



FEDERATION OF PILING SPECIALISTS

CELEBRATING 60 YEARS OF EXCELLENCE



**CONCRETE
FORUM 2024**

**TODAY'S CHALLENGES,
TOMORROW'S SOLUTIONS**

THURSDAY 22ND FEBRUARY 2024 ● CITY HALL, LONDON ● #FPSCONCRETEFORUM

WELCOME ADDRESS

**GOOD MORNING, DISTINGUISHED GUESTS,
INDUSTRY COLLEAGUES, AND FELLOW PROFESSIONALS.**

We are delighted to welcome you to the Federation of Piling Specialists Concrete Forum 2024 here at City Hall, London. As your Co-Chairs, John Chick (FPS Chair and Business Leader at Expanded Geotechnical) and Steve Hadley (Ground Forum Chair and Central Piling), we are thrilled to open this event and welcome you all.

This forum is not just a meeting of minds but a convergence of ideas and innovations, with the singular aim of shaping the future of concrete and cement technology. Our focus today extends beyond technical discussions; it's about envisioning and realising a sustainable future for the use of concrete within the ground engineering sector. We are at a pivotal moment where our decisions, innovations, and collaborations can significantly impact our planet and its people.

Our goal today is to explore the present and future of concrete, its constituents, and the sustainability developments emerging from our industry.

We aim to provide a comprehensive platform for:

- Clients looking to reduce the carbon impact of their developments.
- Consultants and specifiers keen on understanding on-site challenges.
 - Geotechnical and structural designers seeking deeper insights.
 - Contractors aiming to integrate closely with concrete suppliers.
- Concrete suppliers exploring ways for supply chain smoothing and introducing innovations.

We have a fantastic line-up of speakers and panellist who will each share their knowledge and insights on a range of subjects and common issues including the complexities of concrete structures, sampling and control, low carbon solutions and future challenges in concrete. Each presentation promises to be not just informative but transformative, offering new perspectives and spark discussions that will reverberate throughout our industry.

We look forward to a day of engaging talks, productive exchanges, and collaborative learning as we chart a path towards a more sustainable, innovative, and efficient future for the concrete sector.



JOHN CHICK & STEVE HADLEY
Co-Chairs of the Federation of Piling
Specialists Concrete Forum



PROGRAMME

09.00: REGISTRATION

09:45: OPENING ADDRESS

Steve Hadley, (Ground Forum Chair and Managing Director at Central Piling)

KEYNOTE SUSTAINABILITY BY DESIGN

John Chick, (Business Leader – Geotechnical at Expanded Geotechnical and FPS Chair)

CONCRETE, FROM SPECIFICATION TO SUPPLY AND ALL POINTS IN BETWEEN
Dr James Branch, (Regional Technical Manager (Concrete) at Heidelberg Materials UK)

SAMPLING AND CONTROL WITH CHANGING MIXTURES

Matt Oliver (General Manager at Socotec UK)

Q&A

11.30: LUNCH

12.30: PANEL DISCUSSION CONTRACTORS AND SUPPLIERS IN CONVERSATION

Panel Chair: Steve Hadley, (Ground Forum Chair and Central Piling MD)

Danny Bunting, (Operations Manager at Expanded Geotechnical)

Ian Innes, (Major Projects and Key Account Director at Heidelberg Materials)

Kevin Paterson, (Commercial Manager at Capital Concrete)

Mark Boden, (Director at Cementation Skanska)

Paul Wiltcher, (Business Improvement Manager at Aarsleff Ground Engineering)

**CEMENT AND CONCRETE SOLUTIONS IN THE
FUTURE LOW CARBON CONSTRUCTION INDUSTRY**

Veronika Elfmarkova, (Innovation Manager at Lafarge Cement (Aggregate Industries))

**DIGGING DEEPER; UNVEILING THE CENTRE OF EXCELLENCE FOR MODERN
CONSTRUCTION AND THE CRUCIAL ROLE OF PILING IN ENSURING PROJECT SUCCESS**

Phil Muff, (Contracts Manager at Explore Manufacturing (Part of Laing O'Rourke))

Q&A

14.15: REFRESHMENT BREAK

14:45: KEYNOTE LOWER CARBON CONCRETE, TODAY AND TOMORROW

Paul Astle, (Decarbonisation Lead at Ramboll)

THE SCIENCE OF CONCRETE AS A FLUID

James Blackwell, (Technical and Innovation at Martello Piling / Franki Foundations)

THE EFFC/DFI GUIDE TO TREMIE CONCRETE FOR DEEP FOUNDATIONS

Chris Harnan, (Managing Director at Ceecom Geotech)

Q&A

16.25: CLOSING ADDRESS

John Chick, (Business Leader – Geotechnical at Expanded Geotechnical and FPS Chair)

16:30: EVENT ENDS

SPEAKERS AND PRESENTATIONS



CO-EVENT CHAIR: STEVE HADLEY
Ground Forum Chair and Managing Director at Central Piling

Steve is the current Chair of the ground engineering

industry umbrella group the Ground Forum and long-standing MD of Central Piling. Through his work with the FPS and his hosting of the popular Breaking Ground podcast he continues to advocate for the use of more sustainable methods of construction and low carbon materials.



CO-EVENT CHAIR: JOHN CHICK
FPS Chair and Business Leader - Geotechnical at Expanded Geotechnical

With over 35 years of piling and ground engineering experience John has an interest in many spheres of the industry including design, operations, pricing, and sustainability. A major interest is in behavioural safety and performance and attracting new talent into the industry by selling its virtues and contribution to the environment and the economy.

KEYNOTE SUSTAINABILITY BY DESIGN

Sustainability by design is critical to achieving true sustainability reductions. Depending on sources, cement manufacture and concrete products worldwide account for 8-10% of global carbon emissions. Alternative products and innovations in concrete will have a major impact for good.

These innovations including the use of recycled aggregates are not all widely accepted. The manufacturers are innovating faster than clients can or want to.

This has to change, and this conference is one small step towards publicising the benefits to be gained from the new products available and for us to understand the future for these products including their long-term availability and carbon and cost impact.



DR JAMES BRANCH
Regional Technical Manager (Concrete) at Heidelberg Materials UK

James has worked in the concrete supply industry since

2000, having started his career as an onsite soils and materials technician. In 1997 he undertook a PhD at the University of Surrey, researching Plastic Properties of High Strength Concrete, and has been involved in a number of iconic projects.

CONCRETE, FROM SPECIFICATION TO SUPPLY AND ALL POINTS IN BETWEEN

This presentation will show how concrete suppliers turn enquiries into the concrete operatives received on site. It will outline the main constituents and their impact on the composition. Once the constituents are understood, so can the impact on the rheology and performance of the material be understood, and therefore the appropriateness for the application. The presentation will highlight what we think should be added to enquiries to give the best chance of a positive outcome, including the information we require from you. James will also cover a quick review of the acceptance tests concrete suppliers are asked to comply with, alongside project specific trial processes.



MATT OLIVER
General Manager at Socotec UK

Matt is a General Manager for Socotec UK, working in their southern material testing division. He has over 20 years

of industry experience and has worked across multiple areas including on the ground as a technician, to working with suppliers and contractors to establish ITP's or embed new testing methods.

SAMPLING AND CONTROL WITH CHANGING MIXTURES

In this presentation, Matt will focus on the importance of testing and sampling with

changing concrete mix designs. Changing and evolving material will come with changing performance and characteristics; therefore, it is important that the correct testing is carried out at the trial stage of a new mix. This should lead to the correct site compliance testing to ensure that a familiarity and trust can be built with all teams involved with projects.

Matt will also take the opportunity to confirm the importance of good sampling, manufacture and curing of compressive strength specimens so that confidence can be taken, not only when checking individual results but also in monitoring trends.



VERONIKA ELFMARKOVA
Innovation Manager at Lafarge Cement (Aggregate Industries)

Veronika is a civil and materials engineer with experience in academia and industry with a focus on decarbonisation of the cement and concrete sector. Her specialisation is research and product development in cement and cementitious materials, together with AACM, concrete and polymer technologies. She is author/co-author of several publications, technical reports and conference proceedings.

CEMENT AND CONCRETE SOLUTIONS IN THE FUTURE LOW CARBON CONSTRUCTION INDUSTRY

Veronika's talk will reflect binder in concrete, such as cement, as an essential element to the infrastructure on which our society is built. Reputation suggests that the cement sector has not been technically innovative, however there has been a considerable patenting activity in recent years in the space of clinker reduction in cement and especially in comparison with other heavy industries, like steel. Under the drive for sustainability, initiatives are emerging in the next few years to achieve further CO₂e reductions in the concrete sector. An adoption and acceptance across the value chain is therefore needed to expand the portfolio of next-generation materials.



PHILIP MUFF
Contracts Manager at Explore Manufacturing (Part of Laing O'Rourke)

Philip is an experienced project manager with a 17-year

track record working on major projects in the residential, commercial, infrastructure, health and education sectors across the UK. He currently leads the Contract Management function at Laing O'Rourke's Centre of Excellence for Modern Construction, Europe's largest and most advanced pre-assembly manufacturing facility.

DIGGING DEEPER; UNVEILING THE CENTRE OF EXCELLENCE FOR MODERN CONSTRUCTION AND THE CRUCIAL ROLE OF PILING IN ENSURING PROJECT SUCCESS.

Phil will be presenting an introduction to the Centre of Excellence for Modern Construction, showcasing capabilities and focusing on how they integrate into the projects to provide benefits to the project and client. This will also include an overview of their direct delivery model utilising their sister companies, Expanded, Vetter, Select and Crown House Technology. He will be sharing what technologies they use and how these are providing benefits in time and carbon reductions to the overall project performance. Phil will also touch on their carbon reduction strategy and how this is a fine balance/challenge to our production outputs.



PAUL ASTLE
Decarbonisation Lead at Ramboll

Paul Astle is the Decarbonisation Lead for Ramboll Buildings globally.

As a chartered structural engineer, Paul has worked on a large variety of concrete structures. He is also a member of the Low Carbon Concrete Group and a co-author of the Low Carbon Concrete Routemap.

SPEAKERS AND PRESENTATIONS

KEYNOTE LOWER CARBON CONCRETE, TODAY AND TOMORROW

With an ever-increasing focus on the embodied carbon of construction, the impacts of concrete use have never been under more scrutiny in our industry. There are however, things that can be done today to make better use and lower the embodied carbon of this incredibly important material. There is also a huge range of new innovations in a variety of concrete technologies which may unlock lower carbon concrete for the future. Paul's presentation will therefore present an overview of what is happening currently in the field of lower carbon concrete, and what we can expect from the future.

Paul's presentation will include the use of polls. To access them please scan this code when instructed.



JAMES BLACKWELL Technical and Innovation at Martello Piling / Franki Foundations

James was a Founder and Director of Martello Piling. Now semi-retired, he remains an employee of Martello Piling / Franki Foundations, concentrating on innovation and new product development. He has been involved in the piling industry for 40 years and is a Fellow of the Institution of Civil Engineers.

THE SCIENCE OF CONCRETE AS A FLUID

The sheer variability of concrete mixes in terms of aggregate source, aggregate gradings and concrete mix proportions, suggests a complexity which may inhibit a scientific understanding.

Generally concrete companies have been very good and adjusting mixes to provide customers with concrete which mostly meet their requirements, but problems on site may still occur, for example, blockages in pumping or fluid filtration preventing the installation of reinforcement cages into CFA piles. This presentation aims to simplify the understanding

of concrete as a fluid, through logic and established mathematical principles. By understanding the science, modifications to concrete mixes can be better understood or predicted.



CHRIS HARNAN Managing Director at Ceecom Geotech

Chris has over 46 years' experience across UK and international markets. He is currently Managing Director of Ceecom Geotech, a geotechnical consultancy specialising in forensic engineering and expert witness work. Chris was Chair of the FPS between 1995-1996 and is currently the Deputy Chair of the EFFC/DFI Tremie Concrete and Support Fluids Task Groups.

THE EFFC/DFI GUIDE TO TREMIE CONCRETE FOR DEEP FOUNDATIONS

Following extensive testing of mixes being used on site, the practical tests that best determine the workability and stability of fresh tremie concrete were established by the Task Group. Five years after publication, the recommendations have been well accepted as a practical addition to existing standards. New testing methods have not, however, been widely adopted in UK and Europe.

The Task Group is therefore adopting a two-tier approach: i) work to get the recommendations incorporated into the new European Concrete Standard (EN 206), and ii) revise the Guide (Third Edition) to allow easier acceptance by all stakeholders.



To download the EFFC/DFI Guide to Tremie Concrete for Deep Foundations please scan this code.

Chris' presentation will include the use of polls. To access them please scan this code when instructed.



PANEL DISCUSSION

CONTRACTORS AND SUPPLIERS IN CONVERSATION

This round table discussion, chaired by Steve Hadley (Ground Forum Chair and Managing Director at Central Piling), will aim to bring together both piling contractors and concrete suppliers to discuss common issues. There will be a focus on the specification and use of concrete as well as commercial considerations.

Areas discussed will include how concrete is specified, on site sampling practices and standards, reasons for inconsistencies in loads, how rig types can affect static segregation, carbon tax and picking the right batching plant.

PANELLISTS



KEVIN PATERSON Commercial Manager at Capital Concrete

Kevin joined the industry 34 years ago as a Quality Control Technician and has worked on many projects including the Chanel Tunnel Rail Link, O2 Arena, and HS2. In his current role he helped set up a new Ready Mixed Concrete supply business which now operates from 10 Locations inside the M25.



MARK BODEN Director at Cementation Skanska

Mark has held senior management roles with founding FPS member companies and chaired the FPS Safety committee from 2006 to 2010. He was responsible for the delivery of a key foundation element of ESS Lund in the south of Sweden, which won the Ground Engineering International Project of the Year 2017.



DANNY BUNTING Operations Manager at Expanded Geotechnical

Danny is an Operations Manager with a proven track record of delivering major piling contracts across a range of sectors. He has worked in the piling industry for over 15 years gaining experience in a variety of piling disciplines on sites all across the UK.



PAUL WILTCHER Business Improvement Manager at Aarsleff Ground Engineering

Paul is a chartered Civil Engineer with 30 years' experience in the Piling and Geotechnical industry. He has worked on major projects including CTRL, NLE, US Embassy and the Amsterdam Noord Zuid Lijn. During his career Paul has held senior management and leadership roles in Cementation Skanska, Bauer Technologies, Keltbray and most recently Aarsleff Ground Engineering.



IAN INNES Major Projects and Key Account Director at Heidelberg Materials

Ian has been with Heidelberg Materials for nearly 30 years, and has extensive experience in covering asphalt, aggregates and concrete product lines. Ian's current role involves leading teams on major projects in the UK including Hinkley Point Nuclear Power Station, HS2, Crossrail, Thames Tideway, A66, A303.

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