AGENDA ITEM 025

Combined Sewer Overflows (CSOs) in Southwell

Proposal for Full Council, May 2024

What are CSOs?

England has a combined sewage system made up of many thousands of kilometres of sewers, often built by the Victorians, in many urban centres. This "combined system" means that rainwater runoff/stormwater and waste water from toilets, bathrooms and kitchens are conveyed in the same pipe to a sewage treatment works.

During heavy rainfall and storm events, the capacity of these pipes can be exceeded, which means possible inundation of sewage works and the potential to back up and flood peoples' homes, roads and open spaces, unless it is allowed to spill elsewhere. CSOs were developed as overflow valves to reduce the risk of sewage backing up during such heavy rainfall.

According to the Environment Agency, overflows of diluted sewage during heavy rainfall are not a sign that the system is faulty. They say that CSOs are a necessary part of the existing sewerage system, preventing sewage from flooding homes and businesses. However, this issue is one of significant topical debate, being discussed regularly, and heatedly, in the news and by NGOs.

How does this relate to Southwell?

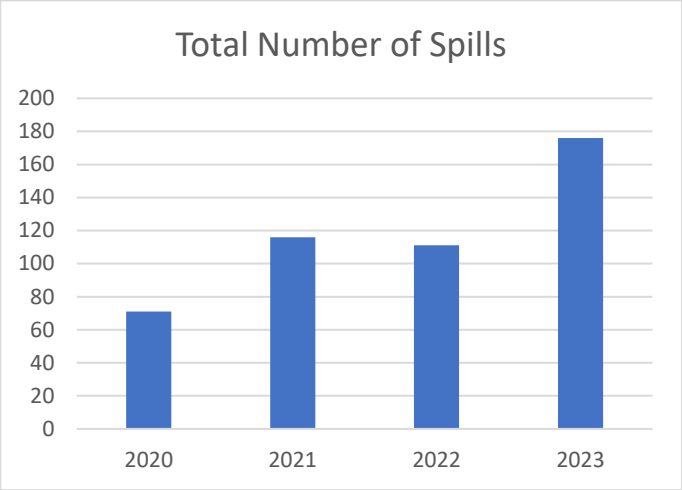
Southwell is defined, historically, by water. In addition to the historic "wells", there are two main local watercourses, the River Greet and the Potwell Dyke, which flows into the Greet. There are 5 known CSOs which discharge into these watercourses, somewhat surprisingly 3 of which flow into the much smaller Potwell Dyke. These are located near Halloughton Road, Nottingham Road and Church St (to the Potwell Dyke) and from Riverside and Newark Road (directly to the Greet).

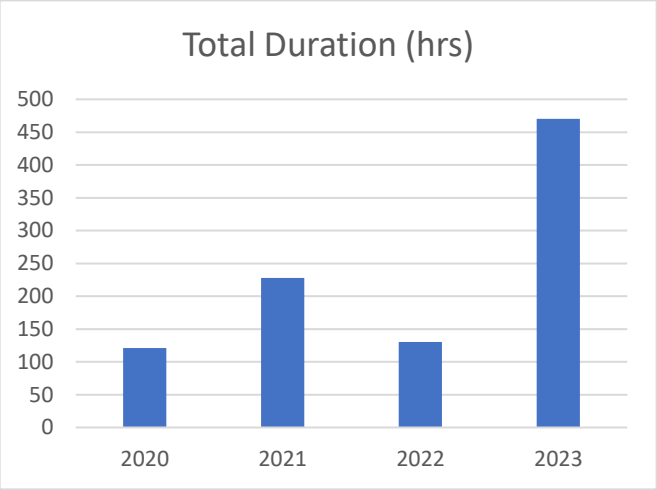
Data obtained from the statutory annual returns from water companies (data not readily available pre-2020, see Event Duration Monitoring - Storm Overflows - Annual Returns - data.gov.uk) shows the following information for Southwell:

Southwell CSOs		**2023**		**2022**		**2021**		**2020**	
Receiving Body	**Name/ Location**	**# Spills**	**Duration (hrs)**	**# Spills**	**Duration (hrs)**	**# Spills**	**Duration (hrs)**	**# Spills**	**Duration (hrs)**
River Greet	Newark Rd	44	100.2	29	22.9	30	84.6	17	33.9
River Greet	Riverside	38	121	21	40.1	20	22	15	42.6
Potwell Dyke	Church St	30	33.7	21	13.8	21	14.9	10	11.1
Potwell Dyke	Halloughton Rd Westgate	62	212	39	53.3	43	105.5	27	31.9

Potwell Dyke	Nottingham Rd	2	3.6	1	0.41	2	0.69	2	1.3

The recent trend can be best seen graphically as follows:





What does this mean?

The bottom line is that we don't currently know any details in terms of environmental impact. It could be that the nature of the CSOs in Southwell means that the sewage discharges are very dilute, however anecdotal reports suggest that raw sewage has been observed in our local watercourses following heavy rainfall. The smaller size of the Potwell Dyke means that it is more likely to be impacted by having 3 CSOs flowing into it. The concerning trend of increasing discharges and the likelihood of climate change exacerbating storm/rainfall events in the future means that this warrants investigation by the Town Council.

Severn Trent Water's (STW) improvement programme

In the April 2024 edition of The Bramley (page 29) an article states that STW are investing £630M to improve CSOs in Nottinghamshire. Apparently 258 Notts CSOs have been identified to be improved.

Proposal:

1. Engage with STW to see if Southwell CSOs are included in the improvement programme and if not then lobby for their inclusion.
2. To request water quality information for Potwell Dyke and the River Greet from STW.
3. Request information on the methodology behind how CSOs are prioritised for improvement.
4. STC request other authorities such as NSDC, Notts County Council and Trent Valley IDB help STW to prioritise their list of CSOs to improve.
5. Identify the main housing areas of Southwell that are served by combined sewers. Input to Planning to ensure that no new storm water connections are made to local combined sewers (note that measures to minimise surface water run-off have already been proposed for the Neighbourhood Plan revision). Where sensible, encourage local adoption of soakaways, permeable surfaces, and rainwater collection (e.g. household water butts) etc. Seek partnerships with other organisations to help achieve this.
6. CSO "monitoring" – STC, Flood Forum and NEBCC members check on the visible discharges from local CSO's following rain events. *N.B. The precise location of all 5 CSOs has not yet been identified by NEBCC members to determine how easy such inspection would be.*

7. NEBCC has proposed a list of potential BSc/MSc/PhD projects for students at NTU, which could be undertaken in conjunction with STC work. This has been updated to include a project related to CSO impact on the local environment.

Proposed: Cllr Phil Barron Seconded: Cllr Karen Roberts

2 May 2024