

# SHADOW

## Industrial Infrared

### CASE STUDY



## STOP 24 SERVICE STATION

Stop 24 Services were looking for a new, reliable heating system to warm the main area of their service station, ensuring a comfortable environment for visitors. Located at junction 11 of the M20, it is the closest service station to the Channel Tunnel. With customers stopping to eat, rest, and take a break from travel, it was essential to provide consistent, efficient warmth throughout the space. This was especially important as the area had doors frequently opening and closing, letting in cool air and making it challenging to maintain a steady temperature. Additionally, with the space being vast and open plan, a heating system with flexible capabilities was needed.

### The Challenges

Their previous hot air heating system had shut down, and the cost of repairs proved too high to justify. Seeking a more cost-effective solution, they explored alternative heating options that could operate efficiently using their existing electrical supply. Additionally, the hot air system offered less flexibility, making it difficult to direct warmth to specific areas without having to heat the entire space, leading to unnecessary energy use and higher costs.

Seeking to solve these issues, they came to Shadow Industrial.



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## Implementation

While their previous wall-mounted heating system had served its purpose, there was an opportunity to improve heat coverage by switching to a ceiling-mounted solution. By positioning the heaters overhead, they could distribute warmth more evenly across the space, ensuring a consistently comfortable environment for visitors. However, with high ceilings and suspended artistic panels in place, they needed a carefully planned installation approach to achieve this without disrupting the existing design.

This resulted in a smartly designed installation that balanced both efficiency and aesthetics. The heaters were mounted on a custom framework, allowing for optimal heat distribution while maintaining a clean, uniform appearance. With all wiring and fittings neatly concealed, the system blended seamlessly into the space without compromising functionality or design.

To further enhance efficiency, each heater was equipped with a PIR sensor for customised heat distribution. The sensors feature a 10-minute timer, ensuring that when no movement is detected, the heater automatically switches off, only reactivating when someone returns. This intelligent setup minimises unnecessary energy use while providing warmth exactly when and where it's needed.

## The Outcome

The versatility of Shadow Industrial's heaters allowed for a customised mounting solution that seamlessly integrated into the space, ensuring optimal heat distribution while maintaining a clean and unobtrusive appearance.

Additionally, the integration of zoning through Shadow Industrial controls provided further flexibility, allowing heat to be adjusted based on specific areas and usage patterns. With the addition of PIR sensors for energy efficiency, the installation has successfully created a warm and comfortable environment, enhancing both the functionality and aesthetics of the space. When walking into the space, you are welcomed with a comfortable and warm environment, making it inviting and efficient for occupants.

**"People regularly comment on how warm it is. It's great!"**

**-Building Manager**

# THE SYSTEM

To meet the specific heating requirements of the space, we implemented a tailored solution with the following key components:

### **Shadow Infinity 6kW Industrial Infrared Heaters (x29):**

29 high-performance infrared heaters were installed to provide targeted, energy-efficient heating. These units instantly heat objects and people directly, ensuring rapid warmth even in large or high-ceilinged spaces.

### **6kW Remote Control Variable Heater Controllers (receivers) (x29):**

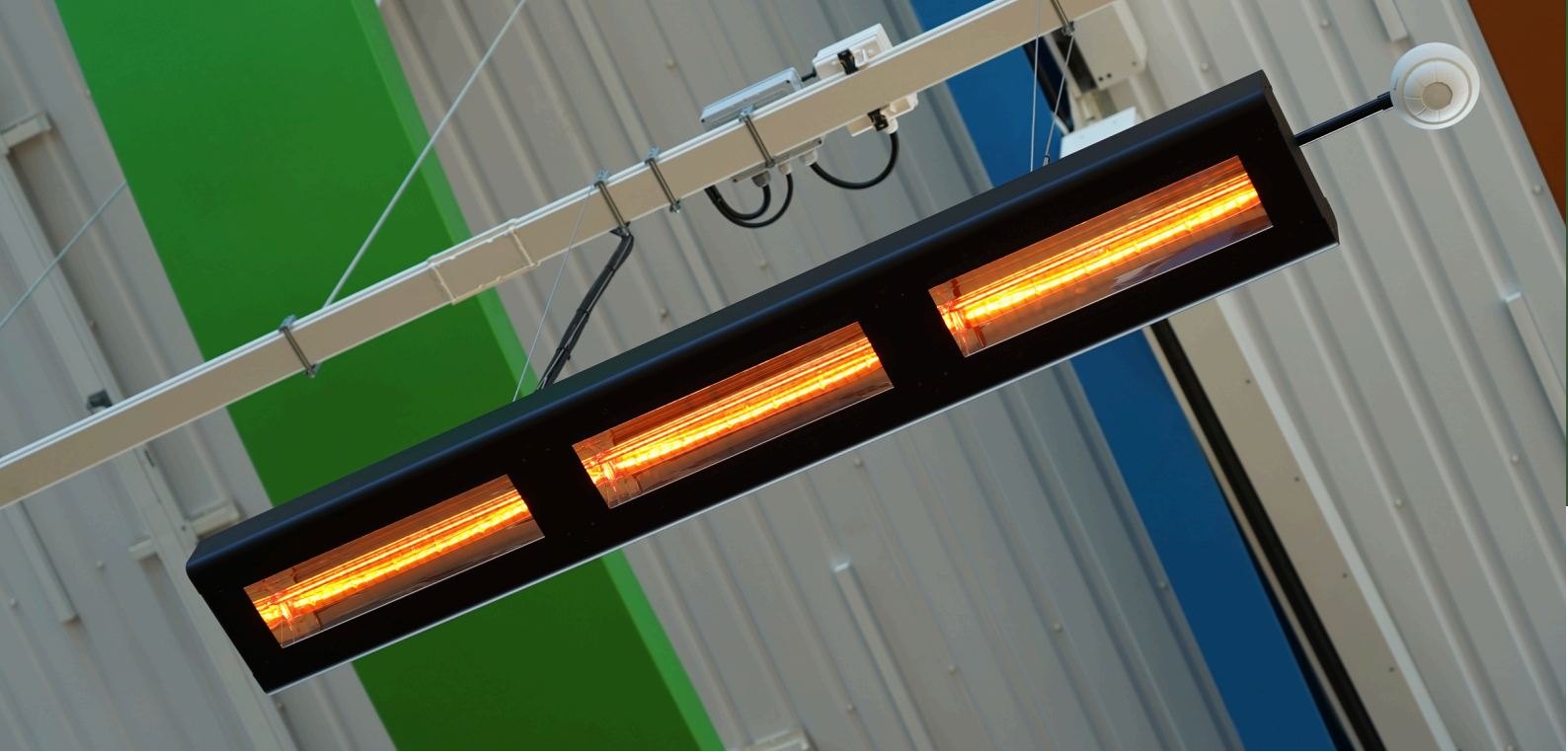
This enabled the heaters to be controlled in a zonal format and easily programmed via our RF Transmitter controller. This enabled each heater to be turned on/off, and heat intensity increased/decreased according to requirements.

### **3 Zone Master Controller (x1):**

A single master controller managed three distinct heating zones, allowing for tailored temperature settings in different areas. This system enhanced comfort and energy efficiency by adjusting the heat based on specific zone needs.

This tailored solution combined advanced infrared technology with flexible control, ensuring optimal comfort and energy savings throughout the space.





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