

# Public Document Pack



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Wednesday, 27 November 2024

## Notice of Reports Received following Publication of Agenda.

### Place Scrutiny Committee

Thursday, 5th December, 2024 at 2.00 pm,  
Council Chamber, County Hall, The Rhadyr USK

Attached are reports that the committee will consider as part of the original agenda but were submitted to democratic services following publication of the agenda.

Item No	Item	Pages
3.	<b>Water Quality and Sewage Infrastructure - Slides</b>  To invite Welsh Water to discuss water quality concerns and sewage concerns, particularly related to the Monmouth and Shirenewton area.	1 - 22

**Paul Matthews**  
Chief Executive

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# Monmouthshire County Council Briefing

*5<sup>th</sup> December 2024*

Agenda Item 3





# **Sharon Evans**

## **Director of Quality Policy & Compliance**

# Contents



- Dŵr Cymru Welsh Water – what we do
- Water quality in Monmouth
  - Overview of water supply
  - Challenges we face
  - Monmouth zonal investment
  - Drinking Water Inspectorate Report
- River water quality
  - Storm overflows
  - Phosphorous in SAC rivers
  - PR24 investment
- Pwllmeyric
  - Problem statement
  - Planned investment

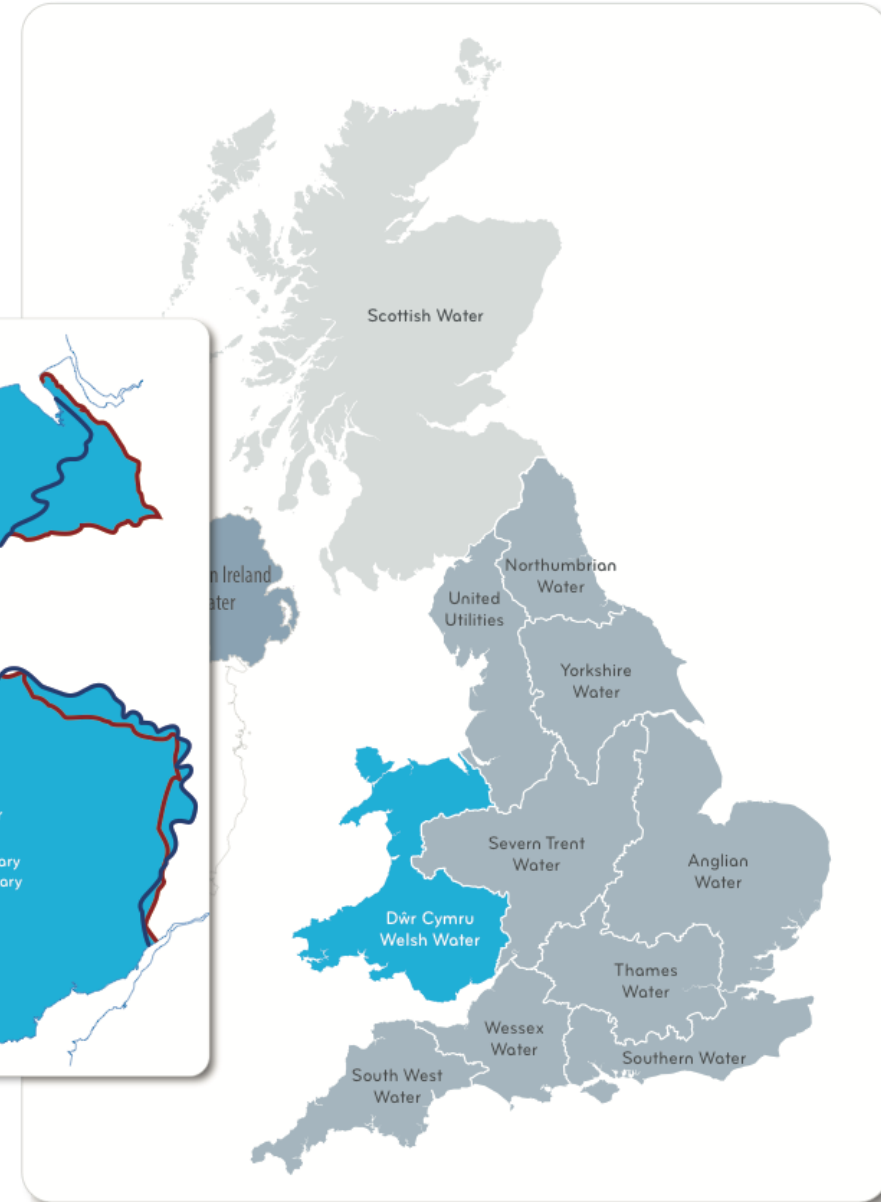
# What we do



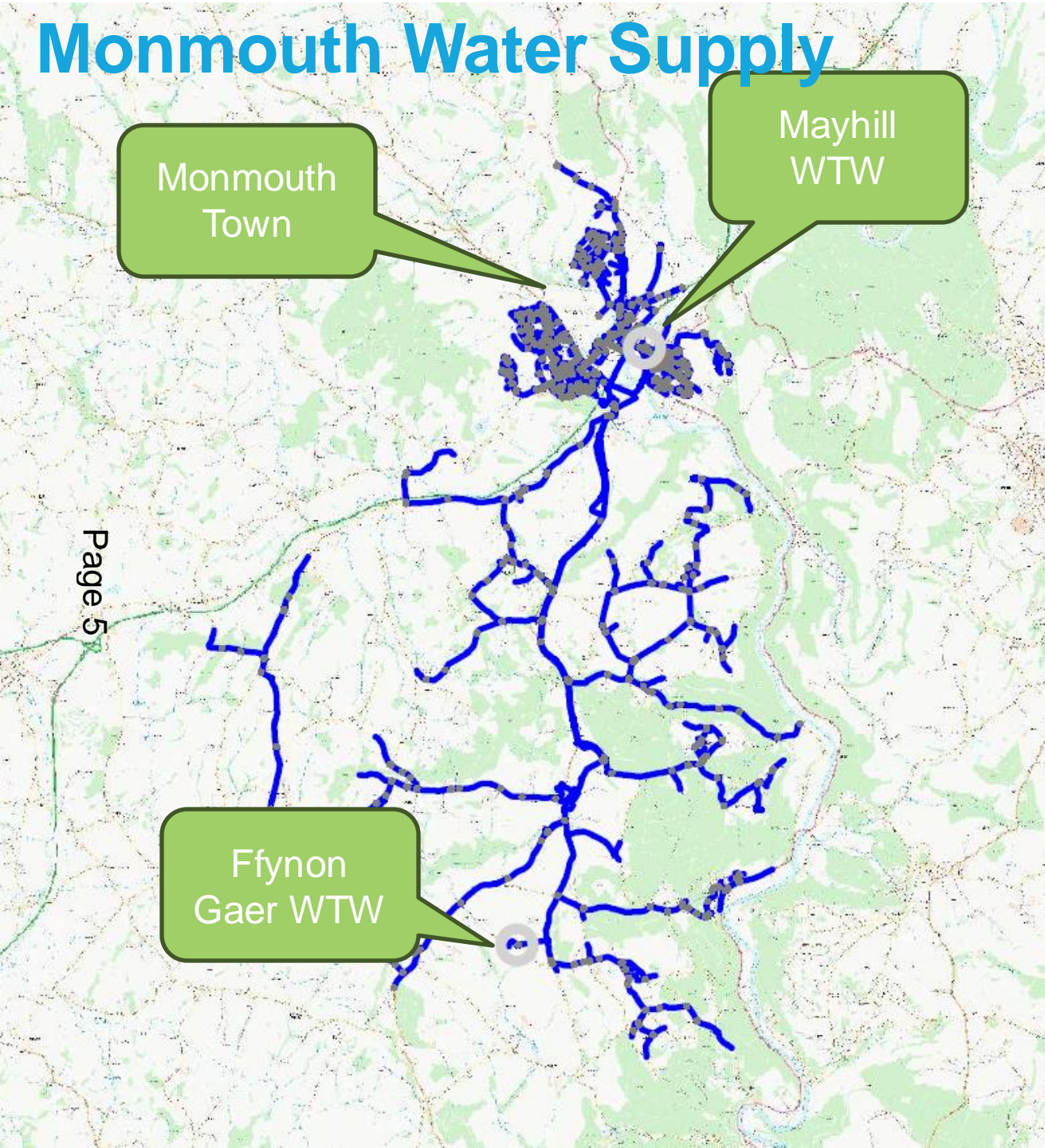
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- Water & wastewater services to **3 million residents** across Wales, Herefordshire and parts of Deeside
  - **27,000km** of water mains
  - **30,000km** of sewers
  - **800+** sewage treatment works
  - **63** water treatment works
- £26 billion** asset replacement value
- Company limited by guarantee;
- No shareholders – all financial surplus retained to improve service and reduce bills
- Private company owned on behalf of customers but not a mutual or co-operative

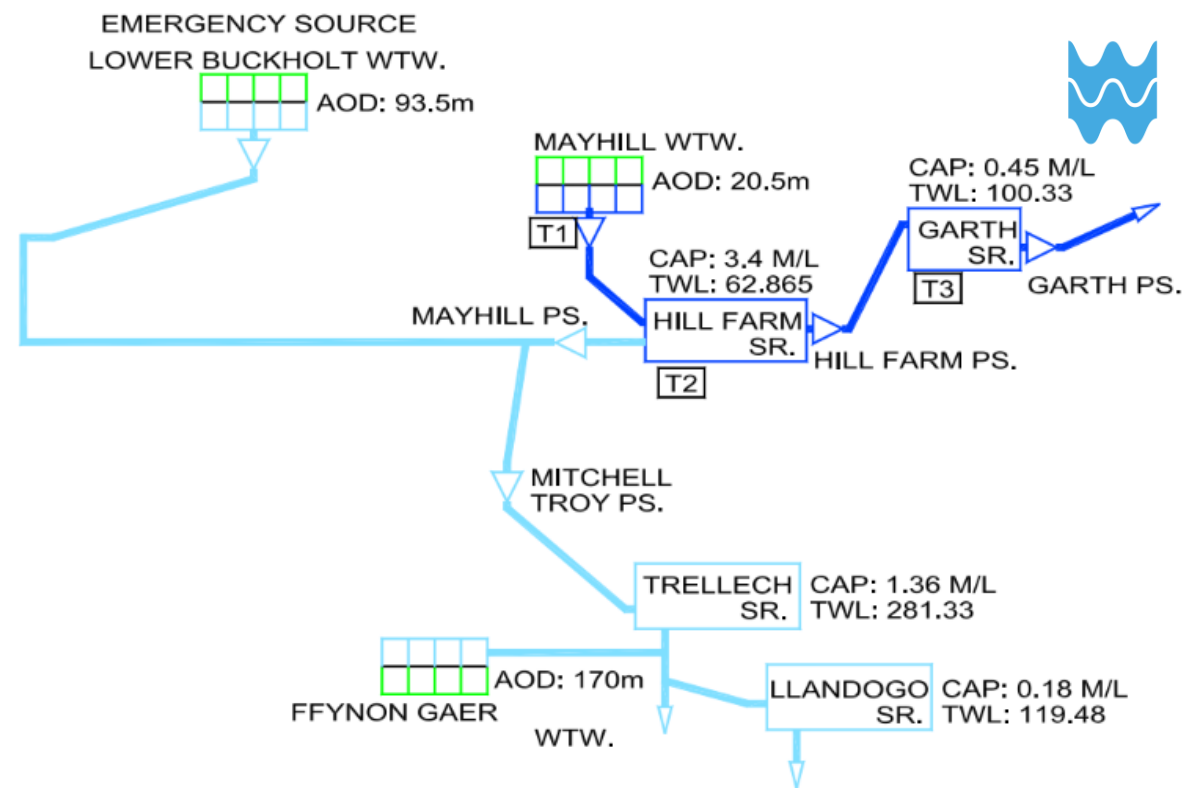
**£1 bn**  
a year  
boost  
to Welsh  
economy



# Monmouth Water Supply



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- We serve approx. 11,000 people in Monmouth across 5,000 properties.
- We supply 772 businesses across Monmouth.

# Water Quality in Monmouth



- No issues with the drinking water in the Monmouthshire area – monitored daily
- No concerns over capacity at our water treatment works
- DCWW is a consultee during planning process - assess capacity for new developments
- As part of our commitment to supply high-quality drinking water to customers we're investing £8.4m in Monmouth and surrounding areas to ensure security and resilience of water supply and alleviate issues with loss of supply or low water pressure:
  - Replaced 15km of water main
  - Cleaned 10.3km of pipe
  - Abandoned 3km of pipe
  - Benefitting more than 5,600 homes and businesses in Monmouth, Redwern, New Mills, Whitebrook, Mitchel Troy, Trellech, Cwmcarvan and surrounding areas.



# Challenges we face



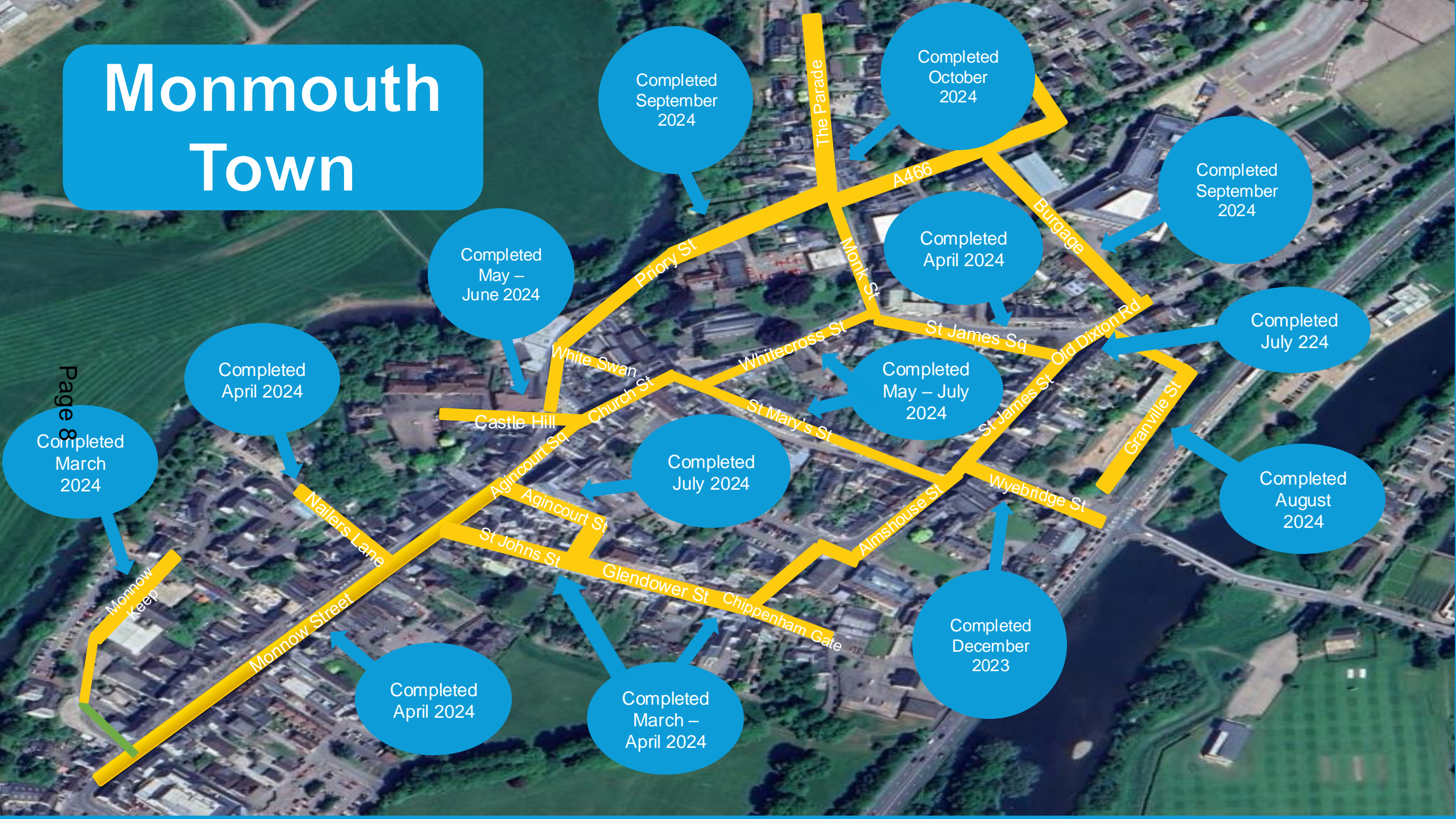
- The impact of climate change and age of our assets mean we face significant challenges such as discolouration, freeze thaw, supply interruptions, lead pipes.
- Our Business Plan between 2025-2030 will ensure progress on drinking water quality compliance is sustained and future proof.
- **Drinking water quality compliance and water supply interruptions, are our primary areas of focus in our plan.**
- Investment includes replacing 7,500 lead pipes, £157m to strengthen resilience of water supply, £66m to replace 174km of ageing asbestos cement main pipes, £51m to build more resilience into supply.

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## Water Services Performance

Measure	2024/25	2023/24	Comment
Water Quality	3.86	7.19	- Likely to be mid-table in terms of industry performance by year end (lower score better) DWR plan having an impact
Leakage	239ml d	256ml d	- 20mld reduction since January but hitting year end target (208mld) will be challenging
Supply interruptions	13.44	11.53	- Worse performance than last year Impacted (60% of minutes lost) due to 3 <sup>rd</sup> party damage Project Novello helping mitigate bursts in West Wales

# Monmouth Town



# Drinking Water Inspectorate Report



*“The DWI report makes reference to an isolated incident that happened over three years ago. This isolated event, which led to 73 customers (from over 950,000 supplied) reporting an unusual taste to the water in the Monmouth area. This was fully investigated at the time, and we have not seen any recurrence of the issue since.*”

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*“There are no current issues with the quality or quantity of drinking water quality in the Monmouthshire area and the DWI report also states, ‘drinking water in Wales is of an excellent standard and this is demonstrated through a continuing high standard of 99.98% compliance.’”*

**Statement sent to the Monmouthshire Beacon**



*"The AMP8 UV Disinfection Schemes notice is a result of a document that has been agreed with the Drinking Water Inspectorate (DWI) following the standard process of risk assessment undertaken by Dŵr Cymru Welsh Water.*

*This established regulatory process requires us to manage potential future risks and agree a course of action to mitigate them. The notice document is the outcome of that process which formally sets out the set of actions that we submitted to DWI and agreed to undertake.*

*As the notice name indicates, these actions are planned for our next investment period (AMP8 2025 to 2030) and will lead to us further investing to upgrade our water treatment services in the Monmouthshire area to ensure these potential future risks are managed.*

*For the avoidance of doubt, we must be clear that there are no current issues with the drinking water in the Monmouthshire area."*

## **Statement sent to the Monmouthshire Beacon**

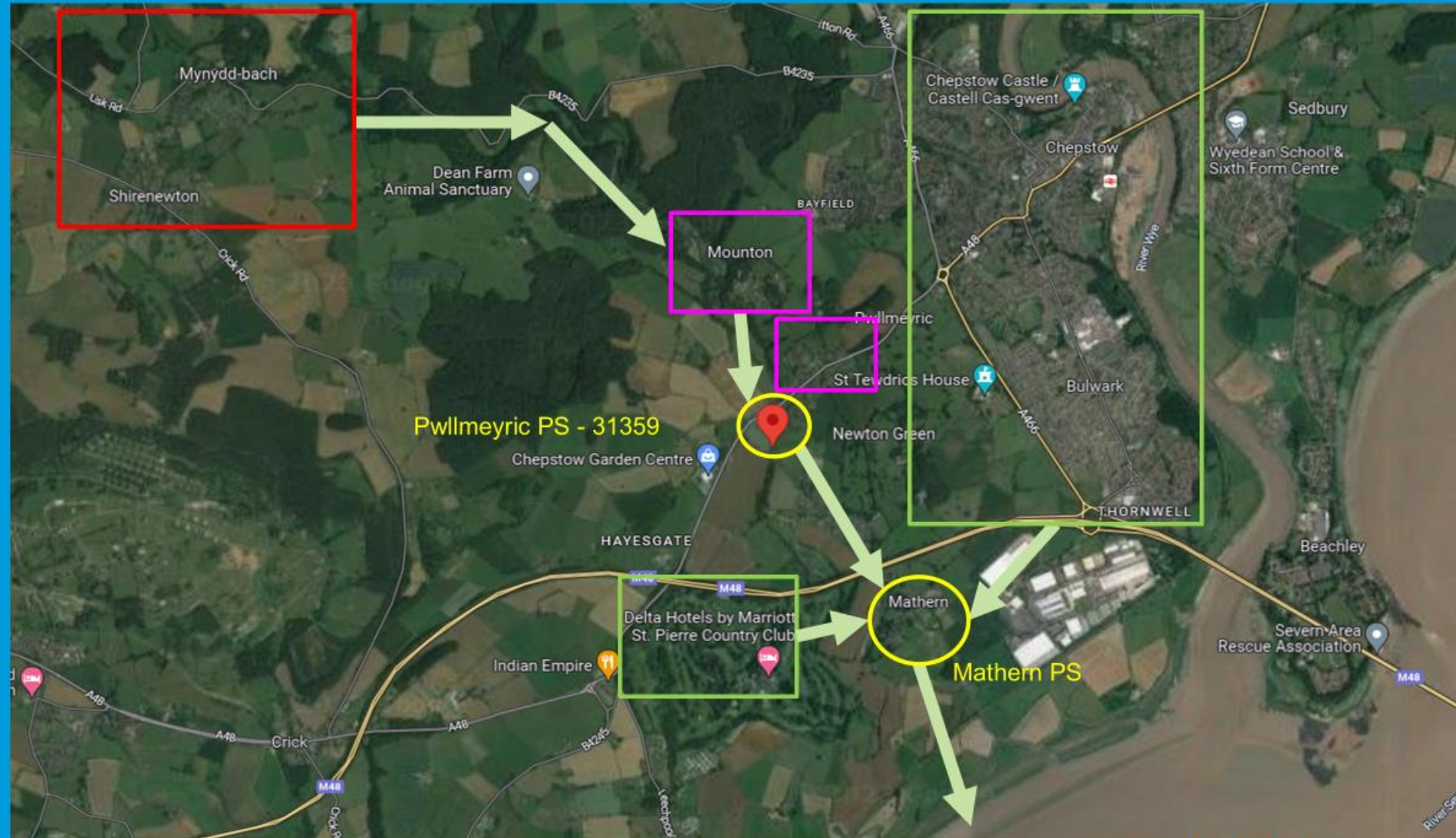


# **Ed Bennett**

## **Head of Waste Water Networks**

## Pwllmeyric SPS & CSO

- High spills primarily caused by inflows & River Ingress
- High storm response in the u/s catchment (Shirenewton).
- There are 4 flooding locations



## Investigations & Investment

- 155m of 375m pipework, which is acting as storage from ST51926101 downstream to the CSO. Added to cyclic desilt programme.
- Ongoing: Connectivity surveys completed at Shirenewton and Mynach Bach. 74 properties were surveyed at Shirenewton, with 32 cross connected at approx. 65 separate locations.
- Review of flow monitor data to be undertaken and hydraulic model updated (Akins support).
- HAL assessment of SPS completed in March 22. Air valve on rising main to be replaced.
- Electro Scan survey completed on various lengths Example between A48 and SPS. Identified 21.8l/s ingress throughout.
- £482,000 invested over 6 year period and £100,000 of additional lining work programmed
- Regular meetings between DCWW, Stakeholders & Regulators

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	Scans	Meters	Pinholes*	Defects	LPS	LPD
<b>Total</b>	<b>4</b>	<b>149</b>	<b>0</b>	<b>235</b>	<b>21.8</b>	<b>1,884,516</b>

Date	Mainline ID	Pipe ID	Pipe Type	Diameter	Distance (m)	Pinhole	Small	Medium	Large	LPS	LPD
24/03/2022	ST51926101 - ST51926002	ST51926101 - ST51926002	CP	400	83	0	143	13	5	14.13	1,220,967
24/03/2022	ST51926101 - ST51926102	ST51926101 - ST51926102	DIP	400	17	0	27	7	2	4.95	427,521
24/03/2022	ST51926002 - ST51925001	ST51926002 - ST51925001	CP	400	34	0	20	3	0	2.23	192,693
24/03/2022	ST51925001 - ST51926001	ST51925001 - ST51926001	VCP	225	15	0	13	2	0	0.60	43,335



# Specialist team focussed on removing unwanted flows from our network

## Unwanted flows



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Surface water



Groundwater



Highway drainage and run off



Urban run off



Land drainage



### Key Insight

- We have identified inflows quickly and cheaply (through targeted investigations) and worked with local authorities, land and property owners to deliver small inflow reduction projects.
- We've had success with a number of projects to reduce highway drainage inflows, with local authorities taking a lead and are keen to continue this work to mitigate pollution events due to hydraulic overload.

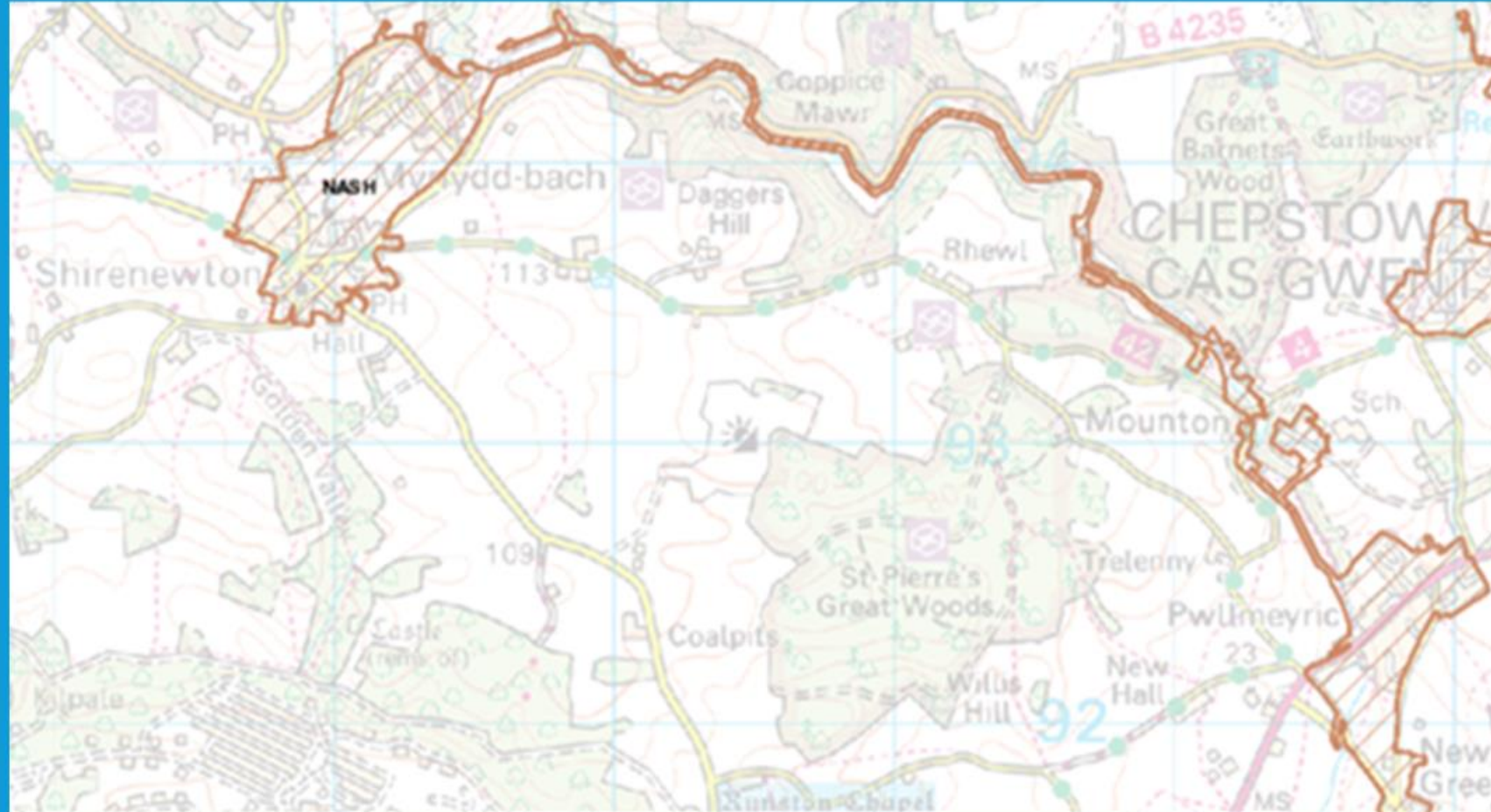


Deposit LDP consultation – 16<sup>th</sup>  
December 24

No detriment to the wastewater  
network

Requirement of HMA or surface  
water removal agreements

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# **Daniel Humphreys**

## **River Quality Liaison Manager**

# What is discharged and why?



## Treated Effluent

At our Wastewater Treatment plants effluent undergoes up to 5 stages of treatment and is cleaned to the standard specified in our permits before being discharged back into the environment



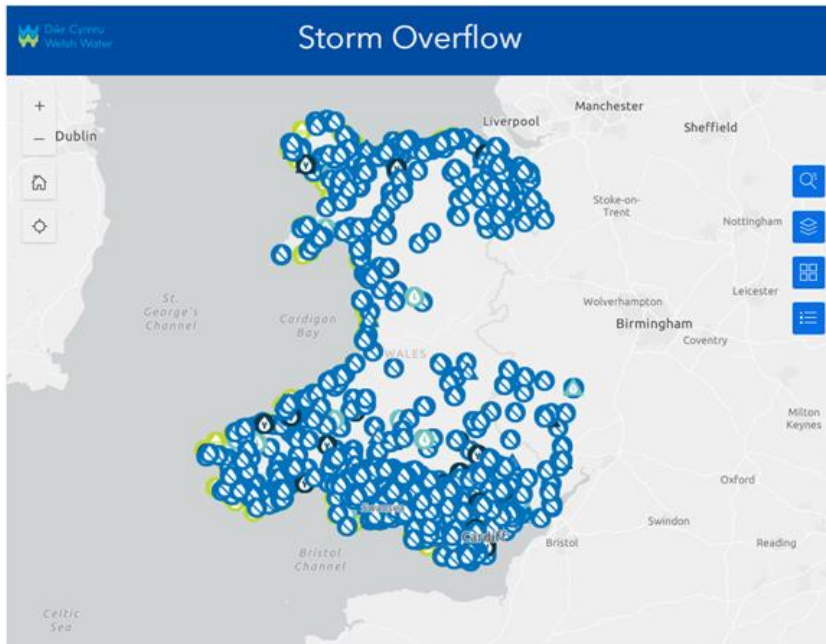
## Storm Effluent

During heavy rainfall conditions when the sewer system is overwhelmed, a dilute mix of rainwater and wastewater is discharged via storm overflows in line with their environmental permit

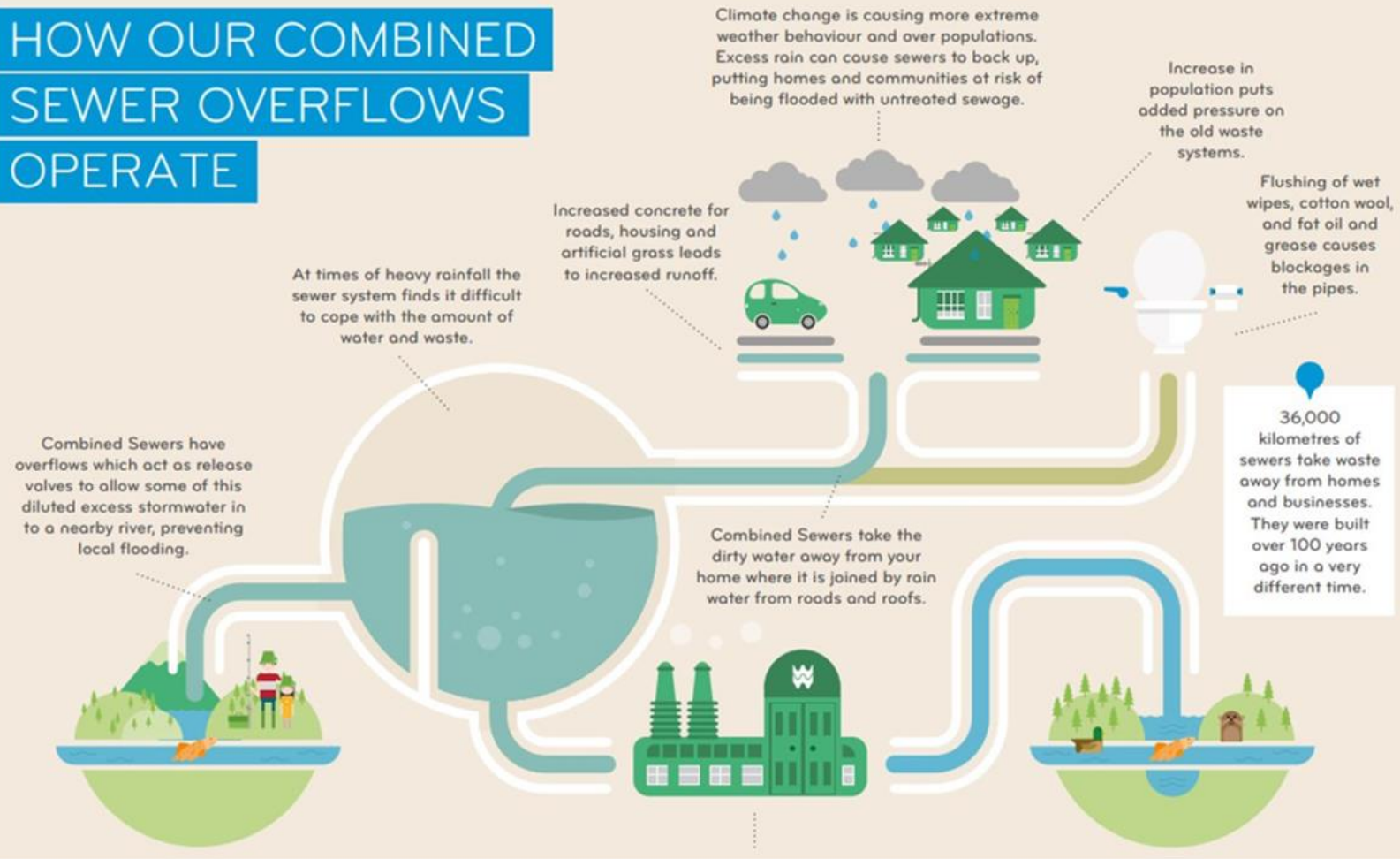
# Storm Overflows

- Approx 2300 across our operating area.
- Being open and transparent with our data.
- Since its launch on 1<sup>st</sup> February 2024, there are now over 1500 sites available.
- We continue to address issues as they appear and aim to have most of our assets available by March 2025.

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## HOW OUR COMBINED SEWER OVERFLOWS OPERATE



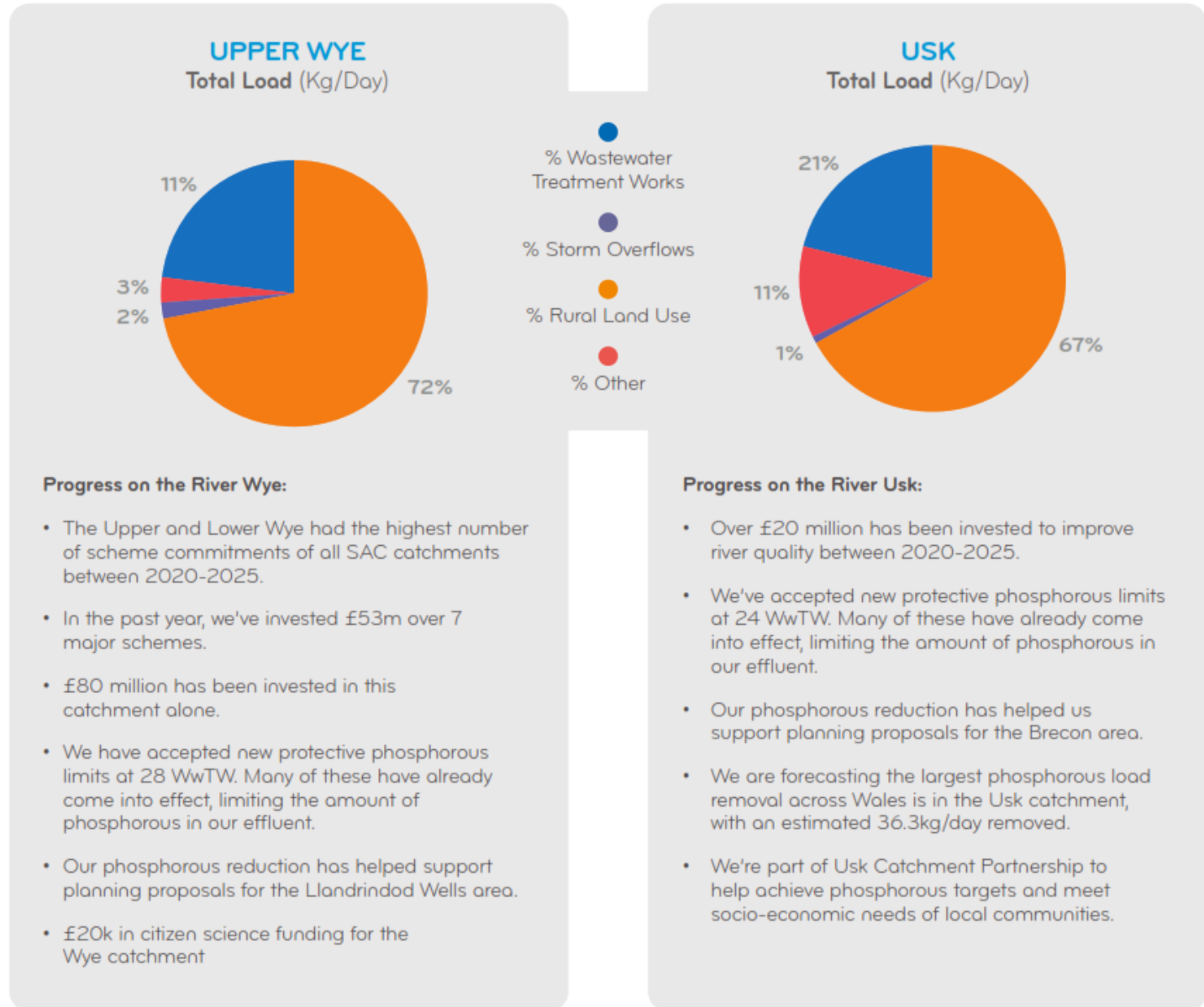
# Special Area of Conservation (SAC) Rivers Update



SAGIS modelling found 67 kg/day total load to the Upper Wye and 180 kg/day to the Usk. This was from all sources.

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We're committed to reducing 100% of our fair share of phosphorous from our operations by 2032.





## RIVER WYE

### Completed projects:

**Norton Wastewater Treatment Works**  
£4 million; Decommission wastewater treatment works and transfer waste to Presteigne Wastewater Treatment Works.

**Presteigne Wastewater Treatment Works**  
£4 million; Reduce phosphorus discharged from works and accommodate growth.

**Weobley Wastewater Treatment Works**  
£3.5 million; Reduce phosphorus discharged from the works.

**Kingstone & Madley Wastewater Treatment Works**  
£3.7 million; Reduce phosphorus discharged from the works.

**Cleghonger Wastewater Treatment Works**  
£1.7 million; Increase flow passed forward through the works.

**Peterchurch Wastewater Treatment Works**  
£0.4 million; Increase storm storage capacity.

**Leominster Wastewater Treatment Works**  
£12 million; Reduce phosphorus discharged from the works.

**Eign & Rotherwas Wastewater Treatment Works**  
£27 million; Reduce phosphorus discharged from the works.

### Projects to be completed by March 2025:

**Lower Cleeve Wastewater Treatment Works**  
£4.6 million; Increased capacity to accommodate growth.

**Monmouth Wastewater Treatment Works**  
£3.1 million; To accommodate growth and reduce phosphorus discharged from the works.

**Rhayader Wastewater Treatment Works**  
£5.85 million (subject to costing); Reduce phosphorus discharged from the works.

**Pontrilas Wastewater Treatment Works**  
£7.7 million; Increased capacity and reduce phosphorus discharged from the works.

## RIVER USK

### Projects in the catchment to be completed by March 2025:

#### Usk Wastewater Treatment works (WwTW) and Storm overflow - £10 million

##### Phase 1 – December 2022

New screen installation as Usk Sewerage Pumping Station (SPS) storm overflow.

Improvement on aesthetic impact when asset discharges. Completed.

##### Phase 2 – Spring 2024 – March 2025

Increase pass forward flow from SPS to WwTW resulting in reduced spills from the storm overflow. Ongoing.

##### Phase 3 – Spring 2024 – March 2025

Increased storm tank and treatment capacity at the WwTW. Large scheme to increase the amount of flow treated at the works. We will also increase the volume of storm water storage. This will result in a decrease in modelled storm discharges from the works. Ongoing.

#### Llanfoist Wastewater Treatment works - £1.9 million

Phosphorous removal scheme, brought forward as part of £60 million additional released.

#### Brecon Wastewater Treatment works - £9 million

Phosphorous removal scheme and additional capacity for growth.

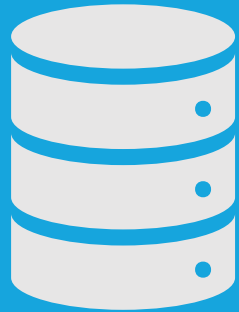
# How can we improve river water quality?



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Increased treatment quality



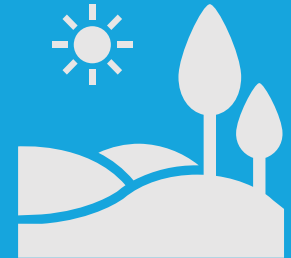
New storage capacity



Storm overflow improvements



Rain/Surface water removal



Catchment interventions



## Monmouth WwTW Growth Mitigation

Growth has led to increased flow and load at the works. Additional plant has been installed to treat these additional flows and maintain compliance. The works has been split into two phases with a total investment of £3m.

Phase 1 – works completed

Installation of two SAF biological treatment units, feed pumping station and associated control equipment.

Phase 2 – ongoing

Installation of new sludge holding tank, two Mecana tertiary treatment units and associated pumping station, new final effluent sampling chamber. Construction phase is currently ongoing and scheduled for completion in January 2025.

## AMP8 (2025-2030)

To address population growth to meet the agreed design horizon of 2045, DCWW will require to construct a new sewage treatment works to treat the increased growth within the catchment and tightening permit requirements.

Proposed solution: install a Sequence Batch Reactor (SBR) plant, ferric dosing to control phosphorus discharge levels and new sludge processing. This would be a large offline build and will require planning approval.

We will also be undertaking work in the upstream catchment to remove infiltration and surface water flows from the combined sewerage system. This will reduce the flow and loading at the wastewater treatment works.

Survey works has started in the catchment (ground investigation, CCTV, asset surveys). The design is planned for early AMP8 with the construction phase / programme to follow.