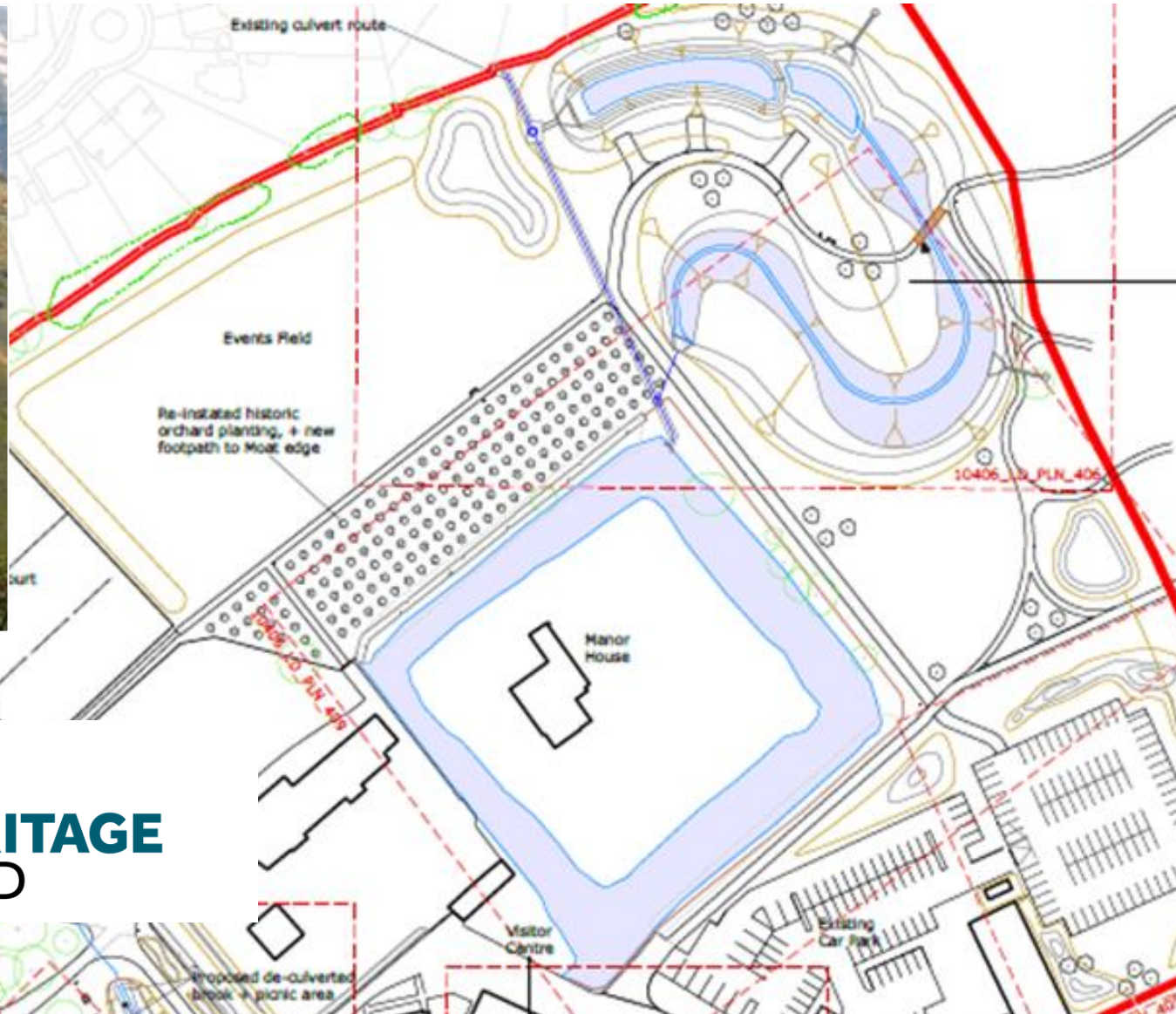
What we have learnt from monitoring a constructed wetland

Joe Pecorelli, Freshwater Programme Manager, ZSL

24th June 2024

The Headstone Manor Park Wetlands



LONDON BOROUGH OF HARROW

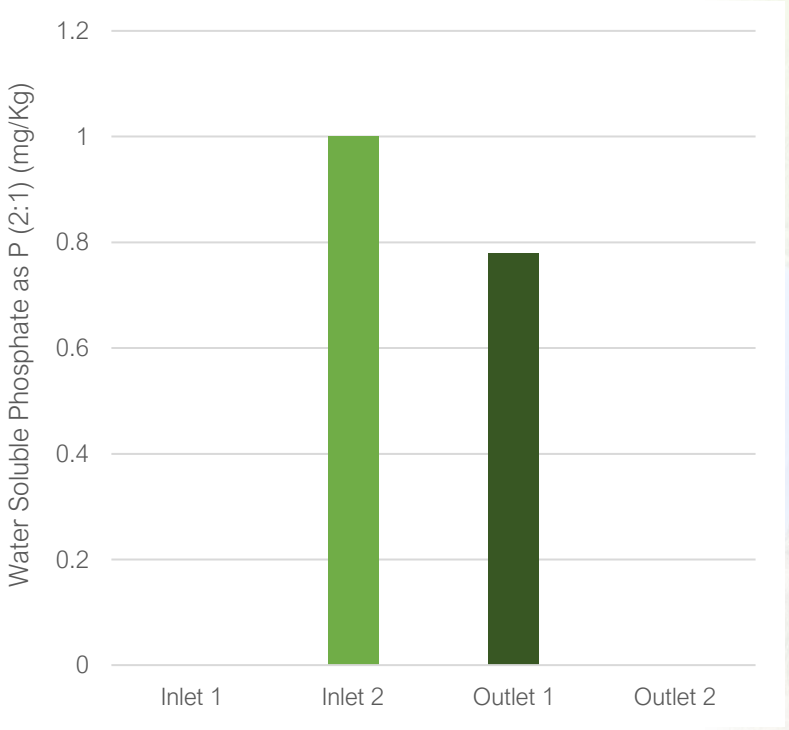
GREATER LONDON AUTHORITY

HERITAGE FUND

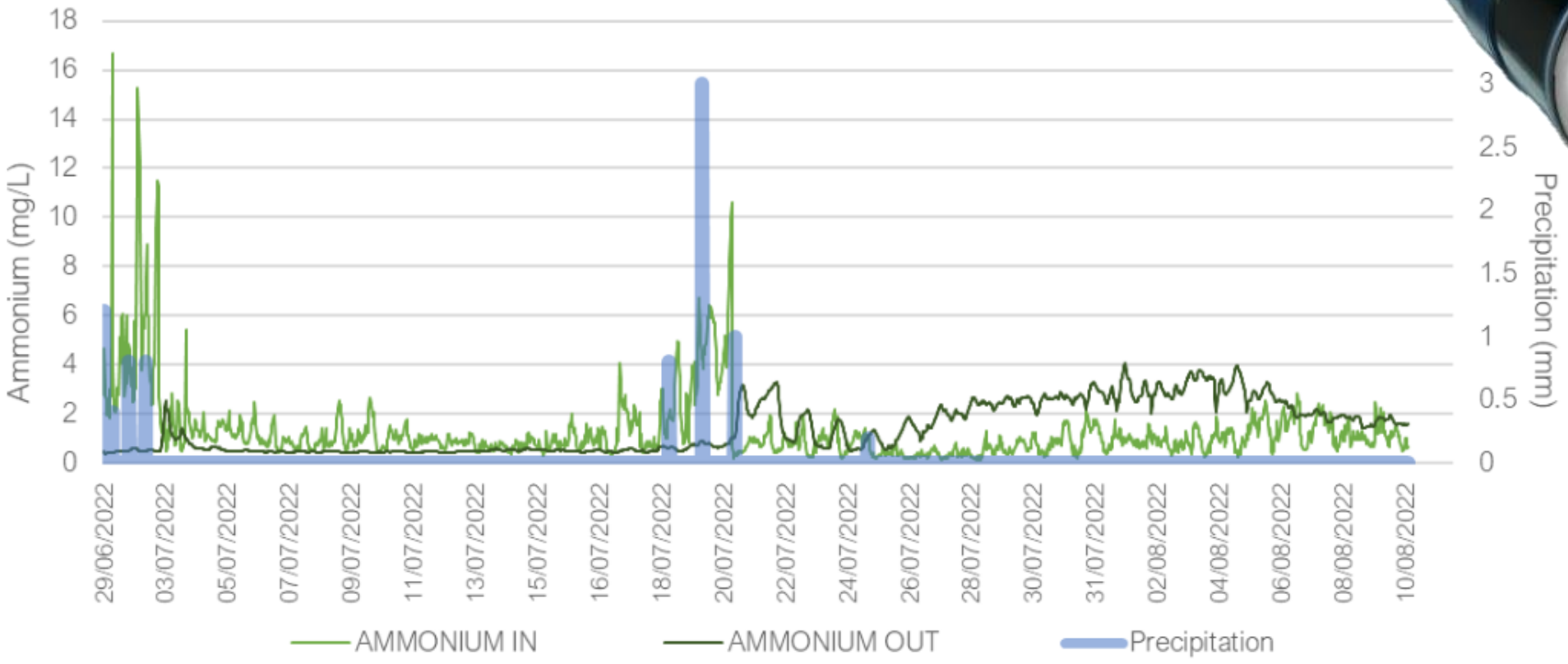
- Water quality
- Habitats for nature
- Silt control
- Regulating flow

- Flood Storage
- Cooling in a warming climate
- Wellbeing and access to nature

Water quality



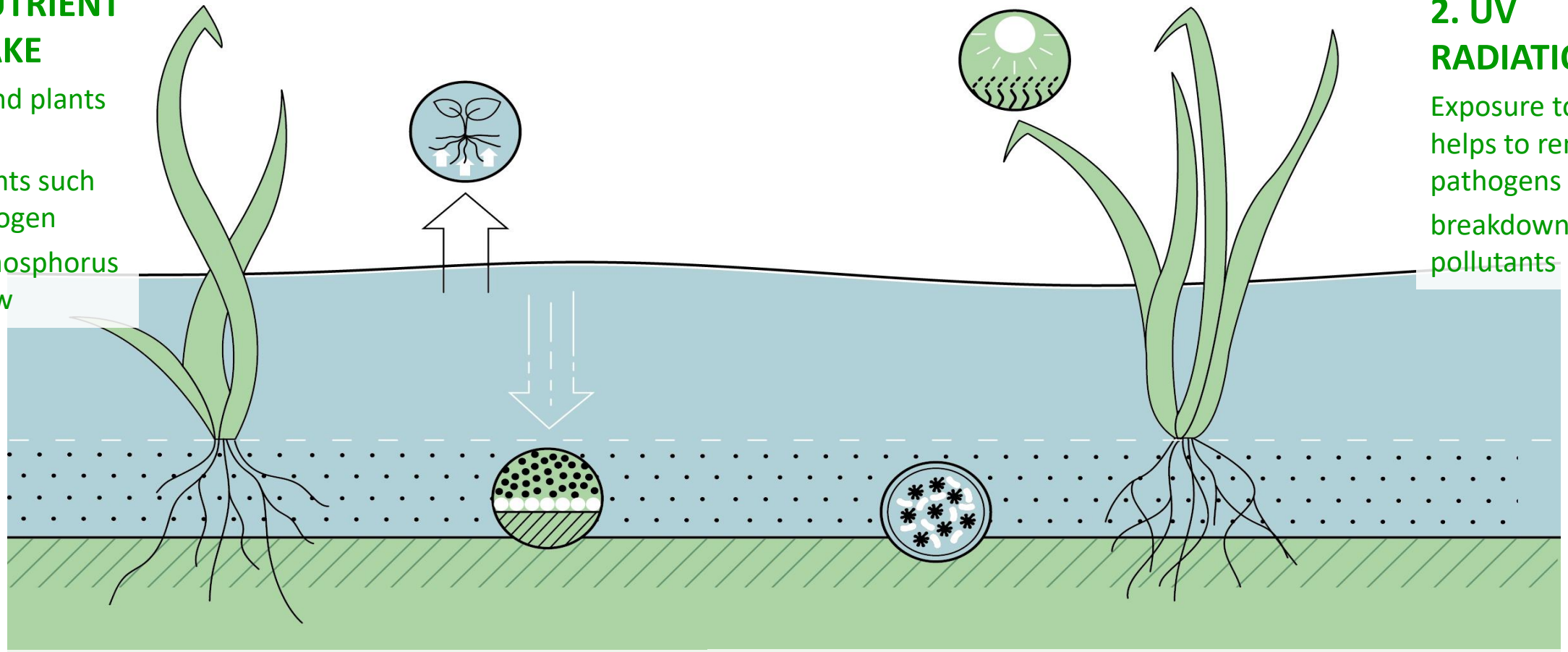
Water quality



Wetland processes that improve water quality

1. NUTRIENT UPTAKE

Wetland plants use nutrients such as nitrogen and phosphorus to grow



2. UV RADIATION

Exposure to UV light helps to remove pathogens and breakdown organic pollutants

3. SEDIMENTATION

Wetland plants increase hydraulic resistance and reduce velocity. Suspended solids drop out together with attached pollutants such as metals and insoluble phosphorus

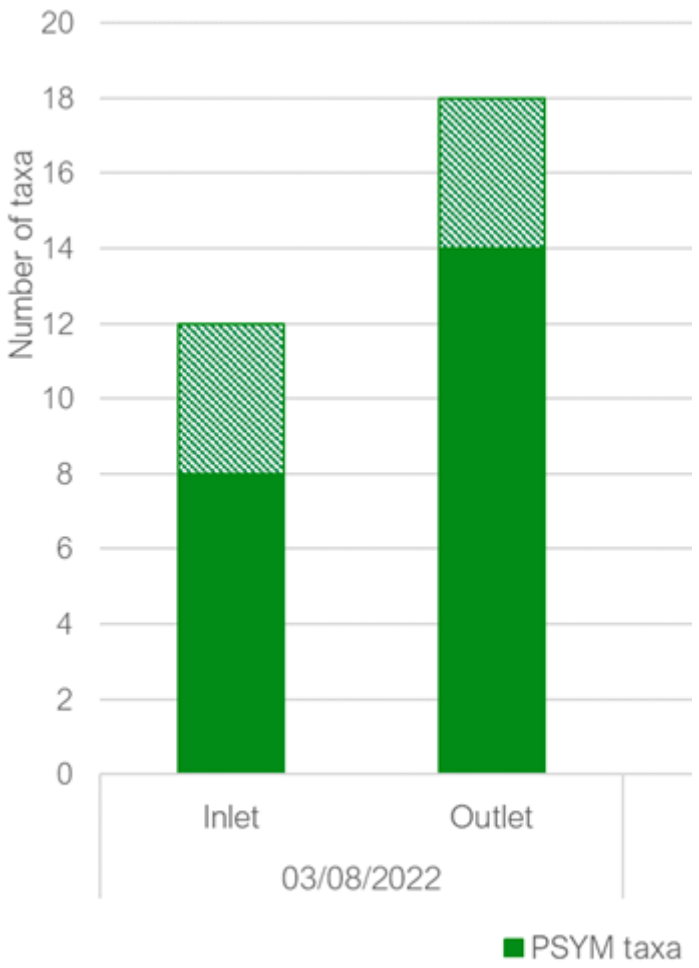
4. MICROBIAL ACTION

The wetland plant root structure creates a large oxygen rich, surface area for microbial biofilms, these microbes break down organic pollutants, such as hydrocarbons

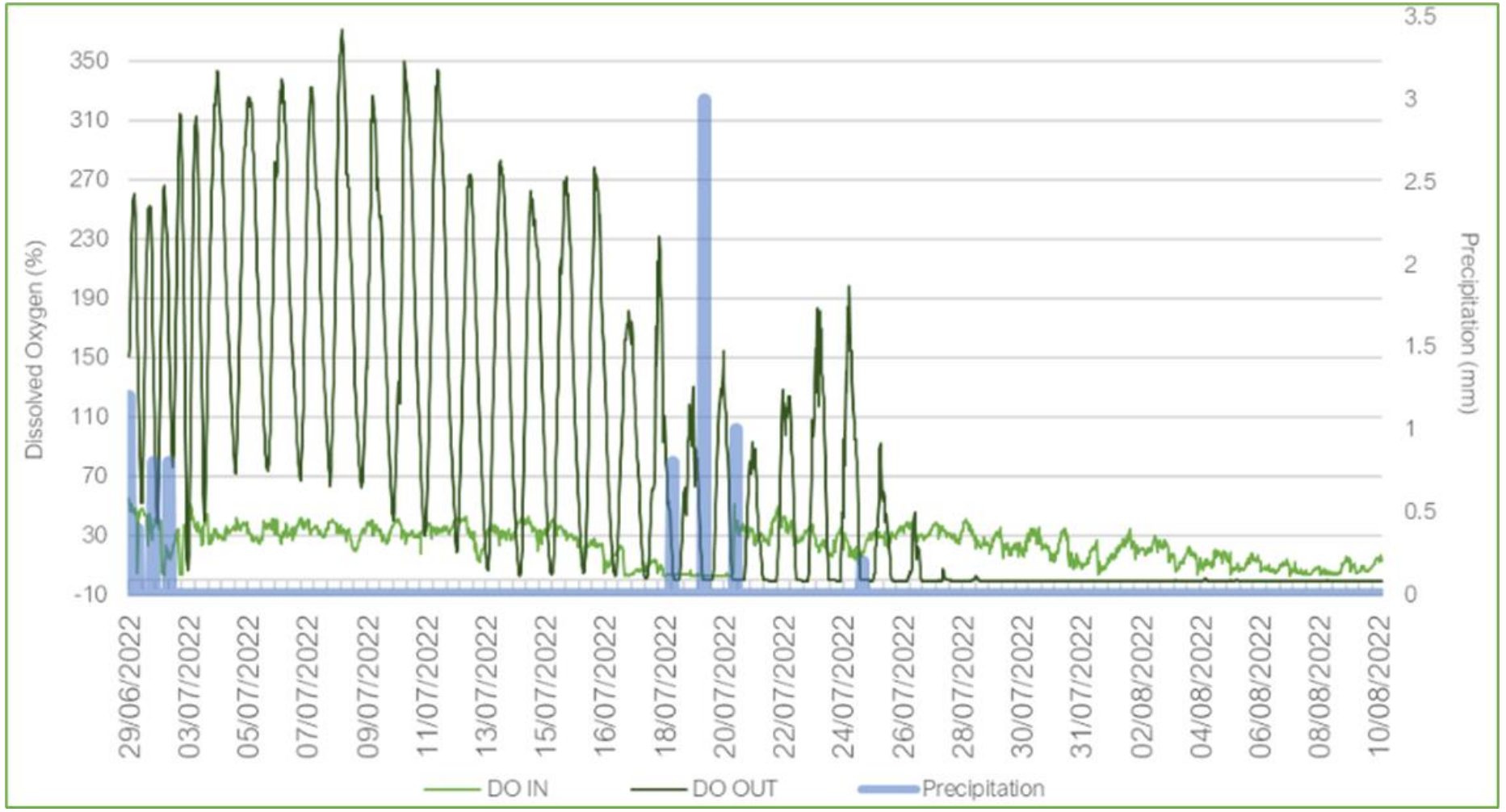





Places for nature



The limitations of nature-based solutions



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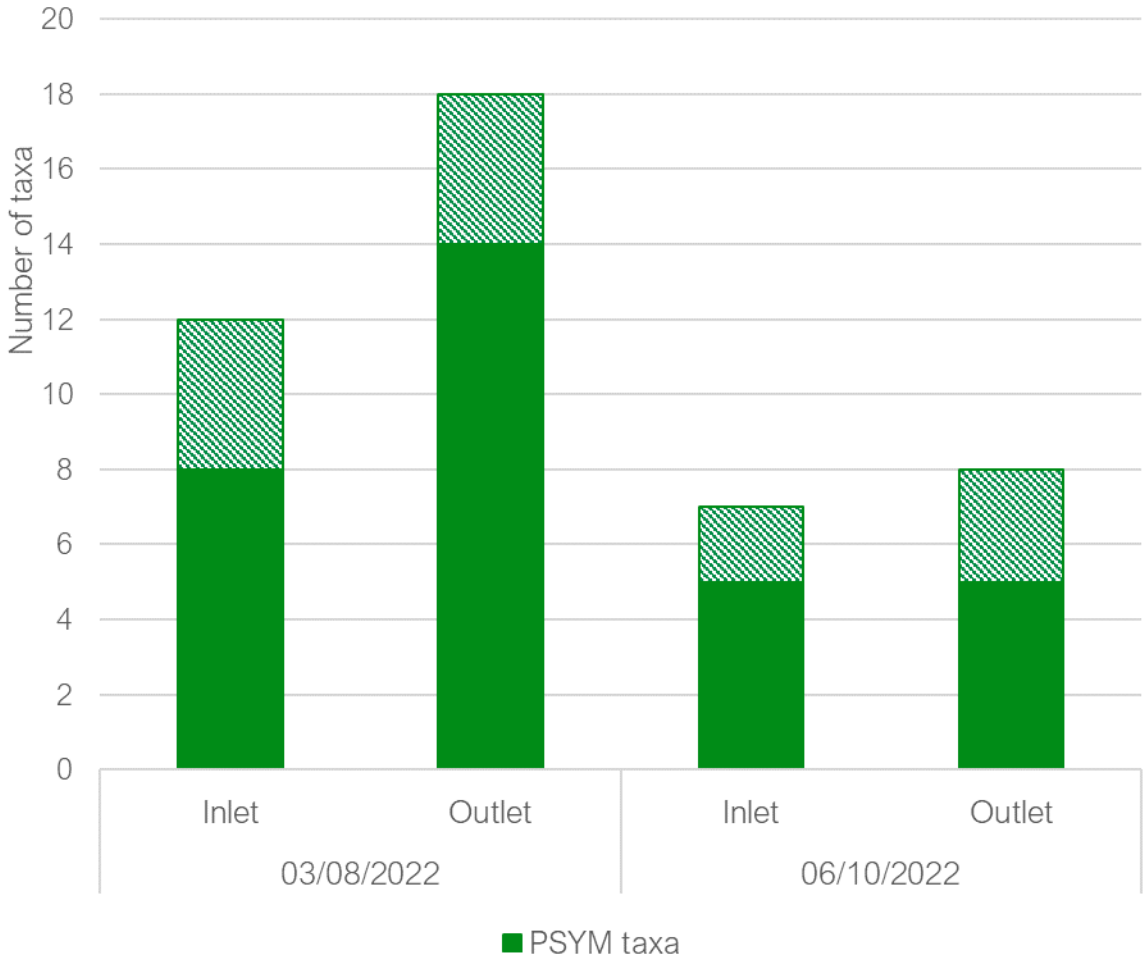
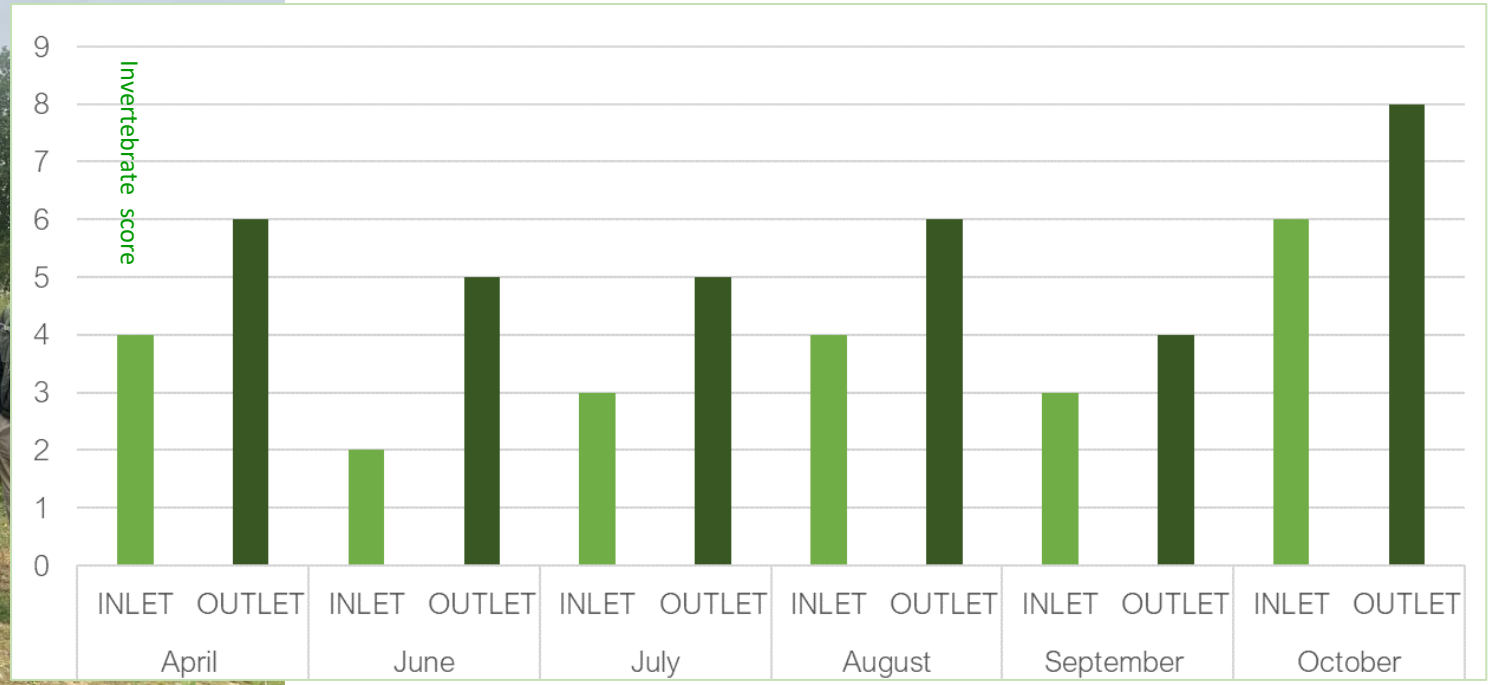


Use constructed wetlands within a ‘Sponge City’, alongside significantly upscaled action to remove pollution at source

Roads

Sewers

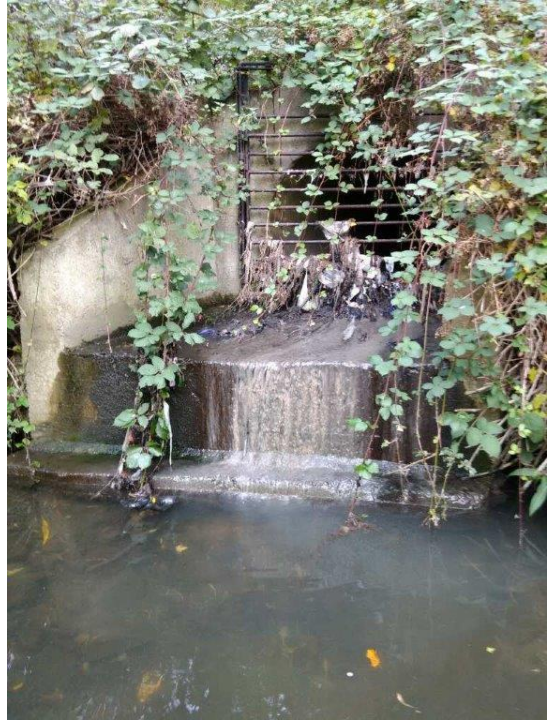
Community monitoring of wetlands to understand impact and limitations

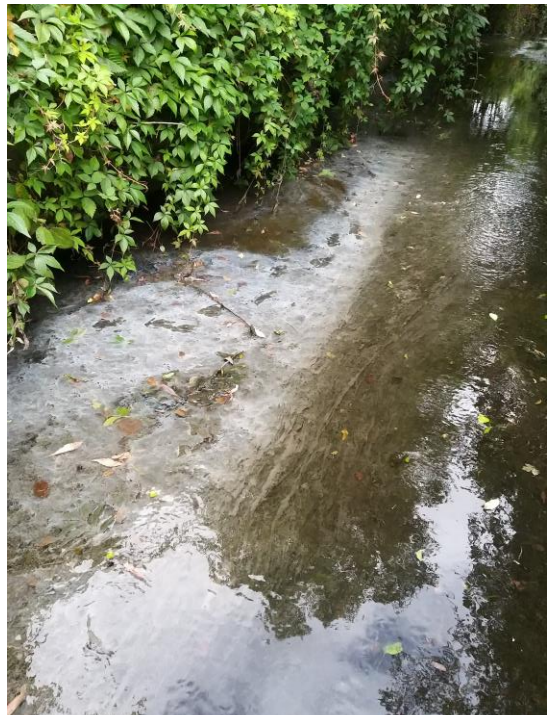


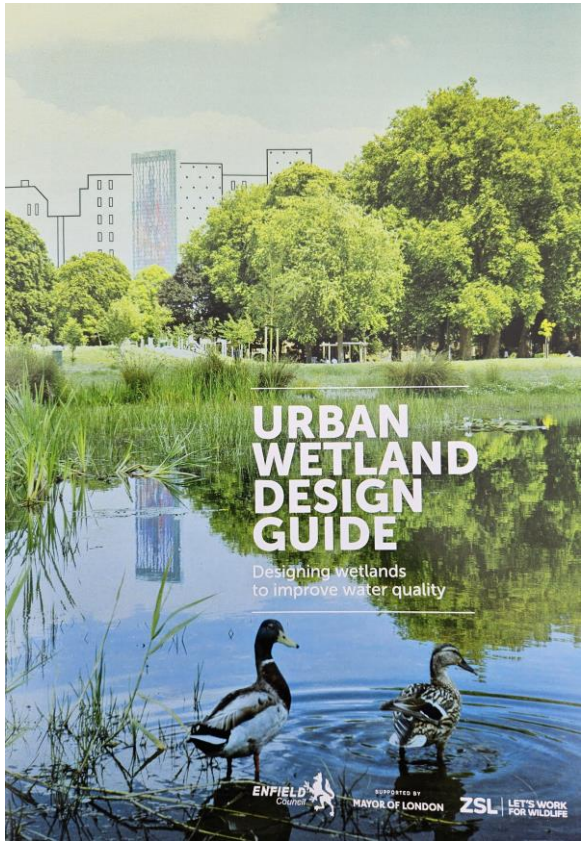
Headstone wetland monitoring 2024

Register to become a freshwater citizen scientist in London

www.zsl.org/volunteer-londons-rivers

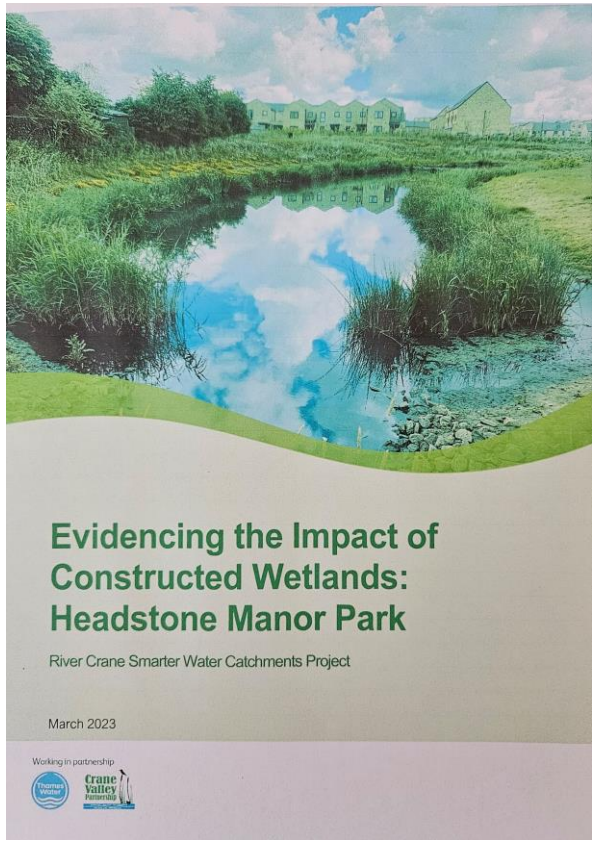






LB Enfield and ZSL's Urban Wetland Design Guide,

www.catchmentbasedapproach.org/urban-wetland-design-guide



ZSL's report on Headstone Wetlands,

www.cranevalley.org.uk

Joe.Pecorelli@zsl.org

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Crane Valley Partnership
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HOUNSLOW · RICHMOND

THAMES21

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CHILTERNS CHALK STREAMS PROJECT

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FORCE
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Established 2003