

Building Zero

The road to zero
carbon logistics

AVISON
YOUNG

Contents

Summary	2
Introduction	4
What has changed since 2022?	5
Gridlocked: Energy and infrastructure	10
Artificial intelligence, data centres andrising energy demands	12
Overcoming the challenge	13
Conclusion	15
References	16

Summary

In early 2022, when we published Building Zero: The Road to Zero Carbon Logistics report, we highlighted a number of challenges facing the sector in meeting the UK government's net zero carbon target by 2050. Much has changed since then. We have seen conflict in Europe and the Middle East, which has not only had a significant impact on energy and fuel costs but has also caused widespread disruption across supply chains. Rising construction costs have led to a slowdown in much needed new speculative development, rendering some schemes unviable. Meanwhile, the government has announced an industrial strategy aimed at promoting growth in the sector, while simultaneously introducing increased employee costs and business rates, adding further cost pressures for the industry.

Technology continues to evolve at a rapid pace, requiring significant financial investment to implement. However, one thing has remained constant: the need for organisations to reduce their carbon footprints and meet their own net zero objectives. In this update to our original report, we will examine innovation being deployed to support this journey.

Sustainability is embedded in how industrial assets are assessed, how schemes are funded and how occupiers plan for long-term resilience. In 2026, the question is no longer whether the sector needs to change, but how quickly that change can be delivered in a market shaped by higher costs, stricter regulation, increasing energy demand and rising occupier expectations.

Climate change is increasing pressure on industrial property, driving demand for buildings that can withstand extreme weather, support operational continuity and adapt to changing environmental conditions.

The market remains resilient, reinforcing the scale of work still required if the sector is to align with legislation, investor requirements and occupier commitments. The growth of artificial intelligence (AI), automation and data-led operations is also changing what occupiers need from their buildings, with electricity capacity, connection timelines, digital connectivity and energy resilience becoming critical in development, occupation and investment decisions.

Progress on decarbonisation remains too slow. The built environment is not reducing emissions at the pace required, while the sector still faces a substantial retrofit problem. The vast majority of assets remain below EPC B, reinforcing the scale of work still required if the sector is to align with legislation, investor requirements and occupier commitments.



Introduction

A market in transition

Our original report established that industrial property would sit at the centre of the UK's net zero challenge and our opinion has not changed. The sector continues to play a vital role within the wider economy, supporting manufacturing, supply chains, online retail, food distribution, data infrastructure and energy-intensive operations.

This update will reflect how the market has evolved. It updates the areas where the operating environment has progressed most significantly: the market environment, reducing emissions, legislative change, electricity infrastructure, artificial intelligence, and the broader definition of what now makes a building ready for the future.

Confidence remains in the long-term structural role of the sector, but there is less demand for buildings that are inefficient or difficult to adapt. Polarisation is increasing between modern, energy-efficient buildings that are ready for future requirements and those that are not. The strongest assets are those that can offer lower-carbon emissions, adapt to changing regulation, accommodate technology-driven occupier demands and provide greater energy resilience.

What has changed since 2022?

The last four years have underlined how quickly external factors can reshape the property market. Geopolitical conflict has had a huge negative impact on energy and fuel costs and has again exposed the fragility of global supply chains. Construction inflation has constrained speculative development and reduced the viability of some schemes that might previously have progressed. Occupiers are also facing significant cost pressures, with increases in labour, energy and transport costs eroding margins.

Sustainability has increased in importance. Carbon reduction is now a long-term strategic commercial priority embedded within core commercial decisions, considered alongside development viability, occupational affordability, energy resilience, transportation efficiency and labour availability.

Climate change is becoming a major consideration for the sector as the UK faces an increasing frequency of flooding, heatwaves and other weather-related disruptions, creating challenges for both buildings and the operations they support. This is particularly relevant for occupiers of temperature-controlled property such as grocery distribution, pharmaceuticals and cold-storage operators, where higher temperatures can increase energy consumption and place greater strain on cooling infrastructure. Occupiers are becoming increasingly focused on maintaining operational continuity and minimising disruption, increasing demand for buildings that remain resilient during periods of extreme weather and are better equipped to adapt to a changing climate.

Technology and innovation have also accelerated at pace over the last four years. The growth of AI, increasingly sophisticated warehouse automation, greater use of data in operational decision-making, and the continued shift toward electrification all mean that buildings need to operate with greater efficiency than they did only a few years ago. This raises the bar for both existing units and new development. Future relevance will be determined by whether properties can absorb those changes without imposing excessive cost or operational friction. Alongside AI and automation, electrification, battery storage, green manufacturing and other energy-related uses are also broadening the range of occupiers seeking power-ready industrial locations.

Supply chain emissions are also becoming more visible in occupier decision-making. For many logistics and manufacturing businesses, building performance is not just a property issue but part of a wider operational footprint. As customers, investors and regulators place greater scrutiny on Scope 3 emissions, occupiers are likely to place more weight on locations and buildings that can support lower-carbon distribution, efficient transport networks and credible sustainability credentials. This means weaker-performing assets risk being filtered out earlier in the search process, particularly where occupiers are under pressure to evidence progress across their wider supply chains.

Decarbonisation: improvements are being made, but the path to net zero remains challenging

Reducing emissions remains complex for the sector. Unlike many other property sectors, industrial property supports a wide range of occupiers, from warehousing and logistics operations to advanced manufacturing, cold storage facilities, data centres and other energy-intensive uses. As a result, there is no single pathway to achieving net zero.

Buildings differ significantly in their energy demands and operational requirements, making sector-wide change slower and more complex than the introduction of low-carbon technologies alone might suggest.

While awareness and investment have increased, the decarbonisation of industrial properties remains slow relative to the scale of the task ahead. Almost half of existing industrial stock was built before 1985, reflecting the ageing profile of the UK's industrial real estate base and reinforcing the scale of retrofit still required to meet net zero targets.

Legislation is also evolving to support the transition. The government has recently proposed changes to Minimum Energy Efficiency Standards (MEES) for commercial property in England and Wales which, subject to parliamentary approval, would introduce a more targeted approach. Rather than applying a single requirement across all commercial property, the proposal focuses on larger rented assets. Properties over 1,000 sqm are likely to require an EPC B rating by 2031 where cost-effective, while smaller properties will remain subject to the current EPC E minimum standard. The previously proposed interim EPC C requirement by 2027 has been removed, while the seven-year payback test and existing exemptions are expected to remain. The intention is to focus regulatory effort on larger, more energy-intensive assets while reducing pressure on smaller properties and many SMEs.

However, this shift is unlikely to materially change the position for most larger assets. Around 85% of industrial stock in England and Wales currently sits below EPC B, and this would fall only marginally to around 78% under the revised framework. This underlines both the scale of the retrofit requirement and the practical difficulty of upgrading a diverse and ageing stock base. Regulatory change alone is therefore unlikely to accelerate the transition sufficiently to meet longer-term net zero ambitions.

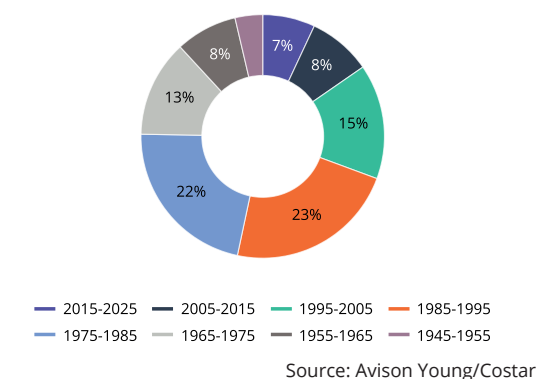
The retrofit challenge

The slow rate of change reflects several structural realities. Industrial property is not a uniform asset class. Buildings vary significantly by age, construction, specification, operational intensity and lease structure. In many cases, improvements are disruptive, capital-intensive or only viable at lease events, plant replacement cycles or as part of wider refurbishment programmes. As a result, progress is often gradual rather than linear.

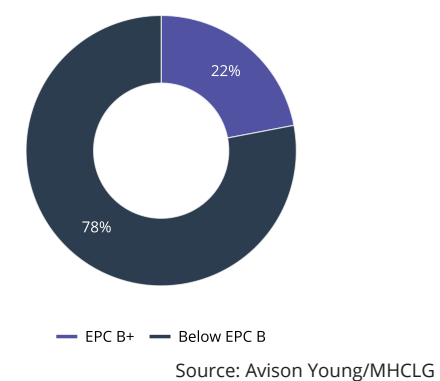
The condition of existing buildings presents a further challenge. Much of the UK's industrial stock was built several decades ago and many properties have not undergone the level of capital investment required to prepare them for the next phase of decarbonisation. Roof condition is a particular example.

Rooftop solar is often viewed as one of the most effective ways of reducing operational emissions and improving energy resilience, yet many older roofs may lack the structural capacity, remaining lifespan or overall condition required to support solar installations. In these circumstances, landlords may first need to invest in roof replacement or strengthening works before renewable energy technologies can be deployed.

% OF INDUSTRIAL STOCK BY AGE



INDUSTRIAL EPC COMPLIANCE LEVELS (%)



When undertaking retrofit works consideration must also be given for a range of wider constraints beyond the technology itself. Structural loading, water leaks, older mechanical and electrical systems, poor insulation, electrical capacity, grid connection availability and the presence of legacy materials (such as asbestos or lead-based paint) can all affect viability, cost and delivery timescales. Upgrades such as photovoltaic panels, battery storage, heat pumps, electric vehicle charging points and advanced building controls may also require supporting improvements to a building's power supply and electrical systems. As a result, decarbonisation is commonly delivered through a phased programme that aligns sustainability improvements with planned maintenance cycles, lease events and refurbishment programmes.

For industrial assets, this is particularly important because the sector combines large floorspace with long asset lives. Many properties in use today are likely to remain operational in some form by 2050. The road to lower emissions depends on retrofit, refurbishment and optimisation rather than relying solely on a new generation of higher-performing stock. There is also a broader whole-life carbon consideration. It is no longer enough to focus exclusively on operational performance while overlooking embodied carbon.

Turning challenge into opportunity

This should be viewed as an opportunity rather than simply a challenge. By aligning essential asset maintenance with energy and sustainability upgrades, landlords and occupiers can avoid unnecessary expenditure, improve operational performance, strengthen resilience and position assets more favourably against increasingly stringent regulatory and occupier requirements. In many cases, the most successful projects are those that treat building renewal and decarbonisation as part of a single long-term investment strategy.

Mandatory Biodiversity Net Gain further widens the sustainability agenda. It places measurable environmental improvement into the mainstream of development planning and reinforces the need to take a broader view of site strategy, landscaping and place quality. For logistics development in particular, this matters because large sites, extensive hardstanding and edge-of-settlement locations can create tension between operational functionality and wider environmental performance. Biodiversity Net Gain raises the expectation that those tensions must be actively designed through rather than ignored.



Gridlocked: Energy and infrastructure

If one theme has grown in importance more than any other since the original report, it is power. Electricity infrastructure has become a significant constraint on both development and occupation. This is partly a reflection of decarbonisation itself: the more the economy electrifies, the higher the pressure there is on networks, substations, local capacity and connection times. But it is also driven by changing occupier requirements, many of which now require additional energy for charging, cooling, automation and digital systems than would previously have been the case.

The reform of the national grid connection process highlights how serious the issue had become. Long queues, speculative applications and limited network capacity have all contributed to delays that can affect when developments start and whether occupiers can access the infrastructure needed to operate effectively. For the sector, that makes power a core asset consideration. Site selection, scheme viability and future rental growth are all influenced by whether sufficient capacity can be accessed in a realistic timeframe.

There are however a variety of solutions which are increasing in usage as a solution to this challenge. In the right circumstances, they can reduce dependence on the grid, support higher loads and improve continuity of operation. For some assets and estates, they may become a meaningful part of the future operating model.



Microgrids

Microgrids are localised energy systems that generate, store and manage power on site, either operating independently of the grid or alongside it. The most developed European example is the Pure Data Centres and AVK scheme in Dublin, which has deployed an on-site microgrid of around 110MW to allow a hyperscale campus to operate before full grid connection capacity becomes available, which will transition towards a hybrid model over time. The significance of this is that power is no longer a constraint that delays development, but something that can be engineered into the scheme itself. In constrained markets, microgrids can accelerate delivery, improve resilience and reduce dependence on overstretched networks, while supporting the integration of renewables and storage.

For the UK, microgrids are unlikely to replace the national grid, but they are becoming part of the solution. They can enable schemes to proceed where connection timelines are incompatible with development, reduce peak demand on the system and, in some cases, provide flexibility back into the grid when connected. They are not without challenges - including high costs, complex regulation and continued reliance on transitional fuels in some cases - but they point to a broader shift in how energy is being delivered. The implication is that the UK energy system is becoming more hybrid and decentralised, with large users taking an active role in energy provision. In that sense, microgrids represent less a standalone answer and more a structural change in how energy is supplied: away from a purely centralised model and towards one in which generation, storage and demand are aligned at site level.

As grid constraints worsen, the ability to provide or facilitate energy solutions may become a stronger differentiator. In some cases that may mean solar and storage; in others, microgrids, private wire, EV charging or active energy management. The wider implication is that future industrial value may be influenced as much by access to reliable power and flexible energy services as by traditional real estate fundamentals, with energy provision becoming part of the occupier proposition and potentially part of the income stack.

In the USA Prologis is no longer treating energy as a building utility or a sustainability feature but as a platform in its own right. Through its energy and sustainability offer, Prologis is now providing customers with on-site solar, energy storage, mobility infrastructure, lighting and electrical upgrades, community solar access and grid-scale energy solutions across its logistics portfolio. As of early 2026, it said it had supported more than 1.1GW of solar energy backed by battery storage, while describing energy as a long-term differentiator for logistics real estate. In other words, it is not simply adding energy infrastructure to support buildings; it is behaving like a distributed energy platform embedded within real estate. Asia is advancing low-carbon industrial parks that combine renewables, shared utilities, water recycling and integrated infrastructure from the outset, while wider innovation trends point towards increased modular and repeatable decarbonisation strategies rather than one-off projects.

Artificial intelligence, data centres and rising energy demands

Demand for AI, cloud computing and data-intensive digital services is driving substantial growth in UK data centre development, with planned IT capacity expected to at least double by 2030. As a result, access to power, fibre connectivity, cooling infrastructure and energy resilience are becoming important factors in site selection and development decisions.

The UK remains one of Europe's leading data centre markets, supported by strong connectivity, a large end-user base and government backing. Data centres have been designated as Critical National Infrastructure, while initiatives such as AI Growth Zones and reforms to electricity connection processes are intended to accelerate investment and support the expansion of digital infrastructure.

However, the ability to deliver sufficient electricity capacity is becoming a key differentiator, with data centre demand expected to rise significantly over the coming decade, adding further pressure to a network already supporting wider electrification across transport, heating and industry.

Projects such as the Blackstone-backed QTS campus at Blyth, which will see Blackstone invest up to £10bn on the development, demonstrate the scale of investment being attracted to the UK, provided the necessary energy infrastructure can be secured. The implications for the market are clear: future competitiveness will depend not only on the quality of buildings, but also on access to the energy and digital infrastructure needed to support power-intensive occupiers.



Overcoming the challenge

The priority for the sector is not simply to deliver lower carbon buildings. It is to deliver assets that are both more sustainable and more useful. That means focusing on interventions that improve performance without undermining the occupational role of the asset. This usually starts with optimisation: better controls, lighting, metering, plant efficiency and better-informed data-led management. These measures may not transform an older building overnight, but they can often create meaningful early gains and improve the case for later investment. Owners will have to differentiate between core assets that require highly complex upgrades, assets that need fewer intensive improvements and buildings whose long-term role is uncertain.

Looking ahead, a number of emerging international themes are worth watching. In North America, there is growing emphasis on using AI, geospatial analytics and portfolio data to identify the lowest cost of decarbonisation interventions across estates, making action faster, more targeted and cheaper. Across the US and Asia, behind-the-meter battery systems are being used not just for backup power but for peak shaving, resilience, demand response and revenue stacking through grid services.

The commercial implication is important. Reducing emissions does not mean opting for the most expensive solution. In many cases, a phased approach is adopted: start with lower-

cost interventions that improve operational efficiency, align upgrades to lease events, and reserve deeper expenditure for those assets where there is a strong case in terms of occupier demand, resilience or long-term relevance. The right strategy is rarely to do everything at once. It is about choosing the interventions that materially improve performance without undermining viability.

Another important shift is that decarbonisation needs to be thought about in relation to energy infrastructure rather than the building alone. As grid constraints intensify, occupiers and owners are looking closely at on-site solar, battery storage, microgrids, private wire networks and hybrid systems. These solutions can support lower-carbon operation, but they can also improve resilience, reduce exposure to grid volatility and give owners or occupiers greater control over long-term operating costs. The transition is now as much about the way space is powered and managed as the physical asset itself.

From there, the transition can broaden into a structured programme. This could include whole-life carbon modelling to identify where embodied carbon can be reduced, analysis of rooftop solar, battery storage or heating electrification, business case development, support on financing options to minimise upfront capital cost, and practical delivery

of upgrades ranging from fit-out and plant replacement to major retrofit works. It can also extend beyond installation to ongoing management: energy dashboards, procurement strategy, performance reviews, sustainable accreditations and equipment maintenance all play a role in ensuring that operational savings and carbon reductions are maintained over time. The important point is that cutting emissions is not one thing. It is a sequence of decisions covering design, funding, delivery, monitoring and maintenance.

Decarbonisation is often framed as a complex, capital-intensive constraint, but in practice it is usually more incremental and operational than that. For landlords, it can begin with something relatively simple: understanding how a building performs today, where energy is being used inefficiently, and which interventions are likely to have the greatest impact for the lowest level of disruption. In many cases, the most effective first steps are not the most expensive.

Optimising building controls, improving lighting, upgrading plant at natural replacement points, managing energy consumption better and using data to understand performance can all deliver meaningful reductions without requiring wholesale redevelopment.

The same principle applies to occupiers and developers. Occupiers should assess the energy resilience and performance of the space they occupy, while developers should incorporate power strategy, lower-carbon systems and future flexibility at the start of the appraisal process. The common theme is that sustainability works best when it is built into mainstream real estate decision-making rather than treated as a separate workstream.

Conclusion

The original Building Zero report was right to identify the sector as one of the key front lines in the transition to net zero. That case is even stronger in 2026. The market remains fundamentally resilient, but the nature of resilience has changed. It is now tightly linked to building quality, infrastructure readiness, power availability and the ability to support changing occupational requirements.

The sector's core focus is no longer on awareness. It is one of delivery. Existing stock still requires significant improvement, while new development must meet a higher baseline of performance. For new development, future readiness now needs to be designed in from the outset rather than treated as a later compliance exercise. Grid capacity and energy resilience are becoming central to viability. Artificial intelligence is increasing demand on the grid and reinforcing the importance of infrastructure-ready locations. Legislation is reinforcing the direction of travel rather than diluting it.

Against that backdrop, the message is clear. The road to zero carbon logistics remains worth the investment, but the nature of that investment is becoming more nuanced. It requires careful sequencing, sharper prioritisation and a wider understanding of what now makes an industrial building genuinely future-ready. Asset owners that can respond to these shifts should remain strongly positioned. Those that cannot will find the market less forgiving than it was when the original report was first published.



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