

The Building Performance Series

DECODING BUILDING PERFORMANCE ENGINEERING

ISSUE 2 | OCTOBER 2026



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Welcome to The Building Performance Series

Decoding Building Performance Engineering

Welcome to Issue 2 of The Building Performance Series. In our first issue we set out what building performance means and why it has become a board-level commercial issue.

This month we go a layer deeper into one of the fastest-moving parts of that story: the technology now available to monitor, understand, and optimise a building's performance in real time.

AI-enabled building management has moved from a niche interest for trophy assets to a practical, accessible option for standard commercial stock. This issue asks the question landlords, facilities managers and managing agents are increasingly asking themselves: is now the time to move to AI-supported building management, and if so, where do you start?

We look at the case for acting now, the practical challenges of getting there, share Mike's guide to commissioning your first building performance review and walk through the results from our own myBEMS deployment at Twenty Chapel Street.

Regards,

The Building Performance Team





1. What Is AI-Supported Building Management?

Building management systems have controlled heating, cooling and lighting in commercial buildings for decades. What's changed is what now sits on top of them.

A traditional BMS is a rules-based system. It follows a fixed schedule and a fixed set of setpoints, and it does exactly what it is told, nothing more and nothing less. That is useful, but it is also the source of the performance gap we explored in Issue 1: schedules drift, setpoints are never revisited, and the system carries on regardless of whether anyone is actually in the building.

AI-supported building management adds a layer of intelligence on top of that existing infrastructure. Platforms like Evotech's myBEMS continuously pull data from sensors, meters and the BMS itself, combine it with external inputs such as weather forecasts and energy tariffs, and use machine

learning to identify patterns that a human manager working across a portfolio of buildings simply does not have time to spot.

Crucially, this is not about ripping out and replacing existing controls. In the overwhelming majority of cases, AI-enabled optimisation sits alongside the existing BMS, interpreting the data it already produces and recommending - or in some cases automatically implementing - small, continuous adjustments: a setpoint nudged by a degree, a start time brought forward by twenty minutes, a fault flagged before it becomes a comfort complaint.

The result is a building that behaves less like a machine running a fixed programme, and more like one that is quietly, continuously adjusting itself around how it is actually being used.



2. Why Does It Matter Now?

The case for AI-supported building management is being driven by the same financial, regulatory and market pressures we set out in Issue 1, but with a sharper, faster edge.

The Financial Case

As we set out in Issue 1, most commercial buildings can reduce energy consumption by 20-30% through operational improvement alone. The practical difficulty has always been sustaining that improvement, not achieving it once. A one-off audit identifies where a building is wasting energy on the day it is carried out; it says nothing about the fault that develops six weeks later, or the schedule that quietly reverts to default after a tenant change.

This is where AI-enabled platforms earn their keep. Because they monitor continuously rather than periodically, they catch drift as it happens rather than months later, and they compound small savings that a manual review would never have time to find. Early adopters are reporting attractive payback periods on top of savings already banked through operational improvement alone.

The Regulatory Case

EPC B by 2031 is a fixed point on the horizon for every commercial landlord in the UK, and the buildings that will get there most comfortably are the ones that can already evidence how they are performing. Continuous, granular data - the kind an AI-enabled platform produces as standard - is quickly becoming the practical foundation for demonstrating a credible pathway to compliance, rather than a nice-to-have.

The Market Case

Green leases increasingly require data sharing between landlord and tenant on energy performance. Institutional investors and corporate occupiers are asking harder questions about how a building is actually managed day to day, not just what its EPC certificate says. A building that can show a live, evidenced improvement trajectory is a materially easier sell than one that can only point to a certificate from several years ago.



20-25% p/a

Potential additional
energy saving from
AI-enabled optimisation



**less than
12mths**

Typical ROI period
reported by
early adopters



+7.5m sq.ft

Commercial property
currently optimised by
Evotech's myBEMS



3. The Challenge Facing Facilities Managers Today

Understanding the case for AI-supported building management is one thing. Getting there from where most buildings currently sit is another.

Too Much Data, Not Enough Insight

Modern buildings are rarely short of data. Meters, sensors and BMS trend logs generate more information than most facilities teams could ever manually review. The challenge has shifted from a lack of information to too much of it, with no reliable way to turn it into action before the moment to act has passed.

The Legacy BMS Problem

Many commercial buildings are running control platforms that are a decade or more old, built on proprietary protocols that were never designed to talk to each other, let alone to external data sources such as weather feeds or energy tariffs.

Bridging that gap is often assumed to require a full, expensive controls replacement, but in practice it rarely does.

The Skills Gap

Knowledge of data analysis and AI-enabled controls is a specialist area that sits outside most in-house FM teams' day-to-day expertise, in the same way that BMS configuration and controls optimisation often do. As with the wider building performance challenge we set out in Issue 1, this is an area where the right specialist partner can deliver results faster, and at lower cost, than trying to build the capability from scratch.

4. Why Move Now? The Case for Acting

The Return On Investment Window Is Attractive

AI-enabled optimisation is typically layered onto existing infrastructure rather than replacing it, which keeps the up-front cost, and the ROI period, well below what a fabric or plant replacement programme would require. As with the operational improvements covered in Issue 1, the opportunity here does not wait on a large capital budget being approved.

Compliance Deadlines Are Real

EPC B by 2031 is less than five years away. Buildings that start building an evidence base now, through continuous monitoring, are in a materially stronger position than those that wait until the deadline is closer, contractor availability tightens, and the case for compliance stops being optional.

Technology Has Never Been More Accessible

AI-enabled platforms, continuous sub-metering and cloud-based BMS analytics are no longer the preserve of Grade A trophy buildings. They are practical, cost-effective additions that can be deployed on standard commercial stock and, as Issue 1 set out, the combination of accessible technology, fast financial returns and a tightening regulatory environment mean the argument for starting is stronger now than it has ever been.

MIKE'S HVAC OPTIMISATION TIPS



Mike Howarth *IENG ACIBSE MASHRAE*
Building Performance Manager



5. Tip of the Month: Commissioning Your First Building Performance Review

If Issue 1's tip was about getting your operating schedule right, this one is about setting up the review that keeps it right. A building performance review is not a one-off audit; done properly, it is the baseline against which every future improvement gets measured.

1. Start With a Proper Baseline

Before changing anything, capture twelve months of energy data if you have it, or as much as is available. Pull the current BMS schedule and setpoints exactly as they stand. Note any known comfort complaints and any recent tenant or occupancy changes. This baseline is what every future saving is measured against, so it is worth getting right rather than rushing.

2. Walk the Plant, Not Just the Data

Data tells you what a system is doing; it rarely tells you why. A physical walk of the plant room, air handling units and terminal equipment - checking for obvious faults, drifted sensors and equipment running outside its design parameters - routinely surfaces issues that never show up cleanly in trend data.

3. Separate Quick Wins From Longer-Term Work

Not everything a review turns up needs a capital bid. Split findings into two lists: zero-cost and low-cost fixes that can be actioned within weeks - schedule corrections, setpoint changes, sensor recalibration - and longer-term items that need planning and budget. Acting on the first list immediately builds credibility for the business case behind the second.

4. Set Regular Performance Reviews

A performance review is only as useful as what happens after it. Agree a realistic timescale for revisiting the baseline - quarterly is a sensible starting point for most commercial buildings - so that drift gets caught early rather than discovered at the next annual audit.

A good baseline, done once and done properly, is worth more than a dozen rushed audits.

6. Case Study: What's Your Building's HVAC Data Telling You?

Addressing underlying HVAC faults and introducing continuous optimisation delivered a 27% reduction in energy consumption at Twenty Chapel Street. The starting point was understanding why the systems were running inefficiently.

This 15-storey, 155,000 sq ft office building, located in the heart of Liverpool's busy commercial sector, had a familiar problem: its heating, cooling and ventilation systems were operating through a fixed BMS strategy that no longer reflected the building's needs.

Uncalibrated sensors and faulty controls were affecting performance. Temperature settings were adjusted in response to individual complaints, creating inconsistent conditions across floors and conflicting demands for heating and cooling. In some cases, these demands kept plant running around the clock.

Restoring performance first

Evotech began by addressing the physical faults. Engineers replaced defective sensors, recalibrated the ventilation system and investigated fan coil unit issues. Blocked hoses and faulty actuators were identified and replaced, helping restore effective temperature control and improve occupant comfort. This established a more reliable foundation for the next stage: continuous optimisation through myBEMS.

Using machine learning and live data from sensors throughout the building, myBEMS analyses and optimises HVAC operation 24/7. Remote monitoring, fault detection and diagnostics help identify issues and support adjustments as operating conditions change.



Where does the first step begin?

Twenty Chapel Street demonstrates the value of combining sound maintenance with ongoing attention to how a building operates. Repairing faults restores capability; reviewing controls and monitoring performance helps sustain improvements.

For building owners and facilities managers considering a similar approach, an initial HVAC performance review provides a practical starting point.

Bringing together energy records, BMS schedules, maintenance history and recurring comfort complaints can reveal where further investigation is justified.

That evidence provides a clearer basis for deciding what to address first, where investment may be needed and how improvements will be measured.





In The News...

7. UKGBC Calls for Greater Focus on Climate Resilience in Non-Domestic Buildings

The UK Green Building Council (UKGBC) has published new guidance highlighting the need for building owners and facilities managers to prepare the UK's non-domestic buildings for the growing impacts of climate change.

The Adaptation for Climate Resilience: Non-Domestic Buildings report warns that many existing properties were designed for historic weather patterns and are increasingly being challenged by overheating, drought, flooding and severe storms. These risks can affect occupant wellbeing, disrupt operations and increase financial exposure.

The scale of the challenge is already becoming apparent. UKGBC reports that weather-related business insurance claims reached £124 million between April and June 2025, whilst the average cost of weather-related claims increased by 73% between 2018 and 2023.

Rather than focusing solely on major capital projects, the guidance identifies opportunities ranging from day-to-day optimisation and maintenance through to light and deep retrofit. Measures include maintaining drainage systems, optimising cooling and ventilation, improving insulation and solar shading, introducing green roofs and rainwater harvesting, and protecting critical building services from flooding.

Importantly for facilities managers, UKGBC recommends using existing building performance data, condition surveys, inspections and climate risk assessments to identify priorities. Improvements can then be aligned with planned preventative maintenance, refurbishment and other key points in the building lifecycle, helping to minimise disruption and make investment more effective.

The report reinforces a growing shift in building management: good building performance is no longer only about energy efficiency and carbon reduction. Buildings must also be capable of responding to a changing climate whilst continuing to provide safe, comfortable and reliable environments for their occupants.





NEXT ISSUE | Issue 03 | November 2026

The Best Lighting Retrofit Solutions for Fast, Hassle-Free & Cost-Efficient Upgrades

In Issue 03 we look at how LED retrofit and modern lighting controls compare, what return on investment owners can realistically expect, and how to plan an upgrade that causes minimal disruption to occupied buildings.



LED retrofit vs full re-lamp: choosing the right approach for your building



Mike's tips: lighting controls that pay for themselves within a year



In the news: UK Government consults on tightened non-domestic lighting standards

MISSED ISSUE 1?

Download your copy to discover how closing the performance gap can reduce costs, improve efficiency and unlock your building's potential.

THE BUILDING PERFORMANCE SERIES

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READ ISSUE 1 

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Get in touch to discuss how we can support your building performance goals and help create more sustainable, cost-effective environments.