ISSUE 60 | June-July 2023 | www.infrastructure-intelligence.com

### INFRASTRUCTURE Intelligence



### NET ZERO SPECIAL

How the world of infrastructure is embracing the drive towards net zero.

See pages 14-25



MARKET INTELLIGENCE

What's behind the mixed picture for construction? pages 4-5



NEW:

New plans from National Highways pages 6-7



#### FOCUS ON EIC

Philippa Spence on why there has never been a better time to join EIC.

pages 26-27

## **Environmental Industries Commission Summer Parliamentary Reception**

Focusing on green growth and innovation.



#### Speakers include:



Rebecca Pow MP

Defra – Minister for

Nature and recovery



Ruth Jones MP
Shadow Minister (Environmental,
Food and Rural Affairs



Baroness Bakewell
Member of House of Lords

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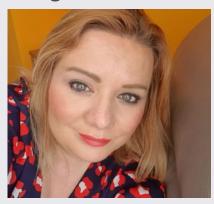
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#### Message from the guest editor



warm hello, from guest editor, Sarah Walker. It is my pleasure to be guest editor for this net zero special of Infrastructure Intelligence.

Since working with this publication at the start of 2023, I have been impressed by how innovative and inspiring the world of infrastructure is.

This is no less evident than when you consider the efforts many organisations are making when it comes to the UK's goal of achieving net zero by 2050.

I have enjoyed writing about this immensely, covering everything from innovations in building materials like the use of sugarcane and ECOncrete, which is helping our marine life to thrive, to developments in hydrogen production. You can read about both of these in this issue, as well as the excitement around Net Zero Week. including an insightful interview with its founder and director Shawn Coles.

Philippa Spence, chair of the Environmental Industries Commission (EIC) also shares why there's never been a better time for pioneering organisations working towards net zero solutions to be part of the group.

You can also learn about Jacobs' approach to managing tidal flood defences and how Atkins believes digital transformation to be a game changer for sustainability.

I look forward to bringing you more news from the world of infrastructure on our website in future!

#### Sarah Walker

Guest Editor, Infrastructure Intelligence

# What's behind the mixed picture for construction?

From rising interest rates to supply chain improvements, *Infrastructure Intelligence* looks at the current highs and lows of the construction sector.



ising demand among corporate clients and contract awards on infrastructure projects underpinned the fastest rise in new construction orders since April 2022, the PMI survey for May 2023 showed.

Despite an overall mixed picture, in which housebuilding continued to decline amidst rising interest rates, there was plenty to be optimistic about, with inflationary pressures easing and the supply chain continuing to improve.

In May, Tim Moore, economics director at S&P Global Market Intelligence,

which compiles the PMI survey, said rising demand among corporate clients and contract awards on infrastructure projects underpinned the fastest rise in new orders since April 2022.

However, cutbacks to new residential building projects in response to rising interest rates and subdued housing market conditions resulted in the sharpest drop in housing activity for three years.

This meant residential work underperformed the rest of the construction sector by the greatest margin since October 2008.

Moore added survey respondents were now concerned about the broader UK economic outlook, which contributed to an overall drop in output growth projections to the lowest for four months.

"Inflationary pressures meanwhile eased considerably in May, with purchase prices increasing to the smallest extent since September 2020," Moore added.

"Supply chain normalisation helped to moderate cost inflation, as signalled by the strongest improvement in delivery times for construction products and materials for almost 14 years." Dr John Glen, chief economist at the Chartered Institute of Procurement & Supply (CIPS), said the situation with house building activity would send a "chill down the spine" of the UK economy, despite output in the construction sector showing an improvement for the fourth month in a row.

House building saw its steepest drop in activity since April 2009, barring the initial pandemic lockdown in early 2020.

"The residential sub-sector is closely linked to consumer confidence and levels of spending," said Glen, ahead of an expected hike in interest rates in June, which "along with the relentless increase in the cost of living is making buyers hesitate about purchasing homes".

"As a result, builder confidence was pinched to remain below the survey average, as business costs remained high and firms expanded their workforce numbers at only a modest pace as they were cautious about their own affordability rates," Glen said.

"Even with the strongest increase in new orders for just over a year, where commercial and civil engineering projects made up the shortfall, purchasing activity remained flat.

"Companies were de-stocking their built-up supplies because, with the fastest turnaround in supplier delivery times since August 2009, builders expected that demands for materials would be met."

Figures from the Office for National Statistics showed all new construction orders in January to March of 2023 fell by 14.3% compared to the same period last year, and also fell by 12.4% when compared to the last quarter of 2022 - equivalent to more than £1.57bn.

A 22% drop (£773m) in private commercial construction orders and a £607m drop (18.4%) in private housing new orders was seen in January to March 2023, compared to the previous quarter.

However, overall, construction output across the quarter rose 0.7% compared to the previous quarter.

Seven out of nine sectors saw increases in Quarter 1 2023, with the largest contributors being private housing repair and maintenance, and non-housing repair and maintenance.

These sectors increased 5.7% (£411m) and 3.9% (£341m) respectively.

There has been continued strength within the repair and maintenance sectors across 2022 and early 2023, with all repair and maintenance sectors increasing on the quarter.

The monthly construction output rise of 0.2% in March 2023 followed an upwardly revised 2.6% increase in February 2023 - the highest level of

construction output - at more than £15.6bn - since records began in January 2010.

In March, new infrastructure work rose 2.2% (£51m) and public other new work rose 6.5% (£48m).

The ONS report also cited anecdotal evidence received from returns for its Monthly Business Survey for Construction and Allied Trades (MBS) suggesting an easing of inflation and material costs.

Despite this, some businesses still noted customers hesitating to request work because of economic worries.

The annual rate of construction output price growth was 8.5% in the 12 months to March 2023 - slowing slightly from the record annual price growth found in May and June 2022 (10.4%).

The largest negative contributor across quarter one was private new housing, which fell 5.3% (£543m).

#### **Opinion poll**

Should new housing construction be considered as infrastructure for the purposes of planning?

Send your comments to sarah@ infrastructure-intelligence.com



# Government roads operator confirms smart motorways scrapped in new plans.

National Highways sustainability agenda also described as 'laudable' – but use of asphalt called into question.

ational Highways says safety, sustainability and the environment are at the heart of its plans for England's roads between 2025 and 2030.

However, the government's strategic roads operator has also come under fire from some organisations, over the continuous use of asphalt rather than concrete in its work.

National Highways confirmed the scrapping of 'smart motorway' plans in its Strategic Road Network Initial Report (SRNIR) for 2025 to 2030, which sets out its vision for England's motorways and major A-roads.

The report made a number of recommendations, a month after the government took the decision to scrap plans for new smart motorways over "lack of public confidence and cost pressures due to inflation".

The scrapped smart motorways included the 11 that had already been paused, which had been part of the National Highways strategy for 2020 to 2025.

A further three smart motorways that were due to be included in the latest SRNIR were also scrapped in the new plans.

Prime Minister Rishi Sunak said all drivers deserve to have confidence in the roads they use to get around the country and he was making good on a promise from last year to scrap smart motorways.

However, National Highways says the new plans for 2025 to 2030 will still increase investment in small-scale local improvements proposed to tackle known congestion hotspots and grow the economy.

They also include a safety drive to target single carriageway A-roads and support for the installation of 2,500 new rapid electric vehicle chargers.

Nick Harris, National Highways' chief executive, said motorways and A-roads had a critical role to play over the next 30 years in supporting growth and levelling up.

"They bind together the regions and nations of the UK, facilitating national and international trade, and even under conservative forecasts demand for the network will continue to increase up to 2050," he added.

"While we strive to maintain safe and reliable journeys for the vehicles that rely on our network each day, we know that ever higher levels of social and environmental responsibility will, quite rightly, be required of us.

"This means we will need to find new and innovative ways to continue connecting the country by facilitating active travel and public transport, and also using digital technology to help customers make more informed decisions and managing our network more efficiently."



Stephen Elderkin, National Highways



In recognition of this, National Highways marked UN Biodiversity Day by unveiling ambitious plans to deliver a more sustainable road network that not only connects the country but also protects and enhances the environment over the next three decades.

Its Environmental Sustainability Strategy set out the company's vision of, 'A connected country. A thriving environment.'

With 30,000 hectares of green land, it set out plans to use its green land to reconnect habitats, reverse the decline in biodiversity, help wildlife thrive and build in environmental resilience to a changing climate.

However, at the same time, National Highways was criticised over its continued use of asphalt rather than concrete in road building.

Britpave chairman Joe Quirke, said its environmental strategy could be undermined by the persistent use of the material, adding: "The objectives and commitments set out by National Highways are laudable.

"Unfortunately, their achievement may prove difficult unless there is a fuller understanding and better use of concrete road solutions."

Quirke says concrete roads have a performance life of 40 to 60 years without the need for major ongoing maintenance or re-construction.

That compares with a maximum of 40 years for asphalt which within that time frame will most likely require resurfacing after just 12 years with major maintenance required by year 20 and further resurfacing by year 30.

"We are committed to achieve net zero for our construction and maintenance emissions by 2040.

"We have also produced roadmaps for decarbonising concrete and asphalt, which set out what known technologies will allow us to achieve.

"We expect innovation to allow us to decarbonise these materials even further.

"We are considering whole life carbon in the development of our standards and specifications as well as other factors such as noise, and we will keep the specifications under review." Stephen Elderkin, director of environmental sustainability at National Highways.

National Highways also says it recognises the durability of concrete as a material and is recycling it to be used as the foundations for roads it is rebuilding, such as the A11 and A12.

The organisation says it considers the most suitable surface for each project using a range of criteria aligned with safety, delivery, sustainability and customer service imperatives.

National Highways also has a 'Concrete Roads Centre of Excellence' looking at all ways of reducing carbon and provide a better recycling/circular economy approach to concrete.

It also has five new techniques for quietening existing exposed concrete pavements, which will be trialled in Cornwall from Autumn.

The techniques offer considerable noise reduction - as quiet as asphalt roads or quieter - less CO2 for cars cross the surface and reduced maintenance in future years.

# A brighter solution for local authorities

A software solution to enable city councils and local authorities to manage their public infrastructure assets has been continuously improved and developed over a period of 30 years.

Prightly's Confirm Enterprise Asset Management Solution is crucial to users, providing organisations with instant data insights to make informed decisions on repair, maintenance, and investment for critical assets, against tightly constrained budgets and timescales, all within one secure repository.

Ultimately, Confirm takes all the information about where authorities can make the best investments, taking account of the risks involved in deciding whether to invest in a particular asset or not.

The knowledge and data held on Confirm enables people coming to work at local authorities to go into a system without any prior information of the assets and understand how they performed over their lifecycle, the history of any issues, how many times that issue happened and how any issues were resolved.

Marc Evans, vice president, government solutions at Brightly explains: "Our core product in the UK, Confirm Enterprise Asset Management, has been present for 30 years.

"We've worked with a number of County Councils including Essex and Kent and in cities like Edinburgh, Bristol and Birmingham on road networks and transport infrastructure.

"Making sure the assets in place are delivering against performance targets and that public money is being spent effectively is what the software is able to achieve."



Evans adds that when it comes to public infrastructure, a lot of time and effort goes into planning.

Then, once a large-scale piece of infrastructure is in place, for example, the public tram system in Edinburgh, there is a shift in thinking in the agency towards ensuring it delivers against performance targets and that "public money is being spent effectively".

"From an engineering point of view, an asset will have a certain lifespan and needs to be managed and maintained over its lifetime," Evans explains.

"Through the software we provide, we are driven by delivering safe, high performing assets, so that they are as safe as we can possibly make them for members of the public and delivering reliable transport infrastructure."

From a budget perspective, Brightly understands any small budget amendment has a big impact, at the same time as residents who pay Council Tax expect services to be provided to them in a good, quality manner.

Confirm brings that to the surface in supporting local authorities to decide where they should be investing, taking a long-term view and accounting for the risks around any assets.

Council officials can instantly see data demonstrating where there are going to be financial pressures alongside information from an engineering point of view and that is translated into decisions on investments.



"The software gives customers the tools to be able to demonstrate 'this is the right decision to make to maximise your budget'," Evans says.

"The software helps them decide where to spend any money coming in to maximise the life of their assets.

"They might decide to fix some potholes, or the most appropriate thing might be to replace a piece of highway network and we are shifting the mindset of reactive response towards proactive investment over time."

Brightly also enables local authorities to embed sustainability within their day-to-day operations.

With Brightly software, instead of sustainability being a calculated report

based on historic data, customers have the ability to utilise their day-to-day process to capture data in real time and take action on that data, for informed decision-making.

From a company perspective, understanding the lessons that they've learned over the years is helping Brightly refine the way products are built and also how it delivers value to its customer base.

Brightly was acquired by Siemens in August last year and now sits in Siemens Smart Infrastructure business.

Under the Siemens umbrella, it is hoped the market share of its core software product Confirm can be maximised across healthcare, manufacturing and government spaces.

"I see that as we embed ourselves more

and more in Siemens, we can start to use that experience and really correlate into the development of our future roadmaps, products and markets," says Marc.

"We've been very focused on asset operations management: how do we give people the tools to enable them to be as effective and efficient as they can with the resources that they have to deliver that customer perception?

"Now we can start to understand how we can use that data to deliver those different outcomes to the client.

"We can also mix information coming from a different industry or different verticals [from Siemens] and use that intelligence to drive models of how we're going to invest in assets in the future."

# The future of resilient flood defences

Jacobs' Patricia Nick, asset management strategic lead, looks at how the approach taken on Thames Estuary Asset Management (TEAM2100), the first of its kind on an estuary in Europe, offers a delivery model for the future.

he Environment Agency developed the Thames Estuary 2100 Plan to create a long-term approach to managing tidal flood defences on the famous River Thames in London and the Thames Estuary, including the iconic Thames Barrier. TEAM2100, the Environment Agency's largest floodrisk management programme, has trailblazed the approach to develop a 10-year programme of work to deliver the Plan. With the potential serious effects of climate change, it considers multiple possible future scenarios. Working collaboratively as an integrated delivery team with the Environment Agency and construction partner Balfour Beatty, Jacobs has helped safeguard approximately 4,000 different flood protection structures along the river and estuary.

In 2022, TEAM2100 focused on over 60 projects aiming to ensure the tidal walls, embankments and barriers along 350 km of the Thames continue to protect 1.42 million people and over £321bn of property from tidal flooding, while also improving environmental habitats and access to the river.

Programmatic approach to asset management

As part of the wider Thames Estuary

2100 Plan, TEAM2100 advocates a programmatic approach to managing tidal flood defences, aspiring to reduce the overall costs by investing in the right assets at the right time.

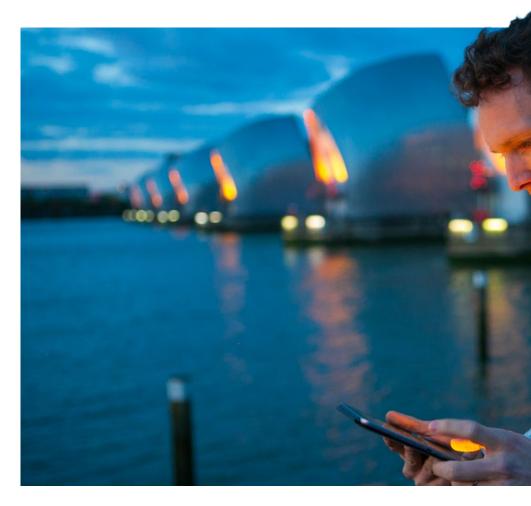
The programme is a first of its kind in applying asset management best practice, as well as continuously improving methods to manage critical infrastructure efficiently. Jacobs combined its programme and asset management expertise with the Environment Agency's knowledge and team to develop a service-focused asset management system which manages

existing structures and creates new assets and systems over a 100-year life cycle.

The programme attained ISO 55001 certification within two years of project commencement, becoming the first UK government major programme and first UK flood and coastal erosion management project to achieve this recognition.

Lifecycle modelling to manage flood defences along the whole estuary has enabled development of risk-based asset management strategies for some 25 systems.

As part of aligning to industry best practice, TEAM2100 used the Water Services Association of Australia's leading Asset Management Customer Value Project, a rigorous benchmarking process, to provide a better appreciation of what needs to be done to improve management maturity. Used alongside auditing and integrated with the requirements of ISO 55001, the process improved transparency and provided a holistic view of TEAM2100, its strengths and areas for improvement. It also uses The Institute of Asset Management's Framework to drive continuous improvement in its asset management system.



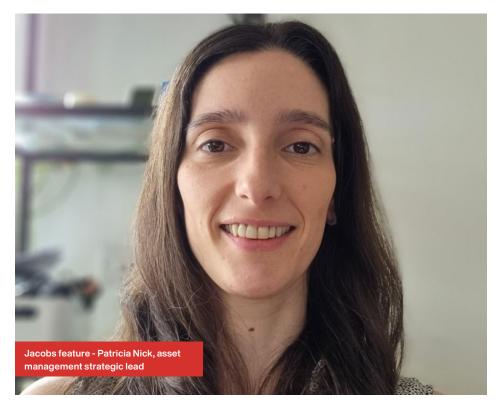
The asset management takes the 'adaptation pathways' approach, advocated by the National Flood and Coastal Erosion Management (FCERM) Strategy, which enables decision makers to identify where and when it is best to invest in improvements. Through investigation and scientific evidence gathering, various options are analysed for robustness and flexibility.

#### Leveraging data and technology to manage assets efficiently

Data and technology help manage in an efficient and intelligent way. For example, portable Leica Pegasus lidar equipment has been used to run surveys at low tide and is particularly useful for assets which are very difficult or dangerous to access. Pegasus makes planning for works and inspections on the foreshore much more effective – from time, cost and safety perspectives.

The team also created a web-based GIS portal – the award-winning Estuary Eye – and associated apps to offer a common data environment for review, management and use of collected data.





The embedded videos and 3D information provide instant access to complex geospatial information. The tools enable a highly efficient approach to option and design appraisals, a foundation for creating an estuary-wide BIM model of the asset system, and an easy visual assessment of live project progress. With over 400 map layers, the Estuary Eye combines a data management tool and an appraisal and design tool, with an interface to a vast amount of new and historic field-collected data.

TEAM2100's Digital Asset Management Plans (AMPs) are an interactive, easy-touse online platform sharing information about future activities required to deliver the Thames Estuary 2100 Plan. During the planning process, the team runs a series of asset management strategy scenarios on a lifecycle modelling tool to select the best performing strategy for each AMP, aiming at the best combination of whole life cost and asset condition. TEAM2100 is currently developing a carbon assessment capability into the lifecycle model to support the delivery of the Environment Agency's corporate environmental and sustainability goals.

#### **Asset intelligence**

To improve understanding of the health of the fixed portfolio, a structured approach to collecting georeferenced

defect data provides asset intelligence and supports data-driven decision-making. The outputs enable users to understand and analyse defect occurrence and significance. This can potentially support investment decisions and, if the data is collected consistently over time, inform future updates of the Thames Estuary's asset deterioration curves to significantly enhance our ability to plan for future investments and be used for machine learning and automation purposes.

#### In summary

With sustainability and digital enablement at its heart, TEAM2100's approach to asset management is leading the way in finding innovative solutions to managing flood risk - providing climate resilience for our communities and protecting the environment. Having asset management at the core of infrastructure projects allows us to improve planning capabilities, optimise whole life costs associated with maintaining and operating infrastructure, extend our assets' useful life, and provide significant carbon reductions in asset lifecycle delivery. As one of the UK government's Pathfinder projects, this approach provides an exemplary model for other major infrastructure programmes to consider adopting.

## Water controversy

Infrastructure enabling access to this precious commodity is a hot topic.

ater, the most precious of the earth's natural resources, has prompted heated discussion, as well as being a haven for innovation in recent weeks.

In mid June, South East Water issued a ban on hosepipes and sprinklers across Kent and Sussex on the fifth day of major water supply issues, that left almost 3,000 people with little or no water supply.

Schools were forced to close amidst the water shortages, with concerns for elderly or vulnerable residents also being raised and farms and equine facilities also affected.

South East Water set up bottled water stations and pleaded for residents to only use essential supplies.

A string of roadworks was also announced, to enable repairs and upgrades on the water network.

A statement from South East Water said: "The demand for water is extremely high and is putting immense pressure on our network. This has left us with no choice but to introduce a hosepipe ban in Kent and Sussex."

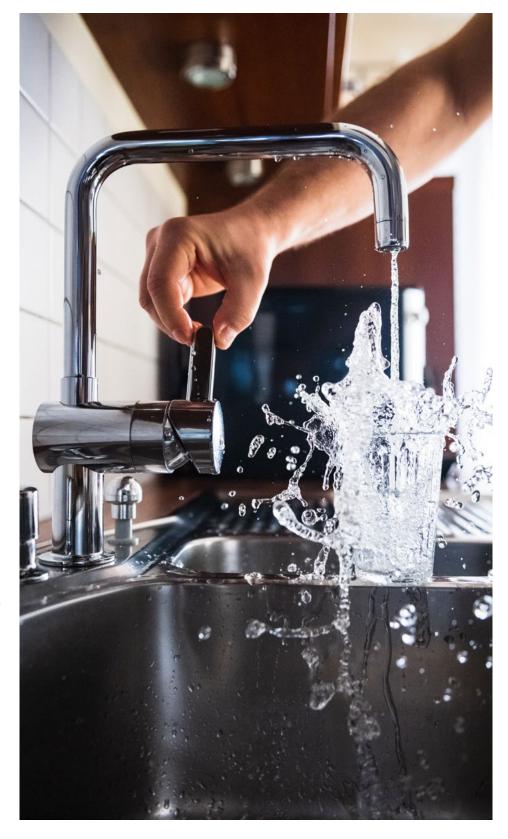
The company also cited the hot weather and highlighted the recent high demand for water in graph form.

It stated: "Hot weather means we are using more water, much more than normal.

"So, we need you to stop, think...and act: reduce your use and save water!"

South East Water also stated that over the weekend of June 12 and 13, it supplied additional levels of water into the network, "enough to serve four towns the size of Maidstone or Eastbourne".

"We had also experienced power outages at some sites, which take time to recover from, but we now have every available Water Treatment Works and water source open and running fully," the water company said at that time.





However it was still unable to keep up with demand because of high usage "beyond the typical levels we supply in summer" leaving some families without water.

In December, South East Water customers were beset by supply issues when pipes burst due to snow and ice thawing rapidly.

This has led to calls for water supply infrastructure to be examined and upgraded as a matter of urgency.

Similar warnings have also been issued in other parts of the UK and Northern Ireland in recent times, with several reports the pipelines and water supply infrastructure is struggling to meet demand.

Meanwhile, sewage in our seas and waterways has been a predictably emotive subject, with Water UK issuing a collective apology from the sector for not acting quickly enough on sewage spills.

Water UK admitted more should have been done to address spillages sooner and empathised with the public's "upset" about current water quality and the state of rivers and beaches.

At the same time, the organisation revealed plans to invest £10bn in storm overflows, as part of a major programme to reduce spills into rivers and seas.

A new national environmental hub with information on all 15,000 overflows in the country was also announced, to increase transparency and allow the public to hold companies to account.

If the plan is approved by regulators, Water UK expects that, by 2030, sewage overflows could be cut by up to 140,000 each year compared to the level in 2020.

This will kick-off the first wave of a massive transformation programme across 350,000 miles of sewer - a length that would stretch 14 times round the world.

Water UK says this will represent the biggest modernisation of sewers since the Victorian era, as "the most ambitious programme on sewage spills in the world".

Meanwhile Yorkshire Water issued contract notices, valued at

approximately £3bn, to help the utility deliver its proposed AMP8 [Asset management period 8, which starts in 2025] capital investment programme.

British Water launched its annual UK Water Company Performance Survey for 2023, which asks contractors, consultants and suppliers to rate their clients' performance in 12 areas, including procurement, professionalism, contractual approach, innovation and communication.

Meanwhile, technology from WCS Environmental Engineering (WCSEE) was selected by United Utilities to deliver biological treatment at a new wastewater treatment works.

The UK utility is investing £8.2m in the new facility in the village of Chipping in the Ribble Valley, Lancashire, a capital project designed to manage the area's recent and future population growth.

Civil engineering and infrastructure specialist Barhale was also appointed by both Thames Water and Southern Water, with contracts totalling £339m.

### A warm welcome

elcome to our Net Zero
Special, bringing you news
of Net Zero Week, as well
as some fantastic developments and
innovations from organisations concerned
with the drive towards net zero.

Find out how Shawn Coles founded Net Zero Week and how new greener materials are shaping a sustainable future for the construction industry.

Atkins explores why the digital transformation is crucial for sustainability and we also look at significant developments in hydrogen production.

We hope you enjoy these special features!







### Is your business helping the transition to net zero?

Join our free-to-attend exclusive webinars offering all stakeholders a dedicated platform to voice opinions, share evidence, explore strategy, and garner expert insight.

REGISTER HERE FOR THE WEBINAR ALERTS

#NetZeroWeek <u>netzeroweek.com</u>

# One man's selfless vision is driving mass interest in net zero

Shawn Coles founder and director of Net Zero Week has put his 24 years of learning into one remarkable project.



wo years ago, Net Zero Week was launched by Coles who had spent over 20 years working in climate change marketing and media.

Across his career he ran the UK's biggest energy exhibition in Birmingham for ten years between 2000-2010 and launched several media channels to reach businesses and help them understand how to reduce their energy use and carbon emissions and navigate government policy.

Infrastructure Intelligence magazine has backed Net Zero Week as a media partner since the early days of the project.

Many others have followed suit including HM Government, Innovate UK, World Biogas Association, Nuclear

Industry Association, Carbon Capture & Storage Association, and HS2, to mention just some of the 40+ backers.

Net Zero Week, the UK's official national awareness week, is a not-for-profit social enterprise; and as Coles explains, "it offers all stakeholders a dedicated platform to voice opinions, share evidence and best practice, explore strategy, and highlight solutions in our shared journey towards a net zero future".

Chris Skidmore MP, chair of the recent Net Zero Review and former Energy & Clean Growth Minister, is an ambassador for Net Zero Week.

He said: "Net zero provides the greatest opportunity of our lifetime to enhance our energy transition in a way which will

secure a warmer and brighter future.

"We simply do not have the time to waste and must seize the opportunities of net zero to avoid the challenges others will face for being not net zero.

"Our environment and our future depend on our actions now and Net Zero Week is the perfect way to highlight these opportunities."

In 2022, the campaign reached 19.92m business stakeholders.
This was delivered by an extensive marketing and communications campaign and the "community spirited" marketing activities of the "dedicated partners," Coles explained.

Coles' ambition moving forward over the next few years is to "organically grow the reach of the campaign" and to "put all my lifetime of learnings into this project".

The mass reach of the campaign is no fluke. It is the business model of being a not-for-profit and its ability to attract important partners and supporters which has helped give this project "wings".

During Net Zero Week the webinar agenda aims to "inspire and educate businesses and draw in the wider stakeholders" involved in helping the UK in the net zero transition.

"I hope this year we will attract more supply chain actors helping the UK transition to net zero," said Coles.

Net Zero Week is taking place for the third year from 1-7 July 2023. New partners have joined the noble cause including The Open University, Net Zero Tracker, Conservative Environment Network, and the British Geological Survey.

You can sign-up for the webinar alert service here



### Net Zero Week is proud to be endorsed by a wide range of leading voices on Net Zero and its role in infrastructure.



"UK Research and Innovation is delighted to be supporting Net Zero Week again, reflecting over 50 years of UK scientific endeavour to develop a globally-recognised Net Zero research and innovation base.

"Supporting the UK's commitment to achieve net zero carbon emissions by 2050, our clear ambition is to harness UK research and innovation to address environmental challenges, overcoming technological, social and market barriers to deliver business growth, increased productivity and a prosperous green future for the whole country."

- Professor Sir Duncan Wingham, UKRI Executive Sponsor, Green Futures



"Carbon Capture, Utilisation and Storage (CCUS) is a critical technology to achieve net zero for many sectors across the economy; it can be used for decarbonising our heavy industries, delivering low-carbon power and hydrogen, as well as removing greenhouse gas directly from the atmosphere.

"The CCSA is delighted to be an official partner for Net Zero Week, which aims to raise broad awareness of climate change and the need to deploy all available solutions to meet the challenge and benefit from the enormous opportunities that the net zero transition represents."

- Ruth Herbert, Chief Executive, CCSA



"To put it simply, net zero needs nuclear. It has the lowest lifecycle carbon of any electricity source, the lowest land use, and the lowest mining and material use.

"It's only by nuclear working in tandem with other clean technologies like wind and solar, that we can cut our reliance on fossil fuels and pave our way towards a greener future. That's why the industry is supporting Net Zero Week."

Tom Greatrex, Chief Executive, NIA



"The carbon emissions challenge that the transport sector faces has never been clearer.

"It's now the single biggest emitter in the UK and this places a huge responsibility on us to build Britain's new zero carbon, high-speed railway.

"We are cutting emissions in construction, innovating with the latest technologies and setting new standards for the infrastructure industry.

"We're supporting Net Zero Week to tell the critical role HS2 plays in tackling climate change and improving air quality. HS2 will be part of the solution, in design, construction and operation, with every single train being powered by zero carbon 'clean' electricity from day one."

- Mark Thurston, Chief Executive, HS2 Ltd

## CLIMATE PERSPECTIVES<sup>TM</sup>



(0)

#### **Listen here on Spotify**

Exclusive interviews and audio articles from changemakers

from Binary Carbon the organiser of

**NetZero**Week™

ENERGY SECURITY &
GREEN INFRASTRUCTURE
WEEK

Decarbonising<sup>™</sup> Transport Week



# Lessons in environmental sustainability

How schools are embracing the transition to net zero

chools are leading the way on the transition to net zero with the help of construction specialists such as Morgan Sindall.

In recent weeks, the firm has seen work progress on the first net zero school refurbishment in Wales, at Pen-Y-Dre High School in Merthyr Tydfil, as well as its carbon neutral project at Ormiston Rivers Academy in Essex.

Morgan Sindall has also seen topping out ceremonies performed at Millside Spencer Academy in East Leake, Nottinghamshire, where it has offered a number of low carbon solutions and Buntingford First School in Hertfordshire, which is set to be one of the country's first carbon neutral schools.

David Rowsell, area director for Morgan Sindall Construction in the Northern Home Counties, said: "Morgan Sindall is at the forefront of net zero construction, and we are proud to see this pioneering project taking place in our local region."

He added the firm was "setting a new standard" when it comes to sustainable, high-quality design for schools around the country.

The school is set to achieve 'Passivhaus Plus,' meaning it will improve the school's air quality, reduce carbon emissions and lower its energy running costs.

All the teaching spaces will face north to avoid south-facing windows that can cause rooms to overheat, while social areas such as the dining halls and common rooms will be south-facing.

The design uses a cross laminated timber (CLT) frame and for every metre cubed, two tonnes of carbon are saved. On completion, the frame is set to be responsible for saving 1,160 tonnes of carbon, as well as reducing construction traffic by 90% and saving 20%.

More than 300 solar panels will be installed alongside triple-glazing windows and air-source heat pumps.

### A material world

How sustainable construction materials will support the drive towards net zero.



#### A living port

Marine life from crabs to sea cucumbers are flourishing along the seawalls at the Port of Vigo's Living Ports Project.

The Living Ports Project includes bio-enhancing seawalls and a coastal protection system, as well as a first-of-its-kind underwater observatory, which enables the public to watch the marine ecosystems thrive.

ECOncrete is leading the project, using nature positive marine technology integrated by local contractors, using locally sourced concrete.

Newly released underwater monitoring data reveals thriving ecosystems only three months after its official opening.

ECOncrete CEO and co-founder, Dr. Ido Sella, said: "In just three short months, this Living Ports Project at the Port of

Vigo has become exactly that – a living port, teeming with healthy marine life.

At the moment, 70% of marine infrastructure worldwide is concrete based, which is not habitable for many types of marine organisms and requires expensive maintenance – to the tune of around €2.2 trillion per year.

By incorporating ECOncrete's naturepositive technology into local concrete, a highly effective biodiversity performance can be achieved, which not only promotes ecological sustainability but also reinforces and strengthens the structures.

#### From sugar to flooring

The University of East London (UEL), in creative partnership with Grimshaw Architects, has developed a prototype floor slab made from sugarcane, as part of a groundbreaking project to find a new low cost, low carbon construction material.

The UEL's Master of Architecture and Sustainability Research Institute, supported by Tate & Lyle sugars, has developed the innovative construction material with the trademark 'Sugarcrete'.

The product, which has been developed over two years, uses sugarcane fibres which are left over after sugar sap extraction, which are known as bagasse, mixed with bespoke sand-mineral binders.

The result is a material which has the potential to be used and re-used in new or existing buildings, replacing both brick and concrete – and it is particularly effective for building in countries at risk of earthquakes.

Testing of Sugarcrete by the UEL's Sustanability Research institute has shown that compared to concrete production, Sugarcrete is cured within one week, while the process takes up to 28 days for concrete.

The product is also four to five times lighter than concrete and only uses 15% to 20% of its carbon footprint at substantially reduced costs.

#### Low carbon concrete

Meanwhile, Laing O'Rourke is setting the standard for other construction companies to follow, by announcing it will use only Low Carbon concrete on all new UK projects.

Following a long-term research programme co-funded by Laing O'Rourke and Innovate UK, and in collaboration with the University of Cambridge and Sheffield University's Advanced Manufacturing Research Centre (AMRC), the business has proven that a range of low carbon concrete options can be successfully deployed on projects as a like-for-like substitute for traditional concrete.

The overall carbon reduction will be 28% when compared with the

company's concrete usage in 2022.

This equates to a saving of 14.4 million kgCO2e, which is the same as planting 120,000 trees or 94 hectares of forest.

Laing O'Rourke's low carbon concrete uses lower carbon alternatives to Portland cement.

These include GGBS (Ground Granulated Blast-furnace Slag) and PFA (Pulverised Fly Ash), both of which are industrial by-products with a much lower carbon footprint.

The company recognises that this is the first step in a longer journey to decarbonisation.

Its ongoing research programme focuses on wider scale deployment of cement-free options, which are ultralow carbon, and it expects to introduce more of these materials going forward.

#### Zero carbon cement

Cement 2 Zero (C2Z), a UK-based demonstrator project bringing together

Cambridge University scientists with key industry figures, secured £6.5m of government funding from UKRI as part of the Transforming Foundation Industries Challenge.

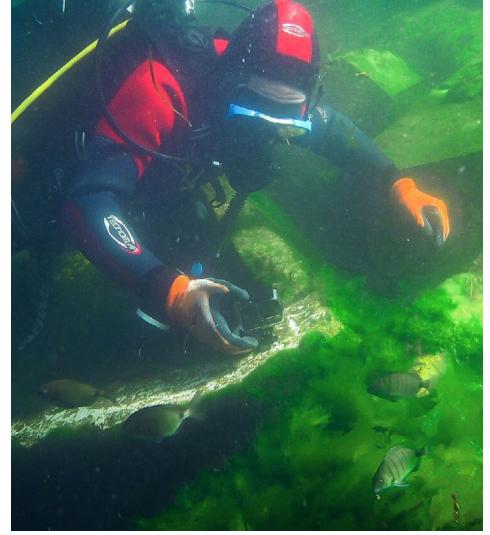
The Cement 2 Zero team aims to demonstrate that concrete can be recycled to create a Slag Forming addition which could, when cooled rapidly, replace Portland cement.

Cement 2 Zero will use recycled cement as the flux in the electric steel recycling process - powered by an electric arc furnace which uses renewable energy - the byproduct of which, when cooled and ground, produces Portland cement clinker, which is then blended to make 'zero-emissions' cement.

This innovative product known as Cambridge Electric Cement (CEC) could be made in a virtuous recycling loop, that not only eliminates the significant emissions of cement and steel production, but also saves raw materials.







## Why hydrogen is happening!

Green hydrogen production in the UK is set to take off, following the announcement of a new partnership between Carlton Power, the UK independent energy infrastructure development company, and Schroders Greencoat LLP ("Schroders Greencoat"), the specialist investment manager dedicated to the renewable energy infrastructure sector.

he partners' new joint veture company Green Hydrogen Energy Company Ltd (GHECO) is set to accelerate the development of green hydrogen projects in the UK, with a project portfolio in the UK of 500 MW by 2030.

This has the potential to substantially contribute to the UK's leadership position in hydrogen production as well as its energy security and Net Zero ambitions.

The first projects in GHECO's portfolio are intended to be Trafford in Greater Manchester, Barrow-in-Furness (Cumbria) and Langage, near Plymouth (Devon).

#### **Government support**

In March, these three schemes, all originated and developed by Carlton Power, were shortlisted by the UK Department for Energy Security & Net Zero (DESNZ) to receive financial support from the government's Hydrogen Business Model/Net Zero Hydrogen Fund in the first Hydrogen Allocation Round (HAR1).

Keith Clarke, founder & chief executive of Carlton Power said the firm was delighted to be joining forces with Schroders Greencoat "to develop a significant green hydrogen portfolio in the UK" underlining "the strength and quality of Carlton's projects and our team" and "confidence in our local development strategy".

"We want GHECO to be the leading green hydrogen production company in the UK," he said.

James Samworth, partner and cohead of Schroders Greencoat's energy transition team, said: "As one of the leading renewables investors in the UK,

we have been long-time front-runners in the deployment, management, and optimisation of the country's renewable infrastructure — it made perfect sense for us to partner with Carlton, one of the country's leading developers.

"Hydrogen is a huge opportunity and will play a centrally important part in the energy transition."

The DESNZ intends for projects awarded contracts to kickstart the low carbon hydrogen economy across the UK, helping meet the national ambition of up to 1GW of electrolytic hydrogen production capacity in operation or construction by 2025.

#### A £200m commitment

To support the achievement of these targets, Schroders Greencoat and Carlton Power are making an initial funding commitment of £200m from funds managed by Schroders Greencoat to build these schemes and future projects within Carlton's project pipeline.

In the GHECO joint venture company, Carlton Power will manage the development, construction and operation of current and future green hydrogen projects, with Schroders Greencoat leading on the financing of the projects and leveraging its UK renewable energy expertise.

Carlton Power is aiming to secure final agreements with DESNZ for the Trafford, Barrow and Langage projects before the end of 2023 and plans to submit further green hydrogen projects in Hydrogen Allocation Round 2 (HAR2) of the Government's Hydrogen Business



Model/Net Zero Hydrogen Fund.

The Trafford, Barrow and Langage projects are planned to enter commercial operation in 2025, with HAR2 projects starting operations in 2026.

Each project will supply green hydrogen to local industrial and manufacturing companies wishing to decarbonise their operations and all will have the potential to supply hydrogen to other businesses in the area, in addition to local transport operators

#### Producing hydrogen from ammonia

The foundations have also been laid at a first-of-a-kind green ammonia to hydrogen demonstrator site at Tyseley Energy Park in Birmingham.

The £6.7m project has been developed by the Ammogen Consortium, a multidisciplinary and multi-national team dedicated to driving forward hydrogen fuel supply chains in the UK and worldwide.

The consortium is actively pursuing



opportunities for investment in order to roll out further sites in the UK.

Consortium partners gathered at Tyseley Energy Park (TEP) to mark the construction milestone for the facility which, once commissioned, will deliver 200kg per day of transport-grade hydrogen to the hydrogen refuelling station at TEP.

Funded by the Department for Energy Security and Net Zero (DESNZ), the project is expected to be the world's largest and most efficient ammonia to hydrogen conversion unit of its kind.

#### Cracking

The facility will use technology developed by H2SITE that derives hydrogen from ammonia through a process called cracking.

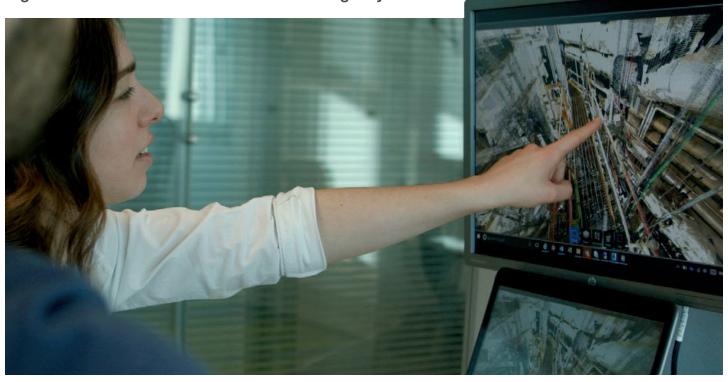
Cracking uses a high temperature furnace to separate ammonia

into hydrogen and nitrogen, after which the hydrogen is filtered and purified for use as fuel.

Project partners Gemserv, Equans, H2Site, Tyseley Energy Park, Yara and the University of Birmingham, estimate that over 97,000 jobs and £16bn GVA could be delivered in the UK through early investment in cracking technologies that enable the use of ammonia as a hydrogen carrier.

# Digital transformation - the game-changer for sustainability

Sustainability is no longer a 'nice to have' but crucial if organisations are to meet the UK's net zero target by 2050.



atherine McQuade, assistant mechanical engineer at Atkins, a member of SNC-Lavalin Group, outlines how digitalisation is supporting industrial sites to accelerate decarbonisation and meet their safety and sustainability goals.

Energy-intensive industrial sites are some of the most challenging to decarbonise, but the abatement of their carbon emissions is essential for achieving net zero.

We see three key types of carbon emissions that represent the majority of CO2 produced throughout an industrial site's lifecycle: embodied, operational and people.

Embodied carbon is in the building

materials we use, such as steel and concrete. Operational carbon is emitted during the working life of a facility due to heating, cooling and industrial operations. People carbon is the emissions associated with our own movements and activities, such as the carbon dioxide emitted from commuting to work or a site visit.

With an uphill climb ahead, we need to find new ways to speed up all forms of decarbonisation. We believe the answer lies with digital transformation.

#### Digitalisation accelerates decarbonisation

Digital solutions can assess and address each of the three types of carbon

emission. For example, implementing intelligent building information models (BIM) throughout the lifecycle of a site - from the development of a newbuild project to decommissioning - you can quickly calculate embodied carbon associated with concrete or steel structures across sites. Similarly, internet of things (IoT) sensors and data analytics can combine to highlight areas of large energy consumption - aka operational carbon.

While embodied and operational carbon represent a significant proportion of the overall carbon footprint, they're difficult to influence on a daily basis. But in recent years, and particularly since the pandemic, we've seen digital

tools offer new ways of working that reduce the emissions associated with supporting operations and maintenance on industrial sites; the people carbon.

For instance, during the design and construction of a new site or in decommissioning projects, adoption of paperless technology makes it possible to view digital drawings on a mobile device. This not only reduces printing, improves accurate data retention and increases the speed of decision making, but also enables remote expertise to be leveraged more efficiently and increases collaboration.

Laser scan point clouds, aerial drone imagery and 360° images and videos previously captured, also provide users with new ways of visiting sites virtually, either on their own or with their wider team, using virtual reality (VR) or augmented reality (AR).

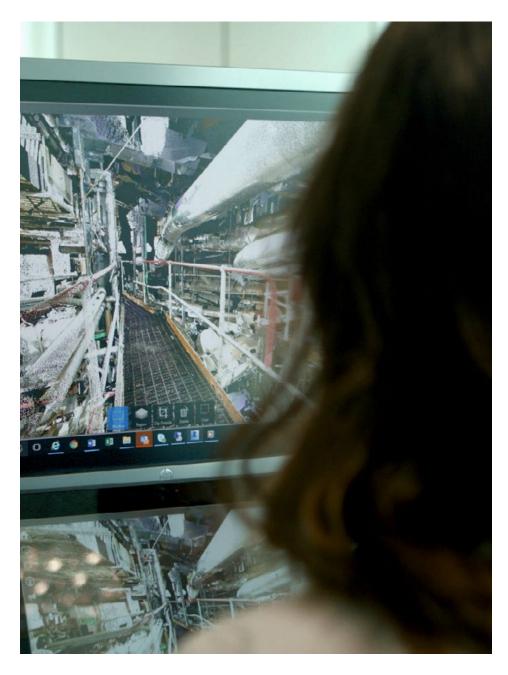
Livestreaming, on the other hand, allows one person to go to inspect and survey a site. Connected via a video call from anywhere in the world, they can then relay information to the rest of the team.

Using technology in this way offers both cost and carbon savings. As an example, recently, for a nuclear decommissioning client, we polled how long it takes engineers to drive to the site and collated this information in a live dashboard. Based on the 23 livestreams they conducted across three buildings, we calculated savings of 490 hours in travel time, £24,500 in associated travel costs and 7224kg of carbon.

Further, since April 2021, we have been analysing access to site survey data for all our nuclear and power clients, via our cloud-based survey platform, CIRRUSinsite. By measuring how many people 'virtually access sites' through the platform, we estimate that, in the last two years, clients have collectively saved over £1m in avoided travel costs and almost 300 tonnes of associated CO2 emissions.

Using CIRRUSinsite to quantify how many times people access a site remotely and how long they spend there, it's also possible to calculate how many future site trips have been saved.

This approach has helped our clients slash carbon emissions and makes it easy to see why site walkdowns, installation, factory acceptance testing and support for operations and maintenance, are now regularly being done with only one individual or a small team on plant.



#### Knowledge retention and sharing

With an ageing workforce, it is also important to find ways to pass on the knowledge of experienced staff to new recruits and ensure decarbonisation isn't slowed down.

One way of doing this is through immersive training, making use of VR and AR, which can be stored in a central repository and accessed by all relevant staff. This enables the transfer of critical information while also reducing the time spent by experts on training new recruits.

The technology doesn't have to be complex or expensive – video walkthroughs by plant operations teams, for example, are simple to create but invaluable; saving someone from trawling through an old 30-page document. And with advances in transcription software, these can become searchable libraries providing valuable insights into a facility's history.

#### Benefits of digital transformation

It's clear the adoption of digital tools can have a real, measurable impact on carbon emissions and sustainability.
But the benefits don't end there.

Digitalisation will not only support and speed up the journey to net zero, but also improve workplace safety and bring financial gains, helping organisations remain competitive and profitable during a challenging transition.

## Vibrant members face big challenges together



The environmental industries will be pivotal to the UK's ability to achieve net zero by 2050 and the EIC brings these companies together to share their collective knowledge.

hilippa Spence, chair of the Environmental Industries Commission (EIC) shares what she believes is key to the success of this collaborative group of companies.

There's never been more of a need for a strong relationship between businesses working in the environmental industries and government than there is now.

Those are the thoughts of Philippa Spence, chair of the Environmental Industries Commission (EIC), ahead of July's launch of the manifesto for the organisation.

The EIC promises to offer regulators, members, politicians and other key stakeholders a "virtual loop of engagement" on how a sustainable future can be achieved.

It is a space for organisations to meet and collaborate to find sustainable solutions for the future, that Spence hopes will see the United Kingdom "become a leader in environmental innovation".

"I don't think there's ever been a better time to be a member of EIC because as an organisation representing the environmental industries, we are at the forefront of addressing some of these enormous challenges to the environment and the drive towards net zero," says Spence, who is also managing director at Ramboll.

"I think we are at a pivotal point in the evolution of the environmental industries in response to the climate emergency."

Since she became chair of EIC in December, Spence has been involved in exploring what would "add the most value to our members," meeting them where they are right now and finding out what they believe the future looks like.

"The members are world-class experts with important perspectives and views and having the privilege of chairing those discussions and being a part of them has been fantastic," she said.

"We've been working to understand what should happen next in EIC and what will add value to the members and we are very much looking forward to the forthcoming launch of our manifesto during Net Zero Week.

"The environmental industries have a critical role to play at this time, providing some of the complex solutions to transitioning to a green economy and a more sustainable way of living - the need has never been greater for our sector's work."

Spence believes members of EIC place great value on the space it provides for technical exchange and collaboration with other members, through working groups and taskforces.

The fact EIC always has one eye on the future in terms of how topics and themes for the sector are evolving and new ways of doing things and new challenges are developing, is also a draw for members.

"The membership is vibrant and full of great insight and those operating in this environment can appreciate and take value from that," says Spence.

"This creates an effective advisory organisation establishing a clear set of

policy positions to engage regulators and other stakeholders around key topics. These policy positions will form our manifesto and serve as a roadmap for the EIC and its work over the coming years.

The manifesto is due to be launched during Net Zero Week, enabling the organisation to open up conversations with regulators and other influential stakeholders in the environmental industries "to give us a continued relevant high-profile voice in those discussions".

EIC is well placed to offer industry insight to government and other stakeholders on how to attract investment into solutions that will benefit the drive towards net zero.

Spence says she has been immensely proud to take up the role of EIC chair, particularly as Ramboll has been a strong contributor to the EIC for many years.

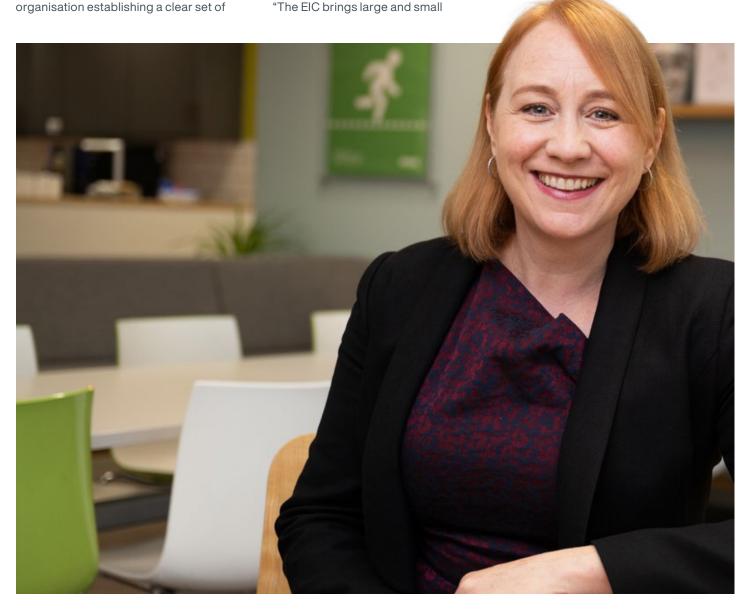
She particularly values the space for collaboration it provides.

companies within the environmental industries together and sometimes, larger consultancies like our own can't find a specific digital or technical innovative solution whereas, for an SME, that solution might be their entire focus," she says.

"The EIC offers us a fantastic space to meet one another and make positive collaborations happen.

"For clients, that collaboration might mean we can offer them the best service or solution possible.

"In any other environment, members might be seen as competitors but in the EIC space, we become a group of pioneers working together to offer clients who are in need of solutions what they are looking for."





# New chair of ACE to help members face "challenge of a generation"

r Sarah Prichard has pledged to support the Association of Consultancy and Engineering (ACE) and the organisation's members as they come together and face the "challenge of a generation".

She believes membership of ACE gives companies of all sizes a stronger voice and a greater impact when it comes to putting the built environment sector at the heart of the global net zero challenge.

The partner and managing director for UK Buildings, Hong Kong and China at Buro Happold is also focused on ACE's delivery of its 2022 to 2025 blueprint.

Dr Prichard believes this blueprint will support more than 400 members in being more impactful and driving economic growth across the UK, whilst developing skills for a greener future and ensuring the industry continues to focus on safety, equality and inclusion.

"As chair of ACE, I will support the CEO in implementing the Blueprint, and ensuring it has a significant impact on the industry," she said, adding it is crucial member organisations unite to promote consultancy and engineering in the UK, to increase the profile of the industry overall, as well as individual member organisations.

"Our industry needs to be more diverse, more inclusive and prouder of the contribution its members make to the UK - both in incredible projects of all scales, and to GDP and skills," she says.

She adds collaboration between ACE member organisations of all sizes is key, as "our unity will result in us having a stronger voice".

Welcoming Dr Prichard to the chair's

role, Stephen Marcos Jones, chief executive of ACE and the Environmental Industries Commission (EIC), said: "We're really pleased to be able to benefit from Dr Prichard's vast knowledge and experience, as she takes on the chair's role and we also thank our previous chair Dave Beddell for his tireless hard work and commitment.

"Dr Prichard has been involved with ACE since joining the Board in January 2020, as the chair of the Net Zero Taskforce - now the Climate Change Advisory group - which spans both EIC and ACE.

"She is a passionate advocate for the industry's role in working towards achieving net zero goals and under her leadership, the group investigated the readiness of the industry to meet the UK's net zero targets and produced a guide for member organisations at earlier stages in their net zero journey, including our SME members."

Dave Beddell, director of growth,
Europe & India - Global Business Line at
AECOM, added: "Having worked with
Dr Prichard within ACE, members can
be assured they will be well represented
under her leadership and I have every
confidence she will build upon the work
ACE has already done, supporting
Stephen to successfully drive the
implementation of the ACE Blueprint."





### ACE and EIC launch People First Charter at UKREiiF

Organisations should work together to improve diversity and inclusion across the built environment industry.

hat was the key message at the launch of the People First Charter, from the Association for Consultancy and Engineering (ACE) and the Environmental Industries Commission (EIC), which took place at UKREiiF.

The People First Charter will support signatories to put people at the heart of their organisation, so they can focus on tackling some of the future's biggest challenges.

The charter is underpinned by four guiding principles; inclusivity of all, openness and respect, development and growth and recognition.

Organisations that sign up to the People First Charter will also be able to share their examples of best practice with other organisations, to encourage shared learning.

Early adopters of the People First Charter came together at the launch to explain why they were keen to get involved.

They included Steve Wooler, chief executive of BWB Consulting, Neil Parkinson, executive director of Curtins, Sarah Bannon, a managing consultant at Ramboll and David Cameron, director of Atelier Ten.

Wooler said: "We've been embracing inclusion and diversity for a long time.

"It's not a race, it's a journey and we are continually learning.

"We want to be part of the People First Charter initiative from ACE and EIC, partly because we can always learn something from other people but also because I think we've got a lot to share about our experiences –



what's worked and what hasn't."

He added: "I do really think that companies within the ACE and EIC - even though we are competitors on one level - we are also allies and collaborators on another."

Parkinson added: "What we like about the charter – what resonates with us even more – is that it's about turning words into deeds, which reflects the journey we are on in terms of the issues around equity, diversity and inclusion.

"The last few years have been about raising awareness and now we are starting to implement initiatives and take actions – and we are starting to make things happen."

Bannon spoke about the importance of people feeling that their voices had been heard and that they had the opportunity to contribute to achieving an organisation's goals.

"We want to give everyone the opportunity to put their best foot forward and bring all their ideas to the table."

Cameron added: "We were looking for someone to stand shoulder to shoulder with us.

"We wanted to pursue an approach that had a collective force towards changing culture and ensure people are treated with respect, whether graduates or directors and make sure people have got a voice and have the confidence to speak up and contribute.

"We felt the charter could support us with that."

Development of the People First Charter has been strongly supported by Sharon Slinger, of Constructing Rainbows Limited, a diversity and inclusion consultancy that helps built environment firms with their EDI strategy.

"There's a real business benefit to be gained from, not just EDI, but from putting your people first," said Slinger.

"If we are going to tackle the biggest challenges that our industry is facing, we need the best people and a diverse group of people in our organisations."

Find out more about the People First Charter from ACE and EIC





## Other news from ACE

CE has outlined its policy aspirations and priorities for Wales' consultancy and engineering sector.

Over the next 12 months, the document will serve as the foundation for political engagement and advocacy.

The Wales Manifesto follows the release of ACE's 2023 UK Manifesto earlier this year and is aimed at policymakers and stakeholders in and around Senedd.

ACE also shared details of its priorities for the English regions and other devolved nations in April.

Meanwhile, in Northern Ireland, ACE Emerging Professionals announced a new lead to grow the newly established network there. Tom McDonald of Mott MacDonald will lead activity in building membership in Northern Ireland and contribute to discussions within the national committee of the network for the next generation of industry leaders working in the built environment.

Welcoming the new appointment, Wojciech Szewczak, chair of the ACE Emerging Professionals, said the appointment offered new opportunities to expand the network in Northern Ireland.

"Emerging professionals are vital for the industry, not just in terms of skills and resource, but in providing the holistic approach necessary if we are to meet some of society's biggest challenges," Szewczak said.

McDonald said: "I look forward to tackling a variety of issues through the committee such as sustainability, the future of the workplace, as well as collaborating with the ACE's Northern Ireland Committee."

In April ACE also published its priorities for the country in its Northern Ireland manifesto.

ACE CEO Stephen Marcos Jones said: "Northern Ireland is home to a vibrant and diverse engineering sector, with ACE members playing a central role in delivering innovative and transformative projects.

"We believe that by working collaboratively with government, industry, and the wider community, we can make a positive difference and drive real change."

Meanwhile, in Scotland, ACE Scotland wrote an open letter to newly appointed Transport Minister Kevin Stewart, calling for greater clarity around transport infrastructure investment and pipeline.

ACE Policy Officer in Scotland, Olivia Smalley said it highlighted the challenges of a lack of a clear pipeline of future projects, procurement policy challenges and a skills shortage "that all of our members working in Scotland and more widely face".

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### Consultancy & Engineering **Awards Open**



ominations are now open for the Association for Consultancy and Engineering's (ACE) gala awards ceremony, the Consultancy and Engineering Awards 2023.

The event takes place at Leonardo Royal London Tower Bridge on Thursday 18 January 2024.

The Consultancy and Engineering Awards champion excellence in people, projects and companies from the world of engineering, consultancy and the built environment.

Stephen Marcos Jones, CEO of ACE, said: "In January this year we held our 2022 consultancy and engineering awards after a two-year absence.

"It was a fantastic occasion with over 300 people turning out to celebrate all that is good about the built environment sector, so I am pleased to announce the next edition of these prestigious awards to recognise, share and highlight achievement."

Last year, Hannah Mehr, a data

scientist for Arup, was named apprentice of the year and praised the Consultancy and Engineering Awards for highlighting the important role of apprenticeships in the sector.

Nominations are open until Friday 11 August at 6pm for the 12 award categories.

Enter now and find out about early bird tickets and sponsorship





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