National Association Construction Frameworks

By the public sector, For the public sector

Delivering Value and Decarbonisation

How can local government construction projects act as catalysts for a low carbon transformation?

Chris Clarke

Co-convenor, NACF Sustainability Group

/chris-clarke-28a14167

/Build4Zero

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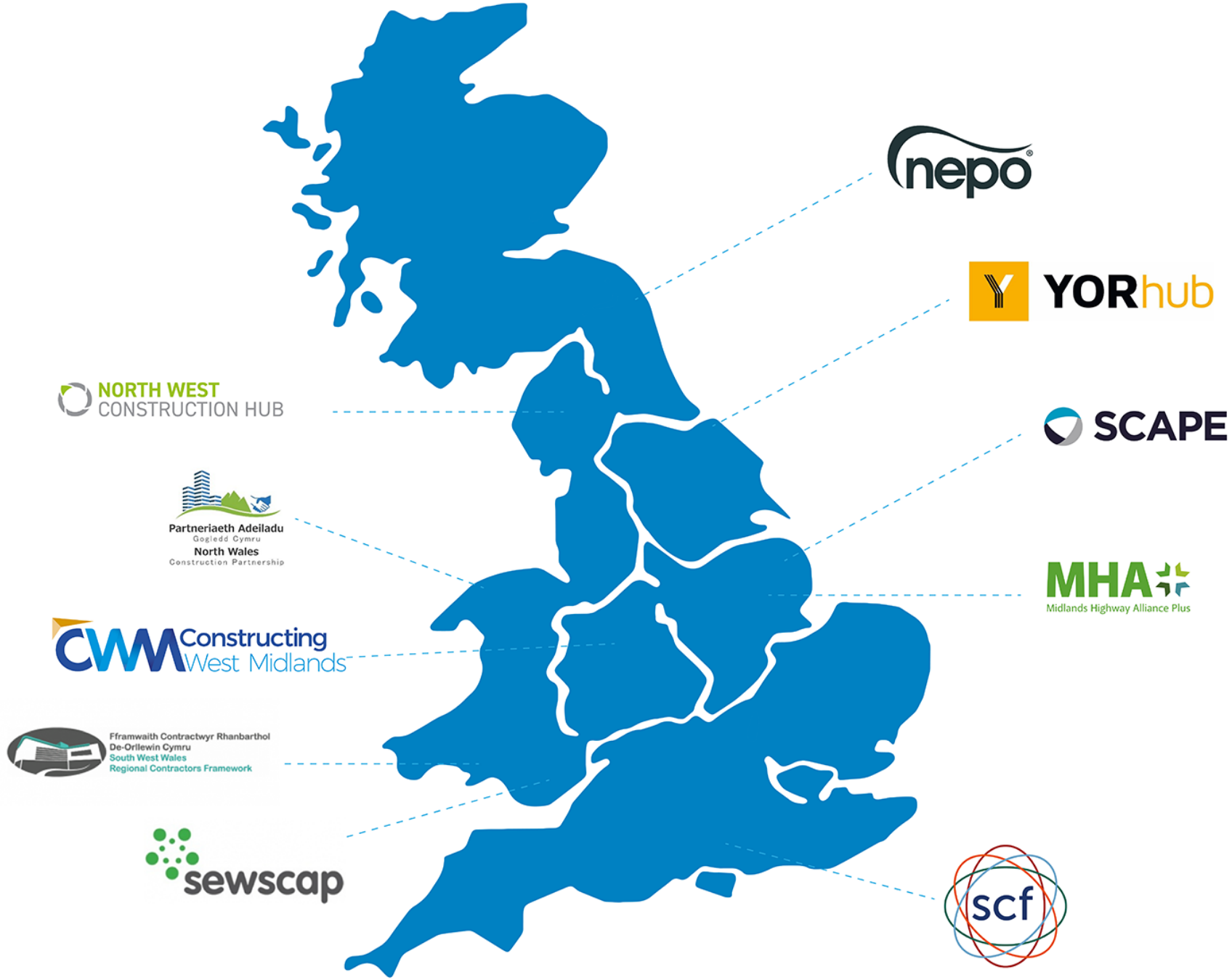
Membership body for public sector built-environment frameworks

- £6.5bn of projects annually
- **procured** and **managed** by public contracting authorities
- All surpluses reinvested in public services
- No commercial / private sector operators



BEST PRACTICE FRAMEWORKS
CONSTRUCTION PLAYBOOK
AND GOLD STANDARD

NACF members have made valuable contributions to the development of the Construction Playbook and our members are ***cited as best practice*** *in "Constructing the Gold Standard"*

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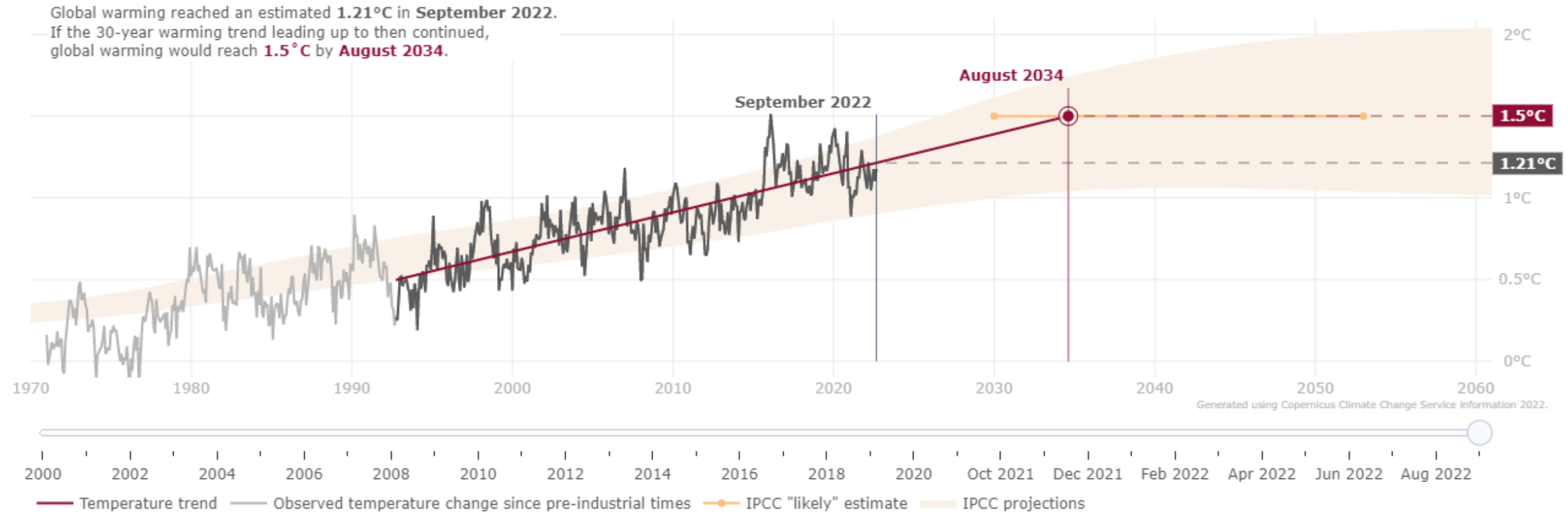
We need to act on major sources of emissions URGENTLY



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#1 Make decarbonisation a visible commitment

sewscap
MHA Midlands Highway Alliance Plus
SCAPE
Partneriaeth Adeiladu Gogledd Cymru North Wales Construction Partnership
nepo
NORTH WEST CONSTRUCTION HUB
Fframwaith Contractwyr Rhanbarthol De-Orllewin Cymru South West Wales Regional Contractors Framework
scf
CWM Constructing West Midlands
YORhub

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Sign up to the Carbon Reduction Code for the Built Environment

https://www-smartinfrastructure.eng.cam.ac.uk/carbon-reduction-code

Part of the ConstructZero initative

Referenced in:

- the UK Construction Playbook
- the UKGBC Whole Life Carbon Roadmap
- UK Government Guidance - Promoting Net Zero Carbon and Sustainability in Construction

CSIC Cambridge Centre for Smart Infrastructure & Construction

Construction Leadership Council

ConstructZERO

UNIVERSITY OF CAMBRIDGE

#1 Make decarbonisation a visible commitment

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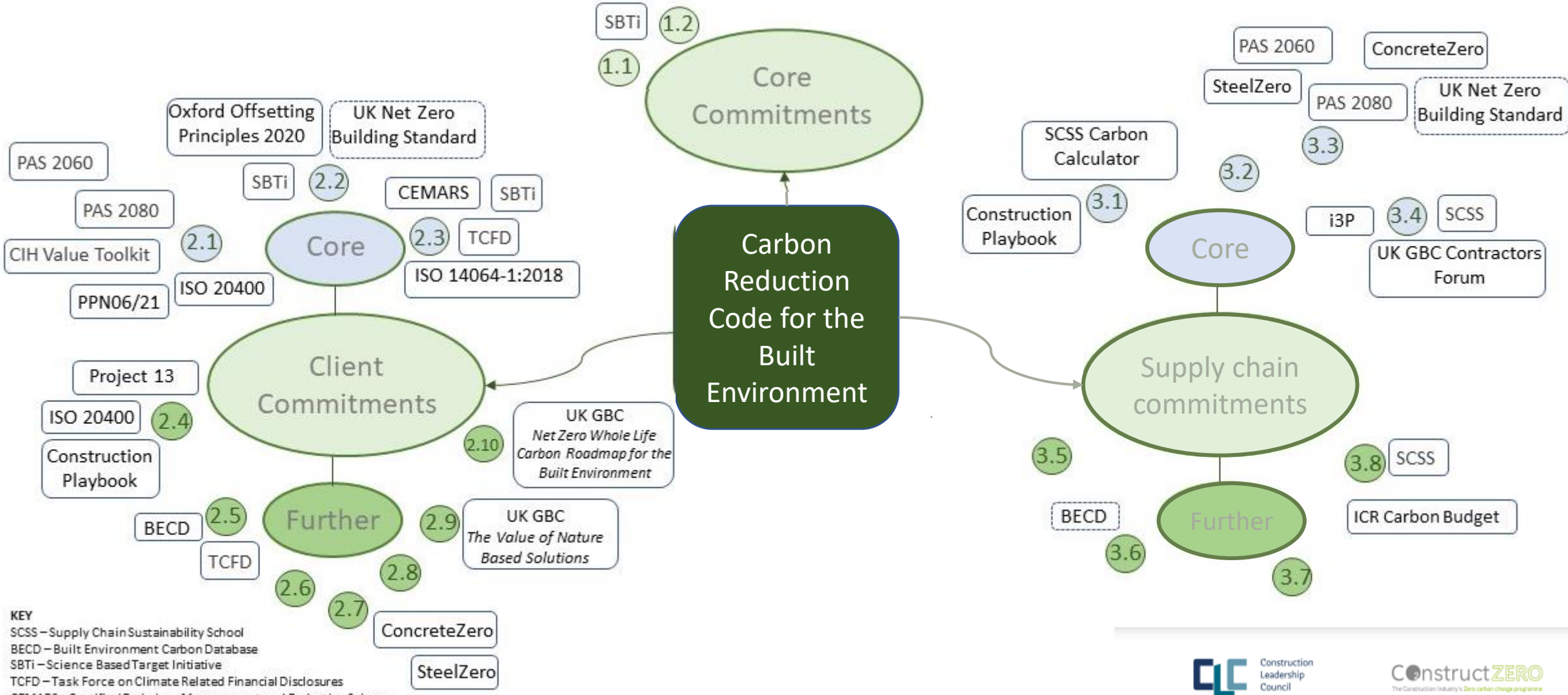
What's the code for?

- Demonstrate your commitment to net zero
- Require supply chain to do the same
- Brings together and aligns sector wide initiatives
- Facilitates cross-sector collaboration to reduce carbon emissions (CO2eq)



KEY
SCSS – Supply Chain Sustainability School
BECD – Built Environment Carbon Database
SBTi – Science Based Target Initiative
TCFD – Task Force on Climate Related Financial Disclosures
CEMARS - Certified Emissions Measurement and Reduction Scheme
PAS 2080 – Carbon Management in Infrastructure Verification (BSI)
CIH Value Toolkit – Construction Innovation Hub Value Toolkit
i3P - Infrastructure Industry Innovation Partnership
UK GBC – UK Green Building Council
ICR – Infrastructure Carbon Review
Note: dashed lines indicate a resource that is still under development

Construction Leadership Council

ConstructZERO
The Construction Industry's Zero carbon change programme

Carbon Reduction Code for the Built Environment

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How does the Code work?

- Three levels of code compliance
- Pledger, Signatory and Champion
- Free to apply. Annually renewed
- Administered by CCSIC on behalf of the CLC
- Steering Group Committee reviews applications

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NACF and the Carbon Code

- The NACF and our members have supported the development of the Carbon Code
- Our frameworks are code compliant
- We use Code Compliance as part of supply chain benchmarking for our contractors

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#2 Put carbon emission targets into action

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#2 Put carbon targets into action

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You can't manage what you don't measure!

Targets have a transformational effect in a number of ways.

Operational carbon targets
– address emissions from the building in-use

Embodied carbon targets
– emissions from the construction process
and from construction materials
(during initial build and maintenance)

Whole life carbon targets – all emissions from the asset lifecycle

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Where to find targets?

- RIBA 2030 Climate Challenge

  https://www.architecture.com/about/policy/climate-action/2030-climate-challenge/resources

- LETI Climate Emergency Design Guide

  https://www.leti.uk/cedg

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Operational carbon = energy efficiency!

Case study: St Sidwells Leisure Centre, Exeter

- Built to Passive House standard
- Ultra efficient in-use

https://constructingexcellence.org.uk/st-sidwells-point-2/

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Embodied carbon = getting serious about materials, transforming the construction process

Why?

- 28% of built environment emissions now….50%+ by 2035
- Requires products to be carefully selected – drives industry change
- Demands collaboration between designer, contractor and manufacturers
- Requires us to challenge our dependency on concrete and steel

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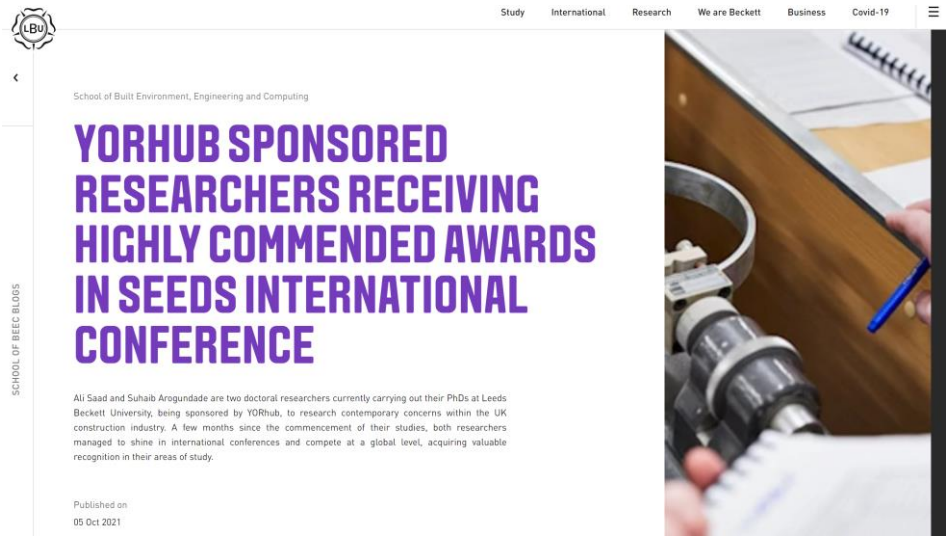
NACF Embodied Carbon Benchmarking

Yorhub sponsored research

- Focus on construction emissions
- Transport and MMC opportunities



Study International Research We are Beckett Business Covid-19

School of Built Environment, Engineering and Computing

YORHUB SPONSORED RESEARCHERS RECEIVING HIGHLY COMMENDED AWARDS IN SEEDS INTERNATIONAL CONFERENCE

Ali Saad and Suhaib Arogundade are two doctoral researchers currently carrying out their PhDs at Leeds Beckett University, being sponsored by YORhub, to research contemporary concerns within the UK construction industry. A few months since the commencement of their studies, both researchers managed to shine in international conferences and compete at a global level, acquiring valuable recognition in their areas of study.

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SCHOOL OF BEEC BLOGS

Embodied Carbon Benchmarking Pathfinder Initiative

- With contractors, for contractors and their clients
- SCF and SCAPE developed for NACF-wide use
- Contractor-led embodied carbon benchmarks
- Tight focus on major building components / assemblies
- Rapid view of current performance and capabilities – ahead of national database (BECD) and standards

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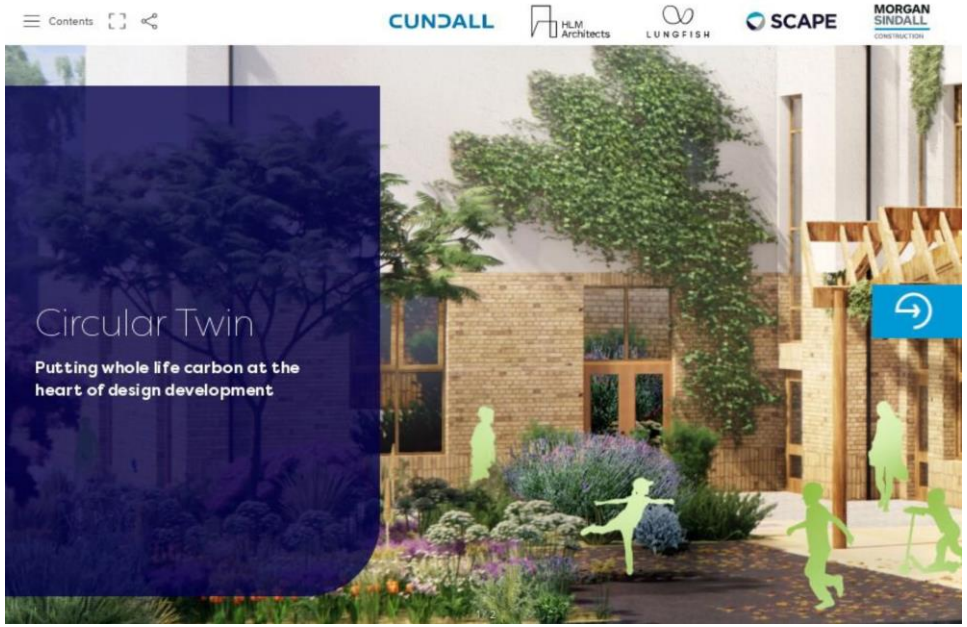
You can't manage what you don't measure!

Whole life carbon = recognising the cost and benefits across the lifespan of the asset

Case study: Circular Twin

- Explores impact of working to whole life targets on design process, project team roles
- Shows WLC to be a measure that demonstrates productivity, value for money as well as environmental responsibility



https://www.scape.co.uk/research/circular-twin

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#3 Make Net Zero part of social value delivery

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#3 Make Net Zero part of social value delivery

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Net zero is not just an environmental consideration

A well designed and planned project should leave a legacy in your community

Case study: Enfield – Meridian Water

- Employment and skills
  – transition to low carbon jobs
  - inspire future workforce
- Health and wellbeing – more liveable, climate resilient buildings
- Local labour, reduced transport, local products

[Enfield - Meridian Water Sustainability Strategy]

#3 Make Net Zero part of social value delivery

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Net zero is not just an environmental consideration

Net zero considerations are reflected in the 2022 update of the national Themes, Outcomes and Measures for measuring social value

https://socialvalueportal.com/wp-content/uploads/2022/06/TOMs2022_Update_Guidance-FINAL.pdf

Practical action in construction projects:

#1 Make decarbonisation a visible commitment

#2 Put carbon emission targets into action

#3 Make Net Zero part of social value delivery

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www.nacf.org.uk