



The Road to COP26: Tackling Net Zero Whole Life Carbon

#BuildingLife

UKGBC - Together for a better built environment

Today's speakers & panellists

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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



Agenda

10mins Welcome

John Alker

5mins Global Status Report for Buildings

Martina Otto

10mins Roadmap overview

Tom Spurrier

5mins UK Government perspective

Will Hall

Panel discussion

35mins

- Charlie Foster
- Dr. Jannik Gieseke
- Stephen Richardson

Panellists

Audience Q&A

Close

To radically improve the sustainability of the built environment, by transforming the way it is planned, designed, constructed, maintained and operated.



500

Members



150

C-suite
Leaders



70

GBCs



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*

ARUP



THE CROWN
ESTATE



STANHOPE

TROUP
BYWATERS
+ ANDERS



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





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The 2020 Global Status Report for Buildings and Construction

Martina Otto

Head of the Cities Unit at UNEP

Head of the Secretariat of the GlobalABC

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Over **150**
members:

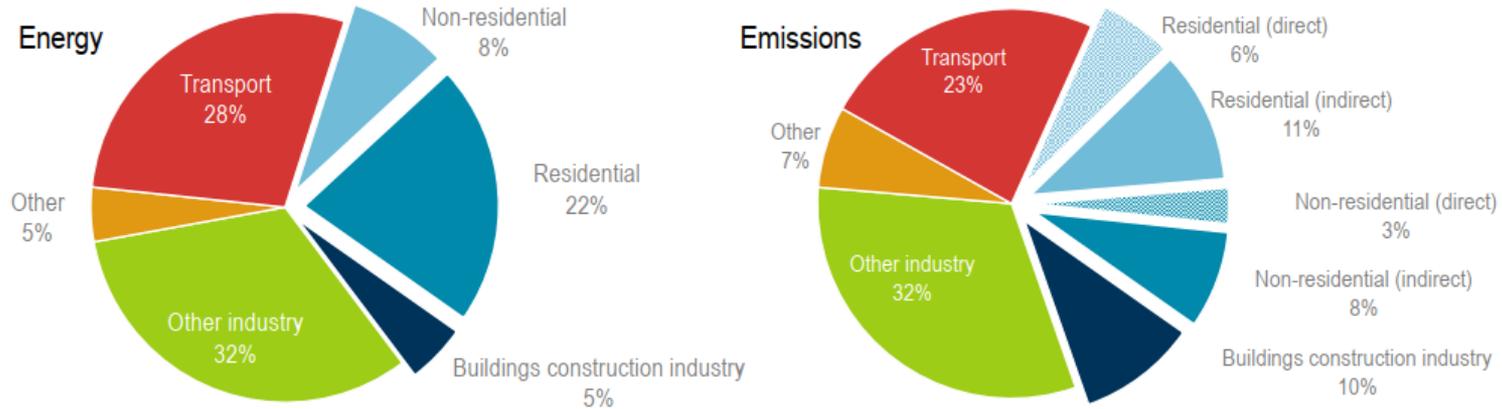
governments, private sector, civil society,
research and intergovernmental organisations



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

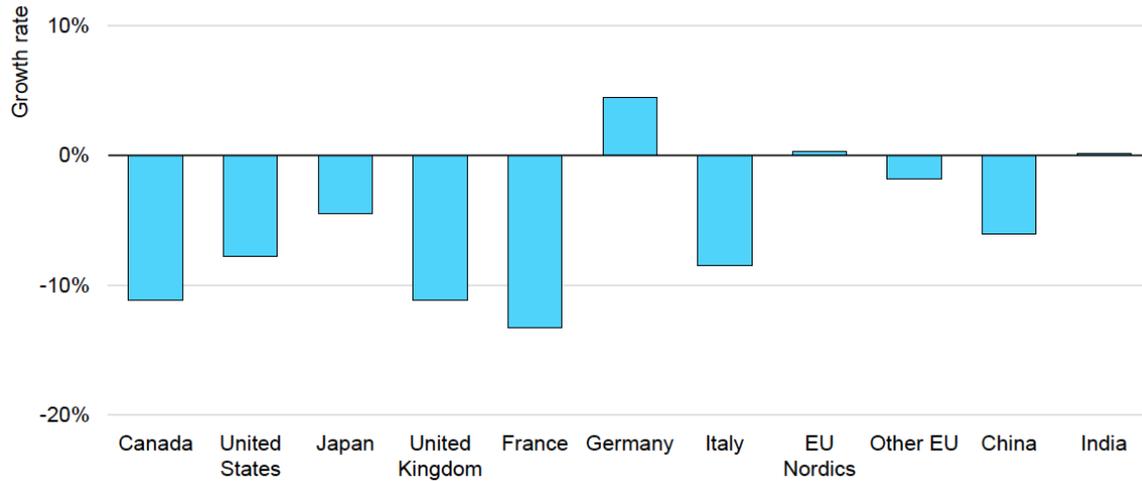
- » A global advocate and catalyst
- » A trusted platform to set targets & track progress and facilitate support to countries in setting priorities & measures based on their situation.

The 2020 Buildings-GSR: CO2 emissions



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.

The 2020 Buildings-GSR: COVID-19 impacts



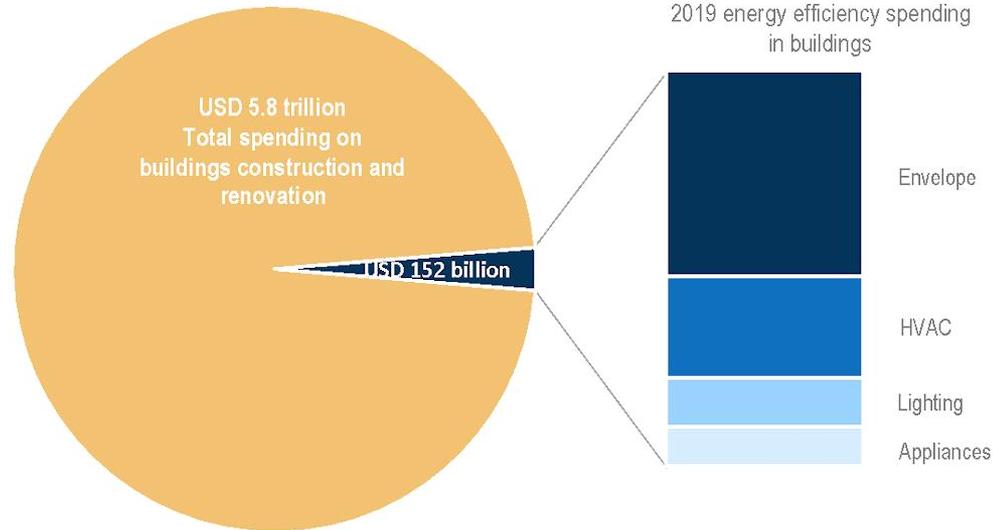
IEA 2020. All rights reserved.

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.

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](#)].

The 2020 Buildings-GSR: Investment & financing



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

Example

New buildings

Status

Most construction occurring in places with no codes for mandatory minimum energy performance

Recommendations

Prioritise high efficiency standards
Develop decarbonisation strategies, implement mandatory building energy codes, incentivise high performance

Global Alliance
for Buildings and
Construction
**GlobalABC Roadmap
for Buildings and
Construction**
2019-2030
Towards a zero-emission, efficient, and resilient
buildings and construction sector



Global Alliance
for Buildings and
Construction
**GlobalABC Regional
Roadmap for Buildings and
Construction in Africa**
2019-2030
Towards a zero-emission, efficient, and resilient
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**GlobalABC Regional
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Construction in Latin America**
2019-2030
Towards a zero-emission, efficient, and resilient
buildings and construction sector





Global Alliance
for Buildings and
Construction

GlobalABC / UNEP – 11 December 2020

**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



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Project Lead
UKGBC (seconded from
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Alexandra Jonca
Project Officer
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Alex Green
Stakeholder Engagement
Adviser
UKGBC (seconded part-
time from BPF)



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Net Zero Whole Life Carbon Roadmap for the UK Built Environment

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

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Advancing Net Zero

BBP BETTER BUILDINGS PARTNERSHIP

LONDON ENERGY TRANSFORMATION INITIATIVE

UK GBC ADVANCING NET ZERO

Net Zero Carbon Buildings: A Framework Definition

APRIL 2019

Advancing Net Zero Programme Partners

Lead Partner: REDEVCO
Programme Partners: bam Berkeley GROSVENOR HOARE LEA JLL

UK GBC ADVANCING NET ZERO

Net zero carbon: energy performance targets for offices

JANUARY 2021

UKGBC Task Group for Renewable Energy Procurement and Carbon Offset Guidelines

Lead Partner: REDEVCO
Programme Partners: bam Berkeley GROSVENOR HOARE LEA JLL

RIBA
Royal Institute of British Architects

SOLAR TRADE ASSOCIATION

Building the case for net zero:
A feasibility study into the design, delivery and cost of new net zero carbon buildings

DOWNLOAD NOW



Case Studies

BPF

BRITISH PROPERTY FEDERATION

CIBSE

Net Zero Carbon Buildings Commitment

<p>Berkeley Group Property Developer Find out more</p>	<p>BioNova Software & Property Business Development Find out more</p>
<p>Brunnwood Commercial Property Developer Find out more</p>	<p>Burchthorpe Engineering Global Engineering Firm Find out more</p>

Climate Commitment Platform

Profiling climate action in the built environment

REA
RENEWABLE ENERGY ASSOCIATION

RICS

Revo
Retail. Property. Community.

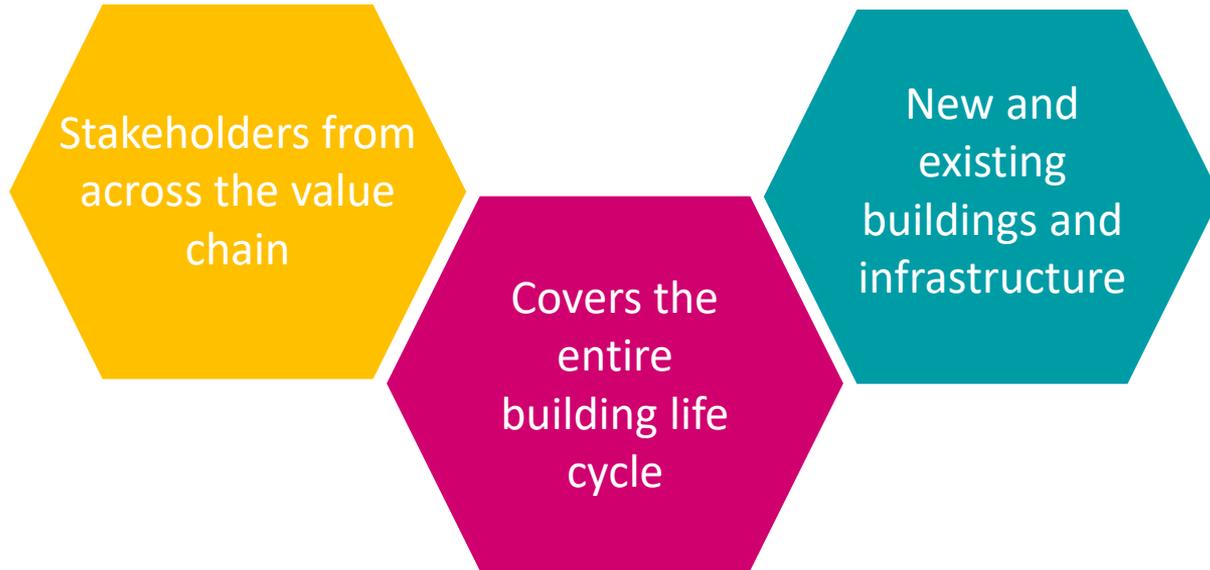
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Net zero whole life carbon roadmap objectives



- 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

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**
Take 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

2030

Net Zero Carbon Buildings Commitment
All buildings within direct control to operate at net zero carbon by 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 Operational Carbon

Net Zero Embodied Carbon

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



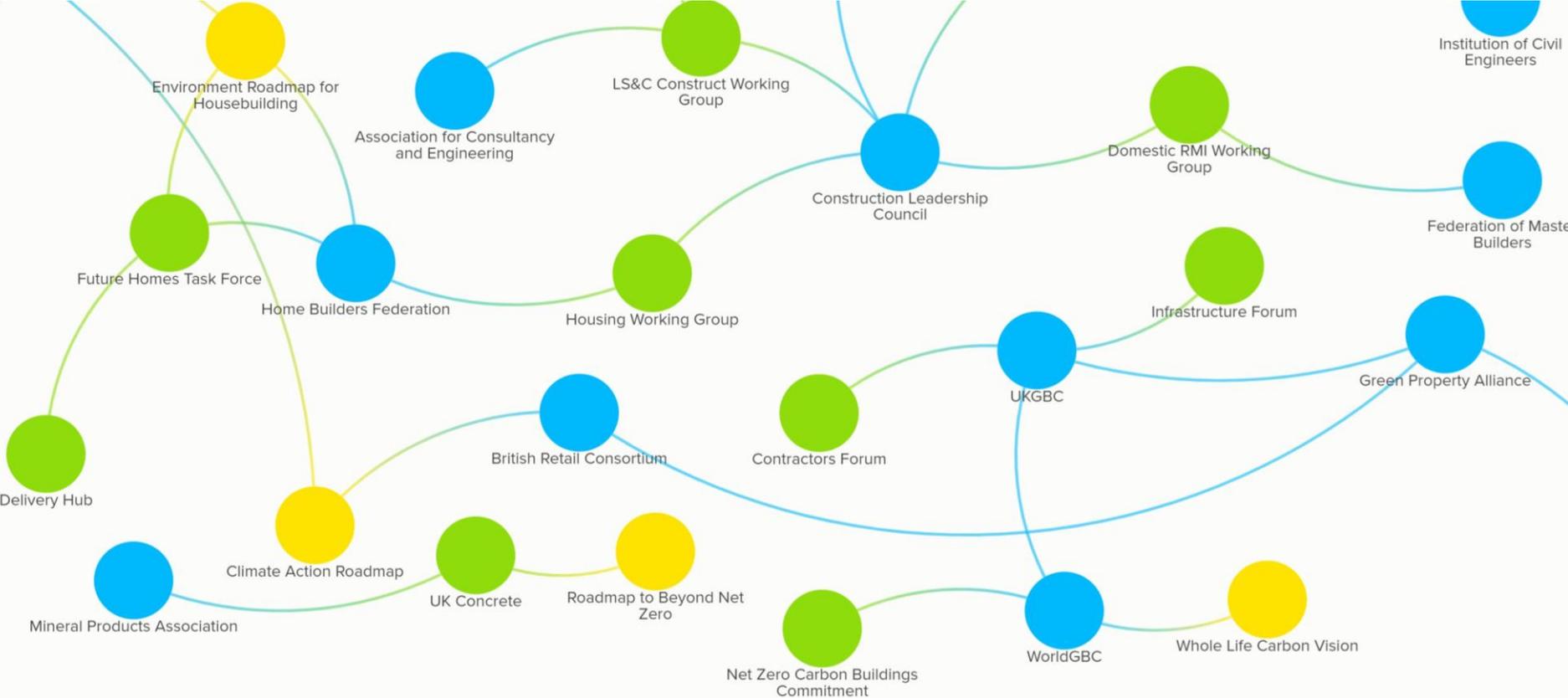
Delivery process



- 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



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



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UK Government Perspective

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Panel Discussion



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Thank you!

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

ANZ@UKGBC.org