

DELIVERING NET ZERO

for **BRITISH**

ceramics

2023

**Industry Decarbonisation
Conference & Awards**

**Promoting & Celebrating
Industry Best Practice
Research & Collaboration**

FOREWORD

We're delighted to update you on [Delivering Net Zero for British Ceramics](#) 2023, the sector's Decarbonisation Conference which this year was held at Staffordshire University.

This annual event is now our focal point to coalesce and discuss how UK ceramic manufacturers are contributing to tackling climate change ... past, present and future. It is also about ensuring we bring everyone along on the journey so we were delighted to see so many members and other stakeholders on the day, comparable with last year.

Enclosed is an overview of the day, as well as of the Industry Decarbonisation Award entries - recognising exemplar projects, initiatives, and individuals within the sector - to help share best practice and learning with others. Thanks to all BCC members engaging with the awards, and especially congratulations to this year's winners! We encourage others to do the same in future years as we continue to showcase the industry.

I'd like to thank all award judges for giving up their time and sharing your expertise, and our sponsors and exhibitors for supporting the event and our members.

Delivering Net Zero for British Ceramics will return soon ... we will keep you posted on our plans! In the meantime [please get in touch with the BCC](#) for further details.

Lee Brownsword
Senior Manager - Industrial & Environmental Policy



CONTENTS

<u>BCC President's address</u>	<u>Speakers</u>
<u>Awards</u>	<u>Sponsors</u>
<u>Exhibitors</u>	<u>2023 attendance</u>
<u>British Ceramics: Towards Net Zero - sector support programme</u>	

BCC PRESIDENT'S ADDRESS

The great attendance at *Delivering Net Zero for British Ceramics 2023* is testament to how serious the sector, supply chain and stakeholders treat the net zero transition challenge.

We continue to raise the bar to highlight the importance of UK ceramics and the great work already being undertaken by BCC members. In particular, we are profiling just how essential ceramics are, not only to achieving a net zero society, but many fundamentals of day-to-day life where ceramics play a role. Also, emphasising the sector being 'Dispersed' (not in the big industrial clusters but often rural areas and in proximity to raw materials), 'Diverse', (in the products being produced, businesses and processes) and just how ceramics is 'Driving Decarbonisation', with around £750m invested by the industry over the last decade alone.

The Conference helps to bring issues to the fore; although with companies operating in a commercially-competitive market many specific details cannot be shared. We have found different ways the industry can work collaboratively in disseminating best practice, pooling of resources / expertise and companies supporting each-another whilst not compromising confidentiality or competition law. For a sector dominated with SMEs this is crucial to bring everyone along on the journey.

With no 'one-size fits all' decarbonisation solution for UK ceramics a range of solutions are going to be required, each happening over different timeframes, with unknowns, challenges and support needs. All stakeholders have a role in helping to decarbonise the sector.

The Decarbonisation Awards highlight some of the sector's ongoing success stories and recognise what many companies have been getting on and doing for many years! Read-on for further details.



We especially want to thank to the JJ Charitable Trust who have continued to support us through the *British Ceramics: Towards Net Zero initiative* as their support is having a tangible impact on what we can deliver and are helping to kick-start new, beneficial activities for BCC members.

Please continue working with the British Ceramic Confederation in *Delivering Net Zero for British Ceramics*.

Alan McLelland
Vice President Of Technology, Morgan Advanced Materials

CONFERENCE PROCEEDINGS

Roland Harwood, Founder



LIMINAL

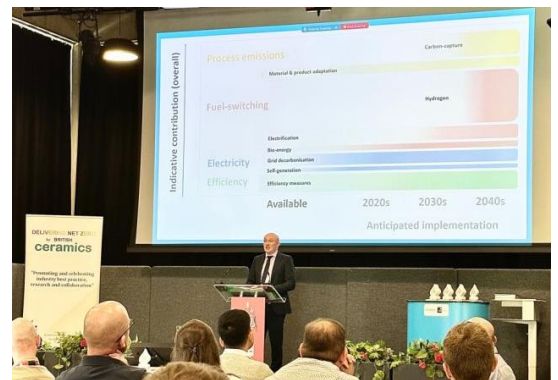
Roland opened the day emphasising how the uncertainties of a future world should be embraced as an innovation opportunity, rather than threat, with navigating the net zero transition being the biggest challenge we face.



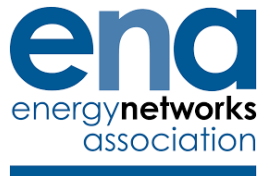
Lee Brownsword
Senior Manager - Industrial & Environmental Policy

Lee spoke about the sector support activities already in place and plans for the future.

In particular, this focussed on ongoing updates to the UK Ceramics Industry Decarbonisation Roadmap (2023) and an SME Outreach programme (planned for 2024), both being kindly supported by the JJ Charitable Trust.



Lawrence Slade, Chief Executive



A crucial factor on which UK ceramics depends is energy supplies. Lawrence gave an update on developments in decarbonising the electricity and gas networks.

There was particular interest in the ENA's [hydrogen vision for the UK](#) ([click link to access video](#)).

Pre-recorded messages from:



Lord Callanan
Minister for Energy Efficiency and Green Finance

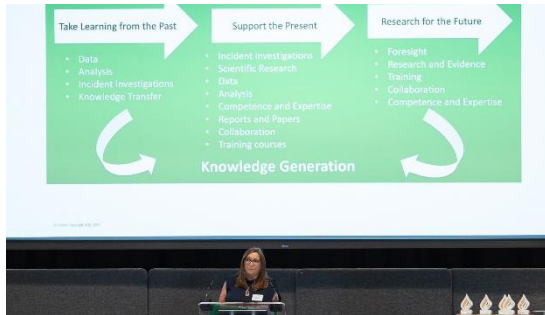
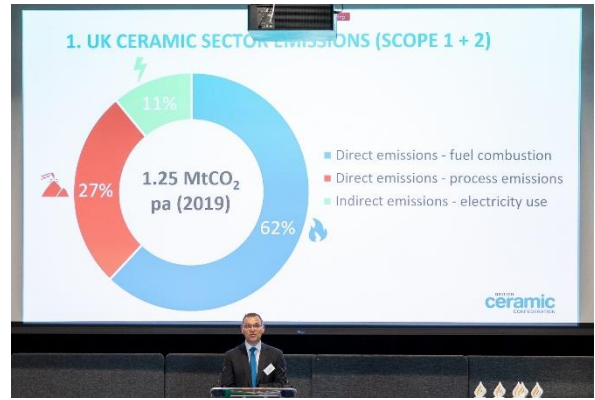


Nusrat Ghani MP
Minister for Department of Business & Trade

Dr Andrew McDermott, Deputy Chief Executive



Andrew gave an update to the Hydrogen for the Ceramics Sector project, with the project now in Phase 2 and progressing with further demonstrator trials.



Lorraine Gavin, Net Zero Strategic Lead



An overview of work by the HSE, in considering health and safety issues connected to the net zero transition, was given.

Manufacturer Updates were also given on progress, current activities and plans from:



Q&A PANEL - DELIVERING NET ZERO FOR BRITISH CERAMICS



There was a great Q&A panel discussion (participants detailed above) covering insights from the day, biggest priorities and challenges for decarbonising ceramics manufacturing, given the sector's numerous dispersed sites, comparative small industrial emissions (versus other EIs) and predominantly small- and medium-sized businesses.



Supporting your journey to net zero

Inenco is trusted by some of the UK's leading organisations to support their journey to net zero.

We're working with manufacturers across the country to ensure they have access to the right expertise, insights, tools and support to deliver on their energy and carbon reduction targets.

To discuss how we can help you to develop, implement and monitor your net zero transition plan then get in touch today.

Find out more



www.inenco.com
01253 785 294

Proud sponsors of the
Delivering Net Zero for
British Ceramics conference
and awards 2023.















2023 INDUSTRY DECARBONISATION AWARD WINNERS

Awards are a key Conference feature, to recognise individuals and companies who are driving forward decarbonisation of UK ceramic manufacturing. 2023's Categories and Winners were:



Delivering Decarbonisation Award

Recognising the extensive efforts being taken, across a range of projects and initiatives, in delivering decarbonisation

<p>Net Zero Business Advocate</p>	<p>Employee Engagement</p>	<p>Decarbonisation In Action</p>
<p>An individual who is dedicated, passionate and promoting / delivering carbon reduction</p> 	<p>Companies with effective employee engagement in energy and carbon reduction strategies</p> 	<p>Projects / initiatives delivering tangible carbon reduction</p> 
<p>Individual Recognition</p>	<p>Decarbonisation Trailblazers</p>	<p>SME Decarbonisation Award</p>
<p>Individuals who are outstanding contributors to the ceramics industry</p>    	<p>Progressing innovative decarbonisation technologies</p>  	<p>SME companies implementing decarbonisation projects</p>     

Entries were assessed with set criteria with the process kept simple, encouraging members (large or small) to enter. Judging was carried out collaboratively by BCC / award sponsors.

Enclosed is a summary of all shortlisted entries and winners (details that can be publicised) to assist in the sharing of best practice and so other companies can consider potential projects and initiatives they may be able to take away and implement.



Delivering Decarbonisation 2023 Winner

Awarded by:



Imerys Minerals took away the 2023 Delivering Decarbonisation Award, in recognition of the breadth of activities the company has (and continues) to take, as well as its openness and transparency in sharing details of ongoing projects / activities in continuing to decarbonise.

These include:

- Generating (and facilitating) over 35 megawatts of renewable energy on land in their ownership including four 500kW wind turbines, 8 solar and two hydro schemes (supplemented by further renewable energy procurement). Also continue to investigate more renewable generation opportunities
- Commitment to hydrogen, as a green hydrogen off-take partner with Carlton Power
- Participation in the Industry of Future Roadmap programme
- Battery-grade lithium production through British Lithium joint venture
- 'I-Nergise' energy performance evaluation programme
- 'I-Suggest' ideas sharing initiative within company
- Annual company Sustainability Challenge within company
- Participation in the UK Ceramics Industry Partnering & Mentorship scheme
- An active advocate of ceramics and, as an industry supplier, support the UK ceramic sector's decarbonisation



Gary Bell, Operations Services Manager at Imerys Minerals.


Net Zero Business Advocate

Sponsored by:

Recognising individuals' dedication, passion and efforts to promote and deliver carbon reduction at their company



Employee nominations were provided to the BCC, with information on the contribution they make in decarbonising their company as well as personal and professional development:

Shortlist	Key commendations / stand-outs
 <p>Andrew Craddock Manufacturing Development Director</p>	<p>A knowledgeable leader and decarbonisation advocate across a number of projects in the business. Particularly playing a key role in ongoing progress of the Atlas 'Pathfinder' project.</p>
<p>Darren Bowkett Technical & Strategic Projects Director</p>	<p>Extremely valuable to not only Ibstock, but the entire sector. 'Quietly advocates' to drive change through deep technical understanding, strong relationships and connections across the industry. A true industry expert and knowledgeable individual.</p>
<p>Emily Landsborough Head of ESG</p>	<p>Brings energy, passion and knowledge and has been the driving force for the development and publication of Ibstock's ESG 2030 Strategy and Net Zero Roadmap, released in March 2022</p>

Entries were considered against criteria around: spearheading change, internal engagement, dedication / commitment, progress / transition, external collaboration, and overall impact.

Net Zero Business Advocate 2023 Winner Darren Bowkett



Darren Bryant (Heatcatcher CEO) commented:
"Darren stood-out in terms of his value; both clearly to Ibstock as a company but also the entire sector. A deep technical understanding of a breadth of energy / climate areas, strong connections across the industry and (as Lee reliably informs me) extensive experience and engagement in various sector activities through BCC over many years.

A longstanding industry advocate for whom Ibstock colleagues and BCC wish to see being acknowledged and also to express their gratitude.

Well done Darren!"



Darren Bowkett (right) receiving the Award, presented by Darren Bryant from Heatcatcher.




Employee Engagement Award

Recognising programmes demonstrating effective engagement with employees in energy and carbon reduction strategies

Sponsored by:



Companies provided BCC with various details on how their businesses approach employee engagement as a strategy to reduce energy use and carbon emissions, as outlined below:

Shortlist	Best practice highlights / commendations
	<p>Developed a bespoke course based on IEMA training materials and tailored to company needs (now IEMA approved) for management teams.</p> <p>Employees also have access to digital noticeboards, newsletters, site energy teams; and regular review meetings are held to identify training needs. Employee onboarding also covers company sustainability issues.</p>
	<p>Recently created a new, dedicated role of Systems and Process Improvement Manager to drive employee engagement in energy reduction.</p> <p>The programme involves staff training, idea generation / capture, various communication tools and openly tracking / sharing progress against delivery of carbon reduction.</p> <p>Since inception, and over a relatively short period of time, virtually all staff have undergone the new engagement, informative and idea-generating process. This has already highlighted a number of actions being investigated by the company.</p>
	<p>Operators on a particular site being trained to make ‘real-time’ decisions, based on various data / parameters, to select optimal heat source: either utilising recovered heat (variable) or a gas burner.</p> <p>This led to large energy / cost savings versus previous years.</p>

Entries were considered against the [Energy Conscious Organisation matrix scoring criteria](#) as well as overall level of detail / supporting information provided.

Employee Engagement 2023 Winner



John Mulholland (EnCO) commented:

“What really stood out about Denby’s entry was the pace at which a new employee engagement roll-out programme had been made, what had been achieved over a relatively short period of time and the appointment of a dedicated Systems & Process Improvement Manager to drive their initiative.

Clear evidence was given on engagement tools, metrics and actions being set out and clearly a lot of thought had gone into embedding employee engagement across the whole business.

Elements of Denby’s participation with last year’s Employee Engagement Learning Sessions also shone through, which was great to see in terms of best practice in action. Well done!”



Simon Grant (Quality & Compliance Manager), Julian Bell (Systems & Process Improvement Manager) & Joellen Fowler (Environmental Officer) from Denby

Decarbonisation In Action

Recognising projects / initiatives delivering tangible energy-efficiency / carbon reduction

Sponsored by:



Companies provided BCC with details on various projects or activities that they have / are undertaking, as outlined below:

Shortlist	Best practice highlights / commendations
	<p>Product lightweighting by increasing void size thereby using less raw materials (lowering process emissions), reduced natural gas requirement for firing (reducing fuel emissions) and reduced emissions in product transport.</p>
	<p>Collaboration with consultant over carbon footprint measurement and identification of areas of potential savings. Efficiency improvements have been made and renewable energy generation (solar) on adjacent owned land.</p>



A range of projects / activities implemented such as additional energy metering in key areas, a 2050 Energy Roadmap (via Industry for Future programme), significant (ongoing) renewable energy generation on-site (solar) supplemented by renewable energy procurement, involvement in Phase 1 Hydrogen Research, heat recovery, burner technology upgrades, investment in kilns, kiln burner technology upgrades and LED lighting.



A range of projects / activities such as establishment of a Decarbonisation Strategy, data collection and analysis, renewable energy procurement, target setting and reporting, review of funding opportunities / technology partners, contractor engagement, EPD development, kiln rationalisation, upgrades to heat recovery and compressed air.



Evaluation and efficiency improvements to an isolated compressed air system on-site, delivering electricity- / carbon- / cost-savings.

Stages included data collection during standby / load, thermal imaging of pipework, technical and engineer meetings, specialist contractor engagement, options appraisal through to implementation.

Entries were judged against criteria on: relative energy / CO₂ savings (or potential savings, for ongoing projects / trials), novelty, current deliverability, complexity, submission quality, supporting data / evidence, scale-ability and longevity (permanence).

Decarbonisation In Action 2023 Winner



Jordan Rassas (Inenco) commented:

“Churchill China stood-out, predominantly for the relative carbon savings achieved but also level of detail provided on the breadth of projects undertaken.

From Business Road-mapping (as part of Government’s Industry for the Future programme), data collection, renewable energy generation as well as procurement, R&D activities and implementation of other efficiency-related projects.

Well done to all involved!”



Marc Sinclair, Group Financial Controller & Company Secretary at Churchill China

Individual Recognition Awards

Awarded by:



Mark Thompson - Health, Safety & Environment Officer, Johnson Tiles

for longstanding engagement with the BCC and a huge amount of sector advocacy, support and activities, such as joint-Chair of the BCC Energy & Emissions Committee and hosting countless Government Official / MP visits.

Sarah Le Gresley - Innovation Director Michelmersh Brick Holdings (MBH)

has a real passion for raising the profile of sustainability credentials for clay building products, and has recently set-up [Sustainable Brick.com](https://www.sustainablebrick.com) as a key resource to help spread the word all about clay brick and challenges of decarbonising ceramic manufacturing ([summarised in this interview](#)). Sarah was amongst key staff involved in MBH's HyBrick project.



Jafar Daji - Technical Manager Parkinson-Spencer Refractories

from one of our SME members, who has extensively embraced all sector support opportunities and is pushing ahead some key research projects. Parkinson-Spencer Refractories was one of the first companies to sign-up to the *British Ceramics: Towards Net Zero* initiative and Jafar has engaged in all free support sessions / projects to-date.

Georgina Salt - Environmental Manager Ideal Standard

another longstanding BCC Energy & Emissions Committee Chair. Georgina has been heavily involved in a lot of our work and contributed an enormous amount of experience and expertise over the years.



Special Recognition SME Decarbonisation

Awarded by:



Northcot Brick ... as well as a longstanding renewable electricity (solar) generation, recently obtained ISO 50001 certified energy management status (no mean feat for a small business) and upgraded their heat recovery system (with grant funding from the Industrial Heat Recovery Scheme).



DSF Refractories & Minerals ... a suite of activities from general efficiency improvements, mobile plant electrification, and various R&D activities on fuel-switching (hydrogen and bio-energy) and product development (incl. refractories for all hydrogen-fired furnaces).



Alex Patrick-Smith, Chairman of Hinton Perry & Davenhill

Hinton Perry & Davenhill ... a variety of investments in energy-saving technologies, efficiencies and production rationalisation; as well as undertaking studies into heat recovery (to assess the techno-economic viability of waste heat exchangers, supported by the Industrial Energy Transformation Fund) and into potential collaborative carbon-capture and use. The company is also involved in BCC's hydrogen project



Jafar Daji, Technical Manager at PSR



Parkinson Spencer Refractories

... an impressive integrated system of on-site renewable electricity (wind) generation / energy storage / voltage optimisation systems, Transforming Foundation Industries' funded R&D (in collaboration with Sheffield Hallam University / BCC) looking at reducing energy consumption in refractory manufacturing, involvement in BCC's hydrogen project and switching to electric vehicles.

Decarbonisation Trailblazers

Recognising the progression of innovative decarbonisation technologies



... for progression of larger-scale firing by Electrification



Stephanie Palmer (Head of Sustainability), centre with Wienerberger's Decarbonisation Trailblazer award alongside Keith Jackson (Head of Thermal Process and Projects) and Emilande Renard (Thermal Processing Engineer)



... for R&D activities relating to firing with Bio-energy & Hydrogen



DSF Refractories & Mineral's Managing Director Neale Parkin (left) and Strategic Operations Director, Matt Handley, with SME Decarbonisation & Trailblazer awards



2023 EVENT SPONSORS

Thank you for helping to support the event:



<https://inenco.com>
<https://linkedin.com/company/inenco/>
<https://twitter.com/inenco>

<https://brick.org.uk/>
<https://linkedin.com/company/brick-development-association-bda-/>
<https://twitter.com/BricksUK>



2023 EXHIBITORS



The *British Ceramics: Towards Net Zero* initiative is a free sector support programme (which BCC members voluntarily sign up to) providing assistance to companies, engagement with stakeholders and promotion of progress, challenges and opportunities in the sector's continued decarbonisation.

Kindly supported by:

THE J J CHARITABLE TRUST

We are delighted to report that in 2024, through support of the JJ Charitable Trust, an SME Company Outreach programme will be undertaken.

As in previous years (since inception of the initiative) we will look to put on further informative learning sessions in 2024, shaped by polls carried out at the 2023 Conference.

To sign-up to *British Ceramics: Towards Net Zero* please [contact the BCC](#). You can also find out more information at [BCC's Decarbonisation webpage](#).

ORGANISATIONS REPRESENTED IN 2023

Around 140 attendees from the UK ceramics industry, industry suppliers and stakeholders attended on the day, including manufacturers of all ceramic product groups (clay bricks, clay roof tiles, clay drainage pipes, tableware / giftware, wall / floor tiles, sanitaryware, refractories, technical ceramics, material suppliers, equipment suppliers), academics, Government policymakers and regulators, technology providers, consultants, NGOs:

Aldersgate Group	Health & Safety Executive
Aldershaw Handmade Tiles	Heatcatcher
AMRICC	Hinton, Perry & Davenhill
BOC UK & Ireland	Ibstock
Brick Development Association	Ideal Standard
British Ceramic Confederation	Imerys Minerals
Carlton Carbon	Inenco
Carlton Power	International Syalons
CDS Group	Johnson Tiles
Ceramitec	Lucideon
Churchill China	Michelmersh Brick Holdings
Custom Solar	Morgan Advanced Materials
Denby Pottery	Naylor Drainage
Dept. for Energy Security & Net Zero	Otto Simon
DSF Refractories & Minerals	Parkinson-Spencer Refractories
Dunoon Ceramics	Promtek
Energy Conscious Organisation	Staffs University
Energy Intensive Users Group	Thermal Ceramics UK (Morgan)
Energy Networks Association	University of Nottingham
Environment Agency	Vulcan Refractories
Fiskars UK	Wavin UK
Forterra Building Products	We are Liminal
Glass Futures	Wienerberger

DELIVERING NET ZERO
for **BRITISH**
ceramics