

Improving river water quality in Tamworth



Ruth Needham, Head of Landscape and Partnership, Trent Rivers Trust



What are the rivers in Tamworth?

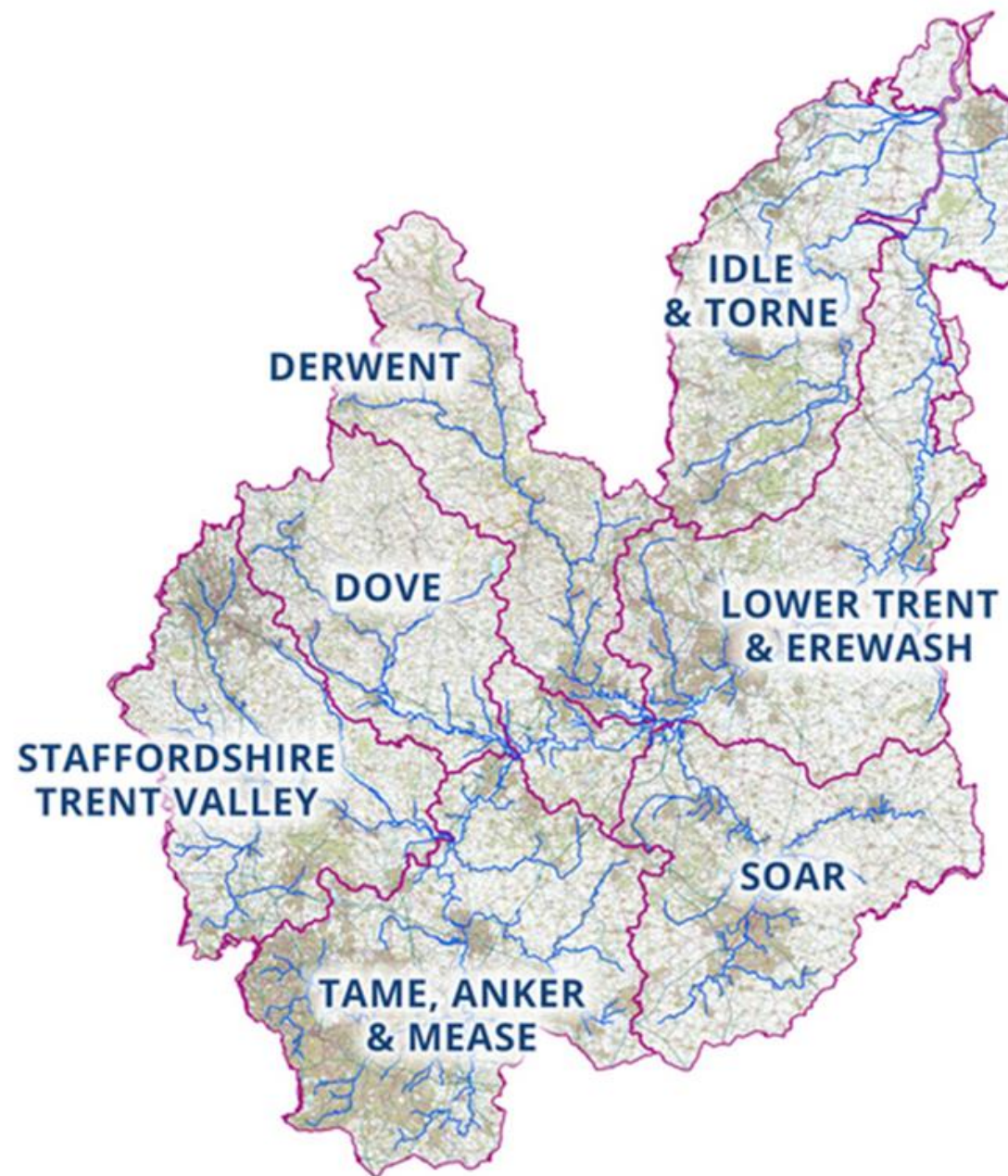
What is their water quality?

What factors influence water quality?

Ways to improve water quality...

What can Local Government and communities do to help?

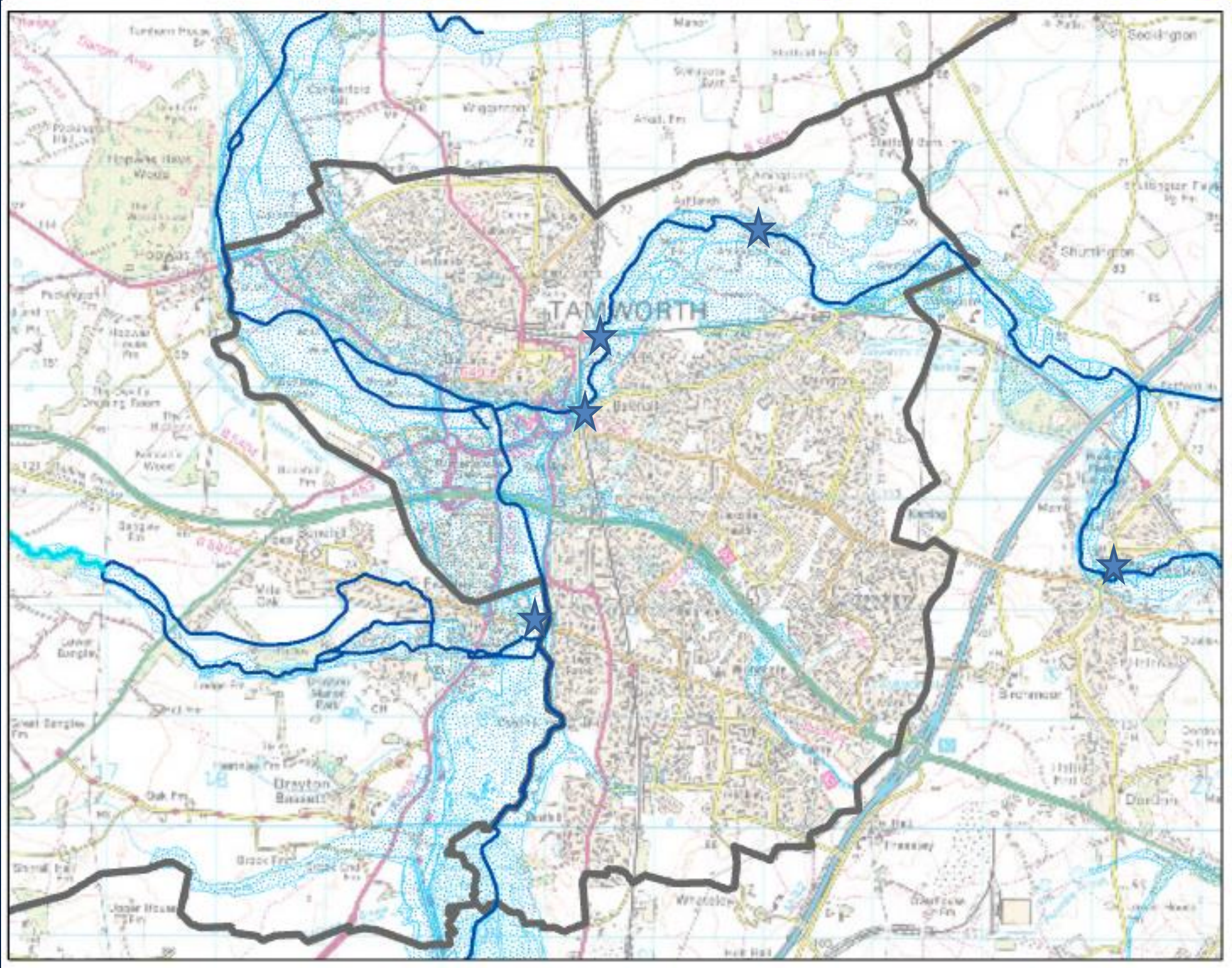
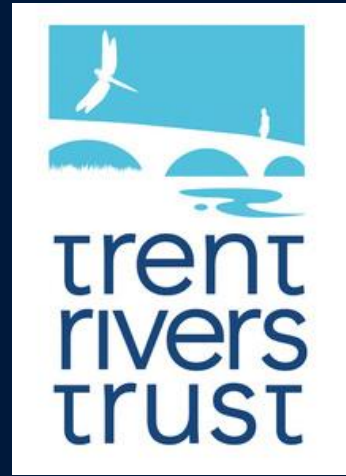
Trent Rivers Trust



About us
250+ projects
20 years of experience

We're a team of conservation, land and river recovery experts

We are a charity working with partners and communities to restore and protect your local rivers, for **people** and for **wildlife**



Legend	
LPA boundary	
EA main river	
Ordinary watercourse	
WFD waterbody ecological status (2022 - poor)	
EA sampling site	
Waterbody boundary	
Floodplain	

Sampling by the EA
Orthophosphate, reactive as P
Alkalinity to pH 4.5 as CaCO3
Temperature of Water
Conductivity at 25 C
Ammoniacal Nitrogen as N
pH
Oxygen, Dissolved, % Saturation
Nitrogen, Total Oxidised as N
Nitrate as N
BOD : 5 Day ATU
Nitrite as N
Ammonia un-ionised as N
Oxygen, Dissolved as O2
Invertebrates
Fish
Diatoms
Macrophytes

Factors influencing water quality...

Habitat Modification



Pollution -diffuse and point source



Efficient drainage, intensive rainfall, increasing urbanisation and use of non-porous surfaces

Sectors	Agriculture and rural land management 62%	Water industry 53%	Urban and transport 26%	Weblink	
Activities	<ul style="list-style-type: none"> ① Poor nutrient management (fertiliser) 33% ② Poor livestock management 24% ③ Poor soil management 15% ④ Farm Infrastructure 4% ⑤ Land drainage 5% 	<ul style="list-style-type: none"> ⑥ Continuous sewage discharge 35% ⑦ Intermittent sewage discharge 11% ⑧ Groundwater abstraction 6% ⑨ Surface water abstraction 3% 	<ul style="list-style-type: none"> ⑩ Urbanisation 11% ⑪ Transport drainage 5% ⑫ Misconnections 4% ⑬ Flood protection 3% ⑭ Contaminated land 2% 	<ul style="list-style-type: none"> ⑮ Industry discharge 4% ⑯ Mining 3% ⑰ Drought 3% 	<ul style="list-style-type: none"> ⑱ Barriers 12% ⑲ Private sewage treatment 8% ⑳ Invasive non-native species 3% ㉑ Septic tanks 2%



Ways to improve water quality...



wetlands



rain gardens and suds (separating combined drainage)

Nature Based solutions (and engineering!)



river restoration



Swales and vegetation management

What Local Government organisations can do to help...

Planning and Policy

- Careful selection and design of development sites
- Encourage nature friendly sustainable urban drainage schemes
- Discourage paving and astro-turfing of driveways and back gardens

Working with communities

- Raise awareness off the 'love your river' resources
- Don't drop litter
- Don't pour paint, chemicals, fats or oils down sinks or drains
- Promote use of water meters and water efficiency measures
- Encouraging citizen science
- Campaign for greater investment in water quality

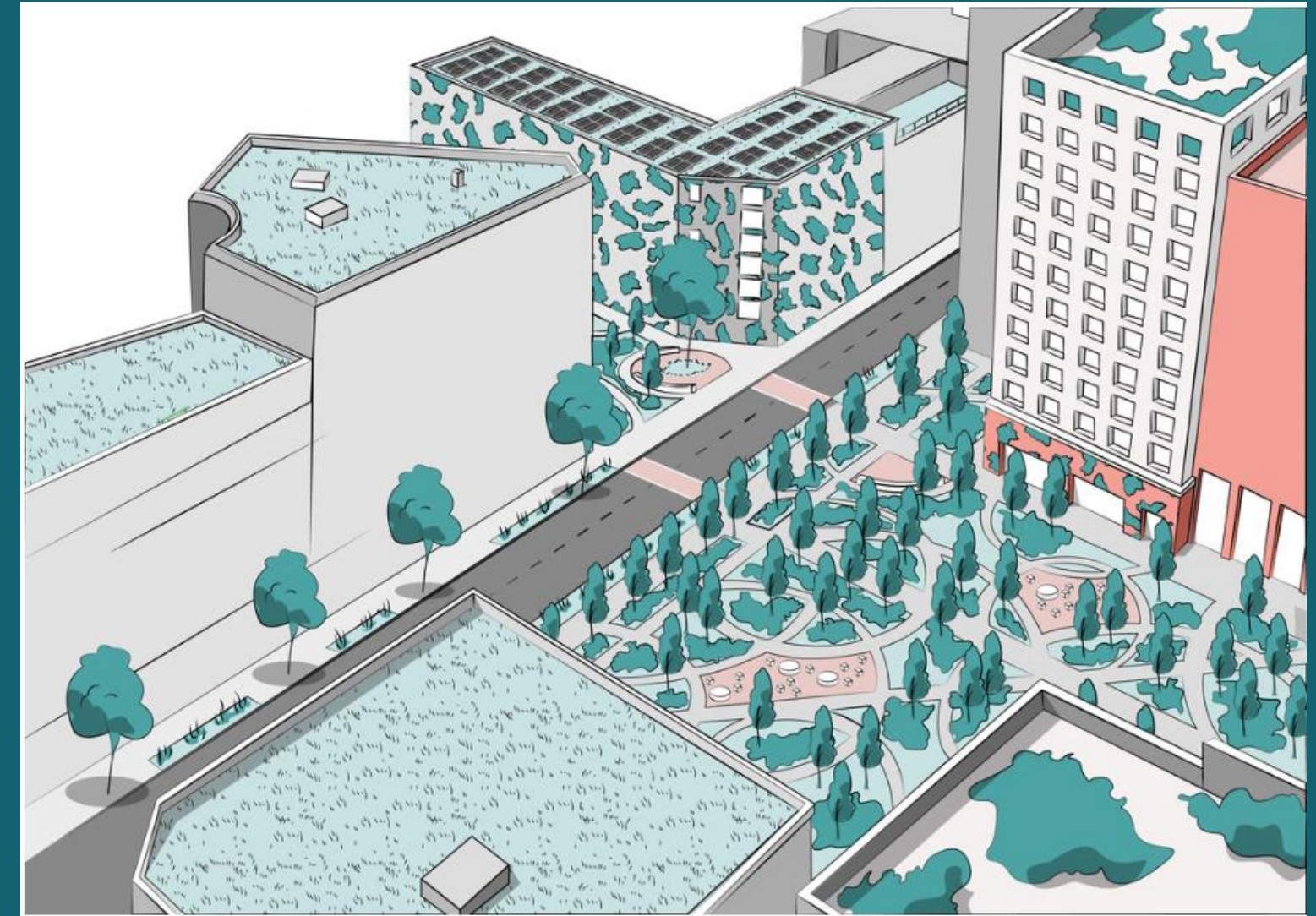
Managing land

- Buffer strips and fencing off
- Vegetation management (reduced mowing)
- Wetlands
- River restoration
- Separating combined drainage systems

Working with others

Engage and influence water companies, investors, developers, and regulators

Raise awareness of catchment partnerships





[Link](#)

	Water Quantity	Water Quality	Amenity Value	Biodiversity/BNG Potential	Climate Adaptation	Installation Cost	Maintenance Cost
Infiltration and Detention Basins							
Ponds & Wetlands							
Bioswales							
Raingardens							
Bioretention Tree Pits							
Green & Brown Roofs							
Rainwater Downpipe Planters							

Low Benefit/
Low Cost

Moderate Benefit/
Moderate Cost

High Benefit/
High Cost

Table 2 At-a-glance summary of the potential of each of the listed NbSuDS intervention types

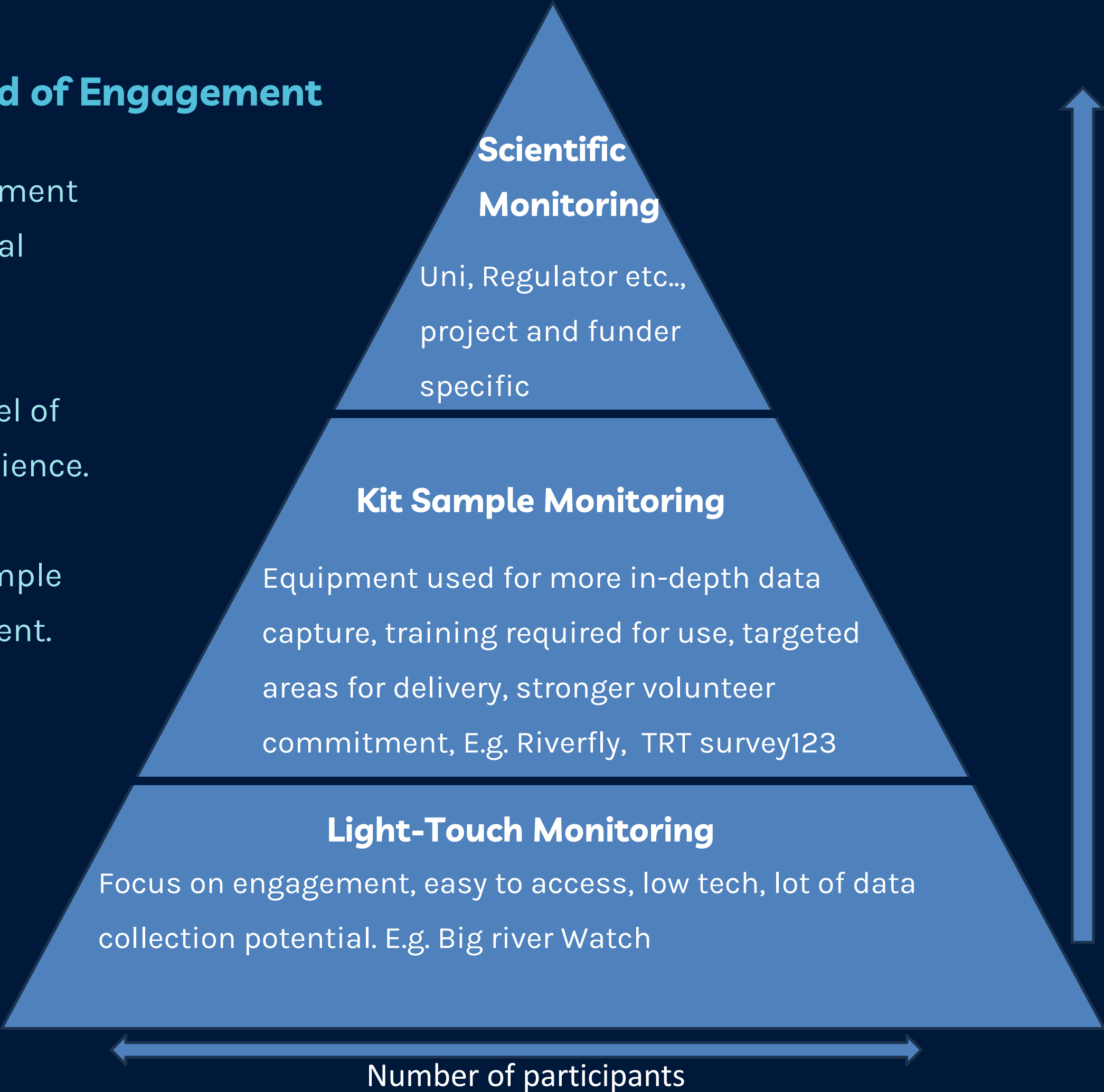
Citizen Science Pyramid of Engagement

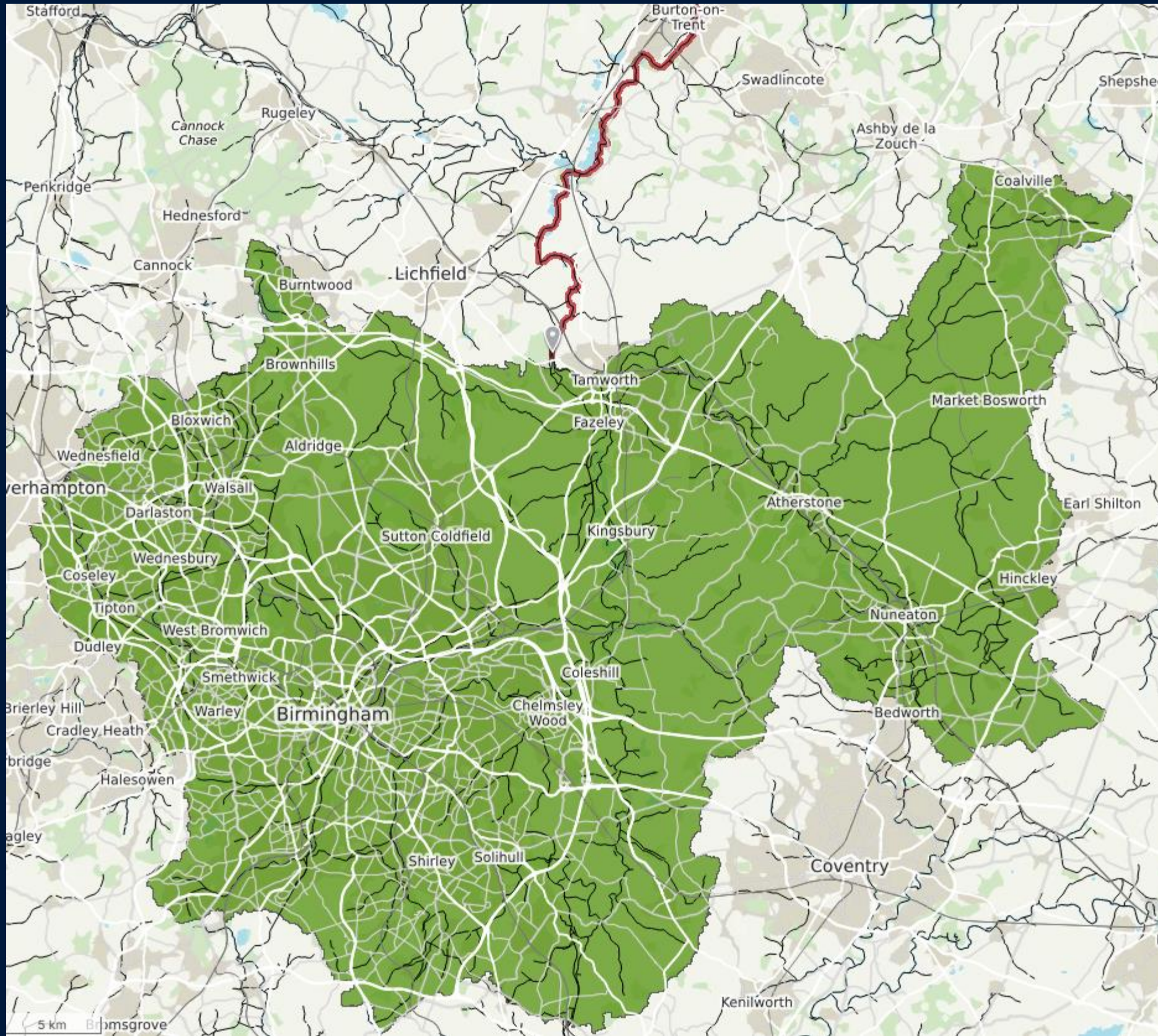
TRT developing an offer local people across the catchment an opportunity to tell us about the quality of their local waterways.

There is a spectrum of engagement outlining the level of detail we recommend when thinking about citizen science.

Our standard approach will be to develop our “Kit Sample Monitoring” opportunity for volunteers and engagement.

Being tested through a NFM project in Leicester





The Catchment Based Approach (CaBA) embeds collaborative working at a river catchment scale, delivering a range of environmental, social and economic benefits and protecting our precious water environments for the benefit of us all

Legend

Useful links

- [EA Water quality archive](#)
- [Environment Agency Catchment Data Explorer -Tame, Anker, Mease](#)
- [Catchment data explorer](#) (catchment maps for all of England, with data of reasons for failure)
- [Tame, Anker Mease CABA site](#)
- [Rivers Trust Sewage map](#)
- [Severn Trent water overflow map](#)

Catchment area of the Tame, Anker upstream of Tamworth



Upstream area	1,418.13 km ²
∨ Land cover	
> Natural	1,054.11 km ² 74%
> Artificial	341.40 km ² 24%
Water	22.62 km ² 2%

Thank you



Email

ruth@trentriverstrust.org



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