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**SCRUTINY INQUIRY PANEL - PROTECTING, PRESERVING AND PROMOTING THE  
RIVER ITCHEN IN SOUTHAMPTON**

**MINUTES OF THE MEETING HELD ON 17 NOVEMBER 2022**

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**Present:** Councillors Savage (Chair), Bunday, Cooper, Moulton (Vice-Chair) and White

4. **MINUTES OF THE PREVIOUS MEETING (INCLUDING MATTERS ARISING)**

**Resolved:** that the minutes of the meeting held on 6 October 2022 be approved and signed as a correct record.

5. **PROTECTING, PRESERVING AND PROMOTING THE RIVER ITCHEN IN SOUTHAMPTON - THE RIVER ENVIRONMENT**

The Panel considered the report of the Scrutiny Manager detailing the issues concerning the environment of the River Itchen in Southampton.

The Panel received the following representations:

Graham Horton, Thames Solent Team Manager, Natural England summarised the key issues about the ecology of the River Itchen in Southampton as:

- The River Itchen is an important asset for people, wildlife and the economy.
- In recognition of its national and international importance its environment is highly protected by several pieces of legislation including - Site of Special Scientific Interest; Special Protection Area (significant bird populations); Special Area of Conservation (Maritime habitats); Ramsar site (Globally significant wetlands). This legislation places a requirement upon public bodies to consider impacts when permitting activities.
- Like many tidal rivers it has a long history of human use and a strong contrast between tidal and non-tidal stretches.
- Above Woodmill; the Itchen is a classic example of a chalk river: clear water, high biodiversity & globally rare. Below Woodmill; its more industrial, more modified but still important.
- Tidal part of the Itchen includes mudflat and saltmarsh habitats; Overwintering birds, including brent geese; Breeding birds such as terns; and migratory fish: salmon, trout.
- Non-tidal part of the Itchen provides classic chalk river habitats with lots of invertebrates – dragonflies and important fish species.
- Like many rivers and estuaries in the Solent (and England) the Itchen is facing a number of threats including population pressure, pollution pressure, climate change leading to droughts and rising sea levels, and invasive species.
- England Coastal Path is nearing completion which provides additional opportunities to access blue/green spaces and reconnect with the coastline and the health benefits that come with this (the higher the quality of the nature the better the health benefits).

- The Itchen could accommodate increased recreational pressures - if well managed - opportunity to increase access provision, build a stronger relationship with 'place' and with the natural environment.
- Opportunities for rewilding and biodiversity recovery – Oyster reefs in the Itchen would help to improve water quality. Pilot schemes in River Hamble and IoW. Natural England is working with universities and are ready to scale this up with potential for this to be funded in Southampton through nitrogen neutrality schemes.
- To develop sustainably, access to the water should be encouraged and integrated into new developments; water usage needs to be reduced in new developments; green developments – trees, amenity grasslands and nature areas need to be incorporated.
- The Council's Nitrogen Mitigation Policy Statement is welcomed. The Council could choose to go further, beyond nitrogen neutral and require developments to be nitrogen positive.

Dr David Rumble, CEO Wessex Rivers Trust, summarised the key issues about water quality in the River Itchen in Southampton as:

- The importance of considering the catchment as a whole, the long timescales and the spatial scale involved.
- Pollution sources affecting the tidal Itchen – Largely rural: Agriculture (70-75% of nitrogen in the Itchen comes from agriculture), land based activities. Largely urban: Maritime activities, landfill leaching, airborne pollutants, wastewater treatment works. Urban & rural: Private sewage / septic tanks, surface drains and highways.
- Pollution types affecting the tidal Itchen – Largely rural: Pesticides, fine sediment, organic waste. Largely urban: Particulates, heavy metals, hydrocarbons, pathogens, plastics, emerging chemicals, persistent synthetics. Urban & rural: Nutrients (Nitrogen and Phosphorus).
- Water Framework Directive Ecological Status: River Itchen 'Good', Southampton Water 'Moderate' (due to 'nitrates') as measured by the Environment Agency.
- Water Framework Directive Chemical Status - River Itchen 'Fail' (due to UPBTs - Ubiquitous Persistent Bioaccumulative Toxic substances), Southampton Water 'Fail' (due to UPBTs). If UPBTs are excluded: River Itchen is 'Good', Southampton Water is 'Moderate' due to Tributyltin (found in anti-fouling paints used to prevent biofouling on boat hulls).
- The challenge for Southampton is can we aim for higher than good regarding the Water Framework Directive Ecological Status? The bar is relatively low.
- What the Council can do – Planning system is key to overcoming a number of pollution challenges; a properly maintained and designed highways infrastructure would also help to deliver an improvement in water quality.
- Partnership forums or management boards – Catchment Partnerships exist to bring together sectors. Dr Rumble is Chair of the Test & Itchen Catchment Partnership. The Solent Forum also exists. No specific forum for the River Itchen in Southampton.

David Murphy, Wastewater Strategy Manager, and Andrew Adams, Catchment Planning Manager, Southern Water together summarised the key issues about the

environmental challenges of drainage and wastewater management which impact the River Itchen in Southampton as:

- Wastewater Systems in the Test and Itchen Catchment - 31 wastewater systems; 31 treatment works; 301 wastewater pumping stations; 4571km sewers; 93% homes connected.
- In Southampton 3 wastewater systems – Portswood, Woolston and Millbrook
- Portswood WTW system - Population c. 80,000; 585 km sewer; 19 pumping stations; 7 storm overflows; Storm tank volume 3549 m<sup>3</sup> - Flow in excess of storm tank volume discharged to Itchen
- Woolston WTW system - Population c. 70,000; 534 km sewer; 10 pumping stations; 1 storm overflow; Storm tank volume 1723 m<sup>3</sup> - Flow in excess of storm tank volume discharged to Itchen.
- Millbrook system - Population 140,000; 3 storm overflows; Treated flows discharge to River Test.
- More combined sewers carrying wastewater and rainwater in Portswood than Woolston or Millbrook, where separate sewers exist. Most urban areas have more combined sewers than Southampton.
- Southern Water planned investment to 2025 in excess of £25m – Portswood increasing storm tank capacity from 3549m<sup>3</sup> to 5556m<sup>3</sup>; Woolston Increasing flow to full treatment (FFT) from 427 l/s to 520 l/s; Increasing storm tank capacity from 1723m<sup>3</sup> to 6723m<sup>3</sup>; Regional programme of pumping station refurbishment based on site criticality and performance.
- Detail available in Drainage and Wastewater Management Plan at <https://southernwater.co.uk/dwmp>
- In Portswood up to 90% of flow arriving during a storm is rainwater, mainly from roof and road run-off. Across the network, during heavy storms the rainwater, combined with the wastewater can exceed the capacity of the storm tanks. To protect homes and businesses the storm overflows are released into the River Itchen. The storm overflow includes silt, sewage and other contaminants.
- Storm overflows - In total there are 15 storm overflows in the wastewater systems discharging to the River Itchen: 9 from the Portswood network (linked to pumping stations) 0 from the Woolston network; 4 from Millbrook network; Plus storm overflows from Portswood WTW and Woolston WTW. Of these currently 3 spill more frequently than the new DEFRA requirements.
- 11 spills from overflows from 2017 to 2019 in Portswood. 60% are caused by blockages. Southern Water employs a Fats, Oils and Greases (FOG) and Unflushables team to educate & investigate where blockages regularly occur.
- Surface Water Outfalls - 50 outfalls from public surface water sewers discharge to the River Itchen. All operate every time it rains. Discharge rainwater from roofs and roads to the river. Not monitored. Likely to be other outfalls from highway drains. Misconnections from homes is a source of pollution into surface water sewers and on to the Itchen. Southern Water are working with SCC when properties are found to be misconnected to system.
- There are broadly 3 main types of intervention to reduce flooding and storm overflow use – 1) Source control (removing and slowing the flow of

rainwater) 2) Optimisation of existing infrastructure 3) Build bigger infrastructure.

- Sustainable drainage solutions such as permeable paving and soakways, green roofs, swales and wetlands, rain gardens and water butts are the best way to remove water, slow it down & reduce flooding and storm overflow use. The more rainwater kept out of combined sewers the more wastewater can be kept in during heavy rainfall.
- Southern Water is encouraging new developments to be designed with sustainable drainage solutions to slow the flow and treat water at source.
- Southern Water provides near real-time information about storm release activity near coastal bathing waters through Beachbuoy tool. There are plans to improve the app to make the information more user friendly and extend it to inland waters such as the River Itchen. The Panel expressed their desire for this to happen as soon as possible, via the Beachbuoy tool or through other communication outlets.

Lindsay McCulloch, Natural Environment Manager, Southampton City Council used Chessel Bay as a case study and summarised the key issues of water quality, pollution and ecology and potential solutions as:

- Chessel Bay is the last undeveloped section of the tidal river in Southampton. It is an SSSI, SPA and Ramsar designated site. It was the first LNR in Southampton in 1989.
- A popular recreation spot with high ecological value providing diverse and complex habitats supporting overwintering birds, salmon, otter and seals.
- Chessel Bay faces a number of problems – litter, pollution (waste from business, industrial material, water quality), disturbance and anti-social behaviour.
- SCC is working with the Environment Agency, Natural England, University of Southampton and Nurdle to remove debris, including plastic nurdles, from Chessel Bay. A recent clean up using Nurdle's technology removed 600kg of micro-plastic from Chessel Bay. Prof Malcolm Hudson is analysing the findings, support has been provided by Surfers Against Sewage, but more plastic has arrived. A full scale clean up is planned early next year.
- 3 large plastics companies in Southampton are regulated by the Environment Agency, a number of smaller businesses are not regulated. SIVA have invested significant resources to improve processes to reduce plastic pollution in the Itchen. Polystar are improving their processes.
- Solutions include working with the University of Southampton and Citizen Science to better understand the impacts; encouraging and supporting local action (welcome support from Friends of Chessel Bay); work to change attitudes and encourage people to value the environment.
- Partnership working is key, bringing businesses and interest groups together. The Environment Agency referenced in their evidence, building on the success of the work in Chessel Bay, that they are now looking to support the development of a much larger 'preventing plastic pollution' partnership project that will aim to clean up plastic pollution across the wider River Itchen Estuary, as well as help reduce the amount of plastic

entering the environment in the first place through engagement with local communities and businesses.

- Linked to this, an accreditation scheme for businesses that respect the river could help to control locally produced waste and pollution.
- When planning new developments in Southampton environmental impacts need to be factored in from the start, retrofitting is extremely hard. Biodiversity net gain will be required for development moving forward.
- That a strong policy basis has been developed to provide biodiversity enhancements in the draft local plan, including green infrastructure and green