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White Paper

Designing & Building Sustainably: The Embodied Carbon Reality Check

Hosted and Chaired by Komfort Partitioning

Dated

Roundtable: 16th October
Whitepaper: 29th October

Roundtable Participants

Attendees:

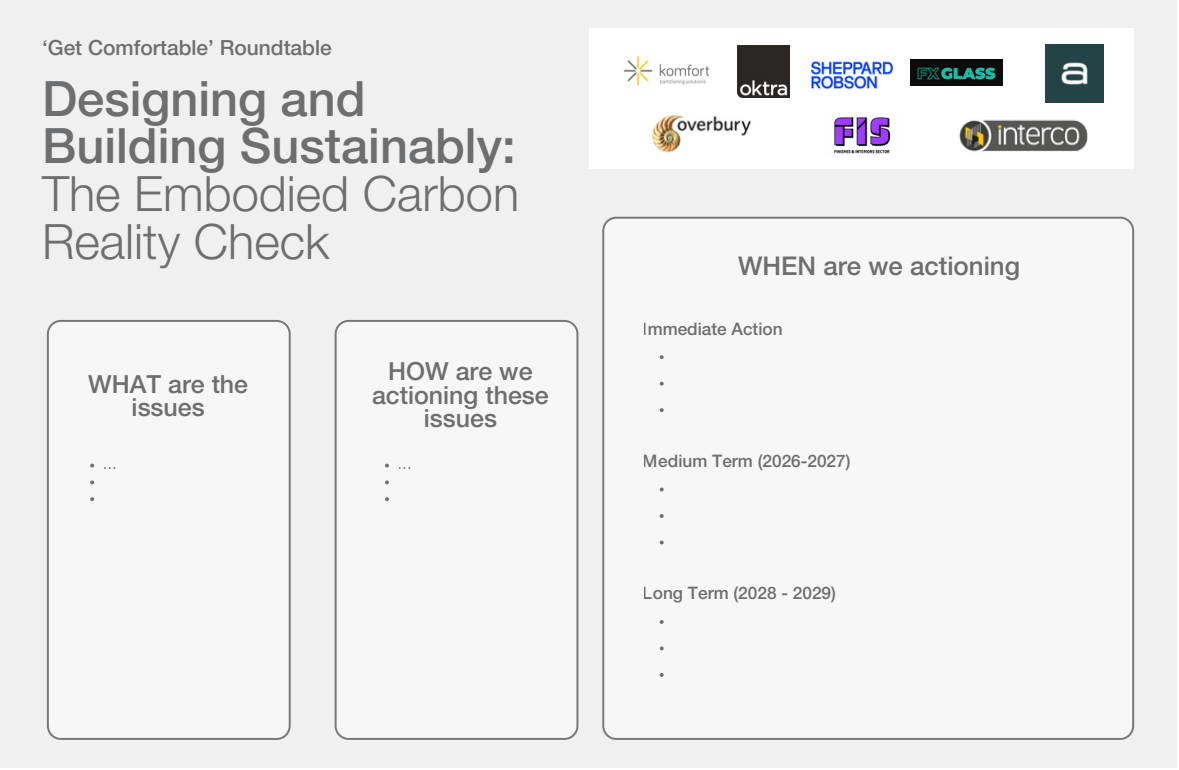
- Enrique Soler (Area)
- James Semark (FX Glass)
- Flavie Lowres (The FIS)
- Prasun Bandyopadhyay
- Tony Roberts (Interco)
- Steven Coveney, Paul Wyatt & Suzanne Walter (Komfort Partitioning)
- Jenny Edwards (Oktra)
- James Ivin (Overbury EOS)
- Armand Terruli (Sheppard Robson)

Introduction

This paper summarises the critical findings from a collaborative roundtable discussion, "Designing & Building Sustainably: The Embodied Carbon Reality Check" hosted in London on Thursday, 16th October.

The event brought together leading minds from across the design, manufacturing and construction sectors to challenge current practices and define a tangible path to a circular economy in fit-out. The core principle for the day was Collaboration over Competition.

As part of the roundtable, we identified WHAT the issues were, HOW we were going to address change and WHEN.



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1. Aims

The session aimed to create a single, informed industry opinion to tackle the fear and uncertainty about sustainable fit-out practices, which are caused by a lack of shared education and clear standards. The participants agreed that a "bigger picture" focus, one that transcends individual competition, is essential for making a positive influence.

The discussion begun with three core objectives:

- **Achieve Holistic Understanding:** To gather unique and often contrasting viewpoints from all key facets of the industry, including design, fit-out, manufacturing and client/asset management to address the complexity of the circular economy challenge.

- **Address Apprehension:** To confront the finding that many professionals are "apprehensive" or "fearful" about sustainability because they "might not truly understand it," underscoring the vital need for mandatory industry education.

- **Drive Tangible Outcomes:** To move beyond “ideas” and produce concrete, actionable outcomes and strategies that can influence positive change immediately.

2. Key Summary Findings

The "Embodied Carbon Reality Check" revealed several critical takeaways for the industry:

- **The Wasted Carbon Load:** The average new fit-out carries a significant embodied carbon footprint, estimated at 190 kg CO2e per square meter (https://www.overbury.com/carbon-in-cat-b-fit-out). This figure is amplified by a systemic flaw where product durability (long lifespan) is negated by a design lifespan of just 5–10 years, effectively guaranteeing premature waste.

- **The Solution is Relocatability:** The clearest, most effective path to a circular economy lies in design. This involves a shift toward modularity and standardisation in fit-out components, making them easily adaptable and relocatable for reuse rather than disposal.

- **Cost Barrier is Labour, Not Material:** The high cost often associated with circularity is primarily a business model challenge. A study confirmed that 60% of the cost of reuse is tied to labour, including strip-out, packaging and logistics, rather than the intrinsic value of the recycled materials (https://www.ifpeb.fr/webinaire-equation-economique-du-reemploi-dans-le-batiment/)

- **Drivers for Change:** The consensus highlighted that significant, industry-wide change will not be voluntary. It must be driven by three primary levers: legislation, mandatory specification and compelling financial incentives (such as client-side tax relief for sustainable systems).

- **The Knowledge Gap:** To achieve true compliance and prevent "greenwashing," there must be an urgent upskilling across the entire industry. This is necessary to overcome professional apprehension and ensure data (e.g., EPDs) is scrutinised correctly.

3. Key Challenges

The discussion navigated three major systemic obstacles to achieving circularity in the interiors sector:

A. **Supply Chain & Market Readiness** As manufacturers, a primary challenge is that the demand for low-carbon material currently massively outstrips the supply of recycled content and certified relocatable systems. This gap confirms that the industry must aggressively pursue the recycling and recapture of existing system components to meet the rising demand. Furthermore, the issue of "greenwashing" remains a threat; every individual within construction must be cautious with data transparency and ensure that any environmental claims are built on honest, verifiable data, not just "box ticking."

B. **Business Model & Client Prioritisation** The current economic model places the financial burden of reuse (strip-out, logistics) on the donor (the company stripping out the material), while the receiver gains the carbon benefit and often a cheaper product. This disincentivises circular practices. More fundamentally, the roundtable agreed that sustainability often fails because it is an afterthought. It must be driven by designers and architects through early engagement with partners at the very beginning of the project and putting it as one of the top three things clients should be talking about.

C. The Lack of Regulation and Incentive The primary driver for sustainable practice currently relies on voluntary standards and client desire, leading to inconsistent application across the sector.

- Absence of Mandate: A lack of mandatory regulation means there is no incentive for contractors or businesses leading the way to change their practices.
- Cost Perception: There is a persistent perception within the industry that sustainable specifications are expensive, which is compounded by a lack of transparent communication regarding the total cost and value across the supply chain. Furthermore, the entities who pay the initial capital cost for sustainable building practices are not always the ones who receive the long-term operational benefits.

4. Action Points

The roundtable concluded with a clear set of actionable recommendations, focused on driving change across different levels of the industry:

4.1 **Policy, Legislation and Financial Incentives**

To accelerate change, the industry must prioritise the creation of compelling financial drivers. The most immediate action is to lobby the government and relevant bodies to explore and introduce tax relief for clients who specify and invest in demountable and relocatable partitioning systems. By aligning client cost-saving with a reduction in embodied carbon, this single action could act as a powerful catalyst. Furthermore, the industry must actively respond to consultations on Carbon Tax or building standards to ensure that future legislation and mandatory specification are integrated with expert, real-world knowledge to avoid compliance gaps.

Key Actions

- Implement Mandatory Sustainability Targets: Sustainability targets should be incorporated into building regulations and planning laws (similar to CDM) to ensure all projects, not just leading ones, must comply.
- Focus on the Incentives and Penalties: The government should introduce financial measures to make high-carbon projects more expensive (like a carbon tax) and offer tax breaks (like the R&D credit) to smaller companies that use sustainable products and practices.

4. Action Points

4.2 **Data, Standardisation and Design**

The single biggest obstacle to setting reliable targets is the scarcity of current, consistent data. Therefore, the industry must continue to collaborate on sharing reliable embodied carbon data to allow for effective benchmarking and target-setting, following the example of the Net Zero Carbon Building Standard. Designers and specifiers must ensure that sustainability is not a secondary consideration but is written into specifications with "weight and influence," prioritising low embodied carbon, modularity and future relocatability from Day One of a project.

Key Actions

- Update Specifications: Specifications must be immediately updated to mandate key circular economy principles, including Cradle to Cradle certification and comprehensive Design for Disassembly (DfD) requirements.
- Enforce Supply Chain Competency: Competency must be demonstrated and assessed across the entire delivery chain, from the individual level to the business and its supply chain, to ensure the sustainable intent of the design is actually delivered. This includes sharing competency files during the tender process to demonstrate a verifiable commitment to sustainable delivery.
- Solve the Reuse Logistics Problem: DfD is only the first step. The industry needs to create robust logistics and storage protocols for reusable materials. For example, materials like glass partitions must be stored correctly (i.e., not stacked flat) to remain viable for reuse.
- Establish Reuse Hubs: There is a documented high demand for reclaimed materials (e.g., reclaimed steel). The industry must collaborate to establish viable reuse distribution hubs that can increase the supply of quality, tested reclaimed materials.
- Share Best Practice: Companies must stop operating in "silo" and actively share their successful strategies and data for reducing embodied carbon. This collaboration is crucial to amplify the overall positive influence across the sector.

4. Action Points

4.3 **Education, Culture and Knowledge**

The collective knowledge gap must be closed to overcome apprehension and fear surrounding sustainability. Professional and trade bodies are urged to mandate that every Continuing Professional Development (CPD) session must include a "sustainability strap" to build foundational knowledge across the industry. This is essential for ensuring that complex data, such as EPDs, is accurately interpreted and used to inform material choice, transitioning sustainability from a "box-ticking exercise" to a core cultural value.

Key Actions

- Drive Education: The industry needs to determine and implement a standardised approach to education to ensure all individuals possess the necessary skills, knowledge, experience and behaviour to deliver sustainable projects.
- Earlier Engagement: Manufacturers and supply chain partners should be engaged earlier in the design process.

4.4 **Internal Culture and Business Implementation**

While systemic change is crucial, individual businesses must commit to cultural shifts. Participants discussed implementing smaller, tangible changes to foster a sustainable mindset, such as introducing "Green Weeks" to raise awareness or promoting "healthy competition" between departments to reduce waste and carbon in day-to-day operations. These internal efforts are vital for ensuring that the external push for a circular economy is supported by a genuinely engaged workforce.

5. Conclusion

The "Designing & Building Sustainably: The Embodied Carbon Reality Check" roundtable successfully achieved its goal of moving beyond theory to confront the practical, economic and systemic barriers to Net Zero in the fit-out sector. The conversation driven by, Collaboration over Competition, was a powerful affirmation that the want for real change exists across the entire supply chain.

We extend our sincere thanks to all the participants for their honest, open and invaluable contributions. We recognise that true progress depends on each firm translating these findings into their own business models and project specifications.

Komfort Partitioning is committed to implementing these findings and leading the ongoing conversation. We plan to host future roundtables to revisit these action points and hold ourselves and the industry accountable for delivering tangible, measurable results.

The reality check is complete, now, the time for decisive action is here.