Decarbonisation and
the path to net zero

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Insights from our 2025 decarbonisation roundtable series

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The path to net zero
Lessons from industry leaders

A year of accelerating change

Our 2025 decarbonisation roundtable series brought together professionals from across the built environment to share insight, challenge assumptions and explore how we can move faster and more effectively towards net zero.

This report summarises the key themes that emerged from our 2025 programme of decarbonisation roundtables. A series designed to bring together diverse voices from architecture, engineering, contractors, consultants, developers, housing, education, healthcare, estates management and the public sector.

Held across multiple UK cities, these sessions created an open forum for honest debate and shared learning, focusing on practical pathways to decarbonisation across real projects, portfolios and organisational strategies.

What emerged was a clear sense that 2025 marked a shift in the industry's mindset. The conversation is no longer dominated by **"why decarbonise"** but **"how do we do it - faster, smarter and with greater accountability?"**

In project delivery, supply chains, investment decisions and long-term estate strategies, it was clear that the built environment is now seen as one of the most powerful levers for climate action.

The challenges are significant, but so too is the sector's capacity to innovate, to collaborate and to respond with purpose. Participants described a sector grappling with complex challenges but also demonstrating growing confidence, technical maturity and a willingness to act.

As carbon reduction, circularity, energy resilience and operational performance move higher up organisational agendas, the conversations revealed not only how far we have come, but also where focus is needed next.

The themes that surfaced throughout the year did not exist in isolation. They were shaped by the wider climate signals, policy announcements and global forces influencing the built environment.

Understanding this context - the pressures, milestones and gaps - is key to understanding why the 2025 discussions unfolded as they did.

2025 in context:
Policy, climate and signals

2025 presented a complex backdrop for climate action - defined by scientific urgency, global political tension, new standards and rising expectations across the built environment.

A climate year of acceleration

2025 was another year of climate extremes: global temperatures continued their upward trend and the earth passed 1.5°C of warming for the first time in modern records. Extreme weather events, from flooding and heatwaves to energy system strain, placed pressure on infrastructure and exposed vulnerabilities in public assets, homes and essential services.

These escalating climate risks underscored the importance not only of reducing emissions, but of designing and operating buildings that can function reliably in a more volatile climate.

The connection between mitigation and adaptation became inescapable: the industry can no longer treat them as separate streams of work. They are now intertwined priorities that must shape all design, procurement and operational decision.

Implementation advances, but ambition gaps remain

COP30 in Belém delivered mixed outcomes. While the “Mutirão” package strengthened implementation tools and scaled up climate finance (including new mechanisms to support just transition and methane reduction) negotiators failed to secure a binding fossil fuel phase-out.

Many national climate plans remained weak or absent, leaving global ambition well short of the Paris Agreement pathway.

For industry, this sent a dual message: multilateral structures are improving, but political consensus is lagging behind what science demands.

UK Net Zero Carbon Buildings Standard launch

Closer to home, the most significant development was the publication of the UK Net Zero Carbon Buildings Standard (UK NZCBS).

The first unified, cross-industry definition of what “net zero carbon aligned” means for buildings. The period for registering your project to participate in the UKNZCBS pilot testing is now closed. We look forward to sharing the results as it progresses along with verification.

Our contribution to the pilot, through Woodmill and St Columba’s RC High School, allowed us to test the methodology with real data from the world’s largest Passivhaus-certified education building.

The Standard’s launch has already begun reshaping expectations around evidence, data quality and accountability, signalling a cultural shift towards more rigorous, transparent net zero delivery.

Learn more about the UK’s cross-industry Standard. →

The process strengthened our understanding of:

Whole-life carbon modelling.

The role of digital monitoring and soft landings.

Interactions between material choices and operational performance.

What consistent, practical benchmarks could look like across sectors.

Strengthening expectations and industry recognition

Strengthening expectations around value and accountability

Insurers, investors and funders tightened their sustainability criteria, embedding ESG-linked terms into financing and increasingly assessing carbon performance as a tangible component of value.

This aligns with broader industry trends: net zero is no longer a marketing narrative but a measurable, risk-based financial consideration.

Industry recognition and leadership

Our recognition as Net Zero Architect of the Year at the Building Design Architect of the Year Awards, reflected both our leadership and the sector's growing expectation that architects integrate low-carbon design, whole-life thinking and operational performance into mainstream delivery.

Projects such as Hemisphere One, the Countess of Chester Hospital Women and Children's Building and 1-21 St Cuthberts Passivhaus supported-living homes demonstrated what high-performance, human-centred, future-ready design looks like in practice.

Taken together, these signals framed every discussion this year: a landscape rich in ambition, but still navigating gaps in policy, infrastructure, skills and long-term performance expectations.

Learn more about what it means to us to be named Net Zero Architect of the Year at this year's Building Design awards. →

Circularity and materials: Ambition to implementation

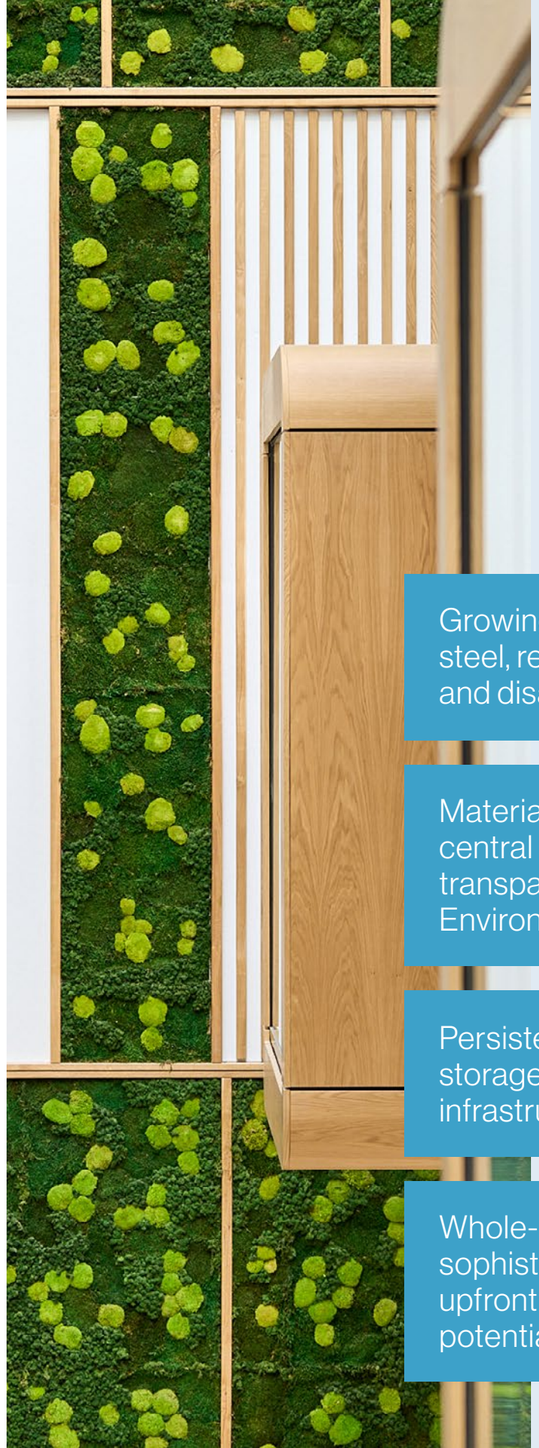
The circular economy gained new momentum in 2025, with conversations shifting from theoretical potential to practical, repeatable methods.

The roundtables revealed a sector increasingly committed to material circularity as a core strategy for achieving net zero carbon in construction.

Perhaps the most significant change is cultural. Teams are increasingly designing for circularity, not retrofitting the idea into existing workflows.

This includes designing for disassembly, prioritising dry construction, interrogating component sizing and embedding whole-life carbon thinking at the earliest stages of design.

Circularity is no longer an emerging theme. It is becoming one of the industry's most immediate and scalable opportunities for meaningful carbon reduction.



Key insights included:

- Growing real-world application of reclaimed steel, reused components, modular systems and disassembly-ready detailing.
- Material provenance and ethics becoming central considerations, with rising demand for transparent supply chains and robust Environmental Product Declarations.
- Persistent certification barriers, liability insurance, storage and logistics. Calls for coordinated national infrastructure and clearer assurance frameworks.
- Whole-life carbon awareness driving more sophisticated material choices that go beyond upfront emissions to consider durability, reuse potential and lifecycle value.

Energy resilience and the evolving role of buildings

2025 accelerated the shift from energy efficiency alone to integrated energy resilience, decentralisation and demand management.

Energy strategy dominated many of this year's discussions, reflecting escalating pressures on the UK's ageing grid infrastructure and the rising energy demands of electrification, digitalisation and AI.

A recurring insight was that energy resilience is now a core design consideration, not an optional enhancement. With grid constraints delaying development, restricting electrification pathways and increasing operational risk, organisations are increasingly exploring decentralised models of energy generation and storage.

Solar PV, battery systems, heat networks and local energy sharing models are becoming far more common, particularly across public-sector estates. Yet the full potential of these systems is not being realised.

Many buildings (especially schools and large public facilities) are generating surplus renewable energy that cannot be exported or stored, resulting in significant waste.Optimisation emerged as one of the most powerful and cost-effective tools available.

Several organisations are delivering major performance improvements simply by recommissioning existing systems, refining controls, improving metering and aligning operation with real-world occupancy patterns.

What is changing most rapidly is the digitalisation of energy management. Predictive analytics, AI-assisted diagnostics and intelligent building management platforms are enabling estates teams to anticipate energy loads, identify inefficiencies and respond proactively.

As these systems become more accessible, the industry is beginning to unlock operational carbon savings at scale.

The role of buildings is evolving: they are no longer passive consumers of energy, but active contributors to local resilience and net zero transition.

Regulation, accountability and in-use performance

Reinforcing a core truth: net zero cannot be achieved at design stage alone.

The persistent performance gap was a commonly discussed theme. Despite improvements in modelling, certification frameworks and digital tools, many buildings continue to perform below expectation once occupied. The root causes are varied including behavioural, technical, contractual and cultural, and the impact is significant.

Participants stressed that a post-occupancy evaluations (POE) is one of the most underutilised yet valuable tools available. Where POE is embedded as standard, organisations are seeing marked improvements in comfort, operational efficiency and carbon performance.

However, the absence of regulatory requirements or clear accountability often results in inconsistent adoption.

There is also a growing recognition that many design-stage sustainability intentions are compromised during value engineering or occupation, where people may not have the training, resources or authority to manage systems effectively.

Throughout these conversations, one theme was clear: performance in use must become an integral part of how buildings are designed, commissioned, operated and measured.

Certification schemes can support this, but they are most effective when used as guiding frameworks — not badges pursued in isolation from operational reality.

Net zero requires sustained engagement, clear roles and transparent monitoring throughout a building's life. Delivering net zero buildings requires long-term engagement, practical training and clear operational pathways, not just technical specification.

Listen to our podcast episode to explore what it takes to manage one of the UK's healthiest buildings. →

AHR Podcast Series

Digital tools, smart buildings and operational capability

Technology continues to advance at a pace that outstrips organisational capacity, yet it remains one of the most transformative enablers of decarbonisation.

The biggest challenge, however, is capacity. Many estates teams lack the time, training or support to fully utilise the tools available. Upskilling, simple user interfaces and ongoing digital support emerged as essential priorities.

Despite these challenges, the direction of travel is unmistakable. As smart buildings become more mainstream and automation more refined, technology will play a central role in reducing operational carbon, enhancing resilience and improving user experience

The roundtables highlighted a step change in digital adoption:

Smart building platforms offering real-time insights into energy, carbon, comfort and occupancy.

Digital twins and intelligent modelling reducing waste and improving precision before construction begins.

AI-enhanced diagnostics automatically identifying inefficiencies through fault detection and enabling faster intervention as well as predictive maintenance systems.

Adaptive systems adjusting ventilation, heating and lighting based on real user patterns.

Finance, value and the economics of net zero

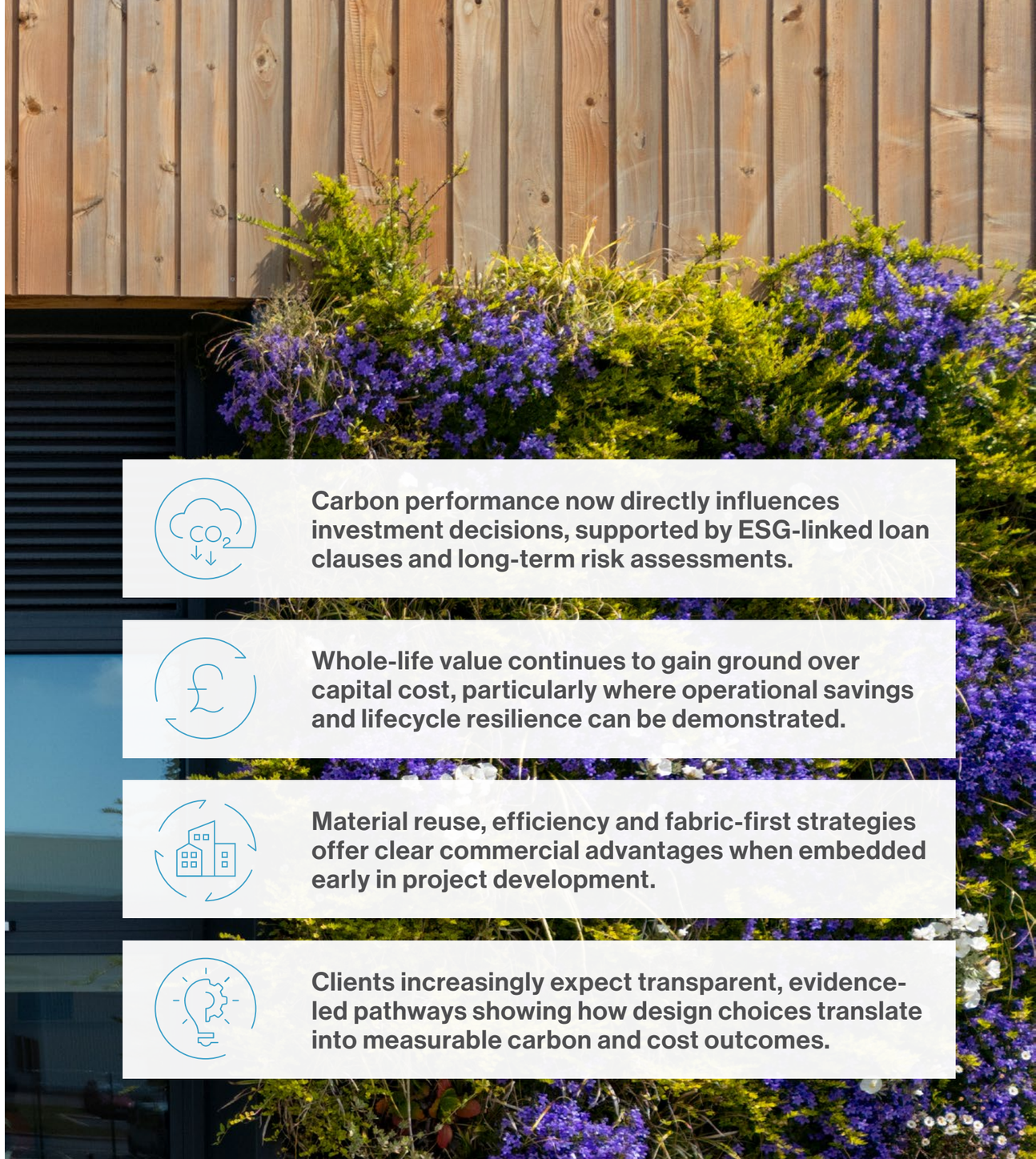
The financial landscape continued to evolve in 2025, embedding environmental performance into how value, risk and long-term resilience are assessed.

Sustainability has shifted decisively from an ethical consideration to a financial imperative.

There is growing recognition that sustainability offers protection against future regulatory risk, energy price volatility and the long-term costs of retrofit.

In this sense, net zero is evolving from a compliance requirement to a strategic investment in future resilience.

Across the discussions, several themes emerged:



Carbon performance now directly influences investment decisions, supported by ESG-linked loan clauses and long-term risk assessments.

Whole-life value continues to gain ground over capital cost, particularly where operational savings and lifecycle resilience can be demonstrated.

Material reuse, efficiency and fabric-first strategies offer clear commercial advantages when embedded early in project development.

Clients increasingly expect transparent, evidence-led pathways showing how design choices translate into measurable carbon and cost outcomes.

Skills, culture and behaviour change

Technology and standards alone cannot deliver net zero - people, culture and collaboration must evolve alongside them.

Across the roundtables, participants acknowledged that people remain the most important part of the net zero equation. Buildings will not perform as intended without clear communication, user-friendly systems and an inclusive approach to carbon literacy.

Estates teams, play an increasingly pivotal role. As technologies become more sophisticated, operational teams must be supported with the training, time and authority to apply them effectively. Organisations are beginning to invest in dedicated performance management roles and enhanced training pathways - a promising shift for the sector.

Equally important is occupant behaviour. From heating and ventilation choices to plug loads and space use, daily habits can dramatically influence a building's operational carbon footprint.

Encouraging positive behaviours requires clear, accessible information and a collaborative culture between building owners, users and managers.

Across disciplines, there is increasing commitment to breaking down silos and embedding decarbonisation skills at every level - not as specialist knowledge, but as everyday practice.

Local perspectives, shared challenges

Though our roundtables took place across multiple UK regions, the discussions revealed remarkable consistency in challenges and opportunities emerging.

Participants described:

- Alignment around material circularity, reuse and responsible procurement.
- Common concern for energy resilience and grid limitations.
- Shared frustration on regulatory clarity, especially embodied carbon and POE.
- Broad interest in digital optimisation, supported by accessible, quality data.
- A collective belief that collaboration accelerates progress, particularly where public and private sectors work together.

The consistency of these insights suggests that the industry is moving towards a more cohesive, nationwide understanding of what net zero in the built environment requires.

Local contexts vary, but the structural challenges (and the appetite for change) are widely shared.

Where we go next

The 2025 roundtable series showcased a sector that is ambitious, pragmatic and increasingly aligned, but still navigating the systemic barriers that define the path to net zero.

Across all discussions, it was evident that the built environment has made significant progress:

- Circularity is gaining real momentum, digital tools are transforming building performance, and energy resilience is becoming a central priority.
- Regulation is strengthening, financial markets are shifting, and the cultural foundations for decarbonisation are taking root.

Yet key challenges remain in various areas that must be addressed for success:

- Grid constraints continue to limit the pace of electrification.
- Post-occupancy accountability needs clearer policy support.
- Supply chains require transparency, scalability and reliable low-carbon alternatives.
- The skills gap, particularly in operations and digital performance, represents one of the biggest barriers to long-term success.

Nonetheless, the tone of the 2025 discussions was constructive and forward-looking.

The industry recognises the scale of the transition, and its capacity to lead it.

The conversations showed that net zero is not a distant target - it is already reshaping how we design, construct, manage and value the built environment.

As we look ahead to 2026 and beyond, we do so with a clear message from our 2025 discussions.

The journey to net zero is complex, but it is achievable when we act collectively, transparently and with purpose.

Thank you

We extend our sincere thanks to every participant in this year’s roundtable series.

Your insight, honesty and expertise continue to shape our approach and strengthen our industry’s capacity to deliver a low-carbon, high-performing, resilient built environment for the future.

Get in touch

If you've got a project you'd like to discuss, we'd love to hear from you. **Contact us** →

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