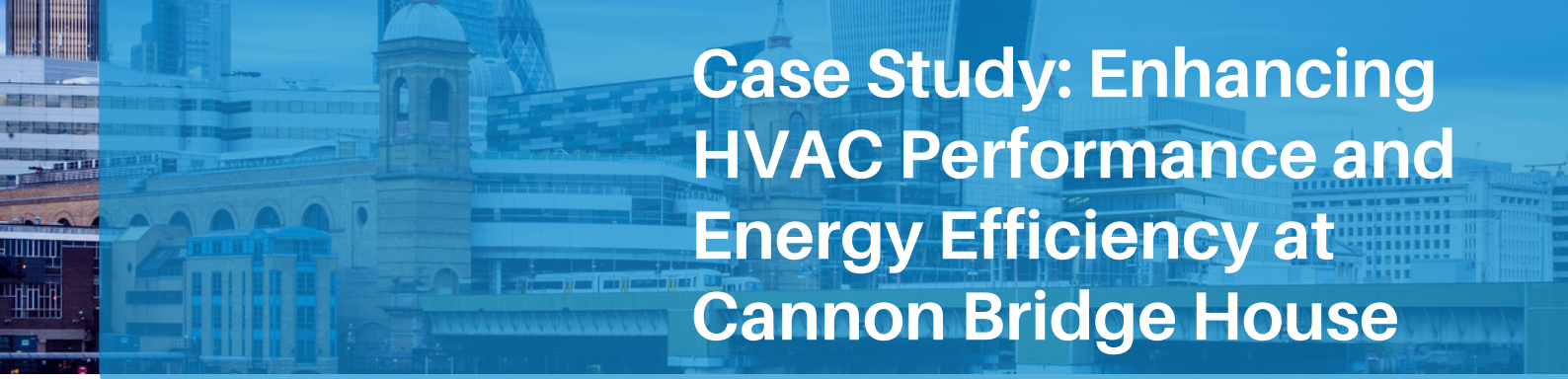

Case Study: Enhancing HVAC Performance and Energy Efficiency at Cannon Bridge House

Executive Summary

This case study delves into the strategies and methodologies adopted by the In-Sites Building Performance team at CBH, alongside BNP Paribas and NG Bailey. It addresses the unique challenges posed by the site's complexity and diverse tenant needs, focusing on innovative solutions for optimising HVAC performance, energy consumption, and overall operational efficiency through an integrated, data-driven approach.

Project Outcomes

The In-Sites Building Performance team's comprehensive approach at CBH sets a benchmark in HVAC system optimisation and energy consumption reduction. Through a blend of data-driven analytics, tailored algorithms, and expert intervention, alongside innovative strategies to overcome site-specific challenges, they achieved significant operational efficiencies and sustainable building management.

£335,101
Total Savings

5 MONTHS
Payback Achieved

1,128 MWH
Gas & Electric Saved

218.4 TONNES
CO2e Saved

Prepared by Horace Cyrus

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Building Operational Intelligence Service
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CHALLENGES

CBH, a complex site with multiple tenants, required a sophisticated approach to balance comfort with energy efficiency. The building's age, diverse occupancy requirements, and the mechanical plant posed additional challenges.

METHODOLOGICAL APPROACH

1

Data-Driven Decision Making

Leveraging BMS data for efficient building control and addressing inefficiencies.
Encouraging automation in plant operations for responsiveness.

2

Algorithm-Based Analysis

Custom algorithms for continuous monitoring and proactive fault identification.

3

Expert Intervention

Specialist guidance for maintenance and monthly reporting to stakeholders.

4

Specific Strategies for HVAC Components:

Tailored approaches for boilers, chillers, and ventilation systems for enhanced efficiency.

SOLUTIONS

- Fully Integrated Approach: Combining maintenance with controls-led data analytics for streamlined operations.
- Real-time Monitoring: Continuous monitoring of HVAC systems for early fault detection.
- Data Correlation: Merging operational and utility data for efficient resource management.
- Workflow Management: Coordinating stakeholder activities for unified goals.
- Audit Trail: Tracking all system modifications and their impacts.
- Mechanical Plant Ratings: Utilising ratings for quantifying optimisations and repair impacts.
- Data-Driven Maintenance: Directing resources based on data insights for targeted maintenance.
- Controls-Led Energy Management: Integrating energy management with controls for enhanced efficiency.
- Recommissioning and Optimisation: Continuously adapting control strategies to environmental changes.
- Agile Platform Development: Creating custom algorithms for swift performance issue detection.