



Delivering Sustainability and Carbon Reduction in Construction

Mike Raven

National
Association
Construction
Frameworks



*By the public sector,
For the public sector*



YORhub

Profile – Mike Raven MSc MCIOB

- National Sustainability Lead for the National Association of Construction Frameworks
- YORhub Client Engagement Lead, East Riding of Yorkshire Council
- Previously Principal Project Manager for East Riding of Yorkshire Council
- MSc Construction Project Management
- Accredited NEC4 Project Manager
- 20 years experience in project management and developing, procuring and managing public sector frameworks



What is the National Association of Construction Frameworks?

- A group of public-sector framework providers aligning aims and requirements
- Recommended in the Construction Playbook



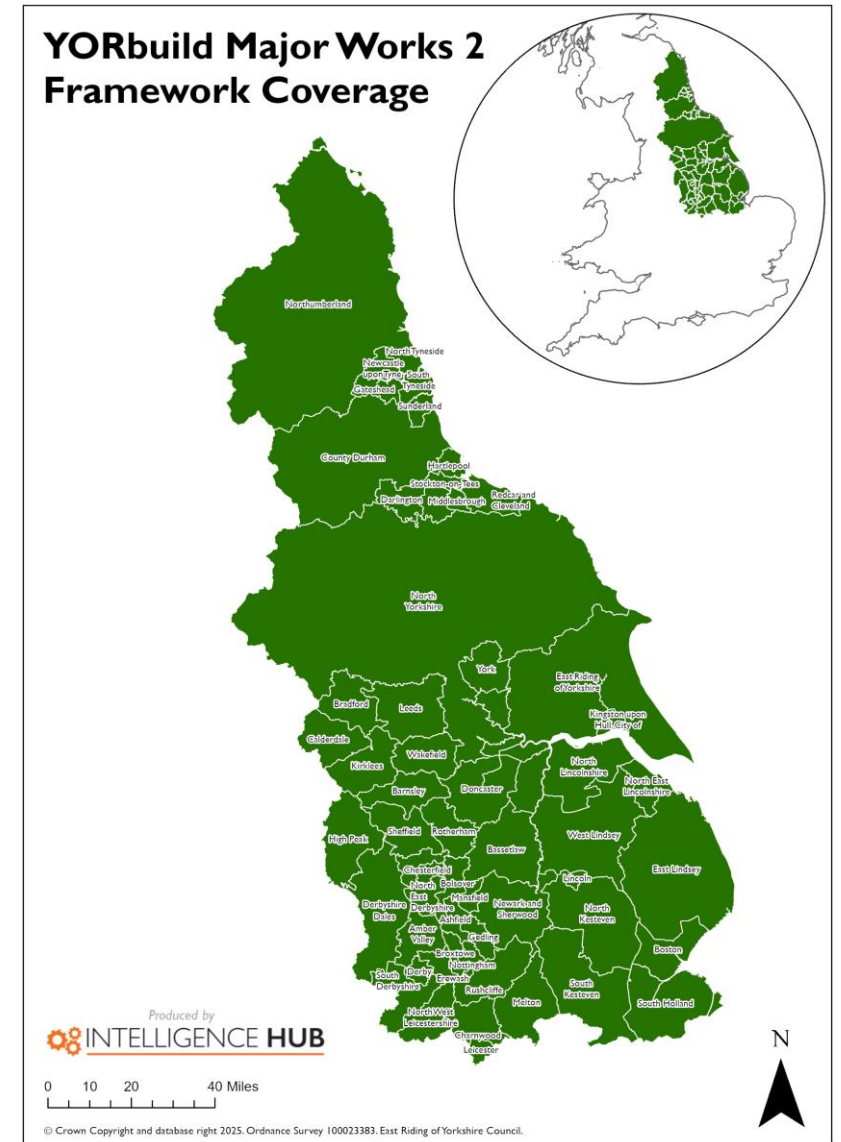
By the public sector,
For the public sector



What is YORhub?

Suite of award-winning & NACF accredited regional procurement solutions comprising of the YORbuild3, YORcivil3, and YORconsult3 frameworks

- Mixture of Mini-competition and direct award routes
- Award winning social value offer
- Easy to access – in the first instance approach Mike Raven (Michael.raven@eastriding.gov.uk) or Caroline Key (caroline.key@eastriding.gov.uk) and we'll guide you through, or if you're already familiar with YORhub speak to one of our friendly YORhub framework managers



Public Procurement - History

Most UK public procurement legislation is thought of as occurring in the past few decades, however the desire to ensure that value for money is achieved and the social good is provided for is something that governments for centuries have looked towards.

Greenland Trade Act



Public Procurement - History



Locationes Censoriae

Public Procurement - Today



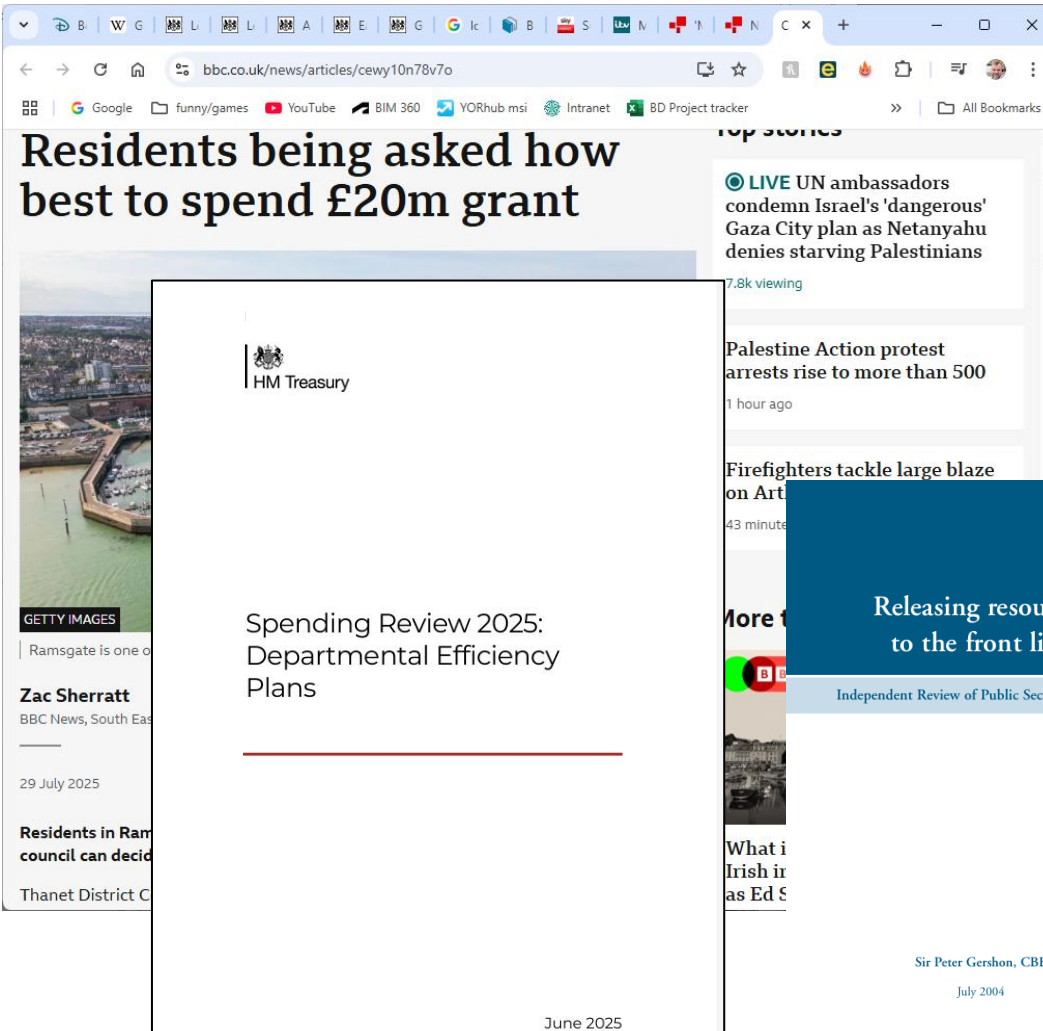
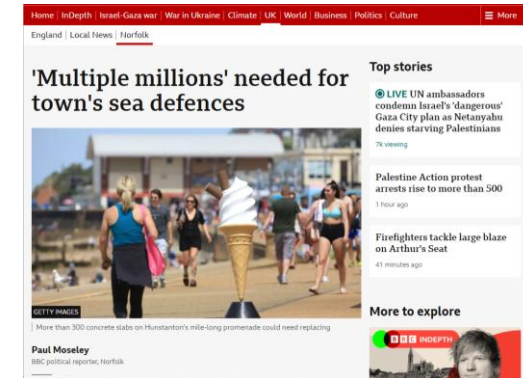
Press release

PM: 'From today Britain will value the hard hat as much as the graduation cap'

Under the Prime Minister's fundamental changes to the education system, 14-year-olds will be able to get early access to technical education, skills training, work experience and connections with employers.

From: [Prime Minister's Office, 10 Downing Street](#) and [The Rt Hon Andy Burnham MP](#)

Published: 27 July 2026



Incorporating sustainability in procurement – consider...



Specifications
& Standards

Construction
Playbook

Procurement
Act inc KPIs

Actually
having an
effect!!!!

Specifications & Standards

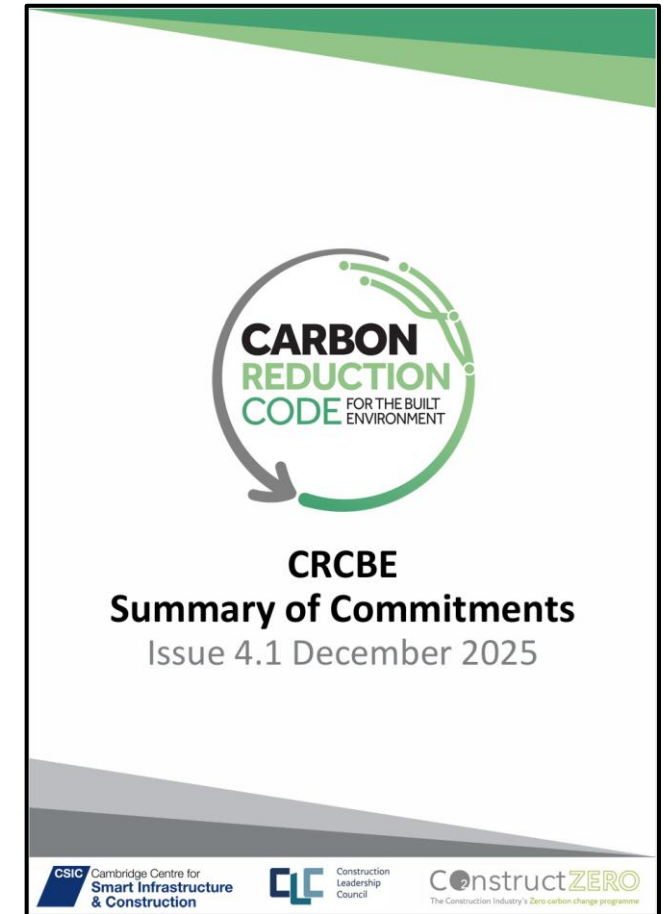


- Choice of materials
- Working methods
- Reporting of carbon data
- Government Buying Standards
- Carbon Reduction Code for the Built Environment

CRCBE



- A simple framework for organisations to examine and test their carbon reduction ambitions, approach and activities and make a public commitment to reaching net zero by 2045, with annual accountability and collaborate on progress.



Construction Playbook



- Early supplier involvement
 - Outcome-based approach
 - Embed into Evaluation Models
-
- Check out “What a Good Tender Looks Like” on the YORhub website and Construction Playbook Carbon Net Zero guidance



Procurement Act inc KPIs

- Consider KPIs on provision of data, rather than performance
- Align with others
- Transparency
- Further change anticipated

Actually
having an
effect!!!!

KEY ACTION

- 1) Understand where your organisation is and what you want to achieve
- 2) Talk to your suppliers and understand their organisational maturity and what is deliverable
- 3) Carbon literacy is more important than contracts!
- 4) Understand the aims of a project and take into account the whole life of a structure
- 5) Align specifications and KPIs
- 6) LEARN!

Finally...



Don't overcomplicate! It's not all about revolutionary products



Rank	Material	Key Notes (Longevity + Performance)
1	Timber (sustainably sourced, e.g., CLT, glulam)	Carbon-storing, good structural performance, long life if detailed correctly.
2	Bamboo	Renewable, fast-growing, good performance but limited durability in some climates.
3	Straw bale (protected, non-load-bearing)	Excellent insulator, low carbon, but needs protection from moisture.
4	Cellulose insulation	Recycled, low energy to produce, good thermal performance, lifespan ~50 years.
5	Cork	Renewable, good insulator, durable if used in appropriate applications.
6	Hempcrete	Breathable, carbon-negative at production, but not structural, moderate lifespan.
7	Rammed earth (stabilized)	Very low embodied carbon, durable if detailed correctly, limited insulative value.
8	Sheep's wool insulation	Renewable, good performance, prone to pests if not treated.
9	Lime-based mortars/plasters	Longer-lasting than cement, lower embodied carbon, breathable.
10	Recycled steel	High embodied carbon, but excellent durability & recyclability → decent long-term impact.
11	Autoclaved Aerated Concrete (AAC)	Lower density = less material; insulating; moderate embodied carbon.
12	Concrete with low-cement mix or GGBS substitute	High embodied carbon but extremely long-lasting and structural.
13	Brick (reclaimed or unfired)	High production carbon if new; reclaimed bricks have better carbon profile. Very durable.
14	Recycled aluminum (e.g., windows)	Very high production carbon, but low maintenance and high recyclability.
15	Glass (double/triple glazing)	High embodied carbon but crucial for daylighting and energy efficiency.
16	Virgin steel (structural)	Long-lasting, but very high embodied carbon; good if reused.
17	PVC (windows, piping)	High embodied carbon and low recyclability; short lifespan.
18	Ceramic tiles (new)	High embodied energy; long-lasting but hard to reuse.
19	Bitumen roofing/asphalt	High embodied carbon and short lifespan → poor long-term carbon profile.

Source: AI generated via BECMAI in carbonetrix.com and chatgpt.com (it had to be used somewhere!)

Sources

<https://www.legislation.gov.uk/aep/Will3/9/15/contents/enacted>

Tarwacka, A. (2024). Between coercion and protection. Locationes censoriae in the times of the Roman Republic. *Hungarian Journal of Legal Studies* 65, 1, 3-17, Available From: AKJournals <https://doi.org/10.1556/2052.2024.00529>

<https://www.gov.uk/government/collections/sustainable-procurement-the-government-buying-standards-gbs>

<https://www.yorhub.com/app/uploads/2023/02/What-A-Good-Tender-Looks-Like-Guidance-note-2nd-edition.pdf>

<https://assets.publishing.service.gov.uk/media/631222898fa8f54234c6a508/20220901-Carbon-Net-Zero-Guidance-Note.pdf>

<https://www.gov.uk/government/publications/the-construction-playbook>



Thanks for your time today!

Any questions?

Mike Raven

michael.raven@eastriding.gov.uk

www.yorhub.com

www.nacf.org.uk

07774 794956