

Global Dairy Company

Scotland

As a leading UK dairy company, this site processes around two billion litres of milk annually, supplying a third of the nation's needs. A tailored approach was adopted, combining expert engineering knowledge, proven technology, and a deep understanding of their specific needs.

The upgrade was seamlessly integrated into the existing plant infrastructure, minimising disruption to operations. By addressing both current challenges and future needs, this project has positioned the company for a more sustainable and efficient future, with an estimated ***fuel cost reduction of £40,000 annually***.



THE PROBLEM

- **Inefficiency:** High oxygen and nitrogen oxide (NOx) levels, leading to increased fuel consumption and emissions.
- **Outdated Technology:** Equipment unable to adapt to future regulatory changes (e.g., MCPD) or potential fuel shifts (e.g., hydrogen).



THE GOALS

- **Reliability and Control:** Ensure consistent heat delivery, remote access for safety, and enhanced plant room functionality.
- **Efficiency:** Reduce operating and fuel costs by improving overall plant efficiency.
- **Innovation:** Monitor emissions and fuel flow to accurately assess the plant's carbon footprint and optimise boiler performance.



THE RESULTS

The upgrade delivered significant benefits:

- **Significant Energy Savings:** Estimated annual fuel cost reduction of **£40,000**.
- **MCPD Compliance:** Future-proofed the plant for regulatory changes, including the reduction of NOx Emissions.
- **Lower Maintenance Costs:** Improved equipment reliability and longevity.
- **Enhanced Safety:** Implemented exhaust gas safety limits and remote access for enhanced control.
- **Hydrogen Readiness:** Positioned the plant for potential future use of hydrogen as a cleaner fuel source.



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THE STRATEGY

The dairy company partnered with Autoflame Service & Support to implement a comprehensive boiler plant upgrade. Key elements included:

- **Energy Audit:** Assessed actual heat demand to ensure optimal equipment sizing.
- **Limpsfield LCN123 Burner with FGR:** Reduced NOx emissions and improved fuel efficiency.
- **Autoflame Mk8 Controller:** Enhanced control and monitoring capabilities.
- **Upgraded Water Level Controls:** Improved boiler safety and efficiency.
- **55kW VSD:** Optimised energy consumption.

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THE EQUIPMENT

Pre-Existing

3 x Cochran 9995kw Thermax steam boilers
2 x Equinox burners
1 x Hamworthy burners
Autoflame Mk7 controllers
Autoflame Mk7 EGA Exhaust Gas Analyser
Autoflame Mk7 DTI Data Transfer Interface

Newly Installed

Limpsfield LCN123 burner with FGR for Low emissions (Low NOx head boiler 3 burner)
Autoflame Mk8 controller
Existing panel reused
55kw VSD
Autoflame Water level Upgrade on all 3 boilers



CLIENT TESTIMONIAL

“Autoflame Service & Support have been an invaluable partner to our business. Their engineers are exceptionally knowledgeable and always deliver the best service for our equipment. Their in-depth understanding of our site and operations is evident in their work.

We are particularly impressed with their call-out support. When we need them, they are there, second to none. The sales team has also been fantastic to work with, providing excellent support throughout our partnership” - **Neil Moore, M&E Team Leader Site Services.**