

List of ICE Carbon Champions, quotes and project summaries

ICE Carbon Champions: Mohamed Al Deab (Arup); Mohamed Hussein (Arup)

Mohamed Al Deab, ICE Carbon Champion and Senior Geotechnical Engineer, Arup

"I am proud to be named as an ICE Carbon Champion. I look forward to seeing the application of value engineering principles and emissions calculators on all infrastructure projects. Together, we can minimise our impact on climate change."

YouTube video: <https://bit.ly/3EjtHEF>

Project summary

How to reduce carbon dioxide emissions on infrastructure projects in the Middle East – Arup

Mohamed Al Deab and Mohamed Hussein have been looking at how to reduce carbon dioxide emissions on infrastructure projects in the Middle East. Here, they used a systems approach, value engineering principles and an emissions calculator on three case study works: temporary retaining walls for a deep tunnel; reuse of site-won material from an open-cut tunnel; and design of piled raft foundations.

ICE Carbon Champion: Ben Hellowell (Transport for London)

Ben Hellowell, ICE Carbon Champion and Senior Project Engineer, Transport for London (TfL)

"I'm delighted to become an ICE Carbon Champion and see the work done on the Colindale Station Redevelopment project recognised by the ICE. TfL is developing its approach to whole life carbon management in the delivery of infrastructure and Colindale successfully trialled integrating carbon with all decision making, as well as client leadership in driving carbon outcomes."

"This was done by clearly articulating the vision and requirements, as well as using the contract to explore opportunities, drive reduction and share risk and reward with the supply chain. The output has been both reduced carbon and reduced cost in the design, construction and use phases."

YouTube video: <https://bit.ly/3kdO8us>

Project summary

Colindale Station Redevelopment – Transport for London

Ben Hellowell worked on Transport for London's Colindale Station Redevelopment, using carbon management protocols and PAS2080 principles in all aspects of its design phase of the project- measuring, managing and reducing whole life carbon and cost. The panel were delighted to learn that this resulted in reductions of 207tCO₂e, equivalent of 16 per cent to the year 2100.

ICE Carbon Champion: Peter Roseff (Stantec)

Peter Roseff – ICE Champion and Senior Engineer, Stantec

"I'm honoured to be named as an ICE Carbon Champion. Reaching net zero has never been more urgent and I always try to look for ways to reduce carbon in my projects. I was really pleased to be able to find an innovative way to help our client save 25.1 tonnes of carbon in their road design by introducing them to warm asphalt; I hope they go on to use it in future projects. I'm very proud that my work is being recognised by the ICE as an example of real carbon reduction in practice."

YouTube video: <https://bit.ly/3hx0aNO>

Project summary

SouthPoint Business Park – Stantec UK

Peter Roseff showcased Stantec UK's SouthPoint Business Park project in Chippenham, which utilised warm asphalt in the design aspect of the project and ensured a reduction of 25.1 tonnes in carbon.

ICE Carbon Champions: Nick Moss (BAM Nuttall); Adam Ferguson (BAM Nuttall); Steve Caucutt (BAM Nuttall); Aaron Lucid DB Group (Holdings); Andrew Rayner (Network Rail)

Nick Moss, ICE Carbon Champion and Senior Agent, BAM Nuttall Ltd

“As a society we all have collective responsibility to seek to reduce our carbon emissions wherever possible. The first use of Cemfree on the UK’s railway at Chatham Station is a significant step towards meeting Network Rail’s carbon saving targets, and the government’s long-term goal of net zero by 2050. It was a pleasure to work collaboratively with our client and supply chain, at Hanson UK and DB Group, to help demonstrate the benefits and to enable the use of Cemfree on this project. We are delighted to have been recognised as ICE Carbon Champions.”

Project summary

Chatham Station AfA Scheme – BAM Nuttall/DB Group (Holdings) Limited/Network Rail

There is a requirement to in-fill a redundant cellar beneath the Platform at Chatham Station, this is enabling works to facilitate the construction of a new Access for All structure at the station. It requires 300m³ of structural fill material. Instead of proposing to in-fill with OPC concrete, this group has proposed a CemFree carbon-reduced product.

ICE Carbon Champions: Kiro Tamer (Keltbray); Darren James (Keltbray)

Kiro Tamer, ICE Carbon Champion and Group Energy & Carbon Manager, Keltbray

“Our drive to digitise our processes in order to visualise our efficiency and reduce carbon emissions is key to our net-zero strategy. We are delighted to have been recognised for our efforts and to have become an ICE Carbon Champion.

“Our industry needs to come together to speed the rate of change in order to significantly reduce our emissions and what better way to do it than sharing best practices with ICE who are supporting and coordinating the industry’s quest to net zero.”

Project summary

Fuel Saving Tournament – Keltbray

Keltbray launched a tournament for its HGV drivers, to incentivise them to review their driving style and become more fuel-efficient.

This fuel efficiency tournament involved rewarding the driver with the biggest efficiency gain with a £250 voucher at the end of each month.

ICE Carbon Champion: Ian Fawcus (Keir)

Ian Fawcus, ICE Carbon Champion and Project Manager, Keir Infrastructure

“The Helston Flood Alleviation Scheme was completed in time for the first winter storm of 2020, better protecting 121 homes in West Cornwall. Working collaboratively with our client, the Environment Agency, Kier has carbon reduction at the forefront of every decision made on site and the best carbon solution is rarely the easiest option. To gain the accolade of ICE Carbon Champion is testimony to the hard work by all the team.”

Project summary

Helston (River Cober) Flood Alleviation Scheme – Keir

An in-house redesign of a new flood bank enabled use of free material from a local development site under a Protocol by sustainable land reuse charity, CL:AIRE. This saved nearly 450,000 km tonnes to import, and prevented over 200,000 km tonnes going to landfill/recycling.

ICE Carbon Champions: Adam Robinson (Environment Agency); Kaye Pollard (Mott MacDonald); Charlie Bell (Mott MacDonald)

Adam Robinson, ICE Carbon Champion and Environment Agency Project Director, Boston Barrier

"The Boston Barrier team are very proud to be recognised by the ICE as Carbon Champions. The project team have strived to continuously look to reduce carbon within the design and build phase and incorporate carbon offset and energy efficient systems within our major infrastructure project. We see this recognition as a great platform to influence and promote how major projects can not only reduce our built-in carbon but our operational carbon footprint as well.

"We see carbon reduction and utilisation of low carbon materials and products as the new normal and are championing the way forward in the Environment Agency on the Boston Barrier with our delivery partners from BAM Nuttall and Mott MacDonald."

Project summary

Boston Barrier - Environment Agency/ BMMJV/Mott MacDonald

The team have looked at three main areas for efficiency for the Boston Barrier, including energy efficiency in the control building, low carbon concrete through the inclusion of ground-granulated blast furnace slag, or ggbs (a by-product of the iron industry) and overall efficiency in design. It would have been a simple proposition to deliver the project in a 'conventional' way, but instead actively incentivised the team through CEEQUAL and as the client reinforcing the need for innovation and low carbon solutions.

ICE Carbon Champions: Ruth Gregory (FJD Consulting (& Design) Ltd); Simon Moon (FJD Consulting (& Design) Ltd); Dom McIlgrew (FJD Consulting (& Design) Ltd); Chris Jefferson (FJD Consulting (& Design) Ltd)

Ruth Gregory, ICE Carbon Champion and Design Engineer, FJD Consulting (& Design) Ltd

"We are thrilled at FJD Consulting to be awarded carbon champion status for our use of the Carbon Analysis Tool within engineering design".

Project summary

Ancillary Design of Railway Trackside Structures - FJD Consulting (& Design) Ltd

The group showcased a carbon calculation tool to inform design decision making, such that alternative design options can be compared with respect to expected carbon. They adopted measures to score design options for construction of ancillary structures based on their CO₂e in addition to or instead of conventional option selection. This brought about a relatively simple process, which enable measurable outputs to be demonstrated.

ICE Carbon Champions: Graham Lloyd (Willis Bros.); Cian McGuinness (RPS Group); Douglas Halliday (Willis Bros.); Adele Ramsden (Scottish Power Energy Networks); Stephen Bisset (Scottish Power Energy Networks); Keith Fernandes (Willis Bros.); Chris Landsburgh (Willis Bros.); Stuart Angus (Willis Bros.).

Project summary

Glasgow Airport Investment Area – cable crossing – Willis Bros Civil Engineer Ltd & Scottish Power Energy Networks & RPS Group

Principal designer and principle Contractor on the Glasgow Airport Improvement Area project. They adopted the PAS 2080 framework for Carbon Management in Infrastructure and with this placed a 20% reduction on the tender and design stage baseline – which it currently is exceeding based on preliminary as-built calculations. A section of their new road had to cross Scottish Power Energy Network's (SPEN) 132kV high voltage, where a carbon crunching concept that was taken from design to construction saved over 1,500 tonnes of carbon.