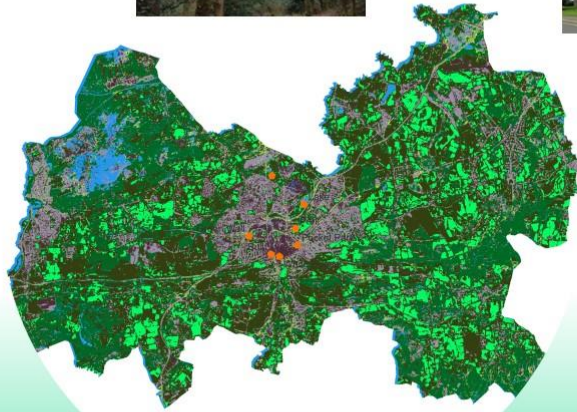




RECLAIM

LivGBGI (Heat, flood, drought and noise)



LivGBGI: Living Lab Demonstration of Green-Blue-Grey Infrastructure's Multiple Co-benefits (heatwave, flood, drought and noise)

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Research Fellow (Project PI)

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Laurence Jones, Professor Prashant Kumar



Project Team/Partners



Overall project management, monitoring, public perception/citizen-science activities, numerical modelling (WRF, DrinC software, HEC-RAS hydraulic model), and GBGI upscaling and replication.



The noise model (Guildford area)

Surrey County Council - Upscale/replicate/disseminate the framework to other boroughs in SCC.



Provide support for the required information and datasets that help to maximise the multifunctional benefit of GBGI.

Support application of WRF model within the UK & beyond.



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Departamento de Ciências Atmosféricas

Project Aims



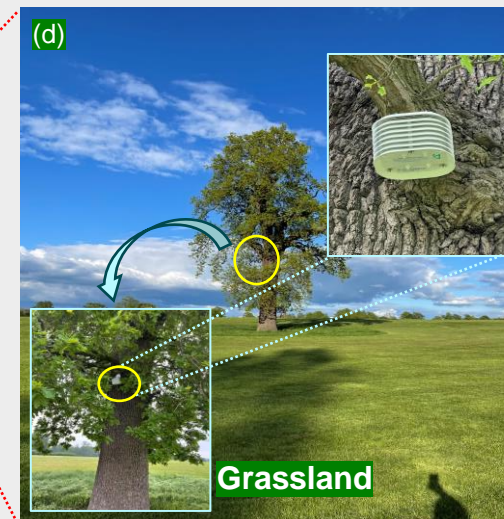
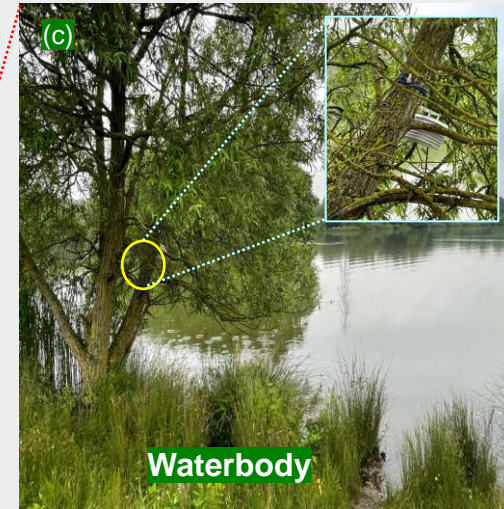
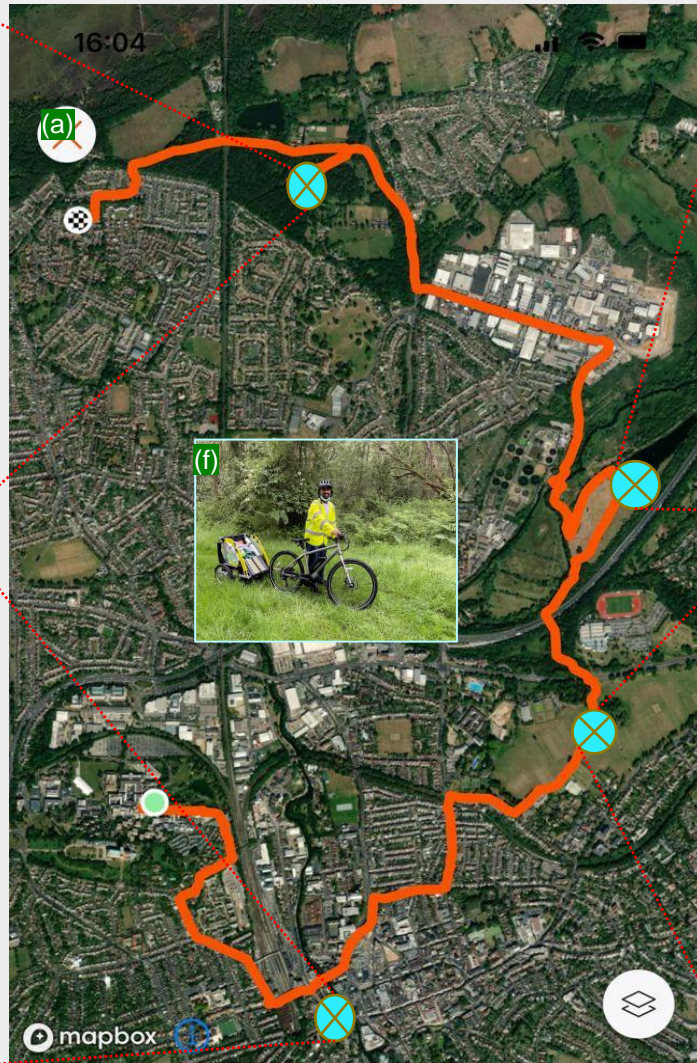
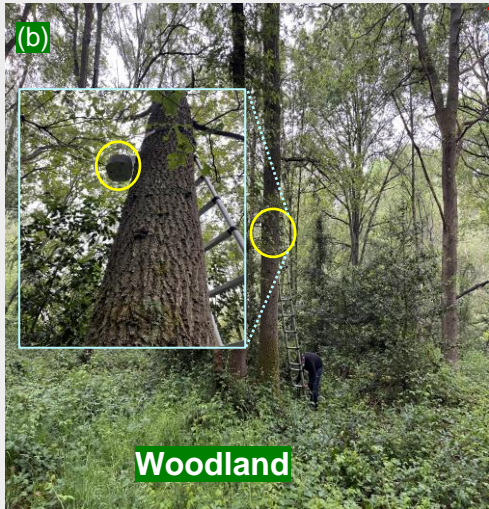
The overall Goal is evaluating the multifunctional benefits of **GBGI** **against** heatwaves, drought, flood, and noise.

Why and what do we want to achieve?



- **Establish case studies** to facilitate best practices for upscaling and replication GBGI elsewhere
- **Generate empirical and modelled datasets** that feed into the GBGI database
- **Synthesizing the result to create**
 - Scientific publications,
 - Policy briefs, and
 - Guidance.

Guildford Living Lab (LivGBGI Monitoring location)



Newly deployed



Stationary
Covering 7 above features

Mobile
Orange path is covering 7 above landscapes

Results (1): Expanding the existing network of sensors



Stationary monitoring

Extension sensors:

- 1 Constructed GI (green wall)
- 1 Pocket park
- 1 Mixed green and blue infrastructure

Network of sensors:

- 4 Green (woodland, park, pocket park, green wall)
- 2 Blue (waterbody, riverway (mixed))
- 1 Urban (built environment)

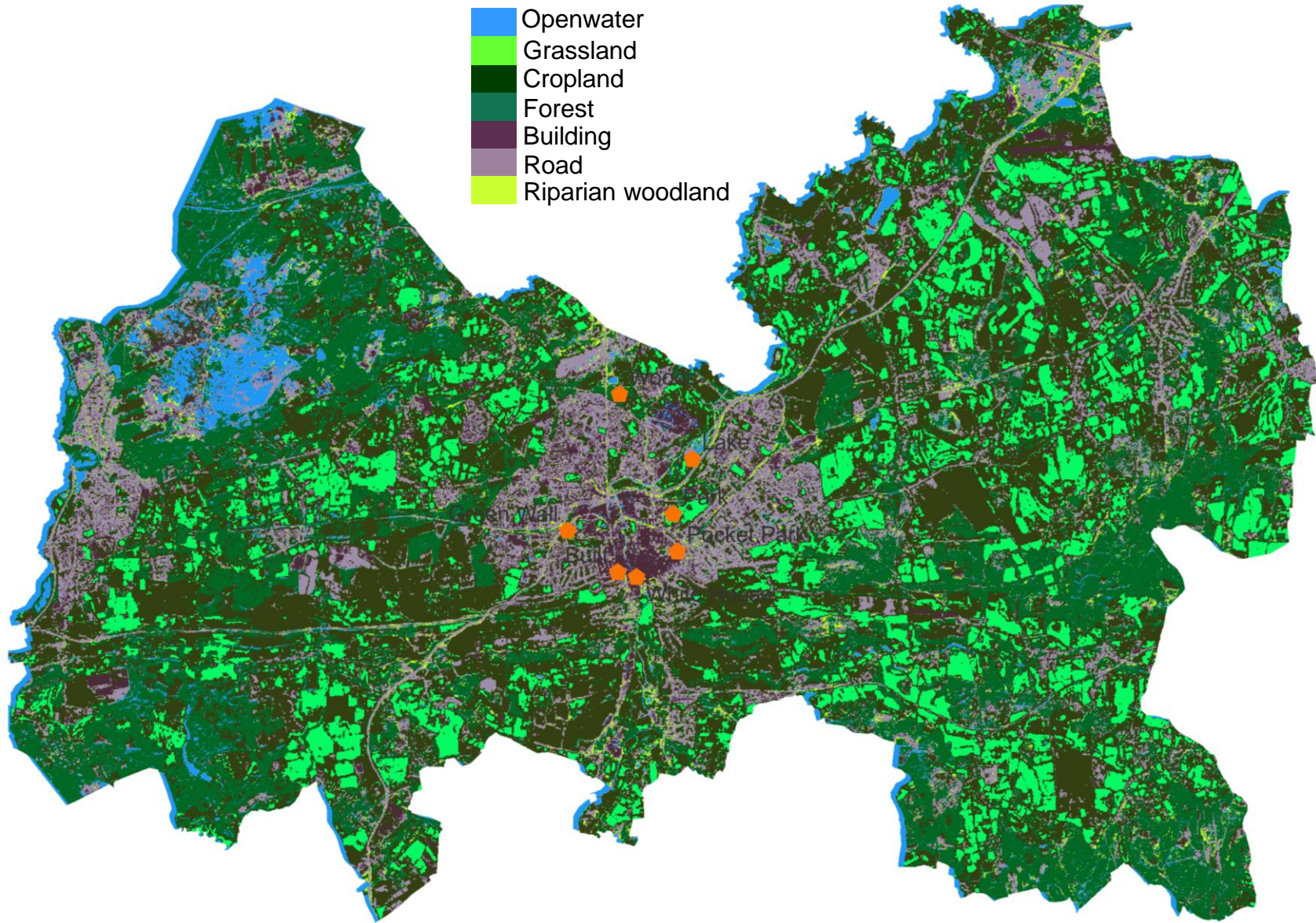


Results (2): Numerical Modelling (Guildford Land use Classification)



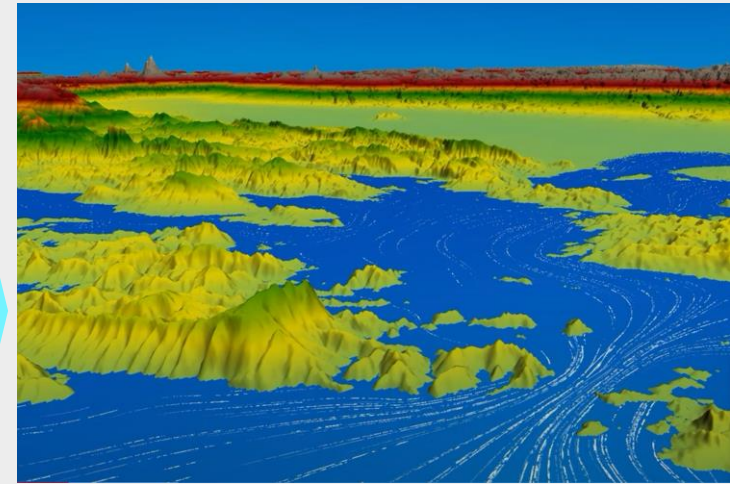
RECLAIM

- Openwater
- Grassland
- Cropland
- Forest
- Building
- Road
- Riparian woodland



- GBGI co-benefit: (1) Flooding – in progress

2D HEC-RAS model



- GBGI co-benefit: (2) Calculating Noise Mitigation Provided by GBGI – in progress
- GBGI co-benefit: (3) Drought reduction – in progress

Thank you to all LivGBGI team!

