

THE SAD SORRY SEWAGE SAGA - 29nd April to 3rd September 2021

(And a few years before that..... Decades)

Borough Green has suffered for decades from sewage blowouts and sinkholes, people's houses and garden flooded on a regular basis. But things came to a head in 2021. Between 29 April and the 29th May we have had **seven** successive breakouts on the main sewage line between the Maidstone Rd Pumping Station and its eventual route past Whatcote Cottages and Askew Bridge to Wrotham Heath. These breakouts have all happened in a garden of a house on Sandy Ridge, and there is a major Southern Water operation taking place there. The proposed solution that we have been advised of today is that a 25 metre sleeve will be inserted in the damaged pipe to ensure sewage cannot escape again.

The sewage had been overflowing into the Network Rail culvert that runs west alongside the railway line as far as Griggs Way, and thence through the Recreation Ground stream, heading through Woodlands Estate towards Basted Mill pond. So far judicious damming of the route has prevented a major flow into the river system. The Environment Agency have been kept informed and are monitoring progress closely.

The Maidstone Pumping Station has had to be shut down to allow work on the damaged pipe, and this has necessitated a huge fleet of sewage tankers bypassing the pipe from Maidstone Rd, Basted and Ightham, and running sewage directly to the Ham Hill Sewage Works at Snodland day and night.

We have to acknowledge the huge effort put in by Southern Water and its contractors, and the exemplary way they have handled the operation, but our main thanks should go to Andy Morris the SW Engineer in charge of the operation, who has been outstanding in his liaison with the residents and Parish Council.

We believe it is largely the astronomical cost of the tanker operation that will persuade Southern Water to seek a long term solution. The main sewage pipe out of Maidstone Rd was installed in 1929, and is past its best - it simply cannot cope with the increased pressure needed to manage the huge increase in sewage demand as more and more houses are built.

Recreation Ground Stream with sewage



Sandy Ridge Site



First Sandy Ridge Excavation



24/7 tanker operation at Maidstone Rd



Site of third sewage breakout



Third and fourth beakouts



Second Excavation extended for pipe insertion



Standby tankers keeping excavations clear



Reinstatement underway



Southern Water have confirmed that the poor pump performance at Maidstone Rd was the probable cause of sewage breakouts in the West of the village. The recent pump upgrades should have resolved that, but the extra pressure then caused the blows at Sandy Ridge in the East.

THE ASKEW BRIDGE CHAPTER OF THE SAGA

The over pressurisation at Sandy Ridge was almost definitely caused by the blockages at Askew Bridge which only came to light when BT engineers replacing a flooded cable duct opened up a huge unknown hole in the ground under the A25.

Southern Water engineers were called, closed the road, and began investigations with CCTV and Ground Penetrating Radar, finding a 5mtr square void, 3.5 mtrs deep under the main A25.

KCC and SW investigate the collapse



Specialist team CCTV survey the pipe and prepare a Resin Repair



After an initial repair it became apparent that there was a further 350 metres of collapsed and blocked pipe past Askew Bridge. A pair of heavy duty silent pumps were brought in to transfer sewage via two pipes to a manhole near Clubb's entrance, to allow repairs to be made to the damaged pipe

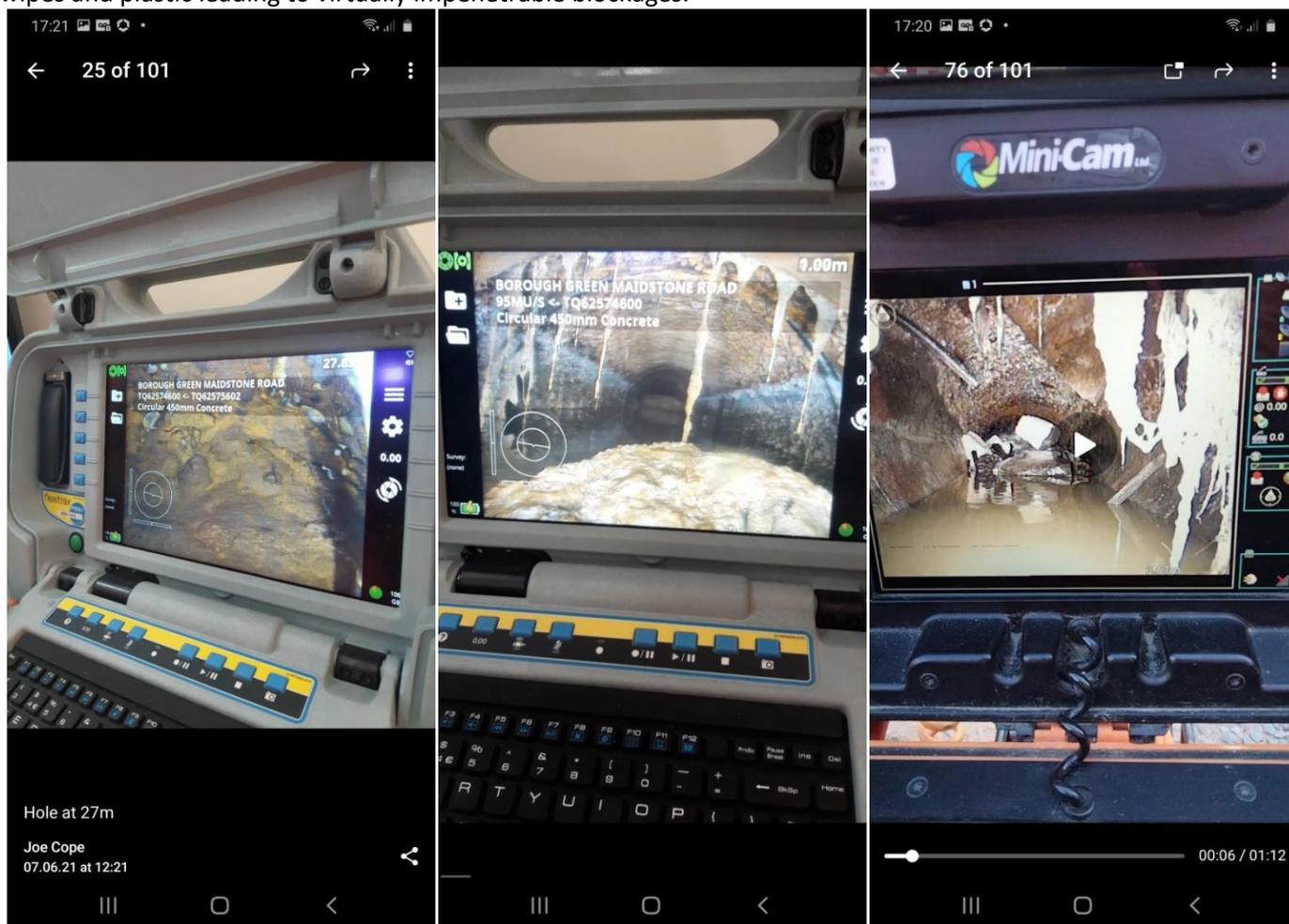


A full site visit was arranged 2 July for MP Tom Tugendhat, who has been supporting the Parish Councils for many years seeking resolution to decades of sewage problems. Tom & KCC Harry Rayner were also out with Platt PC Chair Wendy Palmer trying to resolve the traffic problems caused by "rat-runners" on Windmill Hill and the other narrow lanes south of the village.



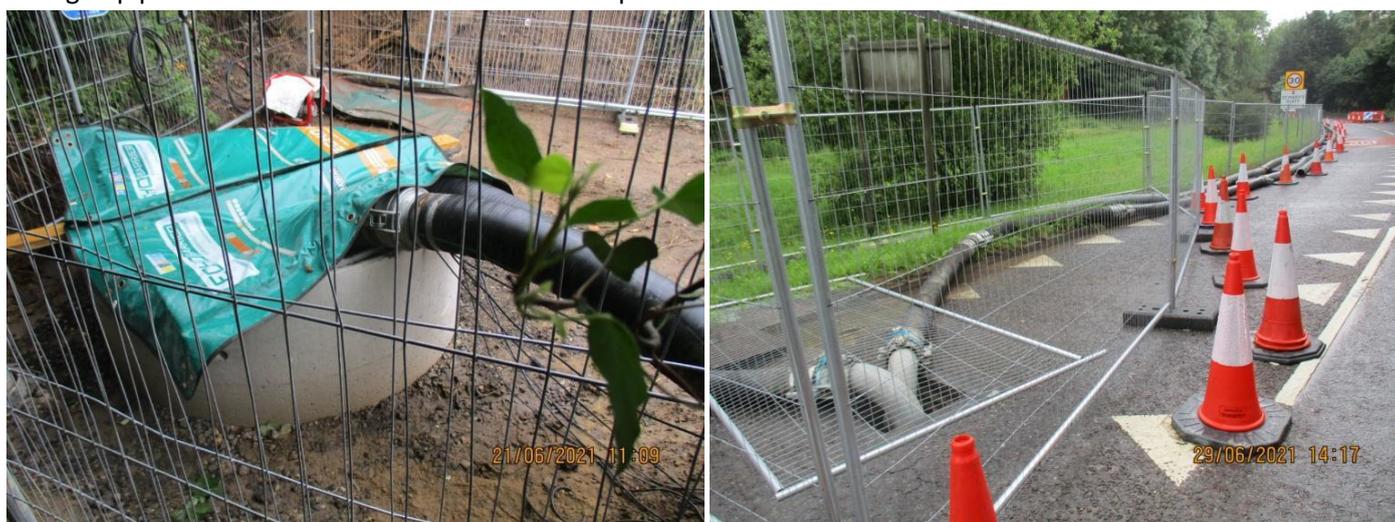
Tom talking to Andy SW and Stuart of Cappagh Brown, to the right the industrial Air Freshener . The green sheeted object behind Tom is the suction point for the transfer pipes

Below are CCTV images of the inside of the damaged pipe. Over the years Sulphur Dioxide gas from the sewage has rotted the 1929 concrete, allowing the ingress of soil and dirt. That build up has caught solids in the sewage such as wipes and plastic leading to virtually impenetrable blockages.



The plan is to thoroughly clean the pipe, and then insert 350 metres of a plastic structural liner, which should be delivered in the next 10 days, followed by rebuilding manholes, testing and the like.

The pipe failure at Askew led to both the wash out void under the A25, and the blockage of the Main Sewage Line. Below pictures show the suction point near Glebe Cottage, and also where the pipes re-enter the system near Nepicar Sandpit . Two massive pumps are carrying the sewage through surface pipes to that distant manhole, so the damaged pipe can be cleared and readied for the repair.



Southern Water are already putting together restoration and compensation plans that will ensure no community or individual suffers in the aftermath of these major works.

Below are pictures of our upgraded Main Pumping Station at Maidstone Rd

The grey cabinets by the window are the new Variable Speed Controllers that will ensure that the pumps will "soft start", and not with a "bang" that can rupture older pipes. To the right are the three upgraded pumps.



And whilst there are many people from many companies involved in this effort, four people deserve a special mention. Barry Woodhams who has been our Southern Water liaison for many years, Andy Morris, the ever smiling SW engineer who really got things moving towards resolution this time. And not forgetting Perry and Tony from MTS, veterans of many years of sewage works, who are the living reference book and involved in every aspect of the works.

The simple fact that since the two pumps have pumping sewage past the damaged section we have suffered no sewage breaches, despite recent heavy rain, seems to show our problems may be over once the lining is completed.

Andy Morris in the Maidstone Rd Pumping Station

Perry & Tony monitor the site 24 hours a day



4th August -the new liner was installed in the damaged 350 metres of pipe between Pinefield and Clubb's entrance.

I had been wondering how they were going to even deliver 350 metres of pipe in one piece, never mind how they got it down the tiny manhole and 90 degrees into the pipe. It all became clear with this picture - it arrives flat and flexible, is manoeuvred into place in the pipe, and then inflated and heat cured in situ.

(The actual process was a lot more complicated, but the detailed explanation went largely over my head).

After the pipe has cured, holes are cut at the manholes, and a special device cuts the holes where domestic pipes are connected.

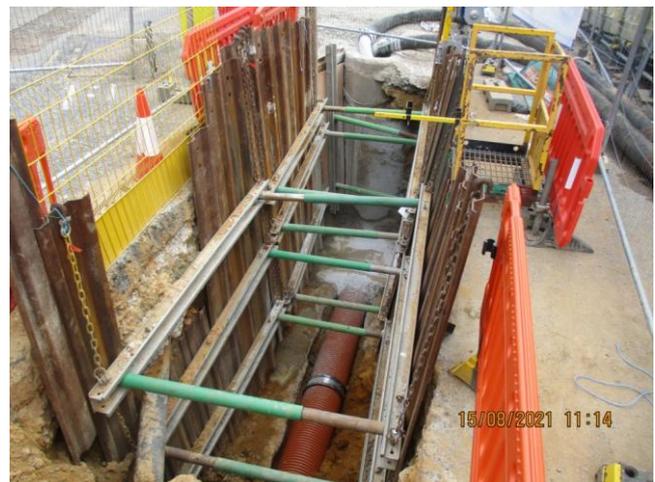
View down a manhole showing the new liner on the left, and some off-cuts of liner



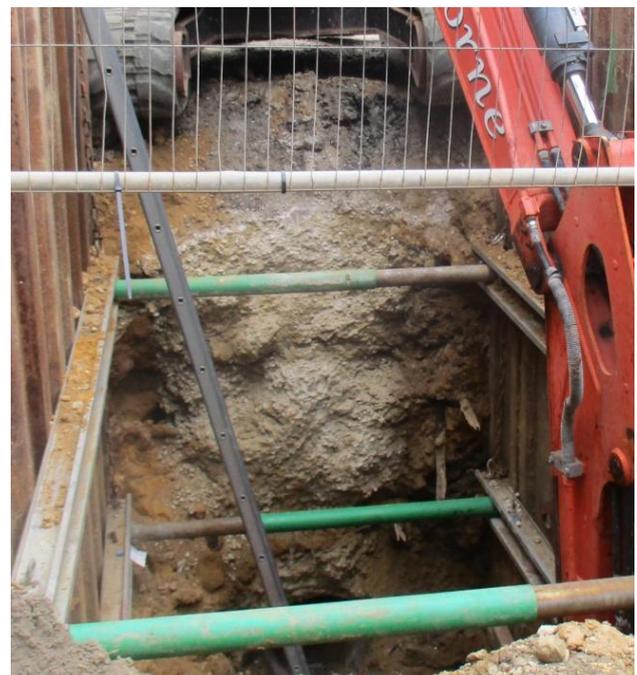
One of the greatest hazards for the crew here is Hydrogen Sulphide gas, which is so toxic a few breaths can kill, so gas monitors and safety kit are mandatory.

The worst section of pipe was from the manhole on the bank at the Glebe land, to the manhole where the road collapsed and the new liner starts. This section is too weak and damaged to be relined, and so it will be excavated and replaced

The trench is being sheet-piled here ready for installation of the first length of new pipe. The "trouble" manhole is at the bottom edge of the first picture.



The pictures to the upper right and below show the new pipe being installed, and illustrate the depth. The picture to the immediate right shows a huge block of concrete left by KCC in earlier works that caused most of the delays on this short section



THE SOUND OF SILENCE 22 August 2021

The first thing I noticed that day when I visited was the peace and quiet, just a small generator running the perfume blower, and a few steps closer the sound of sewage gurgling happily through the pipes, just like a mountain stream.

The final 30 metres of severely damaged pipe has been replaced and partly backfilled. In the next few days that will be covered with concrete before the final base and top coat tarmac. But there has to be a 7 day cure before the concrete can take normal traffic. KCC are threatening penalty charges, but SW insist they will do the job properly, and that it will take as long as it takes - their new motto being "Do it Once, and Do it Right"



The extra voids that were discovered under the road have all been opened up and backfilled properly and resurfaced, except one smaller one that will be drilled and grouted.

The entrances to the houses within the road works areas are having all sorts of repairs and upgrades, including tarmac and new kerbs (*see pic below*).

Over the next few days the huge volume of spare materials, construction equipment and cabins will be slowly removed, and it looks as if Southern Water's 3rd September deadline is achievable.

And my final picture is the garden on Sandy Ridge that suffered five blowouts in a row, now restored completely.

This will hopefully be the last update on this topic, and from now on our sewage system should behave as it should, a tribute to Southern Water and its contractors, most notably Andy Morris and Barry Woodhams, but not forgetting Perry, Tony, Julie-Anne and others whose names I never got. And to Ian McAulay, SW's new broom MD.



Sandy Ridge Garden now blooming....



The final picture, the A25 all repaired, mostly cleared and just awaiting new white lining, preparatory to its opening on the 3rd of September.

All new tarmac, waiting for the white lining crew



Some entrances refurbished



Slowly clearing the equipment and relaying damaged verges,.....including new hedging whips



Apart from ongoing CCTV surveys on the western end of the line, and full of hope, this is: **THE END**