



Safeguarding our rivers since 1907

Who we are



- Riparian Owners
- River Managers and Keepers
- Anglers
- Citizen Scientists and other concerned people



Who we are

- Core Team
- Paul Vignaux - *Executive Director - 2.5 days/week*
- Wendy Turkington - *Administrator – 1 day/week*
- Sue George - *Communications consultant- 1day/week*
- *Monica Howard – Contracted Finance Officer*
- *Jansen van Dok – Contracted Webmaster*



Weed Cut Wardens – L-R: Keith Fisher, Nigel de Foubert and Chris Geal



Jonathan Durrant, Chair



Paul Vignaux, Executive
Director



Neil Freeman



Nick Parkhouse



William Sleeman



Duncan Potts



Andrew Hoad



Jem Dunn



Wendy Turkington,
Administrator

What we do



The Test and Itchen Association is dedicated to conserving and protecting the Hampshire chalk streams of the catchments of the Test, Itchen and Meon rivers.

Our Work:

- Monitoring threats to the rivers
- Promoting good river management practices
- Promote Game Fishing
- Advocacy and Campaigns
- Research and Training
- Legal Action

Membership:

- Annual Rivers Report
- AGM
- Start of Season Newsletter
- Swan Control License
- Weed cut coordination
- Regular Update Newsletters
- Hydrological and Fish Reports
- Water Expert Group Reports
- WQMN kits and consumables
- Sponsored Research Reports
- Autumn Members' Day
- Occasional workshops and training days
- End of season Newsletter
- Advice and consultation from Board and Executive Director

Citizen Science – WQMN, Smart Rivers and Riverfly

Planning 'radar' from members and citizens

Our Goals for the Future:



Conservation

- ***Improve the water quality of the chalk streams.***
- ***Ensure we have year-round sustainable levels of water in our rivers.***
- ***Improve the river habitat to cope with the effects of climate change.***
- ***Bring back the salmon to our rivers.***

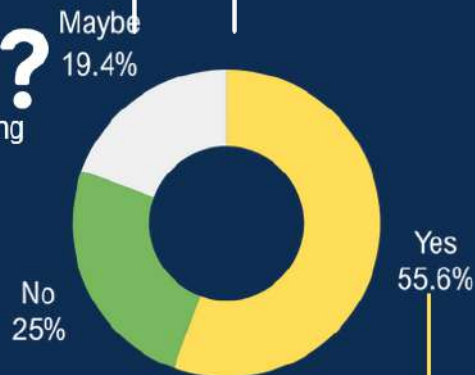
Fishing

- ***Ensure the rivers have a sustainable balance of wild and stocked fish for game fishing.***
- ***Promote the wonderful sport of game fishing on Hampshire's iconic chalk streams.***
- ***Encourage future generations into the sport.***

Catchment Partnership – Benchmarking

MIND THE GAP – CATCHMENT DELIVERY

Are there any
BARRIERS?
to partnership working



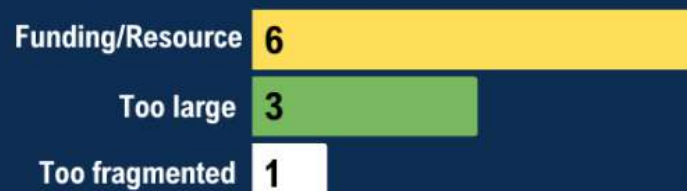
THE 3 MOST MENTIONED BARRIERS



Is the
STRUCTURE?
suitable for the co-creation
& delivery of projects



THE 3 MOST MENTIONED ISSUES



Big gaps in data – flow data;
surveys; chemicals.... and data
consistency (time / method)

Most CPs aren't able to
develop and deliver priorities
in funding and time

20% of waterbodies have not
had project work since 2010

CPs aren't their own entity –
can't apply for or hold funds

Ways and Means



- **Work in partnership locally:**
 - Principally the **Test and Itchen Catchment Partnership** and the **Meon Valley Partnership**
 - Itchen Salmon Delivery Plan
 - Project White Hart
 - Watercress and Winterbournes Landscape Project
 - Southern Water Community Meetings
 - Police and Crime Commissioner Rural Engagement Forum
 - Hampshire & IOW Constabulary Rural Crime Partnership
 - **With Pilhill Brook Association, TARCA, Cheriton Conservation Volunteer Group, Meon Valley Conservation Group, Upper Itchen Restoration CIC, Friends of the Itchen Estuary and Pan Parish River Pollution Forum**
- **Increase our influence:** We are working with other national level NGOs and campaign groups to press those in power for reform of the water sector and planning laws to protect and restore our rivers.
- **Growing our membership:** We aim to grow our membership and attract new forms of support from commercial organisations and others.

Ecosystem contribution to the UK economy through **tourism and outdoor leisure** is estimated at **£22.4 bn** expenditure annually

Recreational Fishing is worth
£2.5 bn
to the UK economy

2.4 million days
Fishing for trout and grayling

Main Findings

- T&OL is worth **£10.5 bn** annually to the UK economy (GVA) (2019).
- This is equivalent of **1.4% of UK GDP**. The ecosystem contribution is 0.9% (2019).
- Freshwater anglers' activities generate the equivalent of **27,000** full time jobs (2015).
- Freshwater angling contributed **£1.46 bn** to UK economy (2015)
- Anglers each spent an average of **£400 on tackle** and £110 on club fees each year (2015).
- Trip related expenditure for trout and grayling fishing was **£115 m (2015)**
- Trip related expenditure for salmon and sea trout was £7.3m (2015)
- Fishing providers and volunteers carry out conservation work to the value of **£??m**, equivalent to ??? full time jobs and ??m workdays each year.
- **19.4million** days fishing for coarse fish
- **134,000** days fishing for salmon and sea trout (**EA**)
- **2.4 million** days fishing for brown trout, rainbow trout and grayling
- Habitat management and conservation are carried out on ?? Hectares/ kms of rivers as a result of fishing.
- **?? out of four** people who take part in fishing say it is important to them and their personal wellbeing.

Need this information boiled down to Catchment Level

The Challenges

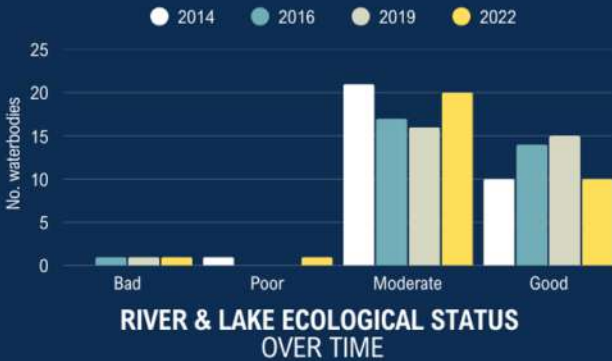
- *The Test and Itchen Catchment*
- *But:*
- *EA WFD Assessment year*
- *Probably worse than this and WFD National Standards being used for assessments and not NE Common Standards Monitoring Guidance (CSMG) for chalk streams*

WHAT ARE THEIR CHALLENGES

37 waterbodies fall within the catchment and each are monitored by the Environment Agency under the **Water Framework Directive** incl. **30 Rivers**, **2 Lakes**, **1 Transitional waterbody (TRaC)** & **4 Groundwaters**



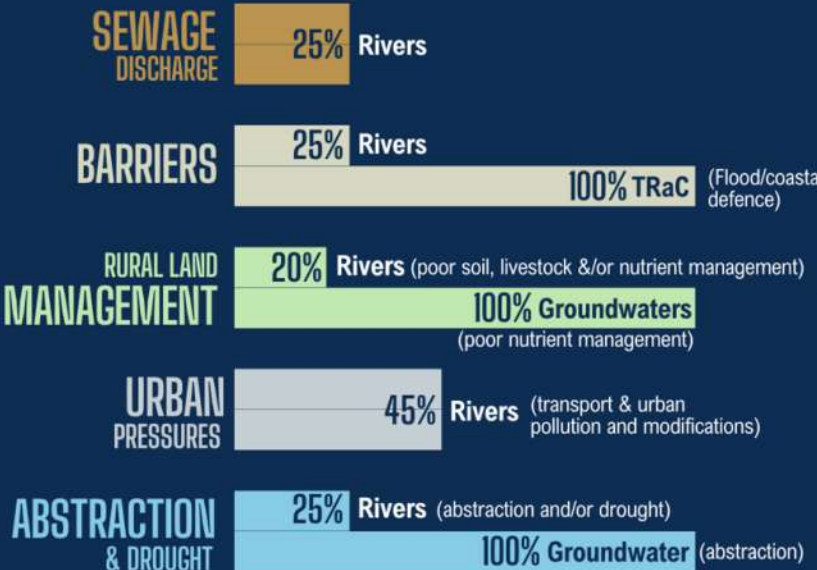
ARE NOT ACHIEVING GOOD STATUS
UNDER THE WATER FRAMEWORK DIRECTIVE (CYCLE 3)



FIVE MOST PREVALENT FAILURES

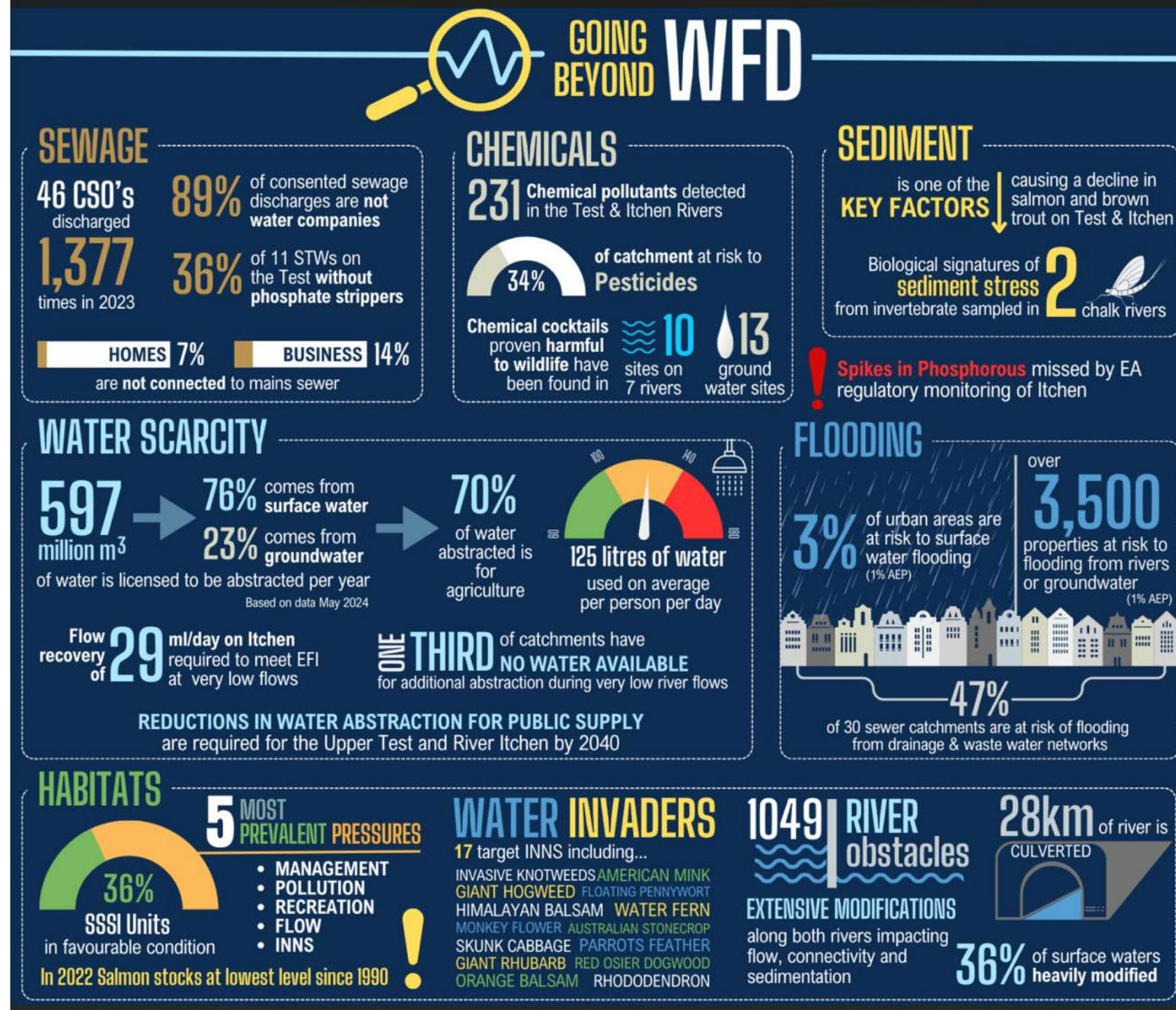


FIVE MOST PREVALENT CAUSES



The Challenges

- *Sewage is not just water companies business*
- *Modern life is dependant on many eco-toxic chemicals - in river effects*
- *We are water scarce and engineering can only do so much – consumption behaviours are key.*



The Challenge and it gets worse!

CLIMATE CHANGE

IS LIKELY TO INCREASE THE EFFECT OF EXISTING PRESSURES ON LAND, WATER & OUR COAST



More fertilisers & pesticides
used due to seasonal changes & extreme weather events



Increase runoff & flooding
due to more intense rainfall events



Flooding of sewer network
more likely due in high rainfall events



INNS & Disease
more likely to spread due to increases in favourable conditions



Low flow conditions
will increase impact water quality, quantity and fragment habitats



Increased river temperatures
may disrupt survival and reproduction of aquatic organisms



Increased water demand
due to decreased rainfall resulting in water supply issues



Groundwater recharge
may be impacted by seasonal changes to rainfall



Intertidal habitat loss
due to sea level rise, increased wave energy and coastal squeeze



Saline intrusion
into aquifers may affect water supply & freshwater habitats



Warmer seas
increases the chances of harmful algae blooms & impacts species



Coastal flooding & erosion
more likely due to increases in sea levels and storm events

Magnified again by 78% increase in imposed housing targets

CAMPAIGNING FOR BETTER WATER



- ***Consultations***

- The Land Use Framework.
- **SW Spring Follow on Consultation to the Havant Thicket Waster water recycling Scheme.**
- Ofwat Growth Duty Consultation.
- The Water Sector Commission.
- ***Battery Energy Storage Systems – Testwood – rejected***
- ***TVBC Local Plan Regulation 18 Revised - 2042 - Stockbridge***
- ***Holbury Lane Development – 52 new houses on a Biofilm PTP***
- ***Rights of Rivers***

- ***Partnerships***

- ***National Fisheries Coalition – Angling Trust, Atlantic Salmon Trust, Game and Wildlife Conservation Trust, Institute of Fisheries Management, Wild Trout Trust, WildFish and the Test and Itchen Association***

CAMPAIGNING FOR BETTER WATER

Flats released sewage into river for 35 years



SOUTHERN WATER

A Southern Water have started diverting the sewage from Upper Grosvenor Road

Dave Gilyeat & James Ingham

BBC News

Anyone recognise this fella? That's a military point for sure 🇬🇧 He used to be my platoon commander many years ago.



Paul Vignaux
Test & Itchen Association
BREAKFAST

My regular Echo column: cleaning up the River Itchen

4th August, 2025

I'm grateful to the [Daily Echo](#) for providing space for a regular column, where I give my 'view from Westminster' and provide Echo readers with an update on my campaigns and news from across Southampton Itchen.

In case you missed it, here's my latest column, which was published in the Echo last Friday.

I recently spent a couple of fascinating hours at Riverside Park with some of the local community superstars who are working hard to improve our waterways.

The Test and Itchen Association and Friends of the Itchen Estuary have been raising awareness of why we should preserve this important and unique habitat, as well as sounding the alarm about pollution in the River Itchen for many years. When we met last week, we discussed the challenges of protecting this unique chalk stream and did

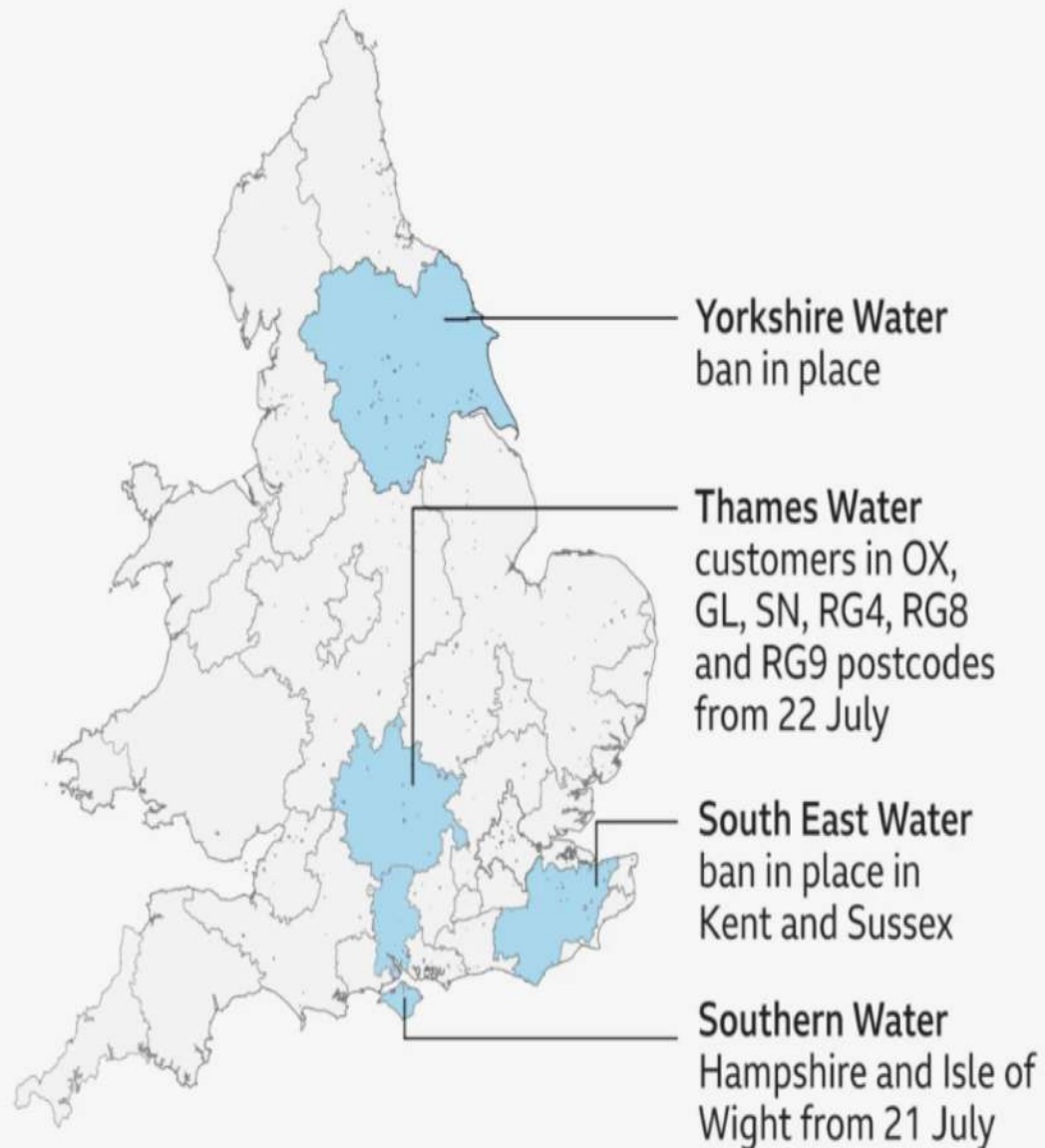
Liz Jarvis MP's post

Liz Jarvis MP
2 August

Recently I joined River Action and the Test and Itchen Association to test the River Itchen at Bishopstoke. The results were disappointing - though not unexpected - with low biodiversity and high nitrate levels.



Hosepipe bans in England and Wales



Source: BBC research, 16 July



Water firm's hosepipe ban warning after dry spring



GETTY IMAGES
The River Itchen has been affected by the dry spells, Southern Water said

Hampshire residents urged to save water after driest spring on record

27TH JUNE DROUGHT NATURE WINCHESTER



Martin Burton (Image: Chris Atkinson)

TEST &
ITCHEN
ASSOCIATION

-
- The map illustrates the proposed water recycling plant and its integration with existing infrastructure. Key features include:
- Existing Otterbourne WSW:** Located in the northwest, near Winchester.
 - Southampton:** The central urban area.
 - South Downs:** The large green area to the north and east of the city.
 - Havant Thicket Reservoir:** A blue-shaded area to the northeast of the city.
 - Existing Boddys Farm WTW:** A purple circle with a white plus sign, located near the reservoir.
 - Proposed Water Recycling Plant:** A blue building icon with a circular arrow, located near the reservoir.
 - Waste water input from SW network:** A blue arrow pointing into the recycling plant.
 - Portsmouth:** Located to the south of the city.
 - Isle of Wight:** Located to the southwest.
 - Existing Eastney long sea outfall:** A yellow dashed line pointing south from the recycling plant.
- Blue arrows indicate the flow of water from the recycling plant to the Otterbourne WSW and to the Havant Thicket Reservoir. A purple arrow points from the reservoir to the Boddys Farm WTW.



EA Spill Data – Our Rivers – 2024 v 2023 – selected sites



	Southern Water Location	River	Hrs Spilt	No of Spills	
1	Kings Somborne WWTW	Test - conf Anton to conf Dun	5481 ↑	252 ↑	
2	West Wellow WWTW	Blackwater (Test and Itchen)	4059 ↓	216 ↑	
3	Wickham WWTW	Meon	2833 ↑	175 ↑	
4	Redlynch WWTW	Blackwater	2660 ↑	138 ↑	
5	Millbrook WWTW	River Test	1630 ↑	122 ↑	
6	Fareham Road Wickham CEO	Meon	877 ↓	70 ↓	
7	Slowhill Copse WWTW	Southampton Water	969 ↓	84 ↓	
8	Chickenhall Eastleigh WWTW	Itchen	999 ↓	73 ↑	
9	Ashlett Creek WWTW	Southampton Water	516 ↓	32 ↓	-50%
10	Romsey WWTW	Test - conf Dun to Tadburn Lake	959 ↓	68 ↑	44 hrs at PS & SO

	Southern Water Location	River	Hrs Spilt	No of Spills	
11	Portswood WWTW	Itchen / Southampton Water	994 ↑	91 ↔	
12	Wellow Mill WPS	Blackwater (Test and Itchen)	755 ↓	63 ↓	
13	Pound Road Bursledon CEO	Unnamed Tributary of the Itchen	437 ↓	95 ↑	39% reduction in hrs
14	Chapel Wharf WPS	River Itchen Estuary/Southampton W	335 ↓	40 ↓	44% reduction in hrs
15	Chilbolton WWTW	Test - conf Dever to conf Anton	175 ↓	17 ↓	76% reduction in hours
16	Woolston WWTW	River Itchen Estuary	340 ↓	35 ↓	33% reduction in hours
17	Burnetts Lane WPS	Itchen	301 ↓	31 ↓	
18	Fullerton WWTW	Test - conf Dever to conf Anton	1314 ↑	74 ↑	297% increase in hrs
19	East Meon WWTW	Meon	406 ↑	32 ↑	72% increase in hrs
		Totals	26,331 ↑	1693	Increase of 922 hrs

Test
2023 – 8,429 hrs
2024 – 9,559 hrs

Blackwater
2023- 6,821
2024 - 7,474

Southampton Water
2023 – 4,516
2024 – 3,684

Meon
2023 – 3,716
2024 – 3,877

Itchen
2023 – 2,149
2024 – 1,737

WATER QUALITY

Water Quality Monitoring Network Annual Report 2023/24



TEST AND ITCHEN

The power of coalitions in the fight for our chalk streams

The rivers in the Test and Itchen Catchment are iconic chalk fishing streams with flora and fauna that are highly adapted to the unique conditions: constant temperature, alkaline pH, ground water fed. They are the most biodiverse of the English rivers.

Chalk streams under threat

The Test and Itchen Association (T&IA) was formed in 1907 to promote fly fishing on both rivers. 118 years later, they are at the heart of a thriving network of groups in the catchment who monitor, campaign for, and directly restore the rivers they call home.

A healthy chalk stream is very sensitive to any reductions in flow,



River work – Mottisfont 1910, from T&I [website](#).

There have been some severe pollution events from sewage

CASE STUDY

CASE STUDY



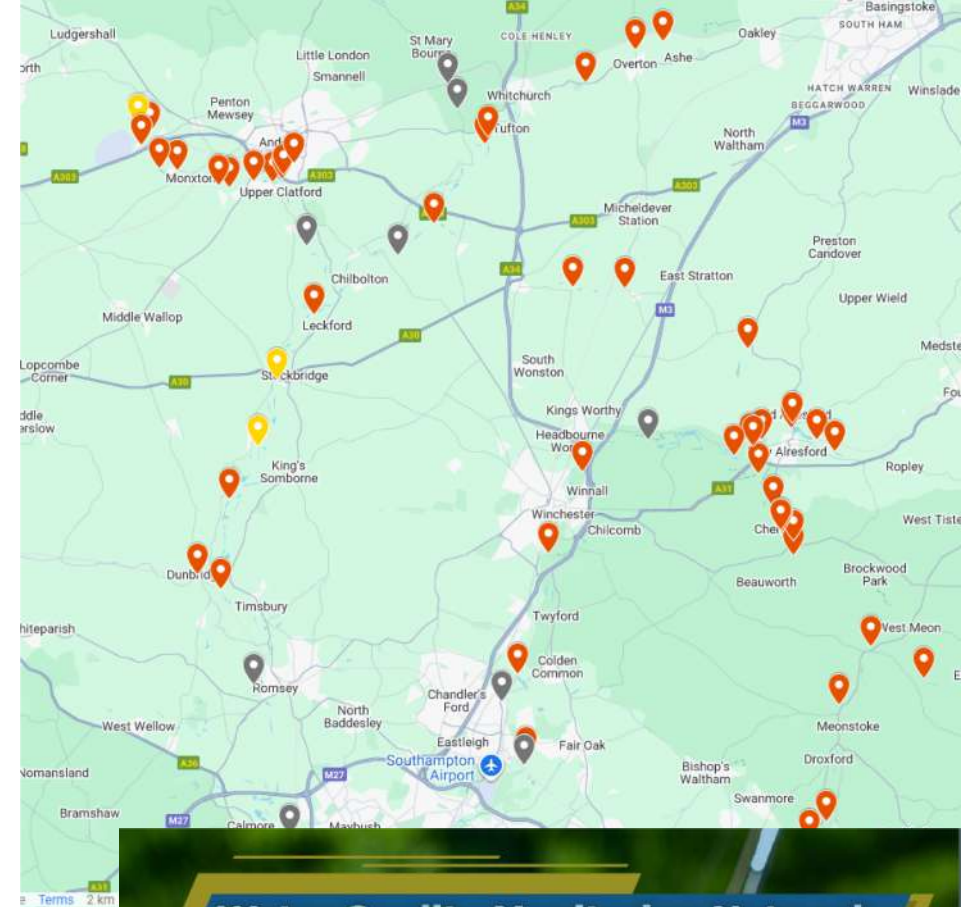
Hampshire River Keepers making their views clear at Fullerton, March '24

Coalitions protest for change

In early 2024, the Hampshire River Keepers Association (HRKA), Activist Anglers and the T&IA successfully protested and stopped Southern Water from over-pumping sewage from local village highstreets straight into the River Test.

WATER QUALITY

- **Water Expert Group** has been set up with heavy representation from the UIR CIC group.
- **First Task is to review the Angling Trust results –**
- Some drop off of volunteer WQMN – 50 boxes have sampled and 9 sites have dropped off.
- We now have an interactive map
- The bottom of the rivers have less WQMN volunteers.
- There may be gaps in monitoring downstream of, Fullerton, Harestock and Portswood, Eastleigh and Chickenhall WWTWs.
- An aspiration to involve the Friends of Itchen Estuary in sampling.
- Some more work to think about conductivity variations through the year and whether that correlates to rainfall, crop cover timings and CSO discharges.
- Temperature is showing seasonal variation as expected.
- Some of the readings, such as low or high phosphate readings, suggest that we may need some refresher training on what to do when these readings occur.



Coming soon ...

- Report on 18 month of WQMN in our catchment – hopefully before year's end.



Safeguarding our rivers since 1907

Test & Itchen Association with Upper Itchen Restoration CIC
Water Quality Monitoring Network (WQMN) on the Test,
Itchen and Meon

Report for 2024/25



September 2025

Findings

Nitrate

Nitrate mg/l Annual Average			1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
River Itchen	Cheriton Stream	Swards Bridge	4.7	4.4	4.4	4.6	4.5				4.7	5.1	4.2	4.2	4.7	4.8	4.4	4.6	5.1	5.6	5.2	5.1	5.3	5.7	5.8	6.8	6.1	6.7	6.3	5.8	5.7					6.9	7.0	6.9	7.0	7.1	6.7	6.7	7.3	7.3	7.3	7.3	7.5																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
	Aire	Drove Lane	4.6	3.8	3.4	4.1	3.9				4.1	4.1	4.1	3.5	4.2	3.8	3.5	4.1	4.8	5.0	4.4	4.1	4.3	4.8	5.1	6.6	5.6	5.5	5.5	4.8	4.6	5.2	5.6	5.6	5.9	5.4	5.3	6.3	6.8	6.4	6.6	6.0	6.2	6.0	7.1	7.0	6.7	6.9	7.5																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
	Candover Brook	Borough Bridge	4.9	4.5	4.1	5.0	5.0			5.0	5.2	4.8	4.8	4.7	5.3	4.9	4.7	4.9	5.6	6.3	5.6	5.1	5.7	6.1	6.2			7.1	6.8	6.1	6.1	6.7	7.0	6.8	7.2	6.7	6.7	7.6	8.2	8.2	8.0	7.9	7.9	7.6	8.2	8.6	8.6	8.5	8.7																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
	Itchen	Itchen Stoke	3.8	4.5	4.3	4.0	4.2	4.3		4.6	4.6	4.7	4.6	3.9	4.8	4.5	4.1	4.5	5.2	5.4	5.1	4.7	4.9	5.3	5.6	6.8	6.0	6.5	6.0	5.6	5.3	5.7	6.0	6.0	6.3	5.9	5.9	6.8	7.3	7.1	7.2	6.8	6.7	6.5	7.6	7.4	7.4	7.4	7.8																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
	Itchen	Easton				4.1	4.1	4.1	4.2		4.4	4.5	4.9	4.3	4.4	4.7	4.6	4.3	4.7	5.2	5.4	5.1	4.9	5.0	5.4	5.5	6.8	6.1	6.5	6.0	5.6	5.4	5.8	6.0	6.1	6.4	5.9	5.9	6.7	7.2	7.0	6.9	6.6	6.7	6.5	7.5	7.4	7.2	7.4	7.8																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
	Itchen	St Cross Bridge	3.9	4.6	4.3	4.0	4.4	4.4		4.5	4.6	4.9	4.4	4.2	5.2	4.7	4.4	4.9	5.4	5.6	5.4	5.2	5.4	5.6	5.8	6.7	6.3	6.7	6.3	6.0	5.8	6.3	6.3	6.2	6.6	6.3	6.2	7.1	7.2	7.3	7.1	6.8	7.1	6.8	8.0	7.8	7.6	7.3	8.1																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
	Itchen	Otterbourne	4.1	4.7	4.5	4.3	4.4	4.4	4.5	4.8	4.8	4.9	4.8	4.6	4.9	4.8	4.5	4.9	5.5	5.6	5.3	5.2	5.3	5.5	5.7	6.8	6.3	6.6	6.2	5.8	5.8	6.2	6.1	6.0	6.5	6.2	6.1	6.9	7.3	7.2	7.1	6.8	7.0	6.7	7.7	7.6	7.5	7.5	8.0																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
	Bow Lake	Stoke Common	4.0	2.7	5.4	3.7	4.0								2.3	1.9	5.5	4.7	2.1	3.5	3.9	4.4	4.2	3.2	3.5	4.4	4.5	6.5	3.7	5.5	3.5	1.9	1.9	1.9	3.8	3.7	3.0	4.0	1.8	3.4	5.5	6.3	3.2	3.2	1.8	3.2	2.1	4.0	5.1	3.0	4.4	5.3																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
	Itchen	Bishopstoke	4.2	4.6	4.5	4.2	4.4	4.3	4.4	4.9	4.8	5.6	4.5	4.0	5.1	4.8	4.4	4.9	5.4	5.5	5.3	5.1	5.2	5.4	5.6	6.7	6.1	6.5	6.1	5.8	5.6	5.9	6.1	6.0	6.4	6.0	5.6	7.0	7.0	7.1	7.0	6.5	6.6	6.4	7.2	7.5	7.3	7.7	7.8																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
	Itchen	Gaters Mill	5.5	4.7	4.8	4.9	5.1	5.0	5.6	5.3	5.2	5.1	4.5	5.3	5.5	4.9	5.3	5.6	6.0	5.8	5.8	5.6	5.9	5.9	6.8	6.6	6.7	6.2	6.1	5.9	6.3	6.3	6.5	7.0	6.8	6.3	7.5	7.2	7.8	7.7	7.8	7.7	7.4	7.4	8.2	7.9	7.6	7.7	8.0																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
Monks Brook	Swaythling	2.4	3.0	3.0	2.4	2.3	1.9		2.1	2.3	2.2	1.8	1.9	2.8	2.6	4.6	2.8	2.3	2.8	2.8	2.4	2.2	2.0	2.0	1.8	2.2	2.4	1.9	1.7	1.9					1.6	1.6	2.1	1.7	1.5	1.8																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												

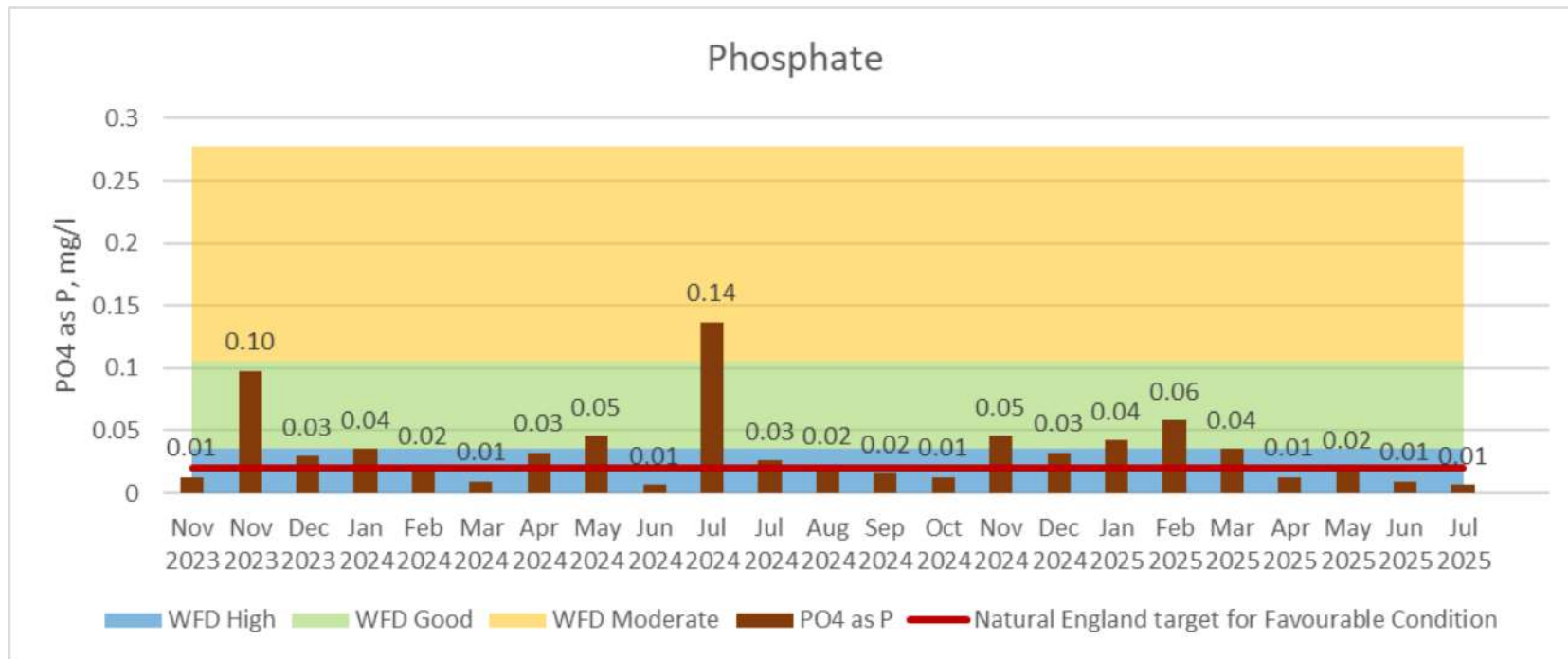
Findings

Phosphate

		Phosphate µg/l Annual Average	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024				
River Itchen	Cheriton Stream	Sewards Bridge			37	69	24	29	27	40	28	40	72	61	158	36	37	34	44	31	35	28	36	29	29	29	30	58	27	27	29	28				26	30	27	30	22	21	20	31	25	19	22	29						
	Aire	Drove Lane			36	45	28	26	26	38	41	69	104	89	95	45	47	48	57	51	74	82	86	87	69	96	65	91	68	88	72	59	71	72	125	78	92	64	52	45	40	41	28	26	29	38	44	49	32	41			
	Candover Brook	Borough Bridge			27	28	16	54	25	30	51	73	98	95	86	34	37	29	35	39	37	33	34	41	29	32			26	39	23	13	28	14	27	28	47	42	24	38	19	15	9	14	12	28	21	17	20	26			
	Itchen	Itchen Stoke			54	37	40	51	32	34	35	45	58	75	70	108	53	57	52	48	40	45	51	59	56	47	45	45	55	43	52	48	40	41	45	63	49	53	52	36	31	29	21	24	23	22	36	26	24	25	32		
	Itchen	Easton				49	40	48	44	52	65	83	85	93	123	73	65	53	47	45	48	63	71	64	55	53	50	55	53	60	59	51	58	57	54	61	61	52	44	37	33	33	30	31	34	36	38	37	31	38			
	Itchen	St Cross Bridge			86	69	71	91	70	78	95	101	115	140	148	223	121	143	136	113	103	120	117	105	105	89	89	90	99	88	91	82	62	55	61	69	58	49	60	48	45	47	37	45	38	51	42	44	42				
	Itchen	Otterbourne			87	77	77	86	76	81	99	110	140	143	151	176	126	129	141	110	98	121	124	137	114	112	104	87	109	91	94	81	52	54	65	65	51	52	58	47	42	40	48	40	45	40	46	44	39	44	42		
	Bow Lake	Stoke Common			118	193	133	119	132	242	323	103	126	190	266	71	89	77	95	60	55	61	67	59	92	52	85	63	99	93	82	75	84	72	46	49	62	108	43	55	79	80	96	50	60	117	57	54	60	57			
	Itchen	Bishopstoke			77	73	74	90	83	76	97	105	160	135	141	184	107	143	123	102	95	98	117	122	103	102	102	82	120	87	87	78	45	53	57	58	44	44	57	44	46	35	37	35	38	35	52	37	37	43	43		
	Itchen	Gaters Mill			343	355	392	371	387	393	425	411	372	465	594	415	396	356	276	262	311	369	375	353	410	378	257	341	221	224	275	189	144	85	76	68	70	81	74	65	64	47	61	65	79	86	73	58	63	69			
	Monks Brook	Swaythling			77	72	39	69	98	184	71	29	98	90	97	99	36	23	29	29	25	23	105	67	41	62	56	45	55	76	54	75	55					56	49	55	59	58	59								53	55	
River Test	Test	Polhampton			27	31	21	24	18	22	76	36	59	52	90	83	129	58	61	33	28	26	28	26	28	25	35	25	29	30	31	22	19	25						20	23	19		26	27	28	33	30	26	26	31		
	Test	Quidhampton																																																			
	Test	Overton			11	14	12	19	29	16	83	52	129	329	465	230	334	464	225	463	429	526	903	450	455	405	202	254	202	109	208	192								150	113	69	50	63		74	60	36	35	36	24	25	
	Test	Whitchurch							32	21			93	198	230	108	173	185	92	195	233	223	410	212	205	182	114	121	111	59	95	90								64	74	66	52	40	42		39	41	34	30	25	31	
	Bourne R/vulet	Iron Bridge (Pre 2001 at Hurstbourn)			58	33	21	38	24	39	32	74	116	85	70	52	50	43	43	37	53	45	54	49	64	56	50	49	60	36	31	51	44	75	46	70	96	50	40	56	67	63	43	50	48	41	40	42	39				
	Test	East Aston Common				28	20	28	20	55	144	62	72	130	231	54	118	99	65	95	105	112	203	124	127	110	76	92	76	50	59	67	44	55	53	47	53	48	38	34	37	36	37	32	30	39	27	25	24	29			
	Dever	Sutton Scotney			65	63	43	64	57	53	50	66	76	86	93	26	30	44	32	101	48	40	49	46	36	44	39	48	56	40				34	43	46	26	45	36	40	26	24		31	41	31	25	30	36				
	Dever	Bransbury			102	117	76	102	100	131	120	133	122	143	240	118	84	110	90	100	92	82	88	79	92	82	69	81	76	79	91	99	66	62	37	36	23	26	27	18	18	22	19	21	19	38	21	20	20	24			
	Test	U/S Andover WwTW																																																			
	Anton	Fullerton			24	23	21	22	25	35	24	90	66	60	103	38	40	50	36	34	30	24	31	32	32	33	28	29	24	32	22	19	20	25	23	22	28	40	32	26	32	31	35	30	37	33	31	31	26	27			
	Test	Longstock (Lackford)			248	150	154	172	159	152	167	178	166	193	225	276	171	259	263	152	185	142	180	217	133	85	75	81	78	81	80	68	69	57	78	53	45	42	42	43	44	49	50	49	47	43	45	43	42	33	39		
	Wall op Brook	Bossington			122	133	130	98	126	93	96	148	150	161	148	79	82	111	76	77	63	38	46	55	61	65	60	59	30	54	53	71	69	68	46	48	50	66	54	53	59	60	66	52	55	53	72	58	55	54			
	Test	Houghton																																																			
	Test	Mottisfont			146	142	137	138	159																																												
	Dun	U/S Garden Fish Farm					98	84	71	103	66	97	124	85	104	42	48	60	68	48	62	42	50	53	48	55	56	64	41	45	31	38	40	39	30	22	28	40	33	32	26	32	44										
	Test	Greatbridge			111	93	100	151	111	122	150	141	151	190	190	234	142	160	157	114	118	110	146	165	93	70	68	64	69	53	60	52	41	49	59	46	38	35	33	32	35	30	37	42	36	30	37	36	31	27	33		
Test	Middlebridge																																																				
Test	Romsey Bypass			85	71	84	67	63	97	69	97	104	116	164	103	109	113	83	74	75	78	97	68	56	54	49	57	44	49	37	44																						
Test	Broadlands (Longbridge)			161	160	139	213	173	179	211	215	198	213	224	276	170	199	192	137	139	137	171	191	132	116	98	105	87	67	79	69	49	55	70	54	45	44	42	42	40	45	46	50	38	35	53	45	43	35	42			
Test	Testwood			163	140	166	146	146	180	196	199	213	213	252	185	197	194	134	140	141	171	189	111	115	97	85	88	72	87	66	56	57	69	51	42	41	44	40	40	49	45	46	46	43	50	49	40	32	41				
Blackwater	Nutsey Bridge			101	108	85	136	137	171	152	175	166	157	203	246	170	154	158	115	121	105	122	124	104	96	87	85	91	75	84	75	90	63	59	56	48	45	59	51	53	52	60	63	53	59	47	58	52	44	54			
River Meon	Meon	East Meon																																																			

Findings

Volunteer Phosphate readings from Candover Brook



- Average of 0.03 mg/l PO4-P meets WFD High, but ...
- 50% exceed Natural England targets for SAC/SSSI
- Regular spikes

WATER QUALITY

- **Plumbosolvency** – emerging discussion and enquiry – phosphate dosing
- **Road Run-off** – Stormwater Shepherds



Household Cleaning Chemicals



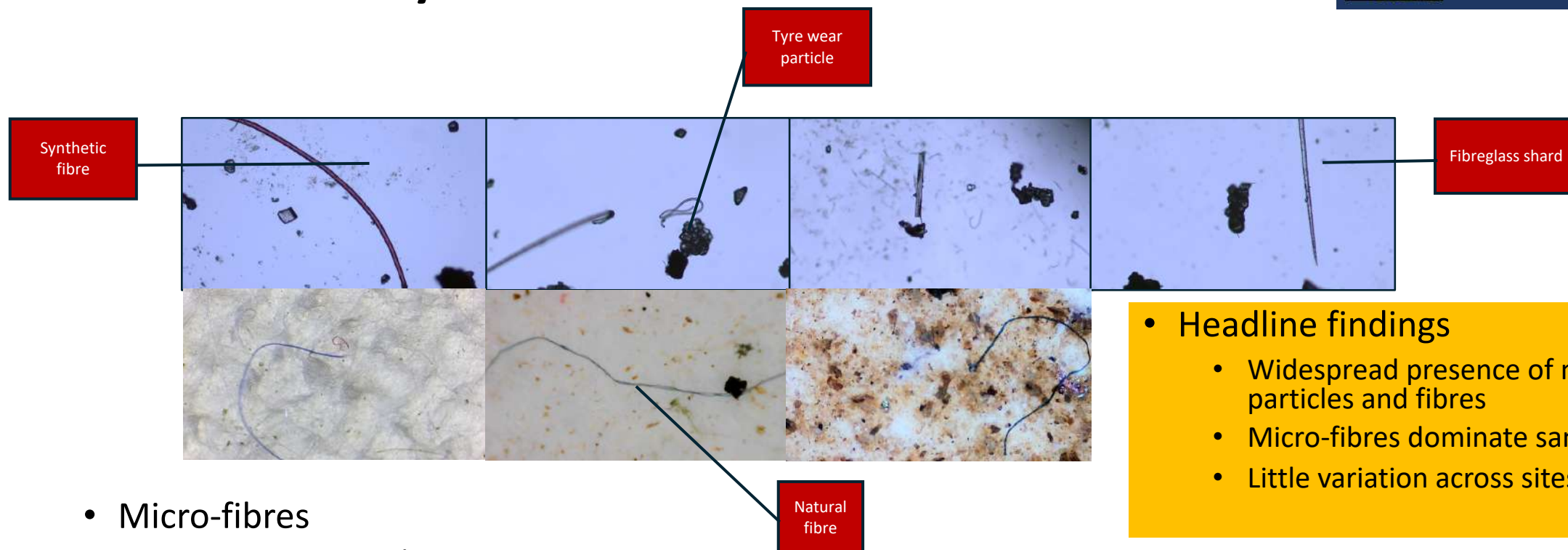
micro-particulate project



We want to find out :

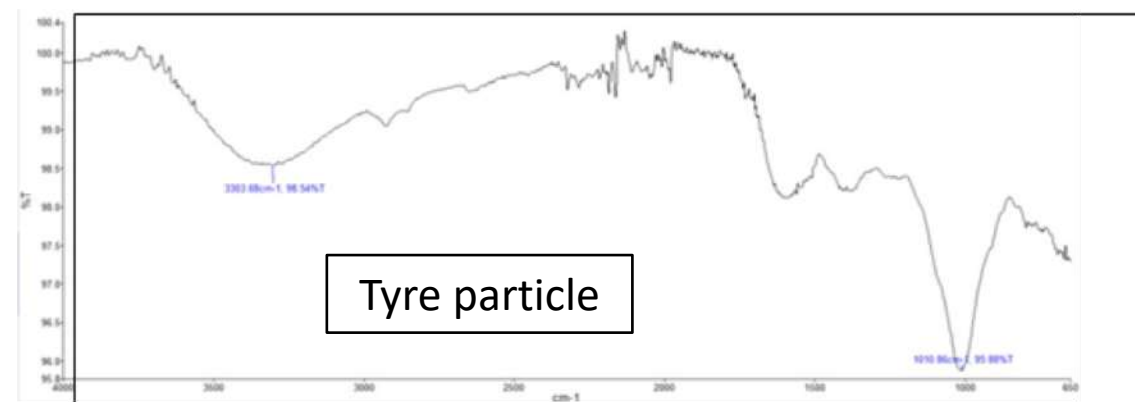
1. Are micro-particles in the river ?
2. What kind of particles are there ?
3. Where do they come from ?

What they found



- Micro-fibres
 - 0.2mm – 1.3mm long
 - Mostly black, blue, purple
- Particles
 - Tyre wear particles (rubber)
 - Polyethylene
 - Fibreglass

- **Headline findings**
 - Widespread presence of micro-particles and fibres
 - Micro-fibres dominate samples
 - Little variation across sites or seasons



Where does this come from ?

- Candidates

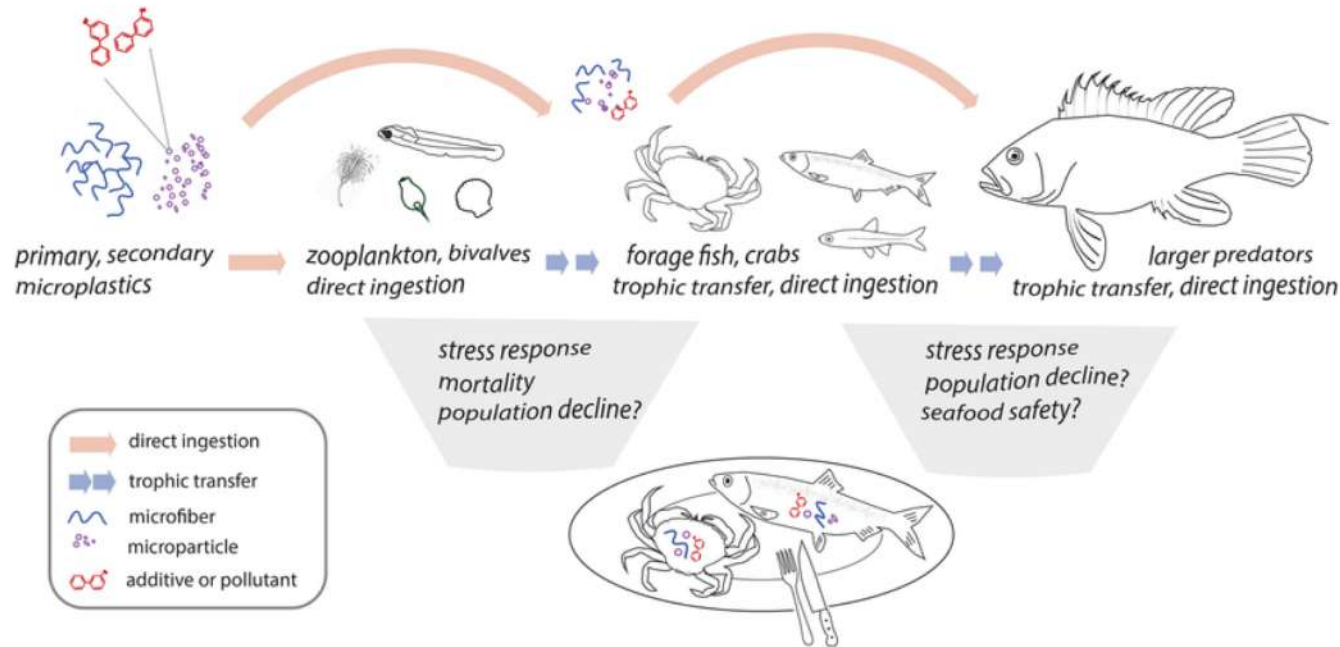
- Washing machines with off-mains drainage (septic tanks)
- Sewage sludge spreading on fields
- Run-off from roads
- Materials from agriculture, aquaculture
- Fibreglass linings in pipes (culverts, boreholes)
- Derelict buildings
- Atmospheric deposition (e.g. airborne pollution from Southampton docks)
- Direct littering

- Probably not ...

- CSOs - only 1 CSO in the locality – all samples taken upstream
- Sewage works - local WwTW discharges to groundwater, not river
- Landfill – no nearby site

- Next objective – can we identify source(s) ?

What is the impact of micro-particulates ?



From Baechler et al, 2019

Microplastic occurrence and effects in commercially harvested North American finfish and shellfish

- Risks to wildlife
 - Entanglement
 - Choking, blocked digestive system
 - Leakage of toxic additives into tissues
 - Reduced feeding
 - Fewer offspring
 - Reduced survival
- Micro-particles coated with chemical pollutants



RIVER MANAGEMENT

- Poaching and Rural Crime
- SOCG – Serious Organised Crime Groups



- The Itchen Breach above Woodmill

Salmon



- Stock Return for 2024 – All figures provisional:
 - Rod Catches in UK 5390 - 14% up on 23 but 3rd lowest recorded
 - Conservation Limit surpassed on only 7 of 64 rivers
 - At risk rivers highest since recording in 2010
 - 120 declared caught by rod on the Test and Itchen

Salmon Stocks
and Fisheries
in England
and Wales
in 2024



- 1. Address diffuse pollution
- 2. Enhance the quality and extent of spawning and juvenile habitat and improve upstream and downstream fish passage
- 3. Safeguard sufficient flow
- 4. Ensure fisheries management measures protect salmon populations
- 5. Implement climate change adaptation measures

Creating Chalk Stream Salmon Sanctuaries

Salmon sanctuaries are essential areas of favourable habitat for juvenile and adults that are left deliberately undisturbed to provide refuge for salmon at various life stages.

The goal, by working with riparian owners, fishing clubs and other external parties, is to create a network of salmon sanctuaries across each chalk stream catchment to help safeguard declining salmon populations. Ultimately, the more salmon sanctuaries established, the greater their impact will be.

Chalk stream salmon habitat requirements

Optimal habitat for juveniles

Salmon parr prefer shallow, fast-flowing water with coarse, clean gravels and cover (summarised in Table 1).

In the chalk stream environment, there is a lack of large cobbles or boulders which would normally provide ample cover. Instead, salmon parr utilise in-stream aquatic vegetation, and in particular *Ranunculus* spp. as well as overhanging marginal aquatic vegetation such as water cress and branched bur reed. Branches and woody debris also provide a critical component of cover which is particularly important in the winter when vegetation dies back. Parr generally avoid

areas where the substratum is fine (sand and silt) which are often found to be areas with deep glides, where velocities are lower.

Table 1 Optimal habitat for fry and parr	
Water depth	<20 – 40 cm
Velocity	50 – 75 cm s ⁻¹
Substrate type	Gravels and cobbles (16 – 64 mm)
Cover	Instream aquatic vegetation (<i>Ranunculus</i> spp.) and over hanging marginal aquatic vegetation. Branches and woody debris to provide cover in the winter when other vegetation dies back.

The following photographs (Figure 1 and 2) provide examples of good chalk stream salmon parr habitat.



Figure 1. Optimal chalk stream habitat for fry and parr with relatively shallow depth and good in stream aquatic vegetation.



Itchen Salmon Delivery Plan

DECEMBER-JANUARY 2024/5
V4.24



HELP US SAVE ITCHEN SALMON

Why do we need to Save Itchen Salmon?

Chalk stream salmon, a subspecies of Wild Atlantic Salmon, are only found in rare chalk stream habitats such as the Rivers Test & Itchen. Chalk stream salmon have swum in the Rivers Test & Itchen for tens of thousands of years. They are a protected species but in recent years, the numbers of chalk stream salmon in our rivers have been decimated. Their survival in our Hampshire chalk streams is



Protecting wild Atlantic salmon:
Guidance for wild swimmers

Did you know

- Atlantic salmon are a keystone species – they help support many other river animals and keep the ecosystem healthy.
- Atlantic salmon are a protected species. Sadly their numbers in the rivers Test and Itchen are now dangerously low.
- The salmon in our chalk streams are genetically unique and irreplaceable.
- When people walk or stand on spawning gravels, they can crush salmon eggs. Just one disturbance can destroy up to 40% of the eggs.

How can you help?

Please keep out of the river between November and June.

During this time, fish are choosing nesting sites, laying their eggs, and hatching into young fry. Staying out of the water helps protect these vulnerable stages of their life cycle.



Scan the QR code to follow the Outdoor Swimmers Code.

- Please note under Section 2(4) of the Salmon and Freshwater Fisheries Act 1975, disturbance of spawn (i.e. eggs), spawning fish and spawning habitat is an offence. This includes walking over or standing on gravels used by Atlantic salmon or sea trout. Further action may be taken by the Environment Agency.

- If you see or suspect disturbance of spawning fish or spawning habitat, please contact the Environment Agency on the 24/7 Environment Incident Hotline - 0800 80 70 60.



1. Address diffuse pollution
2. Enhance the quality and juvenile habitat and improve downstream fish passage
3. Safeguard sufficient flow
4. Ensure fisheries manage salmon populations
5. Implement climate change

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A Critical Mission To Save England's Chalk Stream Salmon from Extinction



Protecting wild Atlantic salmon: Guidance for wild swimmers

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Questions



Safeguarding our rivers since 1907