



Empowering decisions of tomorrow

## Role of wireless sensors to support agricultural water resources monitoring



**Matthew Ellison, Kisters UK**  
11<sup>th</sup> September 2025



Advanced  
Wireless  
Innovation  
Region



River  
Severn  
Partnership

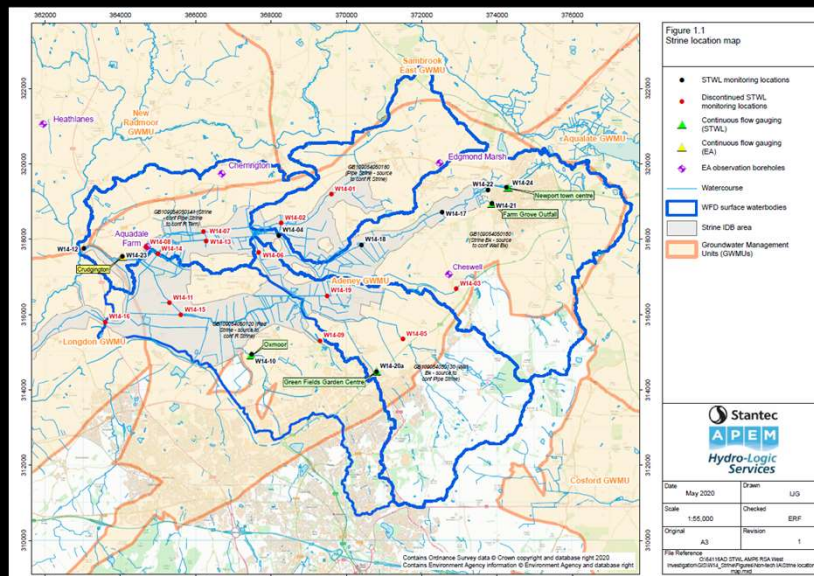
1

## KISTERS Introduction

- A global software and hardware business specialising in water, weather, energy, environment monitoring data, we focus on our client's needs for data gathering, processing and reporting.
- Global team made up of 800, engineers, scientists, inventors and developers from more than 30 nations across five continents.
- Focus is delivery of good data and always ensuring a return on investment in instrumentation

2

## River Strine catchment 2014–2020 monitoring sites



3 22.09.2025 A KISTERS presentation

KISTERS Controlled / Kontrolliert

KISTERS

3

## Philosophy

- Monitor flows throughout the catchment
- Listen to local knowledge of catchment dynamics
- Influence of rainfall in the catchment
- Monitor water entering the catchment from the South and East
- Monitor water as it flows North and West.

### The plan

Monitor water level and velocity where water leaves the catchment under the A442

- Rain gauges and flow in the catchment
- Select sites where a discharge curve can be created



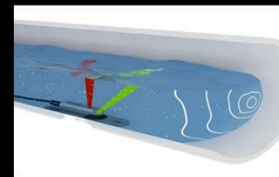
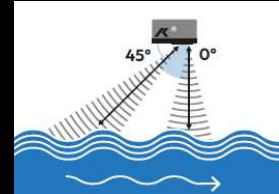
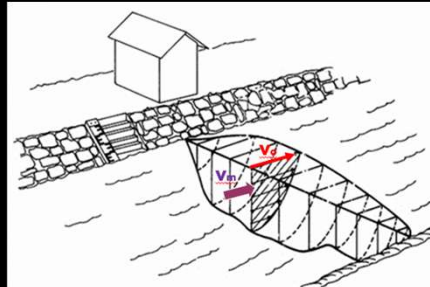
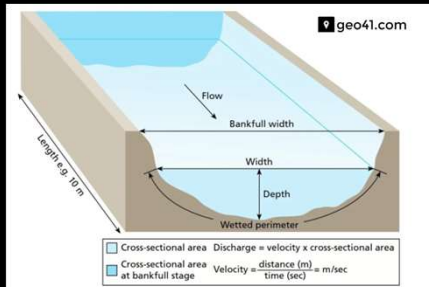
4 22.09.2025 A KISTERS presentation

KISTERS Controlled / Kontrolliert

KISTERS

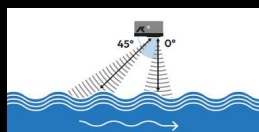
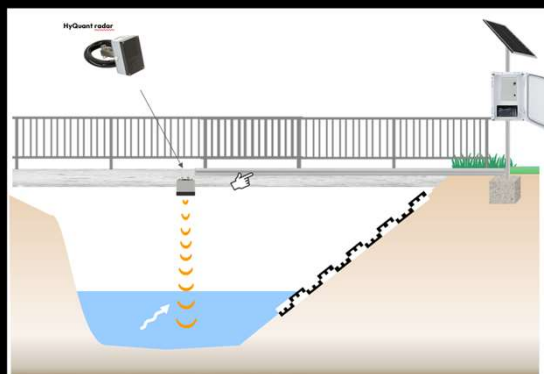
4

## Instrumentation, for level and velocity for discharge



5

## Instrumentation, radar for level and velocity for discharge



6

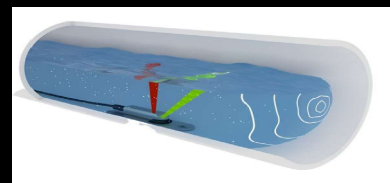
## HyQuant Edge



KISTERS

7

## Instrumentation. Bed mounted doppler



8



## Instrumentation

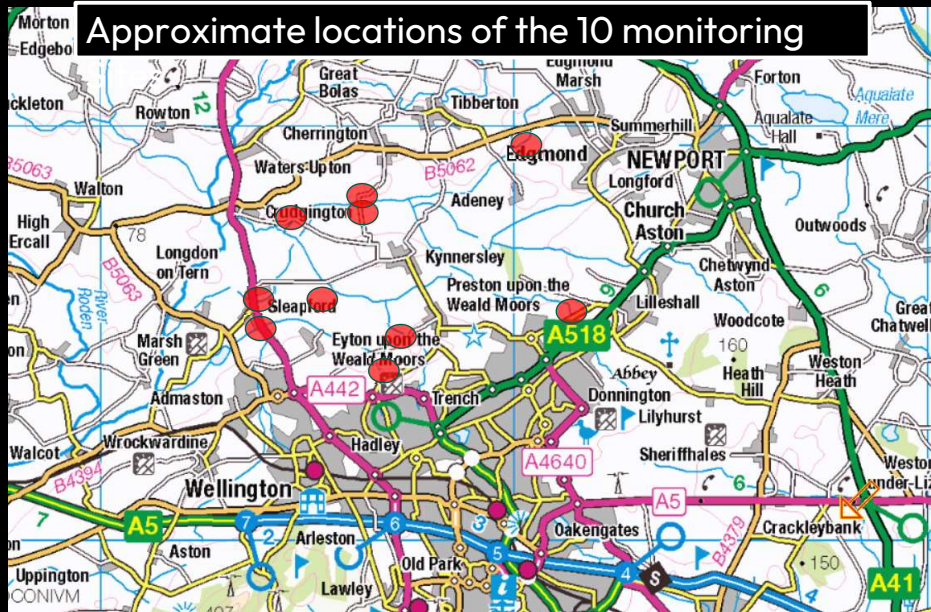


9

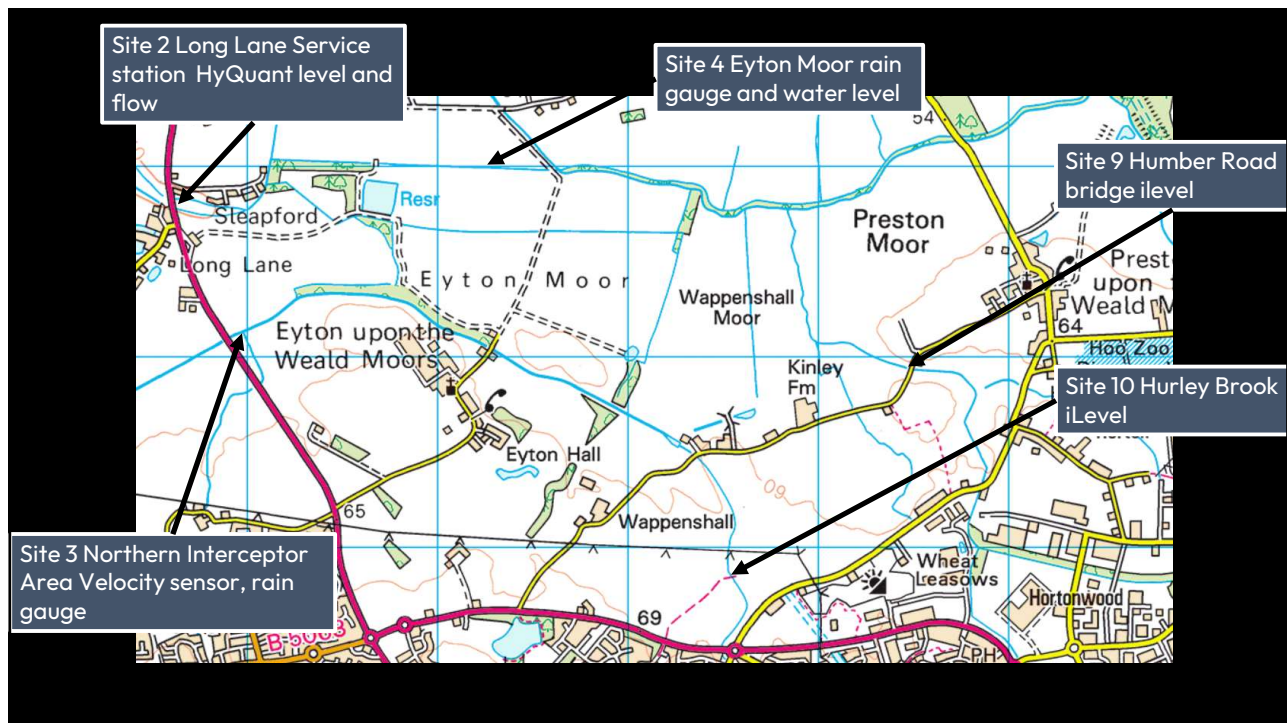
## Instrumentation



10

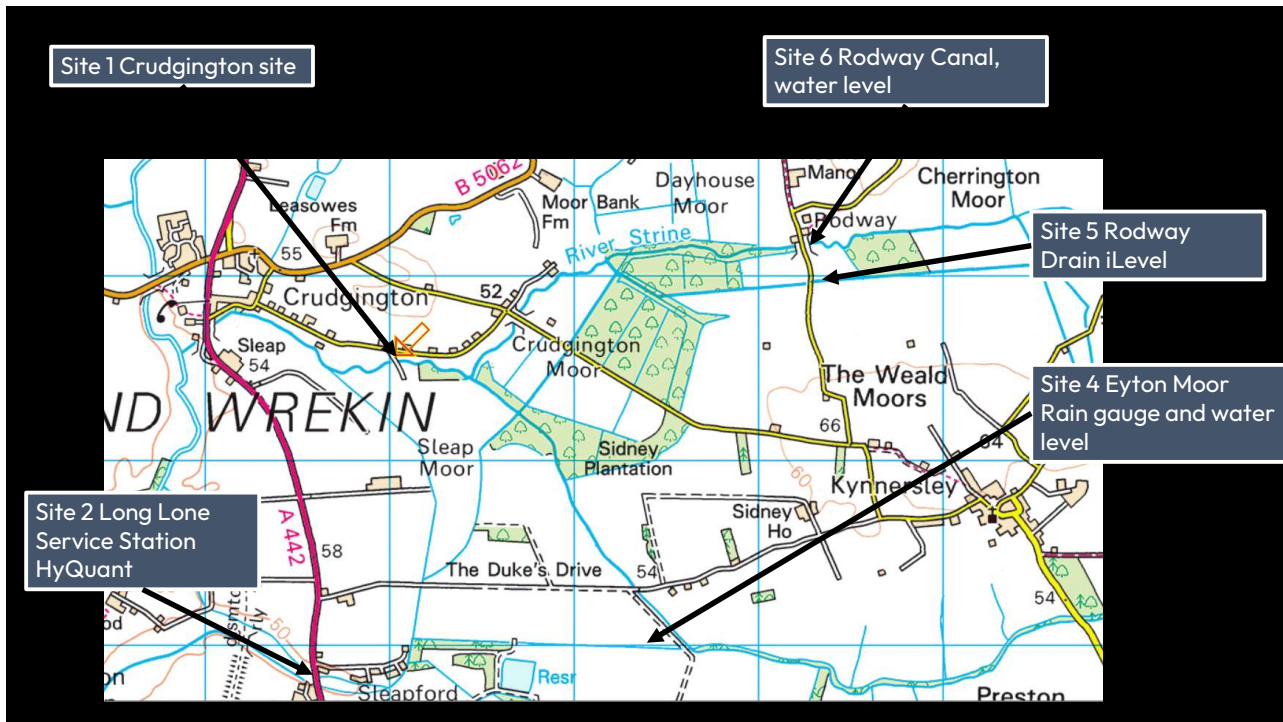


11

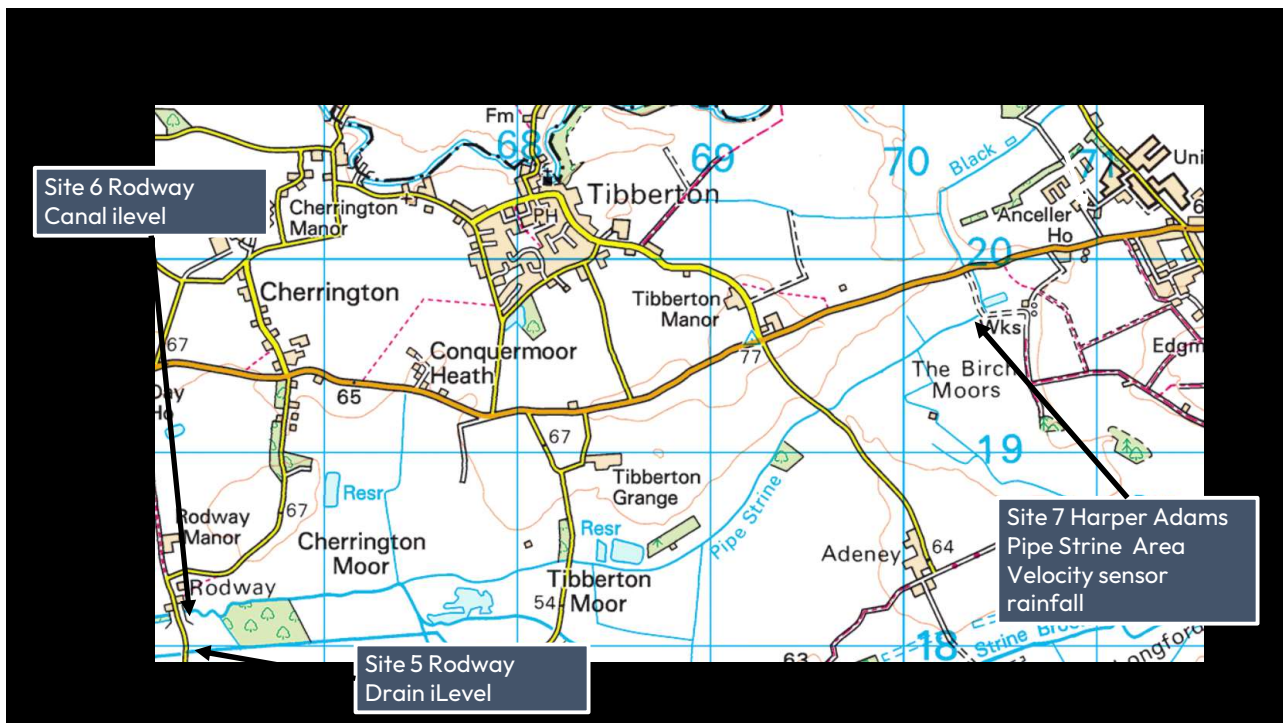


12

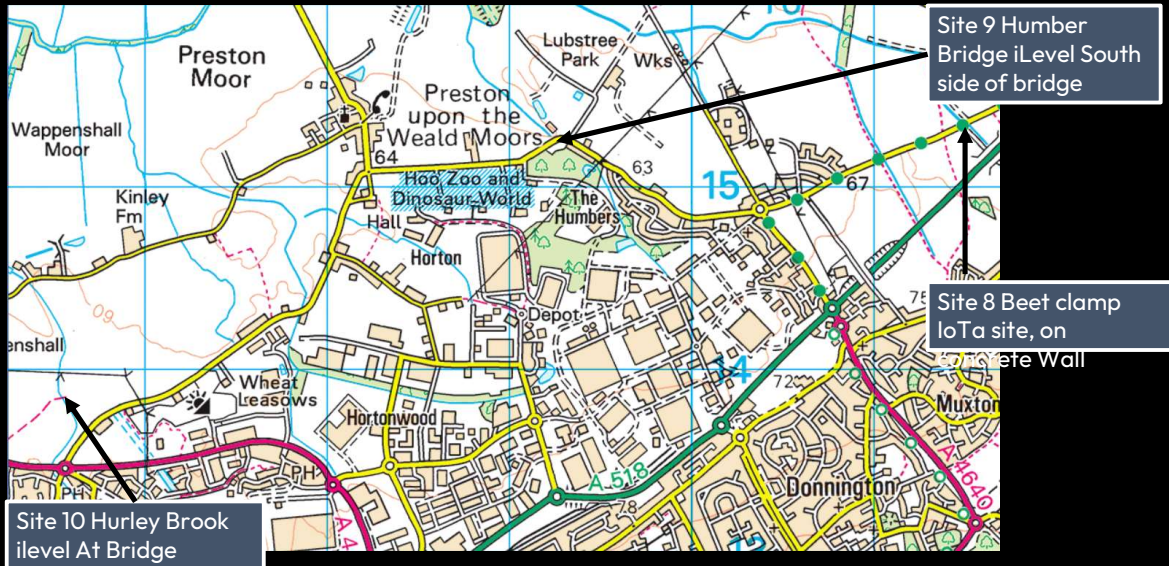




13

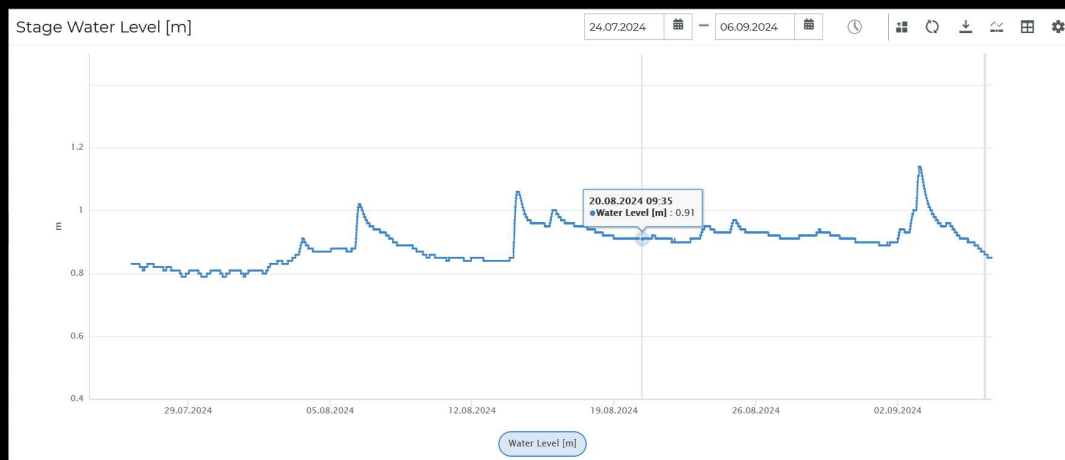


14



15

## Data



16

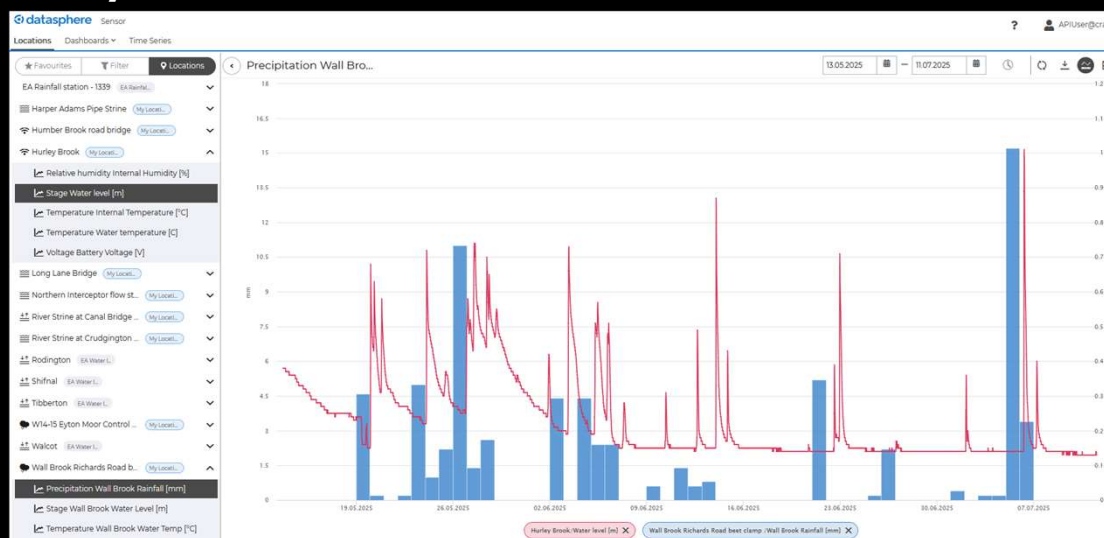


## Rainfall and water level



17

## Hurley Brook water level with Rainfall



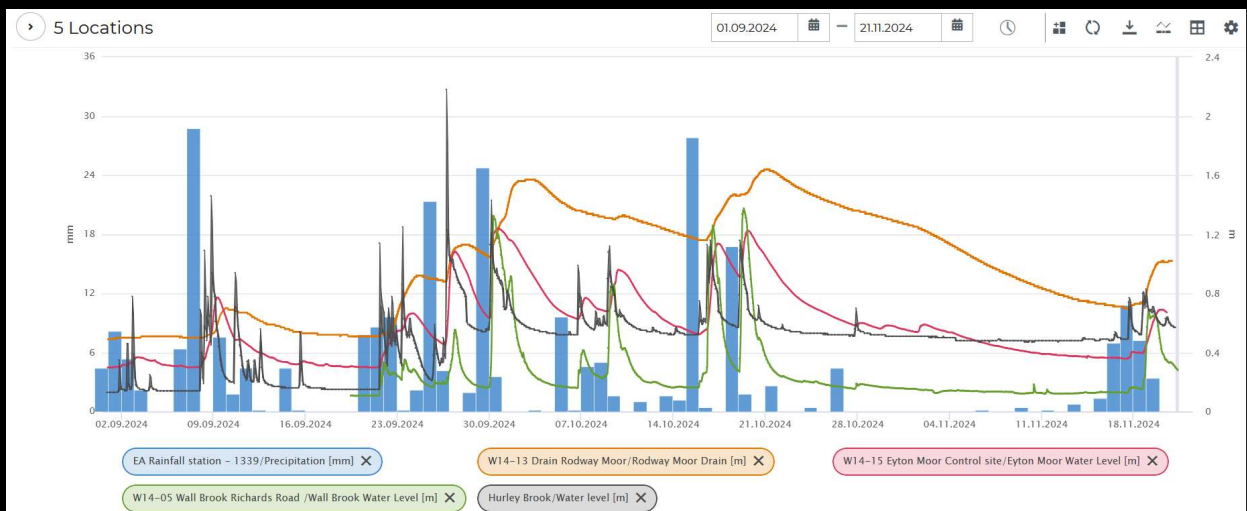
18

## Different reactions in the catchment



19

## Flashy urban runoff



20

## Impact on abstraction from flashy urban runoff



21

## Flows



22



