

ENVIRONMENTAL & GAS MONITORING LTD AND CROWCON PROVIDE CHLORINE DETECTION SOLUTION FOR SCOTTISH WATER

CASE STUDY

Scottish Water are the sole provider of Scotland's water and wastewater services. Their services support 2.61m households and over 150,000 business premises across Scotland, supplying 1.52bn litres of water daily and treating 1.1bn litres of wastewater every day across 1,834 wastewater treatment works. Environmental & Gas Monitoring (EGM) Ltd specialise in the supply, hire, calibration, maintenance and repair of environmental and gas monitoring products, ranging from portable monitoring equipment to fixed gas detection and commissioning. EGM is a trusted supplier of Crowcon products who we have worked with for more than a decade.



SCOTTISH WATER HAVE MORE THAN 1,800 WATER AND WASTEWATER TREATMENT WORKS IN SCOTLAND. THERE ARE A VARIETY OF GAS HAZARDS THAT MAY BE PRESENT ON THESE SIGHTS INCLUDING HYDROGEN SULPHIDE (H₂S), METHANE (CH₄), CHLORINE (CL₂) AND AMMONIA (NH₃).

System upgrade required

As a provider of water and wastewater services, Scottish water have more than 1,800 water and wastewater treatment works in Scotland. There are a variety of gas hazards that may be present on these sights including hydrogen sulphide (H₂S), methane (CH₄), chlorine (Cl₂) and ammonia (NH₃).

In this particular case, Scottish water was seeking an upgrade on its current chlorine gas detection system on a clean water site. The system was more than 25 years old and was starting to become unreliable.

EGM were tasked with specifying and supplying five systems on the site. The systems had to comply with the EH40 regulations for chlorine gas and also needed to be futureproof, so that the system could be reconfigured to meet updated regulations.



CROWCON'S XGARD TYPE 1 FIXED DETECTOR AND GASMATER III CONTROL PANEL PROVIDED THE IDEAL SOLUTION

Crowcon's solution

Crowcon's Xgard Type 1 fixed detector and Gasmaster III control panel provided the ideal solution to Scottish Water's gas detection requirements. The Xgard Type 1 is an intrinsically safe electrochemical type detector with a wide range of sensor options, including different ranges available for chlorine gas detection (3, 5, 10, 20, 50, 100 ppm).

EGM engineers spent a week on site removing the old equipment and installing the new systems, comprising 5 Xgard Type 1 chlorine detectors each connected to a Gasmaster III control panel which were able to be integrated into the existing system and send signals to the sight-based control system.

A key part of Scottish Water's requirement was that the system needed to comply with the workplace exposure limits set out by the HSE in the EH40/2005 Workplace exposure limits. EGM ensured that the alarm levels of the system were tied with the limits of EH40. Unlike the existing system on the site, the new system provided by EGM is reconfigurable meaning that if the exposure limits of EH40 are changed, the system can be reprogrammed with ease ensuring it can be used for years to come.

The outcome

EGM provided Scottish Water with a substantial upgrade on their existing system, ensuring peace of mind with an up to date and future proof system. The versatility of the Xgard fixed detector ensured it was suitable for use in all areas of the site including cylinder store areas, chlorinator rooms and blending chambers.

