

Clean Harbours Partnership

"Turning the tide on harbour pollution"

Project Spotlight Update: Issue 3, August 2022

This is the third update for those that have generously sponsored Project Spotlight – a citizen science research study into the quality of sea water in both Chichester and Langstone Harbours.

The study is being organised by The Clean Harbours Partnership, a unique collaboration of local groups and individuals concerned about "what's in the water". CHP aims to investigate the facts to help inform local opinion, raise awareness and influence improvement.

In this issue we are delighted to announce significant progress on both Project Spotlight & on the River Lavant.

Progress: The First Results are in...

Dr Thomas Miller at Brunel University has started to examine 5 species of aquatic life (biota) found living in our local waters.

It is important to emphasise that early results still need to be fully validated and quantified but the early signs are that several substances are present including anti-depressants, nicotine and some recreational drugs. Scientists advise that such compounds are often not fully broken down by the body and are therefore most likely to enter the harbour via human waste.

Tom and his team have to undertake much more analysis over the coming weeks as some 250 bottles of seawater were collected by our citizen scientists. Initial identification is followed by validation, quantification and thereafter interpretation, before formal publication of a scientific paper. However, we are hoping for a more rounded understanding of the results in November.

We also patiently await an opportunity to add 'post-storm' samples to the baseline 'pre-storm' bottles. The driest 8-month period since 1976 has resulted in very few storm sewage releases and minimal highway and agricultural run-off, so collection of our second batch continues to be delayed.

During 2021 we believe there were storm sewage releases totalling 56 days in Chichester Harbour. This year only one release has been reported at

Thornham (6.5hrs on Jan 9th) and none at Dell Quay or Taylors Lane Bosham. Quite a contrast - due to a combination of drought condition and perhaps Southern Water realising that locals are watching?



Langstone Ragworm ready for analysis

Next Steps

As soon as we have better sight of the lab results, a presentation by our lead scientists (Professor Ford & Dr Miller) will be arranged for representatives of each sponsor organisation. In the meantime, our citizen scientist team continue to keep an eye out for a sustained period of heavy rain to obtain post storm samples and allow a "before & after" comparison.

A four-pronged approach

A quick reminder that Project Spotlight comprises 4 main elements:

1. **Statistical analysis:** of discharge data by Prof Peter Hammond. Highlighted 182 likely illegal discharges locally between 2017 and 2021 - results passed to Environment Agency
2. **Species analysis:** of oysters, limpets, seaweed, ragworms, amphipods – under analysis
3. **Pre & Post storm water samples:** part under analysis - part awaiting heavy rainfall
4. **eDNA testing:** of biodiversity & bacterial range - awaiting heavy rainfall.

Southern Water Performance Drops to One Star

The Environment Agency has just published its 'Water and Sewerage Companies: Environmental Performance Report 2021'. Southern Water's performance was downgraded to the lowest **"One Star"** rating.

<https://www.gov.uk/government/publications/water-and-sewerage-companies-in-england-environmental-performance-report-2021/water-and-sewerage-companies-in-england-environmental-performance-report-2021>

One of the Agency's main roles is to police water companies and in the Chair's final speech, after 6yrs of responsibility for the protection and enhancement of the environment, Emma Howard Boyd stated:

"Southern Water fell to one star, the bottom of our star ratings, meaning their performance was terrible across the board."

"The sector's performance on pollution was shocking." "The water companies are behaving like this for a simple reason: because they can."

"Repeat offenders can now expect criminal prosecutions. We would like to see prison sentences for Chief Executives and Board members whose companies are responsible for the most serious incidents."

This signals a distinct U-turn on previous observations and finally some strong words.... on the eve of her handover to the new Chair! It maybe that there are some criminal convictions coming down the pipes, but we await evidence of a step change in performance.



River Lavant

Progress: Improvement works start....

CHP discovered and reported unpermitted discharges at Lavant sewage works in May, a situation which subsequently received national BBC TV and Radio4 News coverage - reaching an audience of over 10m. In response, the Environment Agency issued Southern Water an “official warning” and substantial physical improvements have been promised on site. These include more storage capacity and replacement of the reed beds which help to filter untreated overflows. We are pleased to report that construction started last month.



Construction starts at Lavant

However, we will be appealing the Environment Agency’s decision which we still see as ‘unsatisfactory’. An official warning does not reflect the fact that Southern Water knowingly and substantially breached permitted levels for several years, negatively impacting the environment downstream. An official warning does not echo the sentiment of their Chairman’s public statement (above).

Prof Hammond’s data highlighted 147 potentially illegal releases (2017-21) at Lavant, and our own on-site investigations suggest Southern Water vented unpermitted ‘storm’ discharges throughout this year until July (despite the drought). The Agency’s statistics for 2021, 2020 and 2019 mirror this 6 month per annum pattern and using their own estimations (obtained through information requests), it seems that at least 75m litres (30 Olympic swimming pools) of untreated effluent is being dumped annually into a small, rare chalk stream about 8ft wide.

By way of update, the River Lavant has now dried out (August) above the sewage works but this doesn’t stop *legal discharges* continuing 24/7. With no natural water flow, downstream of the sewage works is now effectively a (permitted) river of effluent flowing down into Chichester and the harbour beyond.

River Lavant Aerial: showing dried out white riverbed above the treatment works (bottom left) and brown river downstream (middle right).



Channel 4 Coverage

On bank holiday Monday (August 29th), Channel 4 aired a “Dispatches” expose on the performance of the water companies. Bianca Carr from CHP was interviewed and local sites featured including evidence of unnatural storm pipe discharges at Chidham and high bacteria readings taken off the beach at Ryde.

A central theme was the Environment Agency’s inability to bring cases against the polluters despite pollution on an almost unimaginable scale. The programme – “Britain’s Water Scandal” - can be viewed on C4 catch up here: <https://www.channel4.com/programmes/britains-water-scandal-dispatches>



Elsewhere in the news – will the facts lead to meaningful change?

Public awareness and pressure for change is growing with lots of press on sewage discharges and river pollution. Some headline articles on the issue include:

- **‘Sewage sleuths’** – background on the sewage issue and the role of our colleagues Professor Peter Hammond and Ashley Smith
<https://www.theguardian.com/environment/2022/aug/04/sewage-sleuths-river-pollution-slow-dirty-death-of-welsh-and-english-rivers>
- **‘Wet wipe island’** - found at Barnes on the Thames, a few miles downstream of London’s largest sewage works
<https://www.thames21.org.uk/2019/04/23-thousand-wet-wipes-discovered-stretch-thames-river-bank/>
- **Polio** - identifying traces of vaccine derived poliovirus in samples taken in sewage works in East London
<https://www.science.org/content/article/poliovirus-in-london-sewage-sparks-alarm>
- **Microplastics** - Cardiff University’s research suggesting that European farmland could be the biggest reservoir of microplastics due to recycled sewage sludge.
<https://www.cardiff.ac.uk/news/view/2623372-european-farmland-could-be-biggest-global-reservoir-of-microplastics,-study-suggests>

Wanted

**CHP is looking for a communication and social media expert to support our projects.
Can you (or maybe someone you know) help?
Please contact: Rob Bailey tel: 07808141304**

Supporters to date include:

- Bosham Association
- Chichester Yacht Club
- Bosham SC
- Emsworth Yacht Harbour
- Emsworth Slipper SC
- SOSCA
- Locks SC
- Emsworth SC
- Portsmouth Canoe Club
- Friends of Langstone Harbour
- Hayling Ferry SC
- Fat Face Foundation
- ...plus a number of individuals
- Dell Quay SC
- Bosham Swimmers
- Itchenor SC
- Emsworth Residents Association
- Langstone SC
- Langstone residents & Village Assoc
- Andrew Simpson Centre
- Hayling Health Society
- Hayling Residents Assoc
- Friends of Chichester Harbour
- Thorney Island SC
- Hayling Island SC

A big thank you to all those who have pledged to date.