CASE STUDY

AUTOFLAME®
SERVICE & SUPPORT

The Leadenhall Building

London, England

BGIS award-winning install focused on ***emissions reduction*** and ***reporting.*** This site upgraded the boiler plant to increase efficiency, ***reduce fuel costs*** and ***withstand seasonal variations*** in conditions within the ***uniquely situated plant room***, located on the 47th floor with no defined roof.

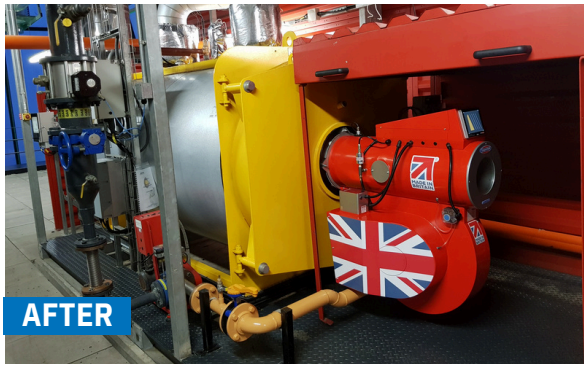
Figures: ***ROI in under 2 years*** with a reduction of over ***180 tonnes of CO2 per annum***.

THE PROBLEM

- Inefficiency of pre-existing equipment caused ***unscheduled downtime*** and ***increased fuel bills.***
- The client was were unsatisfied with their current figures of harmful emissions and wanted to ***reduce their environmental impact***.
- The existing burners were ***susceptible to seasonal variations in conditions*** and therefore ***unreliable*** in this ***high elevation, open air boiler room.***

THE GOALS

1. To ***increase overall the performance*** of the plant and ***reduce harmful emissions*** such as NOx, SO2 and CO2.
2. To ***increase reliability*** of existing burners to cope with seasonal variations in conditions.
3. To be able to ***track and log emissions data*** for ***reporting*** purposes, towards their journey of meeting the ***environmental goals*** of the site.

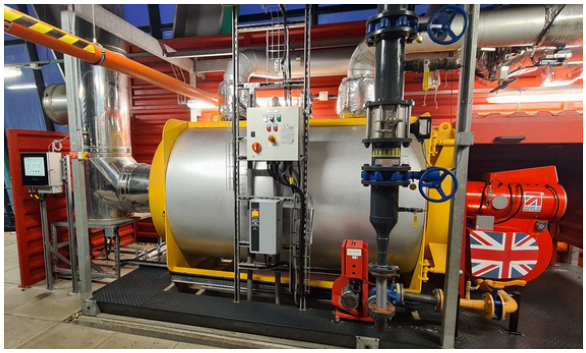


THE RESULTS

This high-efficiency install was awarded the ***'2023 BGIS Global Supplier Innovation Award'*** for its thought leadership and innovation that drive *economic, social* and *environmental sustainability improvements* for BGIS and their clients.

Quick Figures:

- ***ROI*** within 2 years
- Reduced ***180 tonnes of CO2*** per annum



Installed by the engineering team, the equipment was ***up and running within a week***. The reliability of the plant has been vastly improved and the site has reported ***immediate energy savings*** via reduced downtime and a decrease in fuel bills. The central London landmark now serves as a blueprint for other BGIS sites to ***reduce their emissions and fuel bills overnight*** with intelligent, controlled combustion.

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MADE IN BRITAIN

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THE STRATEGY

To understand the site's ***energy requirements*** and how pre-existing equipment was performing, our team conducted an ***energy audit***. This involved gas samples being taken from the flue and analysed, utilising Autoflame's in-house ***Emissions Calculator software***.

A ***custom-made, high-efficiency Limpsfield burner*** was chosen for it's ***robust***, unique and ***adaptable*** design. Many Limpsfield burners operate in ***extreme environments*** across the world, therefore it's perfectly suited to ***reliably meet the heat demands*** of this site within the elevated, exposed environment. Multi-fuel firing, ***hydrogen ready,*** and with a standard performance of 3% O2 across the firing range, its benefits include reduced fuel consumption, ***decreased environmental impact***, and increased ***fuel savings*** per annum.

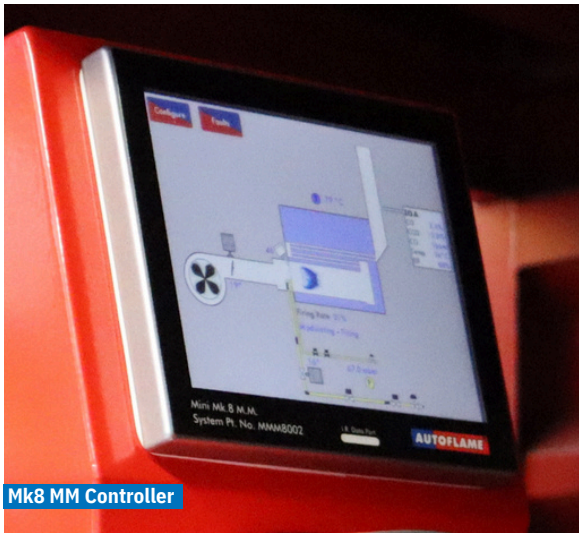
Safety is increased by the pod mounted Autoflame Mini Mk8. This comprehensive burner controller ***reduces CO emissions by 10%*** and fuel consumption by 5-7% over traditional linkage systems, all via its ***7-inch touchscreen***. Through ***analysis of flue gases*** and communication links to the Mini Mk8 MM, Autoflame's exhaust gas anaylser, the ***Mk8 EGA EVO***, automatically trims fuel-air ratios via the ***3-parameter-trim of O2, CO2 and CO.*** This not only increases efficiency but also reduces the level of emissions produced. Combined, the products installed ***burn minimal levels of fuel*** to ensure the ***highest performance***, whist producing ***minimal emissions***.

The Mk8 EGA EVO also provides the opportunity to ***log*** and ***report emissions***, so a plant can prove that they are ***complying with regulations***, such as the ***Medium Combustion Plant Directive (MCPD)***, whilst achieving their ***emissions reduction targets***.

Apart from the ***quick installation*** and ***bespoke design*** to fit the site's needs, the equipment also ***supports emerging technologies*** for energy optimisation.

Most importantly, it is ***flexible to fuel supply changes***: ***from natural gas today to hydrogen tomorrow, infrastructure pending***.

Limpsfield LC Burner



Mk8 MM Controller

Mk8 EGA EVO

THE EQUIPMENT

Pre-Existing

1 x ICI Caldaie (Stokvik) 1600kW boiler

1 x Riello burner

Newly Installed

1 x Limpsfield LP2930 burner, custom wrapped with the union jack

1 x Pod mounted Mini Mk8 combustion controller

1 x Autoflame Mk8 EGA EVO, exhaust gas analyser

1 x variable speed drive (VSD)

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