are made on the Molinnis Storm overflow near Bugle (SBB00794)? (There is often a sewage smell near this facility.)

Molinnis Combined Sewer Overflow (“CSO”) is on a 14-day scheduled maintenance rotation. The checks conducted consist of opening all covers at the CSO and visually checking the channel and overflow pipe as well as checking the onsite measurement systems and confirming that the ultrasonics are positioned correctly. If needed, these checks also include the cleaning of any debris at the CSO. A visual inspection of the next downstream manhole is completed during these checks to ensure forward flows are observed, as well as an inspection of the outfall and watercourse. If the attending operators feel the CSO is in need of a cleanse, this is raised reactively.

Question 7: Why is the Rescorla storm overflow, Luxulyan (SBB01022) often offline for maintenance?

The Rescorla Storm Overflow (“SO”) has been offline due to battery and power issues. SWW are actively investigating this issue to identify the underlying causes and determine appropriate remedial actions.

Question 8: There is a sewage pumping station near Luxulyan village, with a discharge point at SX 0504 5783. (a) Why isn’t this featured on the WaterFit Live Storm Overflow map (<https://www.southwestwater.co.uk/environment/rivers-and-bathing-waters/waterfitlive/storm-overflow-map/full-map>)? (b) How often have there been discharges from this point since January 2025?

We can confirm that the site referenced is Luxulyan PSEO (Pumping Station Emergency Overflow). SWW’s WaterFit Live site shows the discharges for its SOs, alongside some Emergency Overflows (“EOs”) that affect bathing water. There is currently no obligation to include EO sites in live public reporting. Therefore, as Luxulyan PSEO is an EO and its discharges do not affect a bathing water area, its discharges are not included on the WaterFit Live site. There have been 0 discharges from Luxulyan PSEO in the period 01/01/2025 to 10/03/2026.

Question 9: The Environment Agency has confirmed that the Par River has a significant problem with phosphate pollution and that one source of this is likely to be St Austell North STW at Luxulyan. What plans are in place to remove phosphate from discharges into the river and what is the timescale for doing so?

As detailed above, Luxulyan STW is included in SWW’s business plan for a phosphorous reduction scheme during investment period Asset Management Period 8 (2025-2030). Investment at this site will reduce the contributions of phosphorous in line with a revised permit to be applied by the Environment Agency by 2030.

Question 10: Does South West Water use bio-beads in its treatment plants, including St Austell North at Luxulyan? What measures are in place to prevent these entering rivers and streams?

Luxulyan [sic] is not a site with bio-bead media used in the treatment process. SWW operates eight Biological Aerated Flooded Filter (BAFF) plants within its area of responsibility with bio-bead media. There are secondary containment traps to prevent loss of this media to the environment. Additional cleansing and assurance inspections are carried out to keep sites both compliant and environmentally safe.

Your rights under the Regulations If you are dissatisfied with the handling of your request, you have the right to ask for an internal review. Internal review requests should be submitted within 40 working days of the date of receipt of this response and should be addressed to our Group Deputy General Counsel who can be contacted by e-mail on EIInternalreviews@southwestwater.co.uk . If you are dissatisfied with the outcome of an internal review, you may complain to the Information Commissioner here.

Kind regards

South West Water

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

Readers of this report wishing to submit questions or comments to South West Water can send them to eirenquiries@pennon-group.co.uk .

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, Sasha Pinto, Arthur Andrews, and Jenny Tagney 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, 23rd May 2026