



# INFRARED ELECTRIC HEATING FOR GARAGES: AUTO-CARE GARAGE

**SHADOW**  
Industrial Infrared

[www.shadowindustrial.co.uk](http://www.shadowindustrial.co.uk)

# Case Study: Auto-Care Garage



## Background & Challenges

### Project Overview

At Shadow Industrial, we recently completed a project for a facility tasked with upgrading its heating system to comply with new UK EPC legislation. The goal? Deliver a solution that keeps working conditions comfortable while protecting high-value vehicles and equipment stored within the space.

### The Challenge

Because vehicles were stored in the space, our client was concerned about the heaters' impact on the integrity of the cars and equipment.

Recent updates to EPC legislation are pushing businesses to adopt cleaner, more energy-efficient solutions that reduce carbon emissions and operating costs. Yet, there's no room for error, the systems they choose must be versatile, cost-effective, and robust enough to future-proof operations against further regulatory change.

The reality is clear: traditional heating methods are outdated, wasteful, and expensive. Shortwave Infrared technology changes the game. By switching to SWI, businesses can slash energy consumption, cutting heating bills by as much as 90%, while dramatically shrinking their carbon footprint. It's a win for the environment, a win for efficiency, and most importantly, a win for the bottom line.

## Project Details

### The Solution

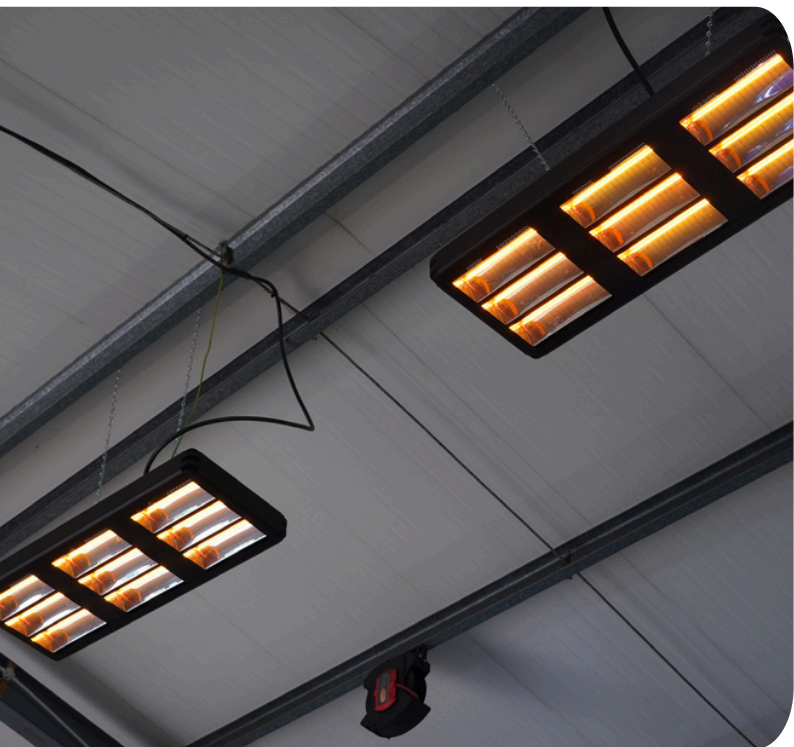
To address these concerns, we conducted a test at a previous test site, providing valuable insights and reassurance about the heaters' performance and safety.

With one of our heaters positioned 1.5 metres from a vehicle's surface, the test results spoke for themselves. The heater raised the surface temperature to 41°C within just 20 minutes - a result comparable to direct sunlight on a bright day. This demonstrated the system's ability to deliver targeted warmth efficiently, without causing any adverse effects on surfaces or materials. Such precision is crucial in spaces like auto-repair and vehicle housing facilities, where heat sources operate in close proximity to objects and equipment. The testing enabled a tailored solution that accounted for the building's roof height, heat proximity, and environmental conditions, ensuring businesses could achieve compliance and cost savings without compromise.

The testing process was also crucial in understanding the heat distribution across the space, ensuring that warmth is delivered where it's needed most.

By understanding how surfaces respond to heat, the system could be fine-tuned for maximum efficiency while identifying the safest and most effective placement of heaters. This careful evaluation eliminated wasted energy and optimised the system's performance.

Additionally, detailed diagnostics showed that the heat being produced is safe for nearby objects, simulating real-world conditions. This step is critical in reducing risks, particularly in environments where valuable equipment and vehicles are stored or repaired. By addressing health and safety concerns head-on, businesses could operate with confidence.



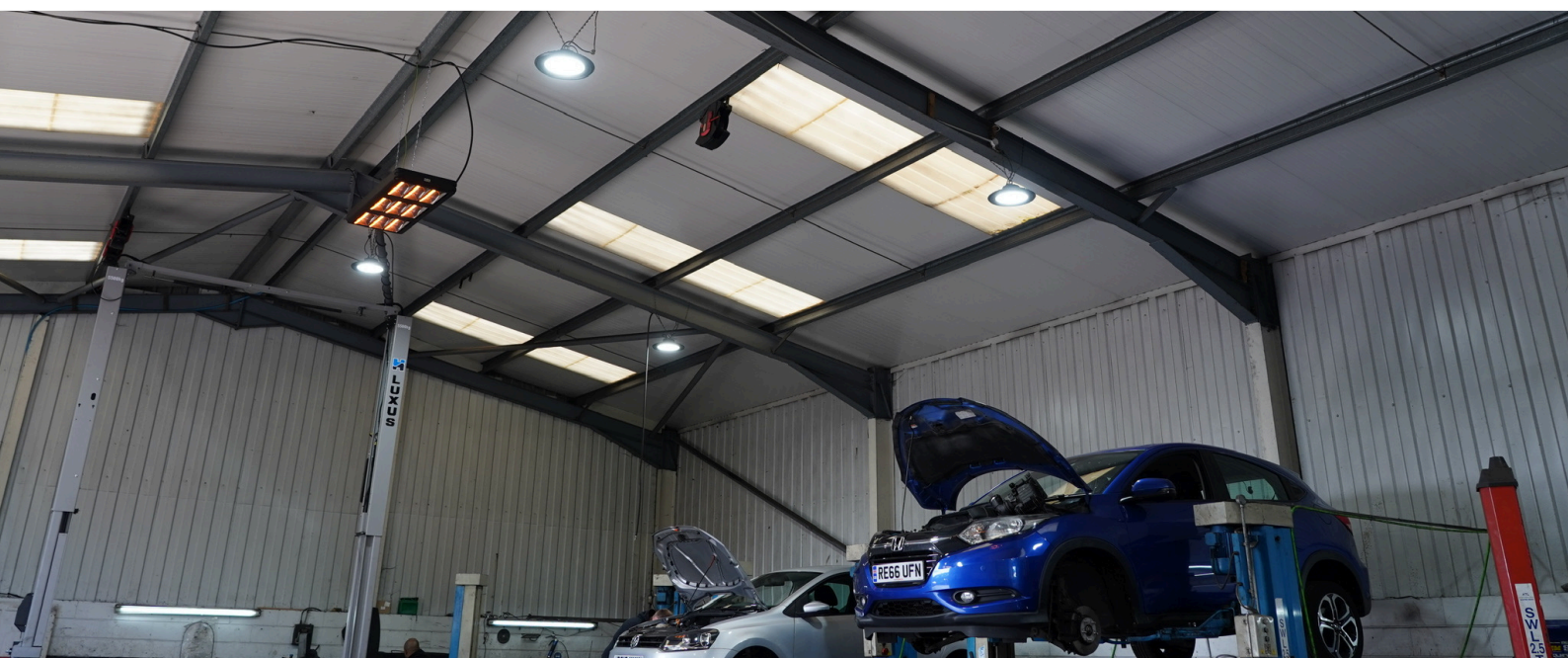
## Conclusion

Shortwave Infrared Heating, combined with rigorous testing, delivers a dynamic solution that adapts effortlessly to the unique demands of any space - no matter how big, small, or complex. Whether it's a vast industrial warehouse or a challenging workspace with tight parameters, SWI provides targeted, precision heating that maximises efficiency, minimises waste, and drives exceptional results.

The garage was impressed with the test results and decided to move forward with a complete SWIR heating system. The installation was carried out in September 2024, seamlessly integrating into their existing setup. The client has expressed their satisfaction with the system, praising its ability to provide targeted, efficient heating while maintaining a safe and controlled environment for their vehicles and equipment. The SWIR system has not only met their expectations but has also demonstrated tangible benefits, such as enhanced energy efficiency and improved working conditions within the space. They are delighted with the final outcome and confident in their investment's long-term value.

## Implementation

The auto-care centre opted for a tailored setup, utilising three 18kW industrial heaters alongside one 4kW industrial heater. This combination was specifically chosen to ensure optimal coverage and efficiency, delivering the perfect balance of warmth throughout the space while accommodating the centre's unique requirements.





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