



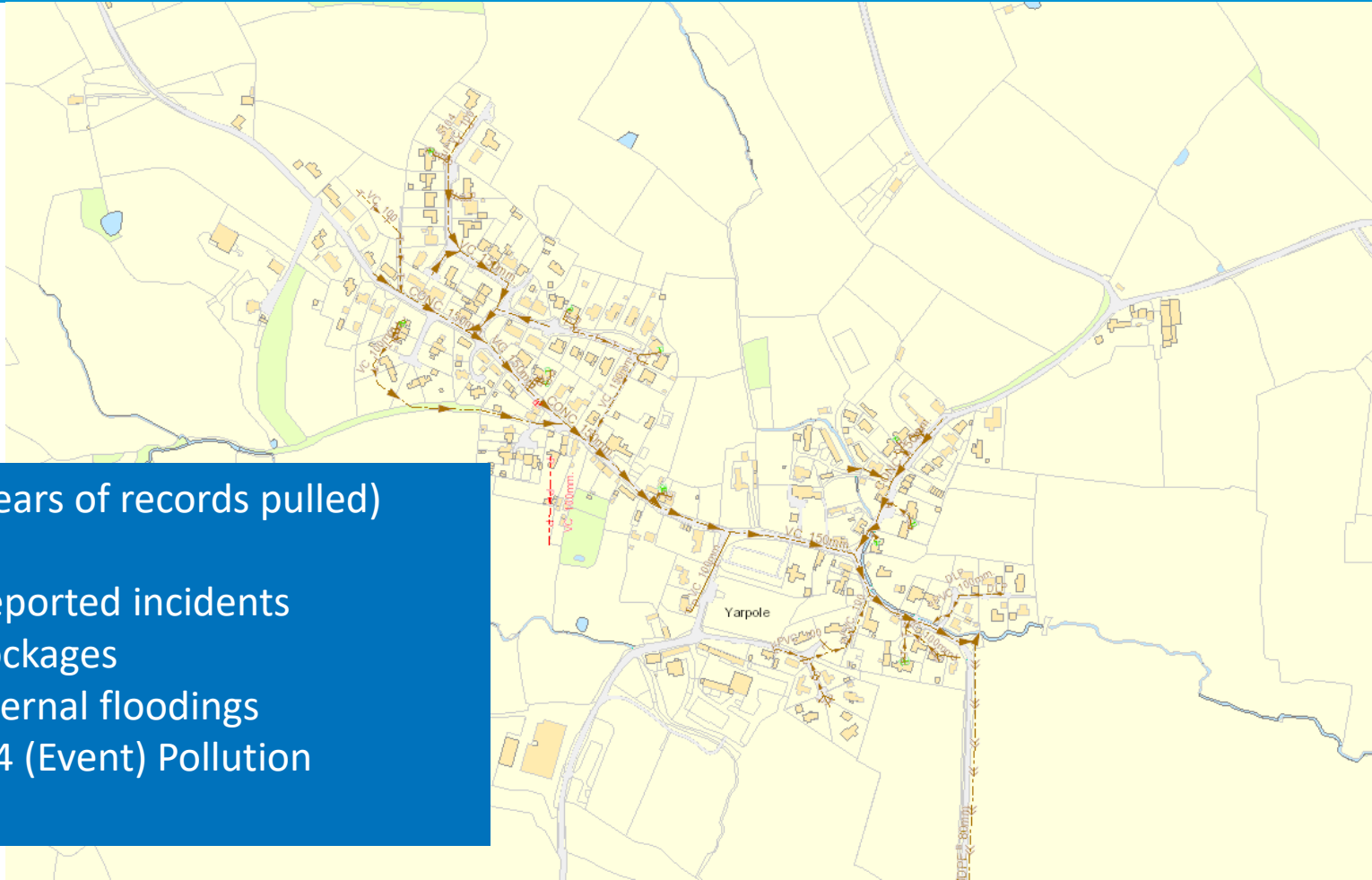
Yarpole Group

- **3 million customers** served across Wales, Herefordshire & parts of Deeside
  - **27,000km** of water mains
  - **36,000km** of sewers
  - **843** sewage treatment works
  - **69** water treatment works
- **Not for Profit:** all profits are reinvested for the benefit of our customers.
- Regulated by Ofwat, DWI, NRW & EA.
  
- Jenny Grubb- River Quality Liaison Manager
- Gareth Morris – Network Area Engineer
- Matthew Lord- Developer Services





- Yarpole
  - Previous issues and work to date
  - Network works since 2016
  - Local development
- Storm overflow operation overview
  - SOAF programme
  - Wye investigations
  - Yarpole Emergency overflow situation asset number 73026
  - EO to SO programme
- Luston and Yarpole works
  - Nutrient Neutrality Scheme
- Other schemes and look ahead 2025-2030



From 2005 (18 years of records pulled)

- 134 reported incidents
- 27 Blockages
- 26 External floodings
- 1 Cat 4 (Event) Pollution



Sewer chamber SO47641702 would frequently spill out, flooding the highway

Following a level survey, it was determined that the cover could be sealed

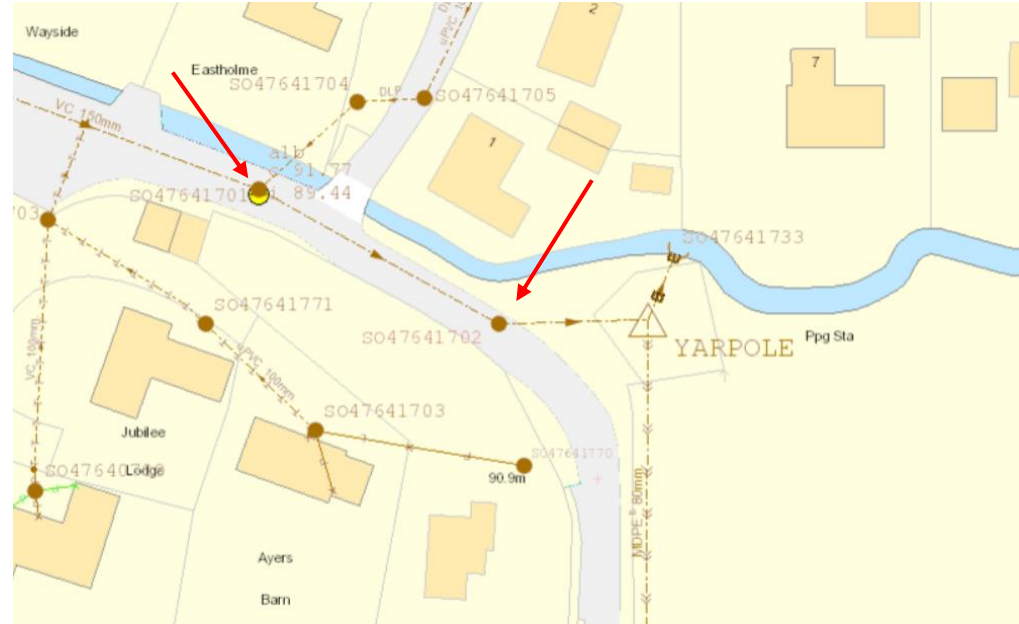
The cover was bolted in 2020, and bar two occasions of third party damage, in which the bolts have been removed, this has remained a success.

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A fat blockage occurred on the 24th August 2016, resulting in chamber SO47641701 externally flooding.

Investigations found that the last sewer line before the SPS routinely holds water, resulting in a scum line forming, and eventually a blockage.

Routine planned maintenance to cleanse the line leading to the SPS is now actioned (every 3 months- 25 attendances since 2016)





Date	High level description of work	Reactive/ planned	Cost
From March 2016	Desilting of sewer to Yarpole SPS to remove fat and siltation. 3 monthly, 25 attendances to October 2023	Planned	£11,250
August 2016	Replacement of pitch fibre sewer at Orchard Lees	Planned	£750
June 2017	Internal spray coating of sewer to reduce infiltration	Planned	£5412
February 2020	Resin injection to sewer chambers outside St Leonards church	Planned	£6000
March 2020	Installation of bolt down cover upstream of SPS	Planned	£1274
March 2020	Replacement of channelling and benching at 2 locations in Yarpole	Planned	£1000
March 2020	Replacement of 3 covers causing infiltration	Planned	£1230
Various	Installation of non return valves	Planned	£1050
January 2023	Replace 600 x 600 bolt down cover and frame following third party damage	Planned	£1200
Various	Response to blockages and incidents	Reactive	£1885
June 2023	Investigation carried out by Asset Engineer at Yarpole SPS (three days of analysis based on DCWW project coordinator rate)	Planned	£541
2016-2023	Network operations investigations and solutions	Reactive	£36502
January 2020	Misconnection survey carried out by Morgan Sindell	Planned	Awaited



# Question

Have there been flooding events since the repair to the bolt down cover? January 2023

If so where?

Have they been reported to DCWW?



Discharges to Luston and Yarpole Wastewater Treatment works

Permission issued for 34 houses in Yarpole  
(18 + 5 allocated in Neighbourhood plan, 5 + 6 windfall)

Most under construction already

New applications will be assessed by Developer Services to ensure capacity at the works and within the sewer.

DCWW are a statutory consultee but also have an obligation to allow development to connect.

Works consistently performs and is well within permitted parameters

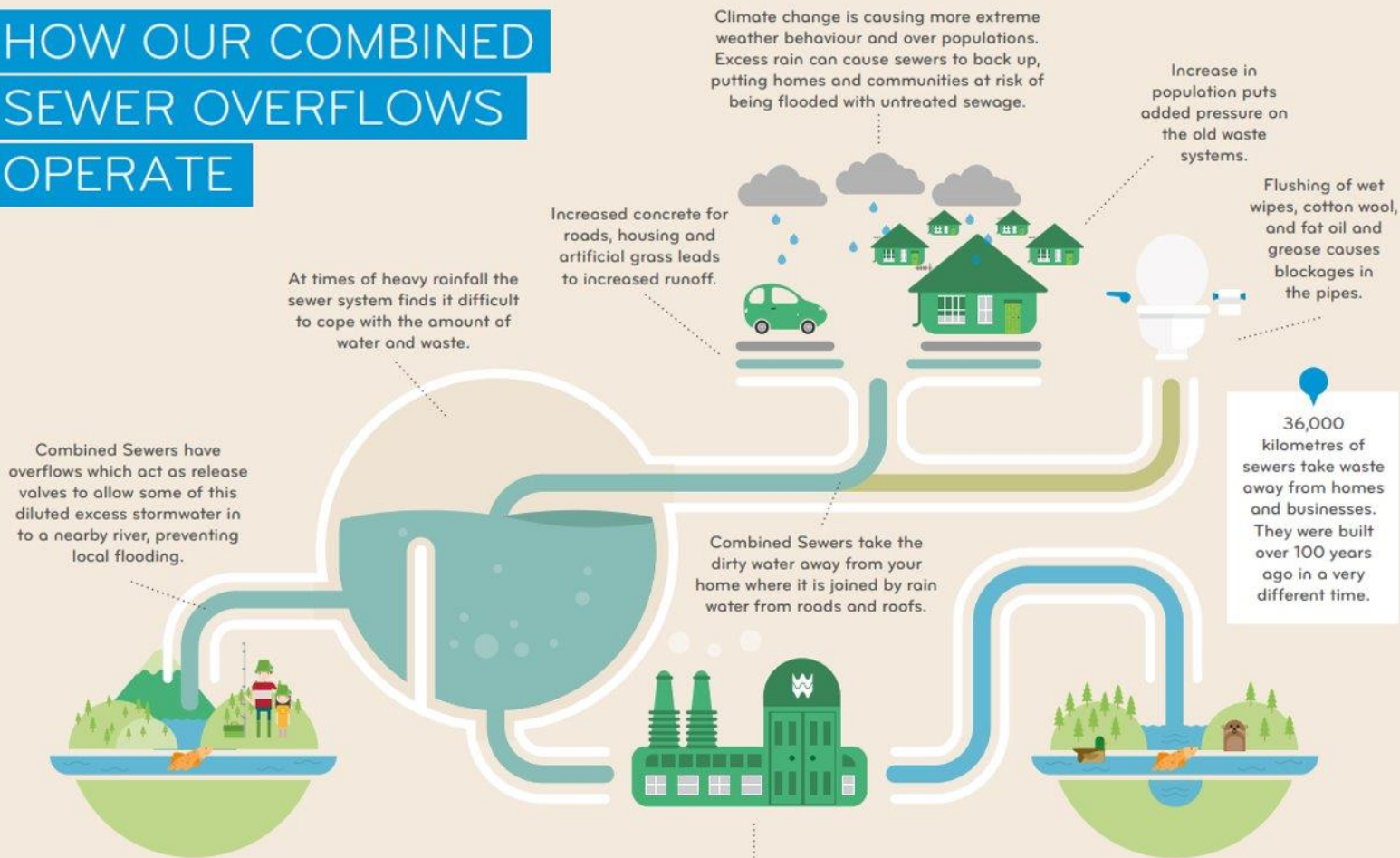
Surface water connections are not allowed





Storm Overflows

# HOW OUR COMBINED SEWER OVERFLOWS OPERATE





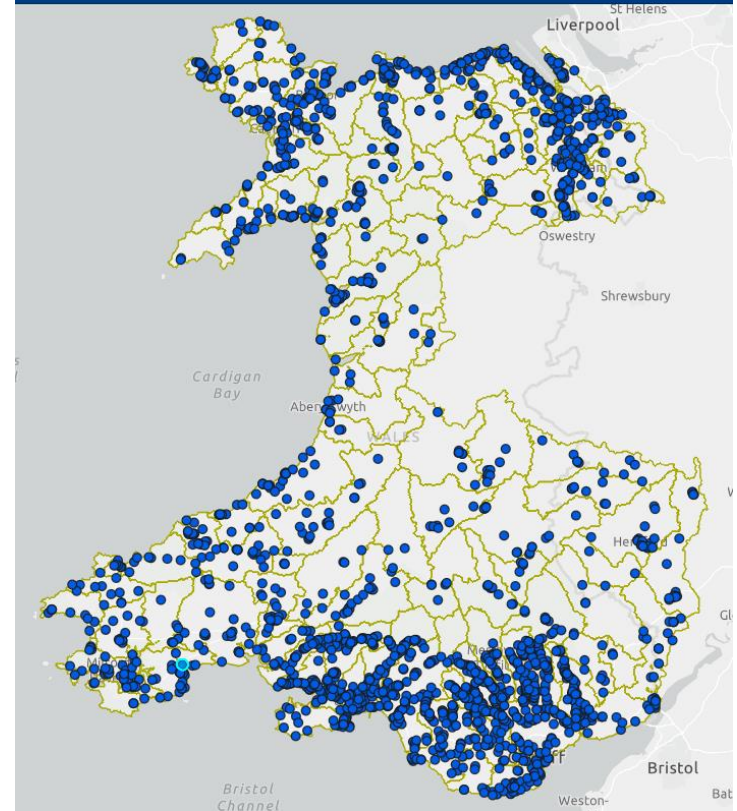
Regulators allow discharges in certain conditions to help Welsh Water to prevent sewer flooding impacting homes and businesses.

We have monitors on 99% of our CSOs which is over 2300 assets

Welsh Water monitor these discharges and report to our regulators

Spills cannot be reported in advance – they are unplanned.

## Event Duration Monitoring





## SOAF Storm Overflow Assessment Framework

1

INVESTIGATION

2

ENVIRONMENTAL  
IMPACT  
INVESTIGATION

3

OPTION  
ASSESSMENT

4

COST BENEFIT  
ANALYSIS

5

DELIVERY



# 137 Storm Overflows in Wye catchment

78 under Investigation

59 <40 spills not under investigation AMP7

36 Other investigations

42 SOAF driven (>40 spills)

15 investigations complete

5 Severe  
Impact

2 High  
Impact

3  
Moderate  
Impact

5  
Low/Very  
Low or No  
Impact

## Yarpole Emergency Overflow- operating as a Storm Overflow

61 in Wales, 11 in England found so far



Apply for a Storm Overflow permit

- Must demonstrate that it is a historic combined sewerage system
- Root cause investigation including hydraulic modelling
- Provide evidence that SO is no impact to receiving watercourse
- Asset must meet minimum standards to be permitted
- Can then be eligible for improvement funding either through SOAF or other environmental improvement scheme.
- Discharge to environment remains



Keep as an Emergency Overflow

- Must prevent operating in wet weather
- EO's should not operate regularly so less impact to receiving watercourse
- We do not want to add to the number of Storm overflows
- Becomes a maintenance issue
- Must compete with all other maintenance needs within DCWW
- Remove as a regular discharge to the environment





Investigation completed June 2023



High Level optioneering has been completed as part of investigation

Options look at removal of surface water, storage or new pumps in different combinations

Solutions range from £150k to £4m

Cannot be funded as part of environmental improvement works

Delivery ranges from 3 years to 10 years

Surface water connections must to be removed where found

Additional gains can be made through water butts- DCWW provide? (Dom?)

Luston also liable to hydraulic overload so cannot pass more flow forward, solution must be within Yarpole

Further infiltration reduction options will be explored by DCWW

An aerial photograph of a river flowing through a dense, lush green forest. The river is the central focus, winding through the trees. In the distance, a stone bridge is visible. The foreground shows the edge of a concrete structure, likely part of a wastewater treatment facility. The sky is visible in the far distance, showing some clouds.

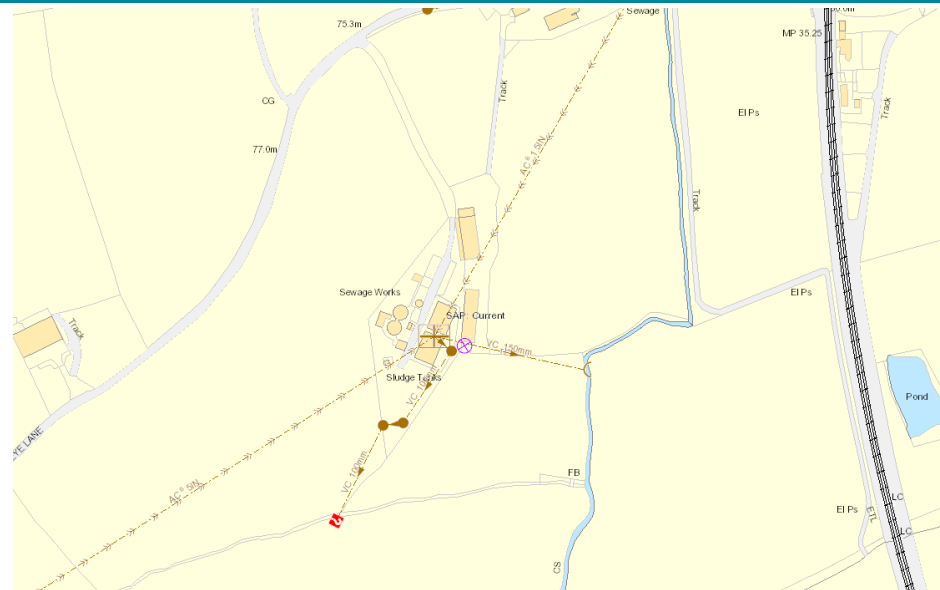
# Luston and Yarpole Wastewater Treatment Works



Permit number AL1001701

173m<sup>2</sup>/d DWF

22/39/7



Works performs well, excellent compliance history

Wetlands for phosphorus removal

11 works in the Wye with P removal being installed 2020-2025

17 more P conditions/permits 2025-2030



Under the Habitats Regulations, 'competent authorities' such as local planning authorities and the Environment Agency must assess the environmental impact of projects and plans (such as planning application) which affect habitats sites.

Local planning authorities can only approve a project if they are sufficiently certain it will have no negative effect on the site's condition.

EU and UK case law have required that the environmental agencies impose an embargo on any practise which would increase the amount of nutrients in to the river.

Because the Wye and Lugg are designated SACs developers, planning permission cannot be given without offsetting nutrients from somewhere else.



DCWW Existing WwTW

DCWW  
Sample  
Chamber

DCWW  
Compliance  
Point Ends

HCC P reduction  
wetland

DCWW's WwTW  
DCWW's compliance and permit  
DCWW's OPEX and Maintenance

LPA Wetlands  
LPA compliance and permit  
LPA OPEX and Maintenance









Storm overflow mapper

# Storm Overflow Live Map

**Digital Survey was in English and Welsh and accessible through**

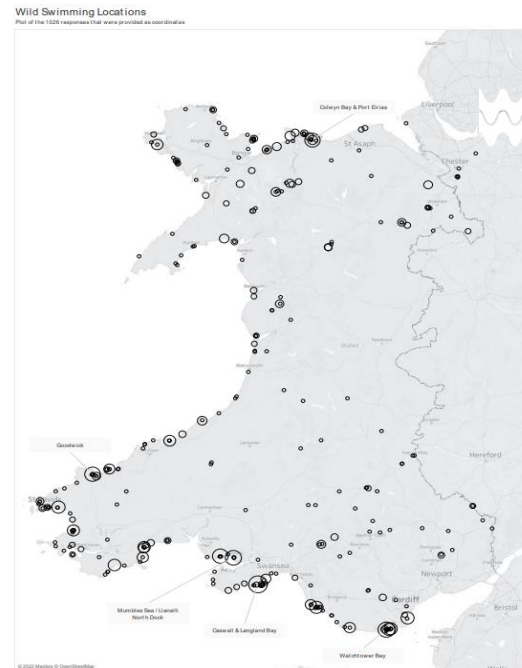
- Facebook Advert to DCWW customers
- DCWW Internal Yammer link
- Swimming groups
- External stakeholders: [including Afonydd Cymru, Rivers Trust, Surfers Against Sewage, the Independent Environmental Advisory Panel and others.](#)
- Welsh Government Link

Survey Ran from 10<sup>th</sup> Feb to 15<sup>th</sup> Mar 2023:

**1787 ( 20 responses Welsh)**

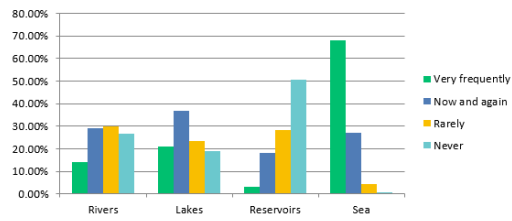
- Email swimming groups link 1086
- General email link 542
- Facebook reached ~214Kpe 101
- Yammer internal link 42
- Welsh Government link 15

We asked 16 Questions including frequency of swimming, location, information sources etc.

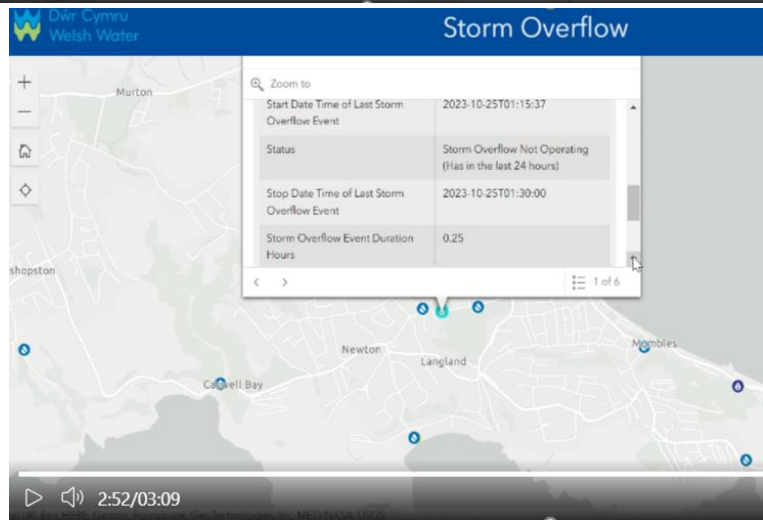
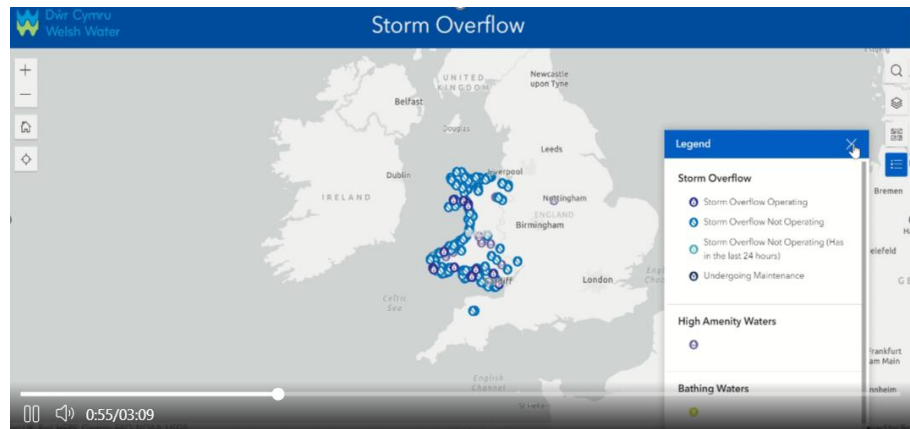


Is there anything that prevents you from swimming in this location more frequently?		
Answer Choices	Responses	
Concern about water quality	46.12%	690
Safety concerns about swimming alone	20.32%	304
Travel time	12.90%	193
Unsure of where I'm legally allowed to swim	5.61%	84
Lack of facilities (e.g. changing areas or toilets)	13.50%	202
Not confident in finding water quality information	13.03%	195
Nothing prevents me	25.60%	383
Other (please tell us)	18.85%	282
	Answered	1496
	Skipped	271

How frequently do you swim or dip in the following types of Open Water (in areas served by DCWW)?



# Storm Overflow Map – Near real-time (within 1 hour) storm overflow reporting



## What is the Storm Overflow Map for?



To give customers visibility of our assets



It does not provide advice on swim safety



Provides an additional source of information



It does not confirm bathing water quality

## When will the Map go live?

1

### Phase 1 – Jan 2024

Will include all Bathing Water Sites and High Amenity Swim Locations (identified by our Swim Survey)

**Approx. 350 sites**

2

### Phase 2 – March 2025

Will include all remaining storm overflows

**Approx. 1950 sites**