



RECLAIM



Adapting hybrid GBGI approaches for better wastewater processing

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Who are we?

- » RECLAIM Network GBGI (Green-Blue and Grey Infrastructures) Workshop
 - Title: Adapting hybrid GBGI approaches for better wastewater processing
 - Proposed date: Dec 7th 2024 (TBC)

» Host - Dr Bing Guo

- Senior Lecturer at University of Surrey
- Department of Civil and Environmental Engineering, Bioinformatics, Institute for Sustainability

<https://www.surrey.ac.uk/people/bing-guo>



» Co-host & Workshop Lead – Mrs Xiaobo (Agnes) Shen

- Part-time PhD student at University of Surrey (supervised by Dr Bing Guo & Prof Tao Chen)
- Part-time Project Engineer at Thames Water

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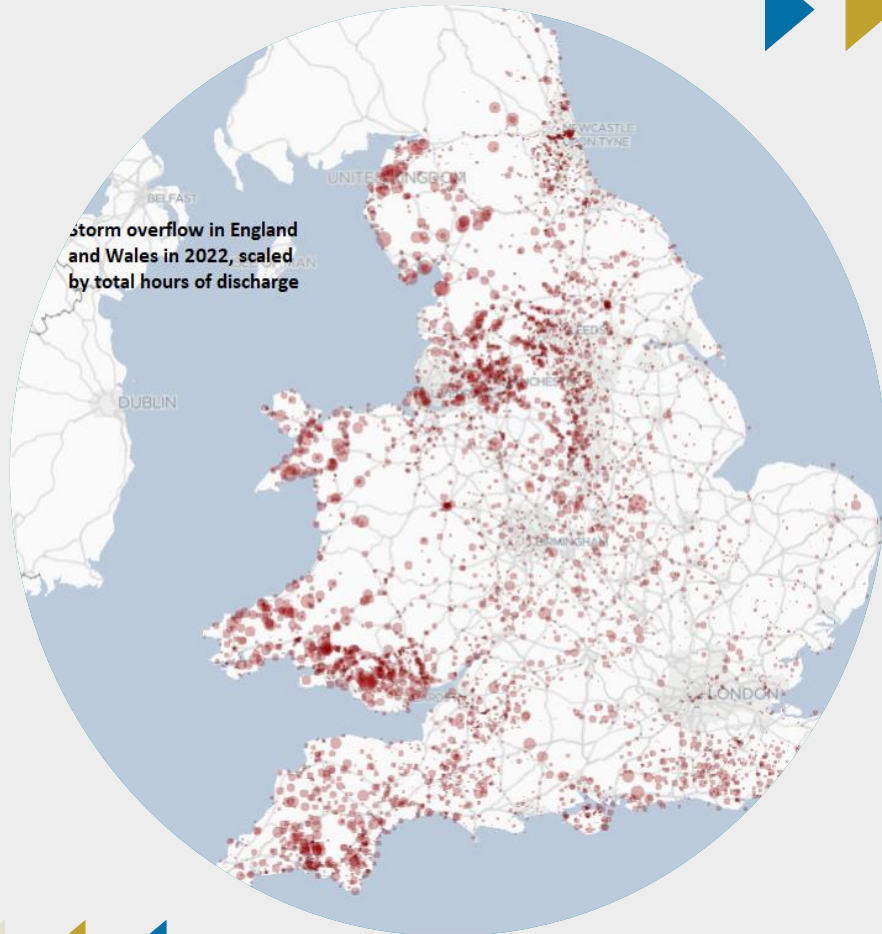


Workshop Background



- The urban water cycle and GBGI
- **Sewage treatment works** (STWs) are:
 - “gut of the community” that purify pollutants and return clean water to the community,
 - normally classified as “grey-infrastructure”,
 - closely linked to urban drainage, community greenspace, surface runoff and downstream green-blue infrastructures,
 - **however**, often singled out from the other sections of the water infrastructure.

Workshop Background



- Current pressure on the STWs due to:
 - climate change,
 - population growth,
 - urbanisation
 - aging assets
 - tightened consents
- STWs with traditional “grey-infrastructure” are reaching to design limitations and not flexible to accommodate the increasing flows & loads – e.g. storm overflows!
- Adapting hybrid GBGI approaches can:
 - protect & restore natural ecosystems, enhance sustainability and reduce energy costs, whilst
 - enhance the efficiency and effectiveness of man-made techniques and centralised management

Workshop Aims & Objectives

- » The **aim** of the proposed workshop is to bridge different stakeholders and co-design optimised future hybrid GBGI for best urban water quality.

- » The **specific objectives** are to:
 - **Provide** a platform for various water sector stakeholders in the water sector to:
 - 1) Understand the importance of collectively adapting hybrid GBGI approaches for STW optioneering & optimisation;
 - 2) Share knowledge, lessons learnt and best practices of implementing hybrid GBGI approaches in STW projects.
 - **Provide** an opportunity to bridge academia with industry to identify potentials of collaborations of how to implement a hybrid GBGI approach in future STW projects;
 - **Create** a community of practice of GBGI professionals from academia, government and industry.