



Sustainable Construction: Reducing disputes, enhancing outcomes

The construction industry faces a dual challenge: achieving sustainability goals while managing disputes. Global construction spending is projected to surge by \$4.2 trillion over 15 years, reaching \$13.9 trillion. Despite this growth, the industry grapples with its high-carbon, wasteful reputation. As the world moves toward net-zero emissions, construction professionals must design sustainable, low-carbon buildings. In this article, we explore strategies for achieving these goals while considering potential disputes.

“To prevent disagreements arising from ambiguous contracts, it’s important to include explicit sustainability clauses.”

Collaboration and early engagement

Imagine starting a project where everyone is on the same page from day one. Misaligned expectations among stakeholders can often lead to disputes. To prevent this, it is essential to engage all relevant parties from the project’s inception. Picture a team meeting where architects, engineers, and developers brainstorm sustainable solutions together—this is the key to seamless project execution. Discussing sustainability goals and design choices while considering holistic building performance, including energy, embodied carbon, and well-being. Considering all potential trade-offs early on can help ensure the seamless integration of sustainable elements, such as rooftop solar panels, solar shading devices, and renewable power systems.

Education and training

In the realm of sustainable and net-zero practices, a wealth of information and research exists. However, there remains a pervasive need for more awareness regarding how these systems seamlessly integrate into building design and construction processes. To address this challenge, investing in comprehensive training programs for architects, engineers, and contractors focused on sustainable design principles is crucial. Equally important is educating clients and developers about the long-term advantages of low-carbon buildings. Recently, at the CIBSE Scotland conference on Retrofit2Perform, engineers and architects engaged in discussions and presentations on strategies to prepare our existing building stock for a zero-carbon grid. With practical solutions at hand, the removal of implementation barriers is well within reach.



Contractual integration of sustainability goals

To prevent disagreements arising from ambiguous contracts, it's important to include explicit sustainability clauses. These clauses should define performance standards, green certifications, and dispute resolution mechanisms related to sustainability. For example, a construction contract could specify that any deviation from energy-efficient HVAC specifications would trigger a predefined dispute resolution process. This clarity would help everyone understand their responsibilities and reduce the likelihood of disputes.

Investor and developer responsibility

Investors and developers play a crucial role in championing sustainability from the outset. Many investors have corporate governance policies driven by ESG (Environment, Social, and Governance) principles, which are increasingly dictating that investment is only in low and zero-carbon buildings. By insisting on sustainability clauses in contracts, they can drive real change. For instance, an investor could mandate that all construction materials meet specific eco-certifications, ensuring a greener supply chain. This proactive approach not only supports sustainability but also sets a standard for the industry.

Contractual accountability

Employers, designers, and contractors should be contractually bound to sustainability targets set by building regulations, local and national energy targets, and employer's requirements. Clear language ensures everyone understands their role in achieving net-zero outcomes. For example, an architectural design firm could commit to reducing embodied carbon in its architectural choices, and a building services engineering design firm (MEP) could commit to energy and building performance targets in its design and specification. Contractual penalties should back all of these commitments for non-compliance, which will limit value engineering decisions that often compromise design intentions.

Dispute resolution as a catalyst

While disputes may arise, they can also propel progress. Disputes over sustainability issues force stakeholders to confront these challenges head-on. For example, a contractor disputing the use of non-recyclable materials could lead to a revised specification and a more sustainable outcome. By addressing these disputes constructively, the industry can make significant strides toward sustainability.

Risk mitigation strategies

Sustainability introduces new risks—technological, regulatory, and environmental. To mitigate these risks, it's essential to conduct comprehensive risk assessments during project planning and allocate risks appropriately among project participants. For example, implementing low and zero-carbon technologies (e.g., solar panels, innovative HVAC systems, heat network integration) may encounter unexpected challenges. Examples of risk mitigation strategies:

- Pilot testing of smaller systems or review of other actual installations prior to full integration into a design will ensure the technology design is appropriate, reducing the risks.
- In some situations, partnering and close collaboration with vendors and technology providers will allow design and implementation issues to be addressed promptly.
- Where a technology requires interface with the environment or other existing systems, such as ground source heat pumps, the appropriate level of testing should be undertaken to ensure the technology will operate as intended. Testing may cost money prior to construction; however, it will ensure that the design is appropriate and minimise issues with performance later.



Expert insights and technical assessments

Technical misunderstandings can fuel disputes. To prevent this, it's important to engage specialists with sustainability expertise and seek technical assessments during the design, construction, and post-occupancy phases. For example, an environmental consultant could assess the impact of green roof vegetation on stormwater management. Early engagement of qualified specialists, like building services engineers and environmental consultants, ensures that sustainability goals are met and reduces the likelihood of disputes.

Transparency and documentation

Lack of transparency can breed suspicion and escalate disputes. To prevent this, it's vital to document sustainability decisions, changes, and approvals. Maintaining precise records of material specifications, energy-efficient systems, and environmental impact assessments can prevent disputes over green building certification compliance. Transparency builds trust and ensures that everyone is on the same page.

Certification and verification

Claims of sustainability need more credibility and validation. Pursuing certifications (e.g., LEED, BREEAM) can demonstrate compliance with sustainability standards. Continuously verifying building performance can help maintain net-zero status. For example, a net-zero school building could undergo annual energy audits to validate its carbon neutrality. With various classifications of environmental certification, perhaps all buildings should be mandated to achieve the highest rating. Certification and verification provide assurance that sustainability goals are being met.

Innovation and industry collaboration

Stagnation impedes progress. Investing in sustainable materials and construction techniques can help overcome this hurdle. Collaborating with startups, universities, and industry associations to share best practices can lead to innovative, low-carbon building solutions. By fostering a culture of innovation and collaboration, the industry can drive significant advancements in sustainability.

Conclusion: Paving the way to a net-zero future

The path toward sustainable and net-zero carbon buildings need not be fraught with disputes. Instead, it can be a collaborative journey—one where industry stakeholders unite to create a greener, more resilient future. By weaving sustainability into the very fabric of contracts, we elevate it from mere rhetoric to tangible reality.

Perhaps it's time for the construction industry to take matters into its own hands. Self-regulation, guided by shared values and unwavering commitment, can ensure that net-zero ambitions steer every decision. Let us move ahead as an industry, not as adversaries, but as a collective industry proud of the buildings that populate this planet, constructing a legacy of sustainable structures that stand the test of time.

I am interested to hear how you and your sector can meaningfully impact our journey towards a sustainable future. Reflect on these questions and share your insights on how your area of the industry can contribute to these goals.

1. How can early stakeholder engagement and clear contractual clauses help prevent disputes over sustainability goals?
2. What role should regulatory bodies and industry self-regulation play in achieving net-zero targets?



Author



Gerry Brannigan

Partner, Forensic Technical Services Growth Development Lead

gerrybrannigan@hka.com

P: 07968990984

[Expert Profile](#)

This article presents the views, thoughts, or opinions only of the author and not those of any HKA entity. While we take care at the time of publication to confirm the accuracy of the information presented, the content is not intended to deal with all aspects of the subject referred to, should not be relied upon as the basis for business decisions, and does not constitute professional advice of any kind. This article is protected by copyright © 2024 HKA Global Ltd.