

# Effective flood management

ABC&D finds out how the South Holland drainage district keeps flooding at bay...

As some parts of the UK lie much below sea level, they are constantly at risk from flooding, which is why drainage districts have been established in order to prevent permanent flooding and water logging.

Despite the UK flooding in recent years, the South Holland district – so named because it is an area of low-lying land akin to Holland – has not been adversely affected, largely thanks to the swift action taken by the South Holland Internal Drainage Board (SHIDB).

SHIDB engaged Cougar Automation – a systems integrator specialising primarily in the water treatment business – in order to install a monitoring system that would control 16 unmanned remote pumping stations of varying sizes in the South Holland district of Lincolnshire, from their office at Holbeach. Cougar turned to Digi International, whose mobile routing technology is now playing a major

role in assisting SHIDB in water-level management.

Phase one of the deployment saw the new routers being used for both fixed line and mobile communications. While BT broadband connections have been deployed where possible, mobile networks are being used in the form of dual Vodafone and T-Mobile SIM cards in some of the more remote locations in order to provide failover in the event of downtime. Industrial wireless access points (APs) are also present at selected sites. Each pumping station has automatic controls – telemetry – capability for central monitoring and an alarm system detecting fixed-line failure.

Transmitting data every 10-15 seconds, the routers not only enable SHIDB to monitor the district's water levels and status of each site's equipment in real-time, but also permit the engineers to remotely switch pumps on and off, as well as adjust the target water levels and

pump sequences. Such remote capabilities mean that the Board can easily scan and assess a site from the office first, before making the decision whether to dispatch a team to deal with any issues.

Cougar Automation has configured SHIDB's telemetry system to allow the routers to establish a secure virtual private network (VPN) tunnel back to the master router from each remote location. What's more, some sites are also equipped with an IP camera which feeds images back to the office. This function gives SHIDB real-time visual images of water levels, as well as acting as a valuable intruder detection system and safety monitoring device when engineers need to remotely control pumps on an automatic basis.

Phase two will involve the installation of additional specialised features to allow SHIDB to record and archive water levels and pump run-hours, as well as any action taken by the engineers, for



Sutton Bridge sluice

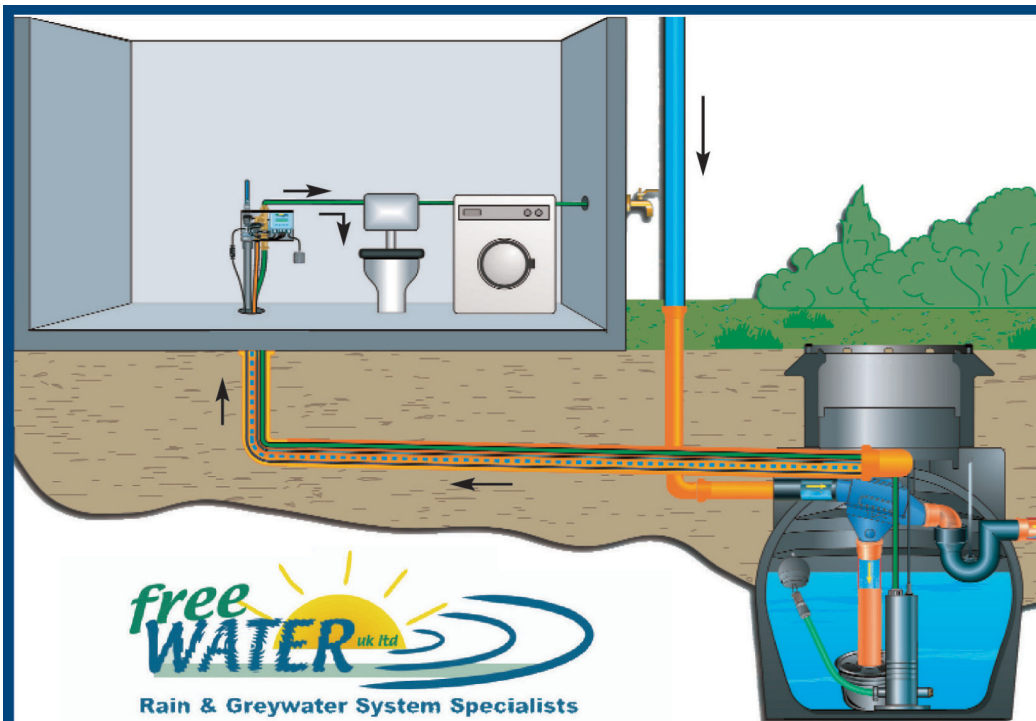


Wisemans pumping station

hydrological modelling purposes. Such functionality will allow SHIDB and other internal drainage boards, to compare and contrast rainfall in the district with the amount of water discharged from the catchment area, among other details.

For more information about Digi International use any of the four enquiry methods below quoting number AJ295

Send in a response  
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