The Road to COP26: Tackling Net Zero Whole Life Carbon

#BuildingLife
Today’s speakers & panellists

John Alker
Director of Policy & Places
UKGBC

Martina Otto
Head of the Cities Unit at UNEP, Head of the Secretariat of the GlobalABC

Tom Spurrier
Project Lead
UKGBC

Will Hall
Head of Buildings and Industry for COP26, BEIS

Charlotte Foster
MD of Large Corporate Commercial Real Estate
Natwest

Dr. Jannik Giesekam
Research Fellow in Industrial Climate Policy, University of Leeds

Stephen Richardson
Director, Europe Regional Network
WorldGBC

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#BuildingLife
## Agenda

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<td>10mins</td>
<td>Welcome</td>
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<td>5mins</td>
<td>Global Status Report for Buildings</td>
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To radically improve the sustainability of the built environment, by transforming the way it is planned, designed, constructed, maintained and operated.
Built environment businesses & COP26

- Committed to net zero & taking action
- Developing solutions to ‘build back better’ – UK & globally
- Need government policy to help drive and unlock further progress
Net Zero Carbon Buildings Commitment

✓ Net zero carbon portfolios in operation by 2030
✓ Advocate for net zero carbon built environment by 2050
  + Whole life carbon component in development
Signatory snapshot

42
UKGBC member signatories

4,790
Buildings and offices

16.7m+
Square metres

1.19m+
t/CO₂

Note: figures are based on self-reported data from signatories
Whole Life Carbon Roadmap
WorldGBC consortium

Funders

Laudes Foundation

IKEA Foundation
Over 150 members: governments, private sector, civil society, research and intergovernmental organisations

Common Vision: A zero-emission, efficient and resilient buildings and construction sector

- A global advocate and catalyst
- A trusted platform to set targets & track progress and facilitate support to countries in setting priorities & measures based on their situation.
Despite stable energy demand, CO2 emissions from building operations and construction reached their highest level ever recorded in 2019 at around 10 GtCO2, or 38% of global CO2 emissions.

Source: IEA, Energy Technology Pathways, 2020
The 2020 Buildings-GSR: COVID-19 impacts

Due to the pandemic, many countries have reported a significant slowdown in buildings completions. The effect of the pandemic on the construction sector might result in embodied emissions from buildings being around 5% lower in 2020 than the previous year [IEA ETP 2020].

Notes: Buildings construction activity is estimated based on the average number of square metres under active construction for a given year, itself derived from construction starts and housing completions data. The EU Nordics country grouping includes Denmark, Finland and Sweden.

Source: IEA 2020. All rights reserved. Adapted from “Energy Technology Perspectives 2020”
Spending for energy efficient buildings increased in 2019 for the first time in the past three years. Yet, at an increase of just 3%, this is outpaced by investment in conventional buildings and construction.
GlobalABC Roadmaps

A Framework and a process
to support setting of targets and milestones for decarbonisation of the buildings and construction sector

- Consultative process, involving 700 stakeholders globally
- 8 priority areas: urban planning, new and existing buildings, building operations, systems, appliances, materials, energy
- Short-term, medium term and longer-term targets and milestones, with policy, technology and finance solutions
- Now being taken to the national level, incl. via national alliances
JOIN US ON 16 DECEMBER 2020, 3PM CET FOR THE REPORT LAUNCH

Contact us at global.abc@un.org
Visit www.globalabc.org
Project Team

Tom Spurrier
Project Lead
UKGBC (seconded from Hoare Lea)

Alexandra Jonca
Project Officer
UKGBC

Alex Green
Stakeholder Engagement Adviser
UKGBC (seconded part-time from BPF)
Net Zero Whole Life Carbon Roadmap for the UK Built Environment

Tom Spurrier
Project Lead, UKGBC
Associate Director, Sustainability, Hoare Lea

UKGBC - Together for a better built environment
Advancing Net Zero

Net Zero Carbon Buildings Commitment

Case Studies
Net zero whole life carbon roadmap objectives

• Build consensus on a pathway to a net zero carbon built environment among businesses and industry bodies
• Develop carbon targets in line with the Paris Agreement
• Set out actions, owners and processes to achieve targets
• Enable consistent sector-based action plans
Scope

- Stakeholders from across the value chain
- Covers the entire building life cycle
- New and existing buildings and infrastructure
Whole Life Carbon Vision

2050
New buildings, infrastructure and renovations will have net zero embodied carbon, and all buildings, including existing buildings, must be net zero operational carbon.

Net Zero Operational Carbon
Definition
A net zero carbon building is highly energy efficient with all remaining energy from onsite and/or offsite renewable sources.

Guiding Principles
1. Measure and disclose carbon
   Carbon is the ultimate metric to track, and buildings must achieve an annual operational net zero carbon emissions balance based on metered data.

2. Reduce energy demand
   Prioritise energy efficiency to ensure that buildings are performing as efficiently as possible, and not wasting energy.

3. Generate balance from renewables
   Supply remaining demand from renewable energy sources, preferably on-site followed by off-site, or from offsets.

4. Improve verification and rigour
   Over time, progress to include embodied carbon and other impact areas such as zero water and zero waste.

2030
New buildings, infrastructure and renovations will have at least 40% less embodied carbon with significant upfront carbon reduction, and all new buildings must be net zero operational carbon.

Net Zero Embodied Carbon
Definition
A net zero embodied carbon building (new or renovated) or infrastructure asset is highly resource efficient with upfront carbon minimised to the greatest extent possible and all remaining embodied carbon reduced or, as a last resort, offset in order to achieve net zero across the lifecycle.

Guiding Principles
1. Prevent
   Avoid embodied carbon from the outset by considering alternative strategies to deliver the desired function.

2. Reduce and optimise
   Evaluate each design choice in terms of the upfront carbon reductions and as part of a whole lifecycle approach.

3. Plan for the future
   Taking steps to avoid future embodied carbon during and at end of life.

4. Offset
   As a last resort, offset residual embodied carbon emissions within the project or organisational boundary where possible or if necessary through verified offset schemes.
Key outputs

1. A report setting out the actions, policies and processes needed to manage the net zero transition in the built environment.

2. A 1.5° aligned science-based trajectory for reducing built environment emissions, including targets for relevant sub-sectors.
Roadmap Report

- Actions, initiatives, processes to drive emission reductions
- Governance structure to manage the transition
- Processes for developing sub-sector action plans
- Facilitate collaboration
- Secure cross-sector commitments and actions
- Catalyse policy change
1.5° aligned carbon trajectory

Carbon budget for UK built environment

Sub-targets for built environment sub-sectors

Foundation for setting SBTs by organisation & benchmarks by project type
Delivery process

- Industry-wide advisory/steering group to oversee project
- Expert input from key stakeholders across value chain, academia, policy
- Modelling of science-based targets
- Industry-wide consultations on draft roadmap proposals and actions
- Government engagement – to align roadmap with key policies and upcoming strategies
- Endorsements of final roadmap & commitment to subsequent actions
UK landscape

Institution of Civil Engineers
Federation of Master Builders
Green Property Alliance
UKGBC
Whole Life Carbon Vision
WorldGBC
Net Zero Carbon Buildings Commitment
Roadmap to Beyond Net Zero
Contractors Forum
British Retail Consortium
Climate Action Roadmap
Mineral Products Association
Delivery Hub
Future Homes Task Force
Home Builders Federation
Housing Working Group
Construction Leadership Council
LS&C Construct Working Group
Association for Consultancy and Engineering
Environment Roadmap for Housebuilding
## Timeline

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Calls to Action

• If you are interested in getting involved in the Roadmap project as a relevant institution or industry body, contact Alexandra.Jonca@ukgbc.org

• Sign up to the Advancing Net Zero mailing list for general updates about the roadmap and other net zero initiatives ANZ@ukgbc.org
UK Government Perspective

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Thank you!

Please fill in the evaluation form you are directed to after closing.

ANZ@UKGBC.org