

‘Storm Overflows’ into the Humber in North Lincolnshire – How Big is the Problem?



What are ‘Storm Overflows’?

‘Storm overflow’ is a term given to the discharge of excess sewage and rainwater to rivers, lakes, or the sea when the sewer system is under strain such as during heavy rain events, or if equipment has failed.

There has been much national press coverage recently of raw sewage release into the sea at or near bathing beaches. The Environment Agency issues permits (a ‘get out of jail free card’) that allows the Water Authorities to use ‘storm overflows’ in ‘exceptional situations’ which appears to cover almost all cases. Meanwhile the Water Companies continue to pay out large dividends and underinvest in upgrading their sewage infrastructure to fix the problem.

What are the Problems with 'Storm Overflows'?

High levels of sewage discharges present two main types of harm:

Harm to public health

Discharges from storm overflows contain raw sewage, which can contain high levels of harmful pathogens, such as viruses and bacteria. This can pose health risks to people who use our water bodies for recreation.

Harm to the environment

Storm overflows can also lead to ecological harm due to their impact on water chemistry. Discharges of raw sewage can contain organic pollutants, microplastics, pharmaceuticals, nutrients, and heavy metals, as well as visible litter that is flushed down toilets.

Is it a Problem in North Lincolnshire?

Although we don't have any official bathing beaches In North Lincolnshire, we are blessed with the Humber Estuary which has every conservation designation going: SSSI (national level); SPA & SAC (European level) and Ramsar (World level). There are no higher designations. It is one of the most important estuaries in Europe for overwintering birds. It is simply the crown jewel of habitats within North Lincolnshire.

As the Humber estuary is dominated by tidal flows, the dynamics of the river ensures that any outfall of sewage, microplastics, chemicals and other waste would, in large part, be deposited, reworked, and even carried back up the estuary rather than taken out to sea [3]. This is, after all, why the majority of the mud in the Humber originates from the East Yorkshire coast.

Surely there is little 'storm overflow' of raw sewage into such an important and vulnerable place?think again:

Anglian Water Sewage Overflow Events in North Lincolnshire

Government Data

The government data on 'storm overflows' into the Humber (Event Duration Monitoring) can be viewed online [1,2]. Concentrating on the outfalls into the Humber, we can see that:

- There are 13 Anglian Water outfalls that go directly into the Humber SSSI.

- Monitoring data is only available for many outfalls within the last few years, as they previously did not have monitoring equipment installed.
- The top two Anglian Water 'storm overflow' events into the Humber both happened to be in North Lincolnshire and were at the following Sewage Treatment Works:

Barton-upon-Humber: **1,420 hours duration; 111 times per year (2021)**

Winteringham: **3,020 hours duration; 136 times per year (2021)**

At first, I thought it must surely be some kind of mistake, but no, you read that right: *3,020 hours total duration*. Equivalent to over 4 months of constant raw sewage overflow at Winteringham and 2 months of constant raw sewage overflow at Barton.

Both incredible and appalling in equal measure.

Effects of Climate Change and more Housing

Barton is currently projected to get an increase of roughly 8% in new housing in the Council's Local Plan (583 new homes). Assuming the best-case scenario of all new housing developments having SuDS and therefore most water run-off not entering the sewers, even so, this will inevitably increase the quantity of untreated sewage into the Humber by roughly 8%.

Climate change is predicted to increase winter rainfall and for the rainfall events to be much more severe. This will have a major impact and will inevitably increase the duration of 'storm overflow' events.

What Should be Done?

Infrastructure Upgrades

There is a long-term plan for upgrading Anglian Water infrastructure (2018) [5]. Shockingly, neither Winteringham or Barton appear on it. Instead, it appears to concentrate on sites that will receive the largest projected increases in population in each catchment, implying that the status quo is somehow OK and the current infrastructure is not a priority for upgrade. Obviously continued dividend payments to shareholders are far more important. **How can this possibly be justified?**

Suitable infrastructure upgrades would include increasing the size of pipes along with more storage tank volume.

SuDS and Retrofit SuDS

SuDS is short for **Sustainable Drainage Systems**. The idea is to disconnect rain water run-off from roofs and hard standing areas from the sewer system and allow this water

to drain naturally, or at least slow down and lower the peak of rain water reaching the Sewage Treatment Works, thereby reducing the number and duration of 'storm overflow' events. This can most easily be done in new housing and building developments. It can also be done with existing buildings, car parks etc through 'Retrofit SuDS'.

An Environment Agency Study into retrofit SuDS [4] indicates that there are multiple solutions which have financial benefits that exceed the costs of their implementation. This means that the financial benefit of not processing this excess water is greater than the cost of implementing the retrofit SuDS. These include both permeable car parking and residential Water Butts that delay water entering the sewers to reduce the peak water flow to the WRC.

Why are they not implemented you may ask?

The same Environment Agency Study [4] indicates inaction on this matter is related to 'buck-passing' between Anglian Water, land owners and local authorities concerning who pays, implements and maintains any retrofit SuDS solutions. There appears to be no joined-up thinking, just inaction.

This is completely unacceptable to North Lincolnshire residents. We demand action:

From Anglian Water:

- Add both Winteringham and Barton-upon-Humber Water Recycling Centres and Pumping Stations to the list of infrastructure that is in need of urgent upgrade.
- Funding for retrofit SuDS solutions such as 'smart' residential water butts.

From North Lincolnshire Council

- Retrofit SuDS on NLC car parks, roads and properties such as schools and leisure centres. This will reduce yearly charges paid by North Lincolnshire Council to Anglian Water to process this water. It will also reduce carbon emissions allocated to NLC that were previously required for processing of this water run-off.



GREENS CALL FOR ACTION AND INVESTMENT FROM ANGLIAN WATER TO PUT AN END TO SEWAGE SPILLS

References:

[1] <https://www.data.gov.uk/dataset/19f6064d-7356-466f-844e-d20ea10ae9fd/event-duration-monitoring-storm-overflows-annual-returns>

[2]

2022 data:

<https://environment.data.gov.uk/portalstg/home/item.html?id=2f8d9b7628dd4f60a30fb1a8483fc2ae>

2021 data:

<https://environment.data.gov.uk/portalstg/home/item.html?id=7581f0165e864d7e93c5535d04906932>

2020 data:

<https://environment.data.gov.uk/portalstg/home/item.html?id=045af51b3be545b79b0c219811d3d243>

[3] <https://www.jstor.org/stable/40572024>

[4]

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/290993/scho0408bnxz-e-e.pdf

[5] <https://www.anglianwater.co.uk/siteassets/household/in-the-community/water-recycling-long-term-plan.pdf>