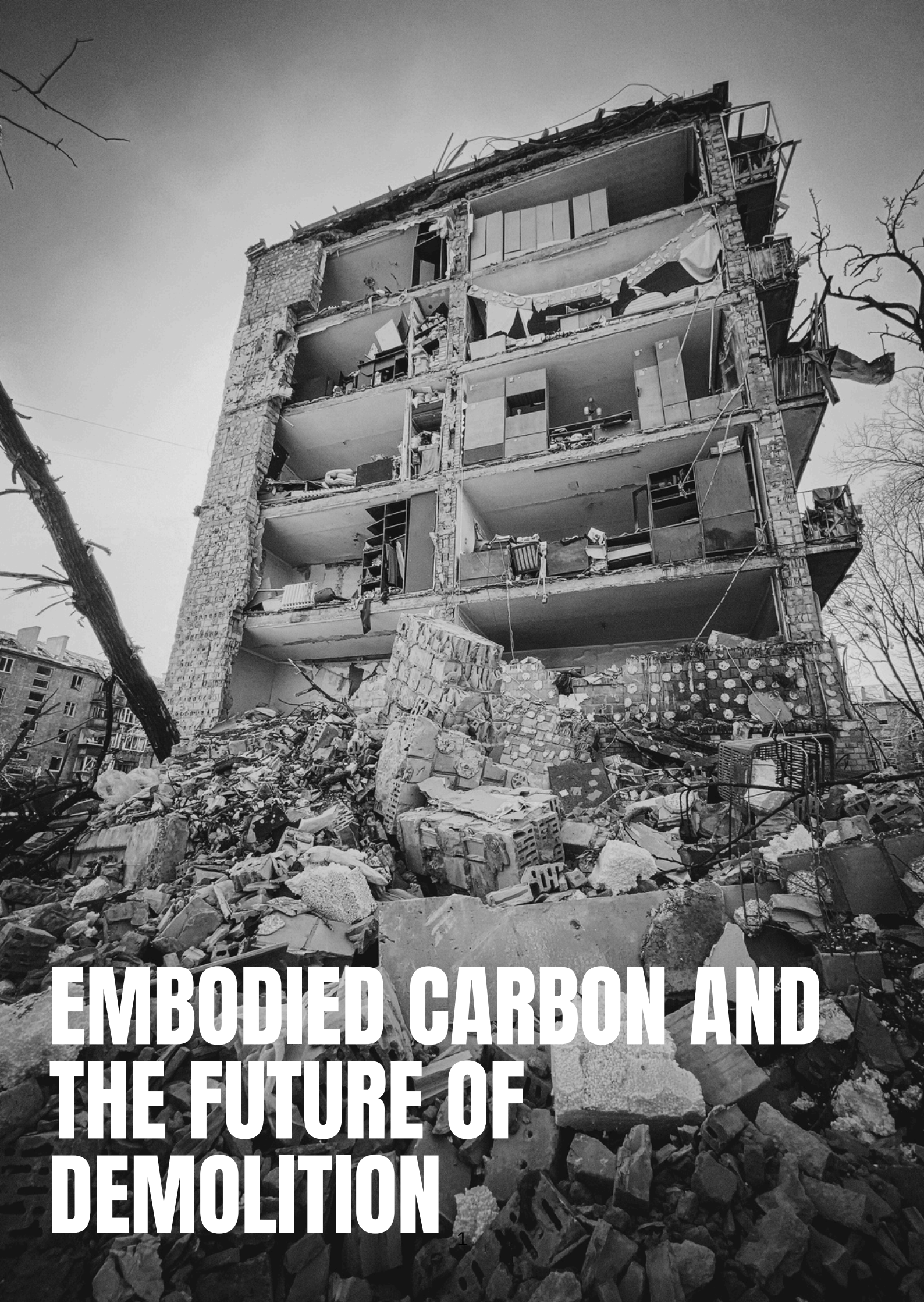

EMBODIED CARBON AND THE FUTURE OF DEMOLITION

Embodied Carbon and the Future of Demolition in Construction

Introduction: This briefing document analyses recent sources concerning the growing concern over embodied carbon in the construction industry and its implications, especially for the demolition sector. It reviews key themes, ideas, and facts from the provided sources, highlighting the tension between demolition and retrofitting in light of climate change mitigation e>orts.

Main Themes:

1. **Embodied Carbon Awareness:** There's a noticeable increase in awareness regarding embodied carbon, moving beyond operational emissions to encompass the entire lifecycle of a building, including material production, construction, and demolition.
2. **Policy & Regulation:** The UK government is under pressure to implement regulations mandating whole-life carbon assessments for buildings, similar to leading European countries. This is reflected in initiatives like the proposed amendment to the Levelling Up and Regeneration Bill and the updated RICS Whole Life Carbon Assessment for the built environment.
3. **Demolition vs. Retrofit:** A significant debate surrounds the choice between demolishing and rebuilding versus retrofitting existing structures. While demolition proponents argue for operational efficiency of new builds, the embodied carbon lobby prioritizes reuse and resource efficiency.
4. **Economic and Social Implications:** Incentivising retrofitting over demolition requires addressing financial hurdles like VAT disparities and promoting circular economy practices like material reuse and pre-demolition audits. The social implications for residents and communities must also be considered.

Key Ideas and Facts:

- **The UK lags behind:** Experts argue that the UK is lagging behind European counterparts in regulating embodied carbon, risking its net-zero targets. Dr. Jannik Giesekam highlights that countries like France have more comprehensive data and established requirements for EPDs. (Source: "Building to net zero: costing carbon in construction")
- **A need for standardized methodology:** The lack of a standardised methodology for embodied carbon assessment in the UK leads to inconsistency. The RICS methodology, while a step forward, faces criticism and requires updating. (Source: "Building to net zero: costing carbon in construction")
- **Demolition as the "single biggest threat":** Some perceive the embodied carbon movement as an existential threat to the demolition industry, potentially leading to

restrictions and even bans. (Source: "Demolition's Greatest Threat #2", "Demolition's Greatest Threat #3")

- **Permitted Development Rights (PDRs) under scrutiny:** The extension of PDRs, allowing demolition and rebuild without planning permission, is criticized for incentivizing demolition over retrofitting. (Source: "Building to net zero: costing carbon in construction")
- **The M&S Case:** The controversy surrounding the demolition of Marks & Spencer's flagship store showcases the clash between embodied carbon concerns, heritage preservation, and the economic benefits of redevelopment. (Source: "M&S decision brings embodied carbon impacts to fore in re-development v refurbishment debate")
- **Local level initiatives:** The City of London Corporation is setting a precedent by requiring developers to consider alternatives to demolition in early planning stages. Similar considerations are emerging in Birmingham and Glasgow. (Source: "Demolition's Greatest Threat #3")
- **VAT disparity:** The difference in VAT liability between new builds (zero-rated) and retrofitting (20% VAT) is seen as favoring demolition, prompting calls for harmonisation. (Source: "Building to net zero: costing carbon in construction")

Quotes:

- **"Fundamentally, they have been hindered by the fact that all of that has been done on a voluntary ad hoc basis. It has not been co-ordinated through some central policy or regulation that is driving it. ... That will only be done through regulation."** - Dr. Jannik Giesekam on the lack of a standardized approach to embodied carbon in the UK. (Source: "Building to net zero: costing carbon in construction")
- **"The guidance highlights the refurbishing of existing buildings as the most eSicient strategy to achieve both of these objectives and the one to be considered before all others."** - On the London Plan's emphasis on retrofitting over demolition. (Source: "Demolition's Greatest Threat #2")
- **"In the middle of both climate and housing emergencies we must focus on reusing our existing buildings rather than allowing them to be demolished without local communities having any say on what buildings stay or go."** - Joe O'Donnell, Victorian Society Director, emphasizing the importance of community involvement and heritage preservation. (Source: "Demolition's Greatest Threat #3")

Conclusion: The construction industry faces a critical juncture where the traditional emphasis on demolition and new builds is challenged by the imperative to reduce embodied carbon. Policymakers, industry stakeholders, and communities must collaborate to find a

balance between development needs, heritage preservation, and environmental responsibility. This requires:

- **Stronger government action:** Implement regulations and incentives that level the playing field between demolition and retrofitting, including a national embodied carbon assessment methodology, VAT reform, and support for circular economy practices.
- **Industry collaboration:** Active engagement from the demolition sector in developing and implementing new standards and embracing innovative approaches to deconstruction and material reuse.
- **Open public discourse:** Fostering transparent communication and informed decision-making processes that involve local communities and address social concerns.

By acknowledging the urgency of the issue and actively working towards a more sustainable future, the UK construction industry can contribute meaningfully to national net-zero goals and create a built environment that is both environmentally and socially responsible.