# newsletter

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## COMBINED SEWAGE OVERFLOWS

(CSOs)

Combined Sewage Overflows document prepared by: Mellissa Davies - Head of Projects

### WHAT ARE COMBINED SEWER OVERFLOWS AND WHAT DO THEY DO?

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

During heavy rainfall 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. Combined sewer overflows (CSOs) were developed as overflow valves to reduce the risk of sewage backing up during heavy rainfall.

Overflows of diluted sewage during heavy rainfall are not a sign that the system is faulty. Combined sewer overflows (CSOs) are a necessary part of the existing sewerage system, preventing sewage from flooding homes and businesses.

### WHAT IS INVOLVED FOR RHAMES TO MAINTAIN/REPAIR CSOS?

Some CSOs are located in restricted access areas and often require a traffic management system set up to allow rhames engineers to enter the chambers. The chambers are confined space classified and require fully trained Atex and Confined Space Trained mechanical and electrical engineers. This type of work requires specialist atmospheric checks to be carried out throughout the whole maintenance time on site which is logged and reported via gas monitoring systems.

At rhames there is a dedicated project team who manage the whole CSO process, fully in house from carrying out the initial intrusive inspection to full remedial works with the relevant reporting documentation. Our SHEQ manager along with the Project Lead carry out regular site inspections to ensure the quality of work being carried out is to an exceptionally high standard. The fully trained engineers at rhames are permit trained which allows some flexibility with self-permitting works as/when required.

#### HOW HAS RHAMES IMPROVED CSOS FOR UTILITY COMPANIES?

- 223 CSO initial inspections completed to date, carried out by our in-house engineers.
- 199 Remedial works completed to date, carried out by our in-house engineers.
- rhames have a dedicated team of engineers who specialise in CSO works including detailed inspection reports of assets and replacement/refurbishment capabilities.



#### **BEFORE**





**AFTER** 





**BEFORE** 





**AFTER** 





**BEFORE** 







**AFTER** 







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#### FOR FURTHER INFORMATION

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