

That's reliability

–weishaupt–

Case study

Enhancing efficiency and reliability
at Queen Ethelburga's Collegiate



That's reliability.



Queen Ethelburga's Collegiate operates an extensive heating infrastructure to support the facilities across its large site in Harrogate.

Recurring issues with another manufacturer's outdated burner technology prompted the collegiate to shift to Weishaupt's WM-series burners, a move that has seen it benefit from both improved efficiency and reliability.

The need for change

The heating system at Queen Ethelburga's Collegiate comprises three Hoval LTHW boilers, each with an output of 1.5 MW, that form a small-scale district heating system. The three boilers supply hot water for multiple facilities, including accommodation blocks, a laundry, the Genesis aquatic centre, and an insurance company with offices on-site. However, the burners originally installed with these boilers were becoming increasingly problematic.

'The burners were probably coming to the end of their production run when we bought the boilers', explained Andrew Lamb, who is responsible for the collegiate's heating system. 'They were proving increasingly problematic. They were constantly locking out and parts were becoming difficult to source.' With these reliability issues and inefficiencies causing disruptions and maintenance headaches, it became clear that an upgrade was necessary.

Finding the right solution

The decision taken to transition to Weishaupt burners was influenced by a previous successful trial where Queen Ethelburga's had installed a Weishaupt burner on a backup boiler situated in their satellite plant room, which serves as a contingency for the aquatic centre.

'The trial burner worked really well. It was a completely different animal compared to the original burners, which were just so clumsy. The Weishaupt burner fired smoothly and has been totally reliable from day one, and that experience convinced us to proceed with the replacement of all three burners on the Hoval boilers', said Andrew Lamb.

Energy efficiency has also markedly improved, with the WM-series burners featuring variable speed drive (VSD). A frequency converter mounted on the burner's motor optimises energy consumption by adjusting the motor

speed according to heat demand. Once the system reaches temperature, the burner turns down, reducing both gas and electricity use. The Weishaupt W-FM54 digital combustion management system ensures precise control, enhancing efficiency further still and reducing unnecessary fuel consumption. In fact, the initial calculations by Weishaupt estimated a five-year payback period on the investment, which helped underline the long-term financial benefits of the upgrade.

Maximising efficiency and reliability

A spokesperson for Weishaupt commented, 'Queen Ethelburga's Collegiate made the right choice by installing these new burners. It has completely transformed their heating system, making it more dependable and efficient, which highlights how strategic investment in advanced burner technology can yield long-term benefits. It demonstrates that reliability and efficiency go hand in hand!'



WM-GL20/3-A ZM-T dual-fuel burner

Since the installation of the Weishaupt WM-series burners, Queen Ethelburga's has seen significant improvements in the performance of its heating system, delivering tangible benefits in multiple areas. The dual-fuel capability of the new WM-GL20/3-A ZM-T burners has given the collegiate greater flexibility, enabling them to operate on LPG in fully modulating mode or on hydrogenated vegetable oil (HVO) in three-stage mode. Now the collegiate can optimise its fuel choice according to cost and availability, all while maintaining efficient combustion.

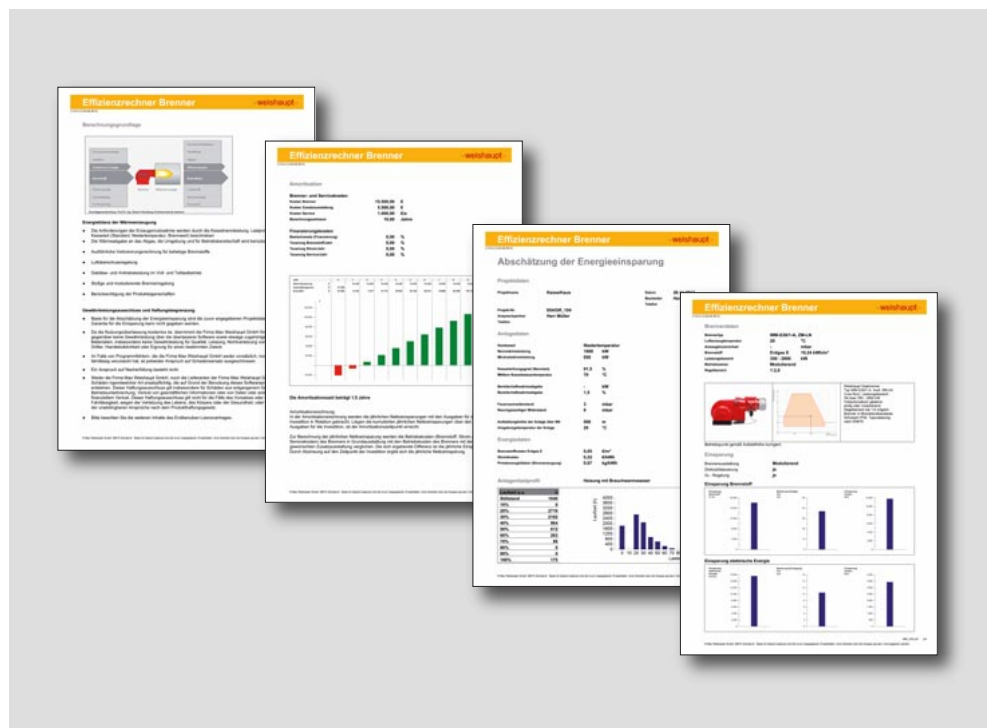
The new Weishaupt burners have also brought about a major improvement in reliability. The old burners from a different manufacturer frequently locked out causing disruption and requiring constant attention. In contrast, the Weishaupt burners have proven dependable from the outset. 'The previous burners were problematic, but these new Weishaupt units have been very smooth and reliable from day one,' said Andrew Lamb.

In addition to efficiency gains, the three WM-series burners meet NO_x Class 2 standards for both LPG (EN 676) and HVO (EN 267), the reduced emissions aligning with Queen Ethelburga's strong commitment to sustainability.

A smoother, more sustainable future

The overall performance of the heating system is now significantly smoother. Quite unlike the previous burners, which were both noisy and inefficient, the new Weishaupt burners fire up with precision and control. 'The difference is night and day,' enthuses Andrew Lamb, "the Weishaupt burners operate in a much more refined way, making the whole system easier to manage.'

Queen Ethelburga's Collegiate has not only resolved long-standing issues by switching to



Weishaupt's advanced burner technology, but it has now also positioned itself for long-term operational efficiency and sustainability.

Concluding, Weishaupt's spokesperson said, 'In choosing to upgrade to our WM-series burners, Queen Ethelburga's Collegiate has made a significant improvement to the reliability and efficiency of its heating system, with the transition not only resolving longstanding maintenance challenges, but also delivering measurable energy savings and, furthermore, a more sustainable operational model. The installation of this project was managed by experienced colleagues at Combust BSL. They ensured a seamless transition, with their expertise in both the decommissioning of the old burners and the commissioning of the new ones playing a crucial role in the success of this project.'



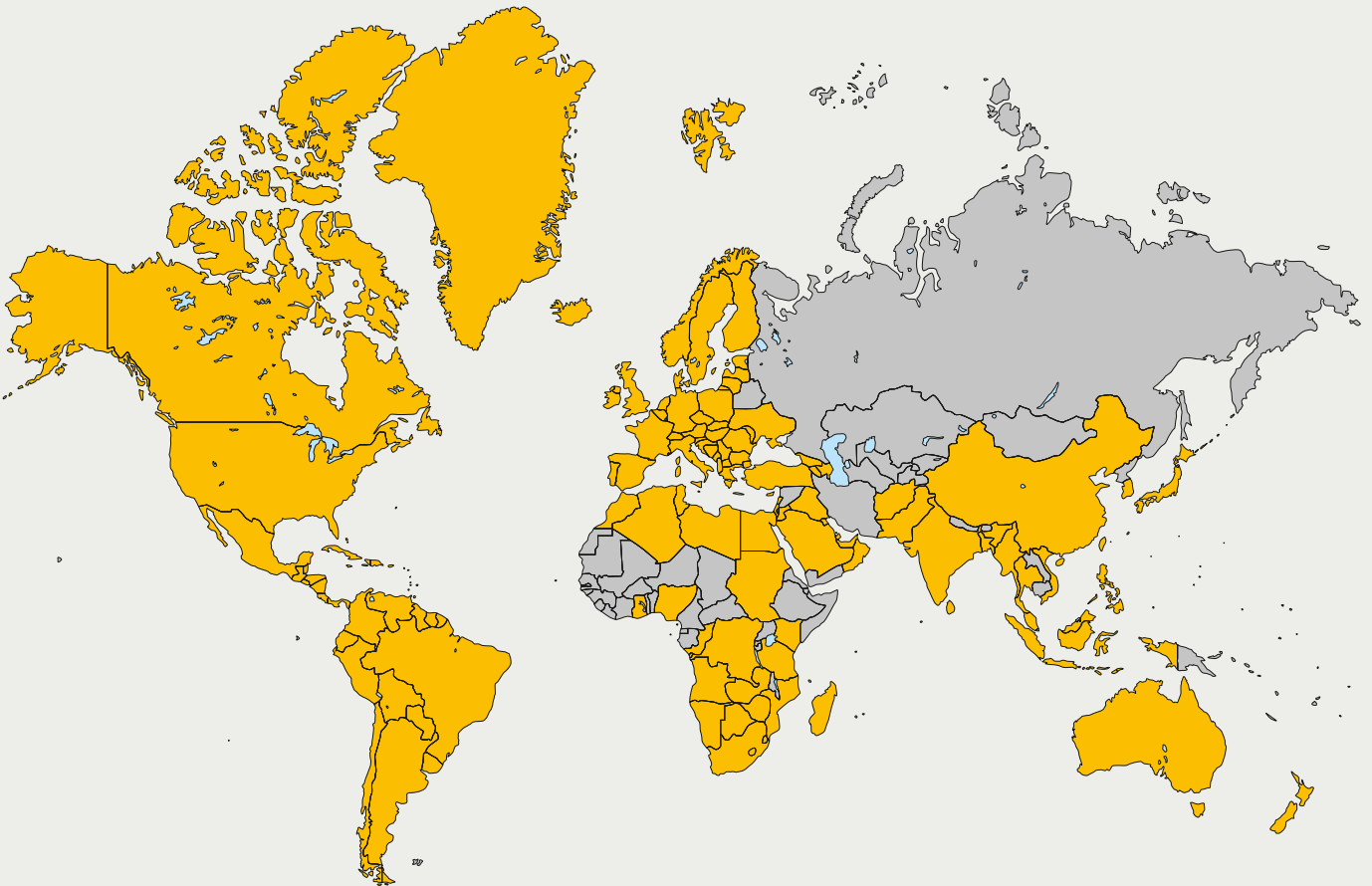
Suitable for green fuels such as HVO

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need
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there.

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