



# PREVENTATIVE MAINTENANCE & FM FOR THE OLDEST F1 CIRCUIT MUSEUM

## PROJECT DETAILS

### Client

Silverstone Museum

### Completed

Ongoing

### Oakland Business Line

Trend Controls

### Objective

Upgrade of BMS controls and installation of inverter drives

SILVERSTONE MUSEUM IS A PRESTIGIOUS FACILITY LOCATED AT THE ICONIC SILVERSTONE CIRCUIT, CELEBRATING THE HISTORY OF BRITISH MOTOR RACING.

Given the high-profile nature of the museum and its commitment to preserving exhibits in optimal conditions, Silverstone Museum sought a dependable partner to ensure consistent and effective maintenance of its air conditioning, building management systems (BMS), and associated hard facilities. The aim was to maintain an environment that meets stringent standards for both preservation of artifacts and visitor comfort.

### Project Objectives

The museum required a comprehensive Planned Preventative Maintenance (PPM) strategy and Facilities Management Contract to:

1. Ensure HVAC and BMS efficiency to maintain the ideal internal climate for exhibits.
2. Minimize downtime by implementing proactive maintenance to prevent unexpected failures.
3. Enhance energy efficiency and sustainability practices.
4. Manage the hard services associated with the museum, covering all necessary physical systems and structures.

### Challenges

The Silverstone Museum presents unique challenges, including:

- Temperature and Humidity Control: Many of the exhibits are sensitive to environmental changes, requiring precise temperature and humidity regulation.
- High Visitor Volume: The museum attracts a large number of visitors, placing additional demand on HVAC systems, requiring them to operate consistently under load.
- Historic Artifacts: Certain exhibits have specific requirements that call for enhanced care, necessitating an adaptable and highly responsive maintenance plan.



Trend Controls enabled system reliability, enhanced energy efficiency and reduced maintenance costs

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### Solution & Implementation

#### 1. Comprehensive Planned Preventative Maintenance Program

We developed a tailored PPM schedule that addresses the Silverstone Museum's needs, focusing on regular, thorough inspections and proactive maintenance. This program includes quarterly system audits, seasonal adjustments, and meticulous monitoring of all BMS and HVAC components.

#### 2. Remote Monitoring via BMS

Our team integrated advanced monitoring tools with the museum's BMS, enabling real-time data analysis and predictive maintenance capabilities. By monitoring HVAC performance, energy usage, and environmental factors, our team can quickly identify potential issues and resolve them before they escalate.

#### 3. Facilities Maintenance for Hard Services

In addition to HVAC and BMS, we provided a comprehensive facilities maintenance solution that includes structural inspections, fire safety compliance, electrical systems, and plumbing support. This approach ensures that all critical systems are regularly checked and that potential risks are minimized.

#### 4. Sustainable Solutions

Recognising the museum's focus on sustainability, we also incorporated energy-saving techniques such as optimising HVAC operation times and implementing sustainable materials for repairs. This approach not only reduces operational costs but also aligns with the museum's environmental commitments.

### Results

Since the commencement of our contract, the Silverstone Museum has reported:

- **Improved System Reliability:** HVAC and BMS downtimes have been significantly reduced, with critical systems achieving over 99% uptime.
- **Enhanced Energy Efficiency:** By monitoring and optimizing HVAC operations, energy consumption has been reduced by approximately 15%.
- **Visitor Comfort and Exhibit Preservation:** Stable climate control has led to a more comfortable visitor experience and an environment that preserves exhibits more effectively.
- **Reduced Emergency Maintenance Costs:** The PPM approach has cut emergency maintenance needs by 30%, resulting in cost savings and fewer disruptions.

### Conclusion

This case study demonstrates our commitment to providing tailored facilities management solutions that meet the specific requirements of high-profile clients like Silverstone Museum. Our focus on PPM, sustainability, and comprehensive facilities support has enabled us to create a successful maintenance framework that ensures operational efficiency, protects valuable artifacts, and enhances visitor experience.