

## Summary of PACE Field Trip to Manningtree Sewage Treatment Works, 3 Sept 2024

27 PACE Supporters were welcomed to the Treatment Works near the Lawford Recycling Centre by Mark Hinson, Colchester Treatment Manager and 4 Anglian Water staff – Paul, Phil, Matt and Tracey. They equipped us with Hi-Viz jackets and disposable gloves and started with a demo of how a Settlement Tank works. About 10,000 local people are served by this Sewage Works – that’s a lot of loos being flushed every day - our community just could not function without the Works and its staff.

We followed the treatment process from where the sewage comes in and powerful pumps take it to the screens where wet-wipes and grit are removed. Wet-wipes are a massive problem for any sewage works- they include plastic and therefore they do not break down like toilet paper and they clog up pumps and filters. ‘Why on earth do we flush them?’, or indeed ‘Why are they called flushable?’ Is it just because they can physically be flushed and we are ignorant of the damage they cause to the Treatment Works and the environment? Everyone on this visit was shocked. How could we get our whole community to stop flushing them and put any wet-wipes in the bin?

After screening, the sewage is pumped to the Primary Settlement Tanks where the solids settle out as a sludge. Over 90% of sewage is just water so the small amount of sludge can be separated off and taken by lorry to the digesters at Harwich or Colchester where they produce methane gas and hence electricity. The water fraction is drawn off on site to the Biofilters – the large circular filtration beds typical of most sewage works. In the Biofilters there is a deep layer of clinker which provides a large surface area so that natural bacteria can get to work and breakdown any organic matter and remove ammonia and other toxic elements. Sewage treatment relies on natural processes (without chemicals) which are speeded up by the design of the Works. From the Biofilters the water goes to the Final Settlement Tanks for finishing and testing before the water can be discharged into the borrowdyke, then through the seawall into the Stour Estuary – just upstream of the Co-op.

If there is heavy rain then a lot of excess water gets into the sewage system and this could flood the Treatment Works – in this event excess untreated sewage is pumped into the Storm Water Tanks on site and, after the rainstorm has passed, the sewage in the Storm Water Tanks is diverted back through the treatment process. In exceptional cases of prolonged heavy rain, the Storm Water Tanks could overflow and only then is Anglian Water permitted to discharge untreated water into the Stour Estuary – this is permitted to prevent the Works being overwhelmed.

There were many questions – too many to cover here - but a couple bearing in mind the current high profile of sewage in rivers.

*Is this Sewage Works capable of dealing with the present housing stock and the increase in new houses?* Yes, since we had an upgrade of the pumps etc we have sufficient capacity.

*How often does this Sewage Works release untreated sewage into the River Stour.* Mark provided the figures after the visit. There have been 40 occasions when the EDM (Event

Duration Monitors) have recorded spills of untreated sewage into the Stour Estuary in 2023, and these lasted for a total of 476 hours. These were associated with periods of heavy rainfall. In 2022 there were only 9 spills totalling 15.5 hours – still too many, of course, but this indicates the problems caused by the very wet 2023.

*What would be the most important improvements that could be made?* A second Final Settlement Tank; education to reduce the number of wet-wipes coming in with the sewage; keep excess rain water out of the sewer system eg lots of water butts; UV Treatment of the final discharge to reduce bacteria now that Manningtree Beach has Bathing Water Status.

Everyone applauded Mark and his team for the opportunity of this visit and for their work in looking after our Sewage Treatment Works.