

Yorkshire Water - West Area IWO Programme cost effective solution for rural pollution problem

by
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An inland waterway outfall (IWO) is the inland site of discharge of liquid from a pipe. In the Selby area, Yorkshire Water had a regulatory obligation to address nine such inland sites during the AMP3 period, which in this instance were surface water sewers contaminated by foul flows. The catchment is predominantly semi rural in nature and construction issues to be overcome were characterised by utility diversions, on-line construction, traffic management and liaison with third parties.



Small package plant solution for rural pollution problem

courtesy: MWH

The IWOs to be treated or removed are generally older properties with septic tanks, where the top water of the septic tank is currently discharged to the surface water sewer.

At the time the properties were constructed and the septic tanks installed, the surface water sewer was the only sewerage system present. Subsequently, most of the areas had foul sewerage laid, but properties previously connected to the surface water sewers were not necessarily connected to the foul sewers,

When the foul sewers were laid in the 1960s Selby District Council had the foresight to lay laterals to ease the future connection of properties to the foul sewers.

Verifying suspected polluters

Yorkshire Water had been provided with lists of suspected polluting properties. All those identified as being potential polluters were challenged and only those confirmed by dye testing as being connected to the surface water sewers were addressed under this scheme. All areas having populations <250 are required to meet a treatment standard of BOD 40mg/l and SS 60mg/l.

Confirming the solutions

The strategy used to remove these polluters was to examine and

consider the merits of potential options and promote the least cost whole life option.

Brayton IWOs

Two IWOs were included in this project. Foul sewers exist in the vicinity, and laterals were laid at the time of the foul sewer. It is likely that most of these laterals are still viable for use. 14 properties were suspected as polluting, but only six of these could be proved by dye testing to be actually polluting the surface water sewers. Septic tanks at the properties will not be removed as the owners currently enjoy the benefit of reduced water charges.

Camblesforth IWOs

Four IWOs are included in this project. Foul sewers exist in the vicinity, and laterals are available to most of the polluting properties. 21 properties were suspected as polluting, but only 6 of these could be proved by dye testing to be actually polluting the surface water sewer. The best value solution is to connect the polluting properties to the foul sewers. The properties septic tanks will not be removed as the owners currently enjoy the benefit of reduced water charges.

Ryther IWOs

One IWO is included in this project. Eight properties were identified as polluting and these were required to be treated. The nearest foul

sewer was 3 miles away and this was judged to be too costly to pursue as a viable option.

A package treatment plant, it was decided, would provide the least cost solution to serve a population of 24. The choice of package plant had to be capable, not only of treating to the required standards the small population involved, but also had to be suited to the very quiet rural location. Although daytime noise was governed by the nearby railway line, no trains ran at night and the chosen treatment facility should not break the silence to which residents were accustomed.

Thorpe Willoughby

Two IWOs were included in this project. Originally 7 properties were suspected, but only 3 have been confirmed as polluting. There is a population of nine to be treated by this scheme. A small package treatment plant had to be capable of treating to the required standards the small population involved, but also had to be suited to this very quiet rural location.

Wastewater West CaSP comprising *MJ Gleeson and MWH* in conjunction with their strategic partners *Peter Duffy Limited and Mowlem Johnston Limited* have enabled Yorkshire Water to meet their regulatory obligations by delivering solutions to 9 IWOs. The strategy, ensuring only verified polluters were addressed has been a major saving to Yorkshire Water.. The solutions identified may be simple but they are adequate and a low cost effective means of addressing the problem. Target Capital Value: £2.1m. ■

Note: The author of this article, *Veronica Flint*, is Project Manager, *MWH*.

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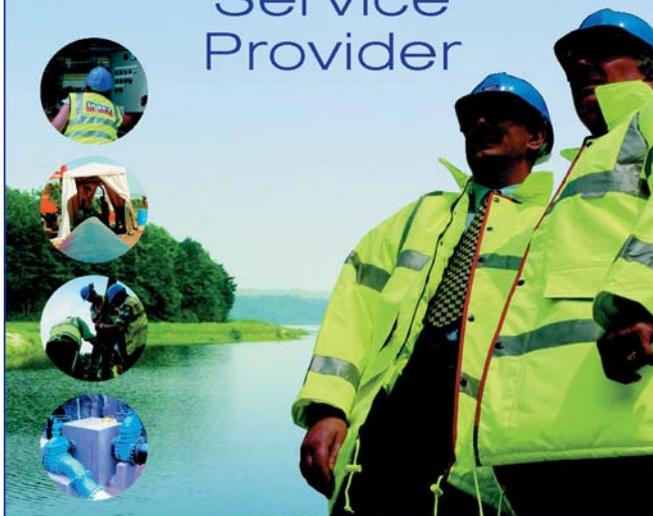
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