

## PROJECT | CHP AND BOILER INSTALLATION

### OUR ROLE | LEAD CONSULTANTS

NIFES were appointed by IUK to assess the feasibility of incorporating CHP into the existing boiler-houses at breweries Samlesbury and Magor. The results of this work showed that the optimum solution on both sites was the installation of two 3.4MWe gas engines to each site.

Heat recovery was via exhaust heat exchange to HPHW (175 °C) at Magor and via waste heat recovery boiler to the site steam system at Samlesbury; along with the removal of an existing HPHW boiler and the installation of a new steam HPHW heat exchanger.

Electrical connections were made at 11kV and the machines and systems are designed to provide an Island Mode/Black start facility. Power is exported to the grid from both sites.

The electrical infrastructures at Magor had to be modified both on and off site in order to cope with the increased fault levels produced by the CHP alternators.

The CHP units, heat exchangers and boilers were installed in new buildings adjacent to the existing energy centres, constructed to match the rest of the site in respect of design, colour and format.

The new buildings were soundproofed to 75dBA at 1 metre and the machines were mounted on inertia blocks to remove vibration.

The plant was built and installed whilst the sites were in operation with only a minimum of interruption to production schedules to make essential connections.

