

Wembley Stadium

London, England

Autoflame Service & Support, working closely with the FA and **Wembley Stadium**, successfully delivered energy-efficient, innovation upgrades throughout the Stadium's gas-fired boiler plant.

Integrating high efficiency Limpsfield burners and Autoflame Mk8 Controls enabled an increased BMS functionality that minimises boiler cycling, which led to a 52% reduction in monthly gas consumption through maximised energy efficiency.



ROI

In under 1 year



52%

Fuel reduction



THE RESULTS

- **ROI in under 1 year** with **52% in fuel savings per annum** - Verified by Wembley Stadium's management team who perform a comprehensive gas usage audit every month, involving individual meter readings for each boiler to ensure accurate consumption data.
- **Emissions were reduced by 52%** which are now controlled and monitored by Autoflame's Queen's Award-winning Exhaust Gas Analyser, ensuring safety and compliance is always paramount.
- Our South London based team continues to provide **24/7 support**, with immediate response times for minimal downtime within the pre-existing service contract in place.



CLIENT TESTIMONIAL

“ In 2023, we upgraded our heating systems with high-efficiency Limpsfield burners and Autoflame controls, reducing annual energy usage by 52% and achieving a return on investment in under 12 months. Despite rising post-Covid energy prices, our fuel bill remains below pre-Covid levels due to reduced gas usage and optimal combustion and burner sequencing, thanks to Autoflame Service & Support's outstanding technology and service.”

- John Stirrup, Technical Manager, Wembley Stadium.

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THE PROBLEM

- **Unreliability** | The existing boiler plant equipment, deemed end-of-life, was not efficiently meeting the critical nature of the site's heating demands.
- **Operating Costs** | Extended downtime periods occurred due to the unavailable, high-cost spares required. The client was also keen to address increasing energy prices for this natural gas firing plant.

THE GOALS

1. **Product reliability** | Paramount for the stadium due to the critical nature of concerts and sporting events that they host. Quick access to spares and servicing is crucial to limit downtime and associated costs.
2. **Efficiency** | Increasing operational boiler functionality is vital to maximise efficiency, whilst meeting the stadium's heating demands.
3. **Running Costs** | Addressing the ever increasing energy and maintenance costs were a key goal for the client. To increase the service life of the existing boilers via more efficient combustion would create less short-cycling, thus reducing the thermal fatigue on the boilers.
4. **24/7 Support** | Callouts need to be responded to immediately for this site to meet the demands of the stadium. Unscheduled downtime must remain minimal.

THE STRATEGY

After completing an **energy audit** and emissions reports for the existing equipment, Our team presented an **energy-saving proposal** focusing on increased operational efficiency through precise, intelligent combustion. Five boilers across two boiler rooms were upgraded with **high-efficiency Limsfield burners** and **precise, intelligent Autoflame controls**, boosting **efficiency**, cutting fuel use and **emissions**.

The Mk8 MM controller provides full fuel-flow metering, in collaboration with comprehensive Autoflame sensors, to deliver full heat flow demand of the boilers and accurate operational costs for a **total carbon footprint overview**. Exhaust Gas Analysers (EGA) were installed in both boiler rooms to improve safety and efficiency. This innovative, multiple-Queen's Award winning technology provides continuous emissions data and stores a 3-year history. The Autoflame Data Transfer Interface (DTI) collects information from across all 5 boilers, providing a **complete boiler plant overview**. This information is accessed by our service team to troubleshoot remotely and **enable the allocation of parts** prior to attending site.

All Autoflame and Limsfield equipment is proudly Made in Britain. It is researched, developed and manufactured in-house by the respective factories in South London.

THE EQUIPMENT

Before:

- 1 x Nuway burner
- 5 x Hoval SR Euro LTHW boilers
- 4 x Riello burners

Newly Installed: (October 2022), (March 2023)

- 5 x Limsfield High efficiency / Low NOx LCN53 burners with Autoflame Mk8 MM Pod Mounted Controls.
- 5 x Autoflame Mk8 EGA EVO, Exhaust Gas Analysers.
- 1 x Autoflame Mk8 DTI , Data Transfer Interface.

