Claret
CIVIL ENGINEERING LTD

St Botolph's Lane, Bury St Edmunds, Suffolk IP33 2AX.

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CASE STUDY TEMPLATE – ALL SECTIONS MUST BE COMPLETED

Which Claret Civil Engineering business are you?

IMR WR Alliance - Whitlingham

Which department is this referring to?

Claret Lining Division

Who was the customer (only if you want them to feature in the article)?

Anglian Water IMR WR Alliance

What was the problem?

WRN Alliance had carried out extensive surveys of a mainline sewer that had previous flooding issues when there had been adverse weather conditions. The sewer run along a boundary line of a farmer's field and a new housing development so authorisation had to be obtained prior to our arrival. The three manholes that we needed to inspect from where in a hedge row, so some pruning was required to gain access to them. A full extensive CCTV survey was carried out which had identified that the sewer was failing in it crown area due to root intrusion and hydrogen sulphide gas attack which had weakened the pipe integrity and had extensively corroded the pipe wall. There were also signs of infiltration throughout the sewer's length and through its failing joints. This information was then passed over to the Claret Lining Division to inspect and then to provide a suitable solution.

What was the resolution? Please include statistics and measurements if appropriate

The resolution was to find materials that could offer structural support of the existing host pipe and to mitigate the infiltration coming into the sewer through different inlets. The varying diameter throughout the sewer had to be a consideration because of the corrosion. The sewers actual installed concrete pipe diameter was originally 250mm but was reading 270mm/280mm in places where we could measure the pipe work. The 174m length of sewer was shallow and in ground that would make the installation difficult due to its location to deploy equipment.

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Through Claret Civil Engineering Lining Division, they quickly engaged with landowners and the housebuilding company to discuss access to the Anglian Water Assets and to produce health & safety documents to allow us onto their construction site.

The solution for the failing asset would be to clean the sewer with high pressure water recycling jetter to remove any debris from the sewer before sending in Claret's new state of the art electric powered Prokasro Robotic Cutter to remove the multiple tree roots that were protruding into the sewer. This was achieved successfully and allowing the lining managers to have a closer inspection to the condition of the asset. It was concluded that we utilise a transition lining that would stretch from the 250mm diameter into the area that had been corroded and utilising a WRc approved Epoxy Resin that is great for sewers that are infiltrating but can also be cured with LED light.

The Sewertronics LED system is small, compact, and versatile which lent itself to the location of the site. The successful installation of 89m & 85m was completed in two days and the sewer asset was put back into operation.

Fantastic effort from our team who demonstrated great knowledge, experience, and tenacity to get the job completed ahead of the programme.