Unlocking the Delivery of Net Zero Carbon Buildings

NOVEMBER 2020

Advancing Net Zero Programme Partners

Lead Partner:  Programme Partners:

REDEVCO FOUNDATION  bam  Berkeley Group  GROSVENOR  HOARE LEA  JLL
The guidance in this document embraces the market shift towards net zero and, through practical resources and case studies, demonstrates that net zero buildings can be delivered today. Whilst barriers are likely to be encountered across all delivery stages, the guidance provides associated opportunities for how these can be overcome.

We hope this guidance helps developers and their project teams unlock the delivery of more net zero buildings. However, it is not able to provide all the answers and UKGBC intends to build on this work as new knowledge is gained and solutions uncovered.

UKGBC’s Advancing Net Zero programme is helping drive the transition to net zero carbon buildings, including through its publication of the Net Zero Carbon Buildings Framework. In September 2020, UKGBC published Building the Case for Net Zero to provide the industry with an evidence base on the design changes needed to achieve net zero performance targets and the effect this has on capital cost. The study found that, in addition to design and cost changes, achieving net zero buildings requires rethinking the typical delivery process.

This guidance document is intended to help developers and project teams set strategies at the outset of any project to streamline the delivery of net zero carbon buildings. It identifies barriers that are likely to emerge through RIBA Stages 0-7 and provides associated opportunities for how these can be overcome.

A total of 17 barriers and associated opportunities have been identified in this document and grouped into four key themes:

**Design** – ways to integrate net zero carbon into the building design or design process. This includes setting net zero carbon outcomes early in the project’s strategy which can inspire design teams to think innovatively.

**Cost** – ways to finance net zero carbon buildings. This includes accounting for future ‘brown discounts’ and ‘green premiums’ and a shift in perspective to whole life investment rather than just immediate capital expenditure.

**Stakeholder engagement** – ways to integrate net zero carbon into the decision-making process of all stakeholders. This includes identifying growing investor and occupier net zero ambitions.

**Innovation** – ways of capitalising on new processes, mechanisms, and technologies to achieve net zero buildings. This includes using new financing mechanisms and alternative building materials.

**Executive Summary**

- Communicate the true impact on occupier comfort
- Embrace an iterative design process
- Provide evidence on the use of timber
- Adopt the principle of maximising reuse
- Agree a net zero carbon outcome in the strategy
- Identify investor and occupier net zero goals
- Focus on whole life value
- Unlock green financing
- Communicate net zero operational requirements
- Make green lease clauses easy to understand
- Share lessons learnt and report outcomes
- Verify net zero outcomes
- Implement a Soft Landings approach
- Identify experienced delivery partners
- Allow time for net zero strategies to be tested
- Communicate the positive outcomes from design changes
- Use net zero outcome-based procurement
- Verify net zero outcomes
- Implement a Soft Landings approach
- Identify experienced delivery partners
- Allow time for net zero strategies to be tested
- Communicate the positive outcomes from design changes
- Use net zero outcome-based procurement

**Figure 1: Summary of 17 opportunities for unlocking net zero carbon buildings**
Acknowledgements

UKGBC would like to offer special thanks to the JLL team that provided insights at a workshop to explore the implications of delivering net zero buildings, of which the findings helped shape the basis of this report.

Project supporter

![JLL Logo]

We would also like to thank the UKGBC member organisations that reviewed and inputted into the final guidance:

- AECOM
- EPR Architects
- JLL
- Landsec
- Lendlease
- Skidmore, Owings & Merrill
- Telford Homes

Report Authors

UKGBC: Karl Desai, Alexandra Jonca, Alastair Mant

With special thanks to the UKGBC Advancing Net Zero Programme Partners

Lead Partner: The Redevco Foundation
Programme Partners: BAM Construct UK, Berkeley Group, Grosvenor Britain & Ireland, Hoare Lea and JLL.

QUESTIONS & FEEDBACK

This guidance aims to enable the delivery of net zero carbon buildings. We welcome input from any interested stakeholders on the content and other follow up resources.

If you have any questions on the guidance or would like to provide feedback, please email ANZ@ukgbc.org.