

# Issue 50 special edition

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## INFRASTRUCTURE Intelligence

Celebrating our

th

issue

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## Message from the editor



We're in a celebratory mood at *Infrastructure Intelligence* as this is the 50th issue of the magazine, a significant landmark for the publication. When we launched in May 2014 we pledged to give a platform to the construction and infrastructure industry, to its profile and promote its activities and I hope we have done that over the past seven years.

The magazine has tried to reflect the diverse nature of our industry and the people who make it what it is. Judging by the kind comments from industry leaders in the centre pages of this issue, we are definitely on the right lines as far as that aim is concerned though we know that we can always improve and do better and with the help of our readers and contributors we will strive to do just that.

As always, this current issue contains a topical mix of news, views, features and opinions which have become the hallmark of the magazine since it first started. We're particularly proud to be able to champion the equality, diversity and inclusion agenda and promote diverse role models across the industry and that will continue in the months and years ahead.

To all our readers, contributors, advertisers and sponsors – a big thank you for your continuing support of *Infrastructure Intelligence* and I hope you enjoy this special issue of the magazine, which is also dedicated to the memory of our former associate editor, Jackie Whitelaw, who sadly died in July.

**Andy Walker,**

Editor, *Infrastructure Intelligence*

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# Whitechapel Crossrail station completed

Following the successful delivery by Balfour Beatty, Morgan Sindall Infrastructure and VINCI Construction (BBMV), Crossrail has handed over the Whitechapel Elizabeth line station to Transport for London.

The new Whitechapel Elizabeth line station will see thousands of commuters pass through each day, providing quicker, easier and more convenient travel across London. In addition, the joint venture successfully delivered the tunnelling works at both Whitechapel Elizabeth line and Liverpool Street stations, delving beneath the ground to excavate 60,000m<sup>3</sup> of material.

Whitechapel Elizabeth line station is acknowledged as one of the most complex and challenging stations on the Crossrail project. The new station concourse was constructed on a bridge consisting of 2,800 tonnes of structural steelwork, above the existing station and two operational railway lines – the London Overground and London Underground.

Steve O'Sullivan, BBMV project director, said: "As I reflect on this incredible feat of engineering, I have never been more proud of what our incredible team have delivered. It truly is testament to the collaborative culture of our joint venture, who have persevered throughout the challenges faced by the global Covid-19 pandemic. We now look forward to watching as the station plays a role in transforming travel across London,



whilst also supporting wider regeneration in the local area through job creation and opportunities for local businesses."

Mark Wild, Crossrail chief executive, said: "The whole team at Whitechapel have done a fantastic job weaving between the existing operational transport services to create this incredible new Elizabeth line station which has been one of the most challenging Elizabeth line stations to

construct."

Passengers will access the new station through the sensitively restored original entrance on Whitechapel High Street. The new station has nine lifts and three escalators and will, for the first time, provide step-free access to improve accessibility for those visiting the renowned Royal London Hospital and the surrounding area.

## Improving accessibility of UK rail stations

Atkins has been appointed by the Department for Transport (DfT) to carry out an accessibility audit of all UK rail stations as part of a government programme to boost inclusivity across the transportation network.

The audit, originally pledged in the Williams-Shapps Plan for Rail, will help identify improvements and highlights existing areas of excellence. The findings will form a new public database so people can better plan their journeys and, along with input from disabled passengers, will shape future investment in accessible rail travel as part of the government's National Disability Strategy.

Atkins is leading the work – which has already started – supported by global technology company ABB, software business K2Fly, equality, diversity and inclusion specialists Goss Consultancy, data management and intelligent mobility pioneers You.Smart.Thing and project and cost management consultancy CPC.

Around 2,500 stations will be audited over the next two years as the government looks to remove barriers and improve confidence for



disabled travellers as they return to public transport after the Covid-19 pandemic.

Sukhy Duggal, Atkins client director for the DfT, said: "This is an incredibly important project which sees us bringing together experts in accessibility, asset surveying and technology to provide the DfT with comprehensive data which will inform investment decisions and provide the travelling public with reliable accessibility information that improves the passenger experience."

## Remembering Jackie Whitelaw

It was with great sadness that we learned of the death of the journalist Jackie Whitelaw in July at the age of 64, writes Andy Walker. Jackie was a former associate editor of *Infrastructure Intelligence* from January 2014 to December 2015 and played a key role in setting up the title during its early years.

She will also be known to many in the UK infrastructure community as the deputy editor of *New Civil Engineer* magazine from 1998 to 2009, where she worked on many key stories about the industry. I first met Jackie while she was at NCE when I worked for the Association for Consultancy and Engineering and always found her a joy to work with and someone who was kind and very generous with her time and knowledge. Jackie was also great company too and I remember many an awards event (and the odd after party) chatting the night away over something chilled.

Jackie had a great knowledge of our sector

and as well as being an excellent journalist and writer she was also a skilled advocate for the industry, who was always keen to advise on how best to promote companies, individuals and their achievements to best advantage. I remember her being particularly helpful and encouraging to young professionals and also to those making their first steps in writing about construction too.

The reaction to her death on social media is a testament to the high professional regard in which Jackie was held and many of those who have posted tributes have also mentioned the fondness with which she will be remembered too.

The world of construction and infrastructure is certainly all the poorer for her death and we are proud to dedicate this 50<sup>th</sup> issue of *Infrastructure Intelligence* to Jackie's memory.

**Jackie Whitelaw 1957-2021.**





# Mayors proving devolution works, says IPPR

New research from the IPPR has revealed the positive difference that metro mayors are making to their communities across the north, *writes Rob O'Connor.*

It's just four months since the May 2021 elections, but an influential think tank for the north of England has published analysis that proves that regional devolution has been an instant success and demonstrates the positive difference northern metro mayors are making to their communities.

The first metro mayors outside of London were elected in 2017. In the north, they were Andy Burnham in Greater Manchester, Steve Rotherham in Liverpool City Region and Ben Houchen in Tees Valley - all of whom were re-elected earlier this year. Dan Jarvis in Sheffield City Region, and Jamie Driscoll in North of Tyne were elected in 2018 and 2019 respectively, and in May this year Tracy Brabin was elected as the first mayor of West Yorkshire.

IPPR North found that three in every five people in the north, that's 9.7 million people, are now represented by a metro mayor. They govern areas with a combined economy worth £227bn annually, meaning that they cover populations and economies larger than Scotland and Wales put together.

The new IPPR analysis shows that northern mayors are working beyond their devolution deals, wielding more power - particularly 'soft power' - than their deals suggest. Originally designed to have powers over their local economies and transport alone, these mayors are now having a wideranging impact. They work together as part of the Convention of the North and Transport for the North and some have collaborated on innovative new employment charters. Locally, the range of projects that mayors are implementing to make a difference are broad.

- In Greater Manchester, mayor Andy Burnham is investing in new walking and cycling infrastructure, introduced the Bed Every Night scheme, proving 500 bed spaces for rough sleepers and announced plans to franchise local buses in his first term of office.
- In Liverpool city region, mayor Steve Rotherham is developing the Mersey tidal power project to provide renewable energy up to a million homes and is supporting the creation of Shakespeare North, a new theatre as the centre of Knowsley's regeneration plans.
- In North of Tyne, mayor Jamie Driscoll is establishing a new £18m new investment fund to tackle carbon emissions, which is simultaneously designed to deliver inclusive growth.
- In Sheffield city region, mayor Dan Jarvis has funded the first ownership hub to help businesses become worker owned or cooperatives.
- In Tees Valley, mayor Ben Houchen brought Teesside Airport into public ownership and established the first mayoral development corporation in his first term of office.
- And in West Yorkshire, mayor Tracy Brabin plans to invest £1m in advancing bus franchising in West Yorkshire and is developing a 'Creative New Deal'.



The new research also revealed that northern mayors are developing ambitious plans to go even further. Each one is different. They have been in office for different lengths of time and have different devolution deals meaning that they enjoy varying levels of powers and budgets, ranging from £1,827m in Greater Manchester for the coming year, to £228m in North of Tyne. However, they are all considerably ambitious. Taken together, the six northern mayoral combined authorities plan to spend over £4.4bn in 2021/22. This is equivalent to:

- £641 per person in Greater Manchester.
- £318 per person in Liverpool city region.
- £271 per person in North of Tyne.
- £253 per person in Sheffield city region.
- £522 per person in Tees Valley.
- £476 per person in West Yorkshire.

Researchers at IPPR North say that this early success is evidence - to be added to extensive research demonstrating the progressive impact that devolution can have - that if properly empowered and resourced by government, mayors can get on with the task of supporting their places to level up for themselves, finally narrowing some of the widest regional divides in the developed world.

Marcus Johns, research fellow at IPPR North, said: "Northern mayors are making a positive difference for the places that they represent. On job creation, building healthier environments

and improving local transport, they are ambitious. We are seeing them increasingly reach beyond the original concept of the Northern Powerhouse and their devolution deals, in order to deliver good lives for the people that they represent.

"Here in the north, mayors are spending £4.4bn this year alone, in close proximity and in a way that is accountable to the people they represent. Through their ambitions and actions, mayors are beginning to prove the difference that devolution can make. While government talks about levelling up, mayors and their places are getting on with levelling up for themselves.

"Not all parts of the north are able to experience the benefits of devolution as yet. The time has come for government to roll out devolution in a way that is inclusive and transparent to other parts of the region, so that they too can feel the benefits of it".



# Freeports should focus on social outcomes

Approached in the right way, freeports could help to build more resilient and inclusive communities and drive transformational change for local people, says *Mott MacDonald's Sarah Marshall*.

The UK government is forging ahead with a plan to create new rules around trade with eight new freeports being established in England and others anticipated in the devolved nations. Beyond the economic gains, freeports also offer diverse social opportunities and can play a key role in the national recovery from the Covid-19 crisis.

The aspirations for freeports are not new. Previous incarnations in the UK pledged economic and social benefits but did not always live up to their expectations. Learning lessons from past freeport manifestations in the UK and other parts of the world is key in delivering successful new freeports which open up opportunities and share benefits with local communities.

The key to success for freeports is to generate positive social change, which means putting social outcomes - such as better access to quality housing, community facilities and sustainable transport, good and secure jobs and greater community wellbeing - at the top of the core delivery priorities. Freeports must offer a



**Sarah Marshall** is a senior consultant in inclusion and social outcomes at Mott MacDonald.

path to prosperity in the long-term by promoting sustainable growth and driving new socio-economic opportunities.

When it comes to delivering social outcomes, one size doesn't fit all. Each community has its own unique set of strengths and weaknesses and the key is to play on the strengths and address location-specific challenges from the early planning and design stages.

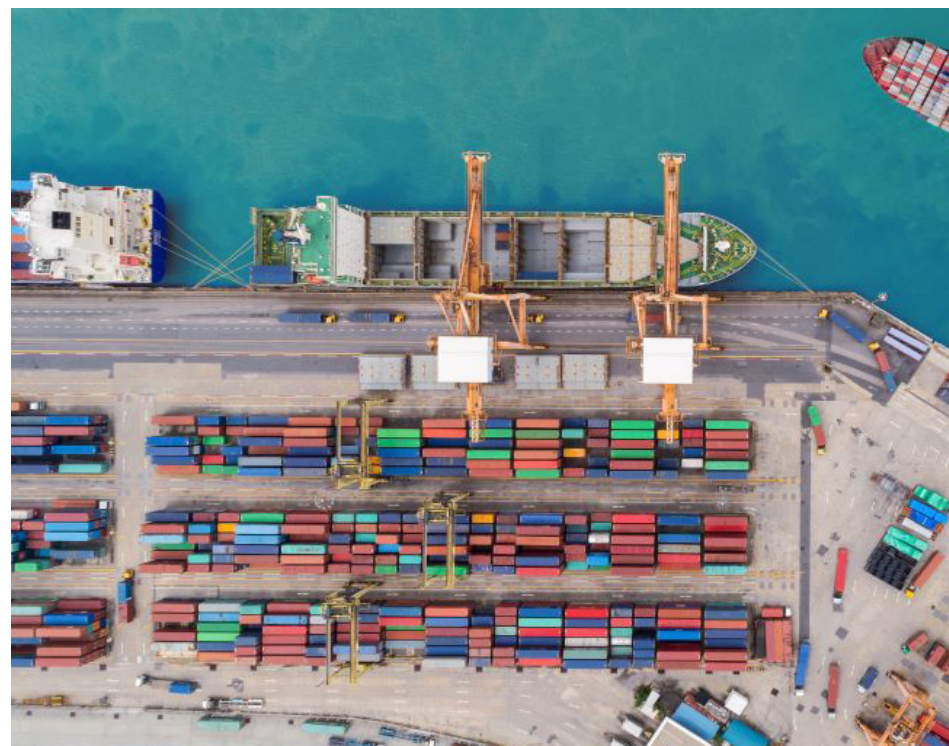
To prevent the displacement of jobs from elsewhere, UK freeports need to be well connected to both their internal and external markets and the communities in which they are located. They must build on what is already in place - the business and societal culture of the region - to capture the full potential of the freeport.

A homegrown approach to freeports which builds on existing strengths and links to local labour markets will foster more inclusive growth and better long-term employment outcomes. It is also important that freeports do not fall short of delivering on promises of wider regeneration and wellbeing outcomes. To make this happen, freeport development should prioritise local needs and foster equality between different parts of society.

Regeneration planning also needs to be harmonised to prevent splintering of investment streams - bringing together local organisations that are trying to achieve similar regeneration goals, pooling resources and creating shared objectives can be the best way to deliver outcomes that are truly transformative and achieve 'levelling up' across communities.

Focusing on social outcomes from the outset doesn't only deliver a better project in the short term, it will ensure a freeport is truly working as it should - as an engine to drive forward recovery and opportunity.

Engaging with all stakeholders from the start means social benefits can be embedded from the early planning and design stages of the project through to completion. This can provide opportunities to explore new initiatives, access new funding streams, and ultimately deliver a better, joined-up outcome.



# Consistency, commonality and clarity on carbon

*Tarmac's Emma Hines* calls for a common approach and greater consistency in the drive towards net zero.

Our recent [Clean construction: unlocking net zero report](#), undertaken in partnership with *Infrastructure Intelligence*, has provided an excellent opportunity to understand what the sector is doing to evaluate and measure carbon.

It's a critical stage of project management and key to helping both clients and contractors make informed materials choices so that projects deliver better environmental outcomes. But when it comes to carbon accounting, there is a widespread divergence of responses in our research which suggests there are perhaps too many systems and bespoke approaches taking place and not enough commonality between businesses.

Many are trying to build their own carbon databases when good quality industry tools already exist. At times this is not helping anyone to have more informed discussions about the whole-life performance of a product or the lifecycle impact of a project.

What's driving this approach? It's a mix of good intentions to support corporate carbon reporting, as well as procurement teams sometimes aiming to deliver a balanced scorecard for specific projects. The problem is that this approach often doesn't help facilitate an opportunity to engage early and discuss how product design, selection, logistics and in-use benefits can significantly cut the whole-life carbon impact of a project.

My recommendation to customers is to use the ICE carbon database as a general benchmark for embodied carbon data and then work with your supply chain to obtain the most accurate project-specific carbon data to consider whole-life carbon.



**Emma Hines** is senior manager, sustainable construction, at Tarmac.

Consistency in terms of approach and benchmarking data is essential to make meaningful comparisons.

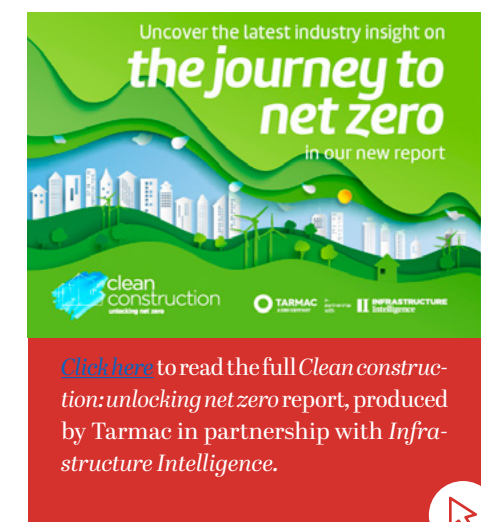
While there are good levels of understanding about what constitutes whole life measurement, this level of awareness is not always necessarily translating into delivery.

The reality from my experience is that carbon measurement is all too often an afterthought. At Tarmac, we're still inundated with requests for carbon performance data retrospectively at the end of project. This approach will not deliver the best environmental performance or outcomes. It really is a missed opportunity to have discussions up front with clients and contractors to collectively consider how to cut carbon during construction and across the lifecycle of an asset.

## More industry-wide collaborative engagement needed

Tackling carbon requires an industry-wide approach and early engagement to shape and embed whole-life measurement from the outset. Engaging with construction products manufacturers early in the design process will help clients and contractors make better-informed decisions about materials and specification that improve whole-life performance.

When it comes to carbon measurement and analysis, significant progress is being made, however we do need more common approaches, greater consistency and early engagement with the supply chain partners to consider the whole life performance of materials.





# Tech's role in a successful energy transition

Properly managed, a successful energy transition can support a smoother and more economical transition to a zero-carbon society, says *Peter Adams* of Jacobs.

**T**o reduce emissions and reach net zero on a global scale, it's essential we look at the innovations and solutions to transition to a more energy efficient and decarbonised tomorrow.

Part of this solution is the energy transition, focused on shifting our electricity systems away from fossil fuels and towards clean energy. It will be a cornerstone of helping achieve the EU's ambitious climate target of carbon neutrality by 2050, with energy production accounting for 75% of the EU's greenhouse gas emissions.

To succeed it will require a huge amount of investment and innovation, with collaboration at a scale not seen before. The industry is already stretched to maximum capacity, but the demand continues to increase and new directions of growth are needed. A holistic approach is needed to address the big issues of cost and reliability and this is where investment in technology can support.

Developing technology poses a real opportunity to better manage the grid and generate greater energy efficiency. Combining technology solutions and addressing supply and demand will reduce the amount of capital investment needed to upgrade existing infrastructure. Virtual transmission lines can be used to control the time of day assets are used, spreading the cost of electricity more widely and reducing peak time demand. But for greatest effectivity, people's energy consumption habits need to change. New tariffs should encourage people to avoid using peak times for energy use, spreading it over a wider period, reducing the level of infrastructure needed and overall capital investment.

But often the amount of energy available at the right time or in the right place isn't sufficient, with it created or stored further away from where demand is located. Significant research and investment is going into improving transmission and distribution infrastructure, storage technologies and energy management,



**Pete Adams**  
is the market director  
for power at Jacobs.

through technologies such as artificial intelligence.

In the UK, the concept of hydrogen hubs is in the early design stages and these are being anchored by public sector demand (transport) and energy intensive sectors. While there are significant challenges to hubs, there is considerable opportunity for the future. In mainland Europe, the proposal of energy parks brings together industry and large commercial properties to manage distributed energy resources through Power-to-X technology, which turns electricity into heat, hydrogen or synthetic fuels, and digital capabilities. They can create an overall carbon and capital saving for key technologies which can be deployed locally and strategically.

This will spread the risks and ensure their usage becomes more viable. It will create a momentum that should bring down overall costs, making energy more affordable and more widely available - ultimately reducing emissions and climate change impact.

Historically, individual countries took ownership of investing in a diverse mix of low-carbon energies, but now the scale is so vast we need multiple stakeholders brought together to implement collective systems and policies. Governments have an important role to enable the success of these technologies, through demonstrator programmes, followed by policy implementation and new business models.

New technologies offer a multitude of opportunities across all sectors. If managed in the right way, a successful energy transition will offer real potential to support a smoother and more economical transition to a zero-carbon society.

# Hoping for the best, but planning for the worst

When it comes to professional indemnity (PI) insurance, it's ok to hope for the best as long as you don't forget to plan for the worst, says *Graeme Tinney* of *Griffiths & Armour*.



**Graeme Tinney**  
is professional risks  
director at Griffiths  
& Armour.

**P**erhaps it's just part of the human condition that we hope for the best but don't always plan for the worst. On many levels, that optimistic outlook is to be admired but when it comes to the PI insurance market it is often misplaced and potentially dangerous.

Over the past number of years, Griffiths & Armour has looked to explain what's happening in the PI insurance market through a series of client communications and broader industry engagement. In the past 12 months alone we have delivered a detailed Client Information Alert, guidance notes for ACE and other professional bodies, a video summarising how firms should be approaching their PI renewal and several informative industry webinars.

These initiatives, together with industry reports, surveys and publications, have helped raise awareness of market conditions and yet we continue to receive last-minute enquiries from firms who are struggling to source renewal terms or facing severe restrictions in cover. The message we hear is invariably the same - "We knew the PI insurance market was in distress, but we didn't think it would impact on us".

This overly optimistic view, that it must be somebody else's problem, is often predicated on the firm's perception of their own risk or the experience they had at their last renewal. "We aren't a great risk; we've never had a claim". "Renewal has always been reasonably straightforward and we've been with

the same insurer for years". "Nothing has changed in our business. We're still doing what we've always done," are just some of the responses we hear.

What these comments fail to recognise is the fundamental shift that has taken place in the PI insurance market. Firms can find themselves in distress for a whole variety of reasons - there doesn't need to be a significant claim, they don't need to have exposure in particular sectors and they are often firms who have never encountered difficulties before. Frankly, they are often firms who look just like you.

In a PI insurance market where capacity is severely restricted, you could find yourselves competing to have insurers take on your risk. We all want to be optimistic; we hope to achieve better outcomes. As brokers we have a

responsibility to do what we can to achieve that, but we need your help.

Regardless of who your broker is or how you regard your risk, taking on board the following actions will definitely help: -

- Start the renewal process early.
- Engage positively.
- Respond to questions fully; and
- Make sure insurers understand your business.

Over the past two years, we have come to the assistance of many firms, but time has been critical in achieving better results and at times the clock has simply run out.

Remaining optimistic is to be admired and it is an essential trait in the current climate. What we can't do however is let it become a substitute for the affirmative actions that will be required to achieve the outcomes we hope for.





# Industry welcomes UK's first hydrogen strategy

The infrastructure sector has welcomed the UK's first ever hydrogen strategy but is looking forward to seeing further details emerge over the coming months.

Leading figures from the infrastructure and consultancy sectors have welcomed the UK government's first ever hydrogen strategy, describing it as an important milestone and the first step in establishing hydrogen as a key part of the UK's future energy plans in the drive towards achieving net zero.

However, while warmly positive towards the general strategy, the industry is still looking forward to seeing further details emerge over the coming months.

Opposite is a brief selection of industry reaction to the UK hydrogen strategy:



**Sir John Armitt, chair of the National Infrastructure Commission**

*"This strategy provides a platform for hydrogen to take its place as part of the solution for decarbonising our economy. As recognised by government, it is vital that we concentrate on truly low carbon hydrogen production, and therefore the proposed development of technical standards is welcome. This strategy is an important milestone and industry will now look forward to seeing details of the business model, funding mechanism and sector development plan in the coming months."*



**Matthew Farrow, director of policy at the Association for Consultancy and Engineering**

*"For a long, hydrogen and electrification were seen as alternatives but this strategy rightly shows that both will be needed to deliver net zero. The UK has some potential strengths in this field given its energy heritage but turning this potential into reality at an acceptable cost will require government to flesh out the detail to give businesses confidence to invest. Hydrogen can play a key role in decarbonising transport in particular. It will also help with heating in homes, though public acceptance will be important here."*



**John Mullen, UK energy market director, Ramboll**

*"What this strategy will finally deliver and what is really needed is the business assurance that investment in hydrogen infrastructure and technology is a good bet. However, as a developing market the government should be seizing the opportunity by providing investment and the development of a concrete action plan now, rather than making us wait until 2022. Hydrogen is often presented as a silver-bullet solution to the UK's carbon and climate concerns, but relying on it alone will not solve the UK's challenge when it comes to the challenge of meeting net zero. Although a key part of the puzzle for parts of the energy industry, it will only hold around 5-10% of the UK's energy mix and we cannot take our eye off broader investment and support for renewable energies."*



**James Watt, hydrogen consultant at WSP**

*"The launch of the UK government's first Hydrogen Strategy is a very welcome development and also signals good news for the green skills agenda through the forthcoming Hydrogen Sector Development Action Plan. However, it is important that we continue to push our boundaries by innovating and capitalising on the huge opportunities provided by low carbon hydrogen. The government lays out an ambitious set of targets under the strategy. Both in the approach to COP26 and in its wake, the UK should lead by example on the global stage in generating low-carbon pathways and realising our net zero ambitions."*



**Clare Jackson, head of innovation - low carbon, at Genserv**

*"The hydrogen strategy fires the starting gun on the scaling of hydrogen solutions in the UK. This is great news for the industry, but it is just the first step in a very long journey to establishing hydrogen as a key part of our future energy systems and enable the UK to cost-effectively deliver net zero"*



**Tim Cooper, client development director for water, energy and environment at Arcadis**

*"The government's hydrogen plan is certainly ambitious but, given the imperative of the UK's net-zero target, will be an essential component in driving change. By financially backing the move to a low carbon economy the level of commitment is clear, but we should not underestimate the scale of the challenge. Carbon intensive industries like construction will need to work collectively to pioneer hydrogen innovation, and this is where the development of carbon capture, usage and storage infrastructure will play a key role. Ultimately we are at the very start of the journey, and while today's government announcement is welcome news, as an industry we need to move quickly to ensure we are ready to capitalise on the full scale of the opportunity."*





# Leading digital change

WSP is sponsoring the Best Use of Digital category in this year's Consultancy and Engineering Awards. We spoke to their head of discipline for intelligent transport, *Louise Lawrence*, about the company's mission to highlight digital transformation across the industry.

**T**here's a lot of talk about digital transformation in the industry currently. How do you view it at WSP and how do you 'default digital' in an organisation?

The phrase "defaulting to digital" has been often used and become a bit of a buzz-statement. At WSP, we are clear that without digital we will not be able to achieve our ambitions for transformational change and it is the absolute building block around everything that we do. To 'default to digital', we are first focusing on our people and making sure that we are developing, attracting and retaining the right people that have that digital

mindset and digital skills. We are also investing in new processes and new technology to continually improve the way we identify challenges and develop solutions and embedding that approach in the work that we do. It's not just the people that we bring in or the tools that we use, it's also the solutions that we design and enable for the sector.

**How does digital enable transformational change?**

Around 50 years ago, when the first digital watches came to market, a digital watch meant having an LED display on your wrist that told you the time. Fast forward to today and a digital watch is now a smart watch because it doesn't just tell me the time anymore, it gives me my route maps, it tells me how far I have walked, it tells me when to stand up, I can use it to pay for things, I can use it as a boarding pass and I can also use it as a ticket at a train station.

Because of digital technologies, such as 4G connectivity, something that was once just a watch can do even more than it could have done 50 years ago. The performance of that watch is transformed. In the same way, for our industry to enable transformational change we have to be able to reimagine how we design, build and deliver using the advantages now enabled by digital tech, but we have to learn how to think with a digital mindset because that is how true transformation will emerge.

**How can the right approach to digital help the industry to address big issues like net zero?**

Digital transformation is critical to achieving net zero outcomes. If we break it down into design, construction, operations and the customer, each of these are opportunities for where digital transformation can deliver to net zero. Carbon modelling tools embedded in our design processes, how we work with the supply chain from production through to the way that goods are transported and delivered to site and carbon in the materials that we are using themselves. Digitally-enabled design reduces our carbon footprint and for customers and communities, ubiquitous connectivity is crucial in contributing to the net zero agenda by enabling everyone to make smarter and greener choices.

**What will a greater focus on digital mean for the skills needed in the sector and will this make the industry more attractive to new entrants especially the younger element that the industry needs to attract?**

A greater focus on digital means that we will definitely need to attract new skills into the sector and that will also make our industry more attractive to everyone. It means that we can provide more opportunities for retraining, development and progression and most importantly, because sector-specific knowledge is vital to digital transformation, we also need to get better at keeping our people in the industry too. So, I think it's not just about attracting new younger entrants - and we will attract those - it's also about keeping those sector professionals with deep corporate knowledge in the industry as well. We need both to achieve transformation.

**Why is WSP keen to sponsor and highlight digital excellence in construction?**

As a society, we are fast-tracking our way to climate crisis. We not only need to put on the brakes, we need to undo the impacts of our carbon footprint on this planet. Our industry and the role that we play within it is crucial to that goal. The tonnes of carbon we can remove through modern methods of construction, digital twins, digital asset management, data collaboration, how we design, build, deliver, maintain, operate and dispose will all make a difference. WSP understands the need to come together and catalyse the learning, innovation and best practice into reality. We all have a role to play in achieving digital excellence and WSP is leading that industry change.

- The virtual awards ceremony to unveil the winners of the Consultancy and Engineering Awards will be broadcast on the ACE website at [www.acenet.co.uk](http://www.acenet.co.uk) on Thursday 16 September 2021 at 12 noon. For further information contact Chetna Gorasia at [cgorasia@acenet.co.uk](mailto:cgorasia@acenet.co.uk)



**Louise Lawrence**  
is head of discipline  
for intelligent  
transport at WSP.



# Life begins at 50!

Editor *Andy Walker* comments on the milestone and industry leaders also add their congratulations on reaching our half century.

**A**s a keen cricketer (highest score 49) I'm absolutely delighted that *Infrastructure Intelligence* has notched up its half century of issues. I've been privileged to be the magazine's editor since issue number 19 and before then and since we have striven to report on the activities of the construction and infrastructure sector with honesty and enthusiasm and in a way that highlights the significant contribution that our industry makes to people's quality of life in the UK and internationally.

Our editorial ethos is unashamedly forward-looking and we make no apology for that. Our readers work in a fantastic industry that shapes people's lives and while delivering the latest news is interesting - and we love doing that on our website on a daily basis - understanding how it can drive businesses forward is more useful. *Infrastructure Intelligence* exists to provide the analysis, comment and insight that business leaders need to compete and thrive in the exciting and expanding world of infrastructure and construction and we will continue to do that into the future.

I'm especially grateful to the industry leaders listed below for their warm words of congratulations on this our 50<sup>th</sup> issue. Their support is much appreciated and I look forward to the magazine continuing to provide a diverse mix of news, views and features from a diverse range of contributors in the months and years to come. Thanks for reading us and supporting us – and here's to another 50 issues!

**I INFRASTRUCTURE**  
**Intelligence**



**Jo Field, President,  
Women in Transport**

*"Congratulations on the 50th issue of Infrastructure Intelligence. The magazine is always on the pulse of key industry issues and reports them in an accessible format. At Women in Transport, we particularly appreciate the editor's championing of the equality, diversity and inclusion agenda and the magazine's promotion of diverse role models across the industry."*



**Luke Murphy, Associate Director  
for Energy, Climate, Housing and  
Infrastructure at IPPR**

*"On behalf of everyone at IPPR, I extend our congratulations to Infrastructure Intelligence for reaching this milestone. From the future of transport, to the race to net zero, Infrastructure Intelligence provides those of us working in policy with the most up to date news on some of the most pressing issues facing the infrastructure sector. Crucially, like IPPR, Infrastructure Intelligence is a truly national voice. With reporters in regions like the north, it is one of just a few magazines that truly lives and understands the issues at play across the UK and this is hugely welcome. We wish you the best of luck for your next 50 editions."*



**Mark Naysmith,  
Chief Executive Officer, WSP UK**

*"Since its launch eight years ago, Infrastructure Intelligence has provided WSP with valuable insight into developments within the built environment. I'm grateful for all Infrastructure Intelligence and the Association for Consultancy and Engineering do to promote our industry, our great projects and consulting firms such as WSP and I congratulate the team on this milestone of their 50th edition."*



**Sir John Armitt, Chair of the  
National Infrastructure Commission**

*"Infrastructure Intelligence has become a must read and its e-newsletters provide a regular supply of information that otherwise would be a challenge to find and digest. They say life begins at 50 – and Andy, Rob and the team look set to go from strength to strength in serving the sector with timely news that helps promote the innovation and collaboration we will need to meet the challenges and opportunities ahead."*



**Richard Robinson, UK CEO, Atkins**

*"Over the course of 50 issues, Infrastructure Intelligence has firmly established itself as one of the most influential and informative publications in our sector, championing what we do, how we do it and why. At Atkins, we've enjoyed working closely with the team to bring the industry together to discuss the challenges we face and the opportunities we must seize as we look to accelerate the digital transformation of infrastructure delivery and realise a net zero future."*



**Mark Cowlard,  
CEO – UK & Ireland, Arcadis**

*"A huge amount has changed in our industry since Infrastructure Intelligence first launched, and that pace of change is only set to continue. One thing that remains the same is the magazine's reliability in providing quality information to unite the multiple professions within our industry and create lively and interesting discussion along the way. This helps many people navigate this exciting and expanding world of infrastructure and I'm excited to see what the magazine has to come in its next 50 issues."*



**Jamie Gordon, Board Director –  
Infrastructure & Energy, BECG**

*"Infrastructure Intelligence has provided a much-needed voice for the sector, a role which has become essential over the past 18 months. We are proud to support their webinars which have encouraged debate and connected the industry during lockdown and will hopefully continue to do so as we move into a post-Covid future."*



**Colin Wood, Chief Executive –  
Europe, AECOM**

*"Congratulations to Infrastructure Intelligence on reaching its 50th edition. Always an insightful read, the magazine remains a key publication for the built environment sector, discussing important issues and helping to raise the profile of our industry and our people."*



**Cathy Travers, Managing Director,  
Mott MacDonald UK and Europe**

*"Since its launch in 2014, Infrastructure Intelligence has continuously championed the engineering consultancy sector and highlighted the value our profession brings to people and communities around the world. From the technically brilliant engineering minds to the innovative problem-solving mentality of our profession, Infrastructure Intelligence has never stopped promoting our work, projects, businesses and most importantly the people themselves."*



**Gerard Toplass, CEO of The 55 Group  
that includes Pagabo**

*"On behalf of Pagabo, I would like to congratulate Infrastructure Intelligence on reaching its half century milestone of 50 magazine editions. Honest knowledge sharing has never been more important due to a rise in misinformation over recent years, so collaborating with reputable titles like Infrastructure Intelligence is really important to us as an organisation. We're looking forward to 50 more editions that recognise and celebrate the potential that built environment innovation is capable of reaching."*



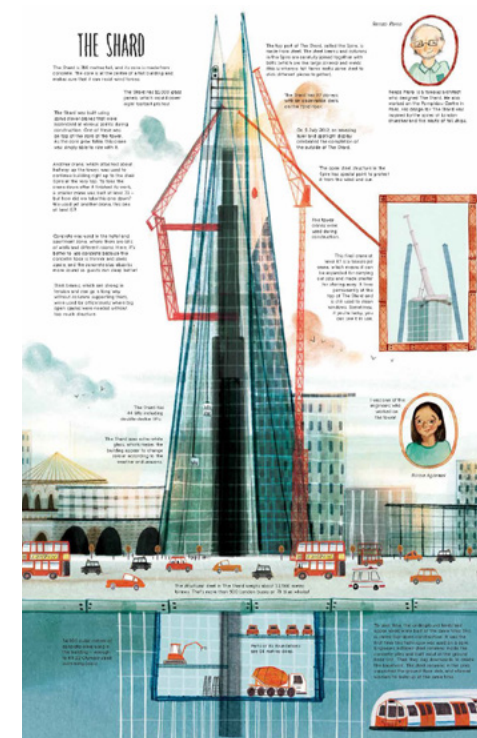
**Roma Agrawal MBE,  
Engineer, Author, Presenter**

*"I'm always pleased to see the II email drop into my inbox, it's my prime source for keeping up with developments in our industry. I also think they've done a great job hosting so many live events during a very difficult year which has been overshadowed by the pandemic. Here's to another 50!"*



# How was that built?

The latest book from Roma Agrawal takes a behind-the-scenes look at some of the world's most incredible structures. *Infrastructure Intelligence* editor *Andy Walker* reviews it here.



**I**nspirational engineer, author and broadcaster Roma Agrawal's latest book, *How Was That Built*, is aimed at children and explores some of the world's amazing structures across seven continents.

The book outlines, in Agrawal's trademark accessible and easy-to-understand style, the forces that act on structures and how to resist them, what materials keep structures strong and how to make them tall and stable, how to build underwater and even on the moon and highlights the stories of some of the amazing engineers who created the world in which we all live.

*How Was That Built* does much more than that though. It really is an accessible, interesting and exciting description of how structures are built and how construction works and anyone reading it - young or older, but especially the young - cannot fail to be inspired by the fascinating world of construction that literally changes people's lives with its achievements.

Using examples from around the world, Agrawal shows how to build structures that are flat, tall, long, clean, strong and stable. The examples she uses include the Metropolitan Cathedral in Mexico City, which sank and tilted because of the ground it was built on (Mexico City was literally built on a lake). She explains how, in the 1990s, engineers had to save the structure using methods that have since been employed on other projects around the world.

Other examples she uses include the Shard (on which she worked), the Brooklyn Bridge (a project on which the engineer Emily Warren played a key role), London's sewer system, the Burj Khalifa in the UAE, the Katse Dam in Africa, Thames Tunnel, Sapporo Dome in Japan and the Halley VI

research station in Antarctica. The book is illustrated beautifully throughout by Katie Hickey's wonderful art which bring Agrawal's engineering descriptions to life.

The book provides an exciting behind-the-scenes look at some of the world's most interesting and incredible structures from skyscrapers that reach beyond the clouds to massive bridges spanning the widest rivers. Agrawal is always interesting and interested in the ingenious ways that engineers tackle big challenges and through the pages of her book readers get to meet the extraordinary people who have transformed the landscape of the globe and the way we live.

*How Was That Built* is a brilliant book and I hope it receives a wide circulation amongst its target readership and beyond. I also think it will do a lot to encourage young people to consider a career in construction. As Agrawal says in her introduction: "Once you read this book, you'll see the world through different eyes - the eyes of an engineer."

*Order How Was That Built? The Stories Behind Awesome Structures on Bookshop.org for £13.94*

[Order Here](#)



# Partnering for action on climate change

Working together and sharing learning on tried and tested solutions can help businesses as they strive to tackle climate change, says *Zoe Haseman* of Jacobs.

**I**n 2021, the world's attention has shifted toward the global drive to net zero, with the United Nations describing it as a "make or break year" for action on climate change. In 2020, net zero carbon commitments roughly doubled, with many countries embracing the opportunity to deliver green stimulus to support economic recovery post-Covid.

The focus for net zero right now is on enabling delivery and this requires all of us to work together - businesses, governments and communities around the world. The interface with businesses and cross-industry partnerships is vital to informing policy, stimulating innovation, sharing learning and, ultimately, improving action.

With world leaders set to gather at the UN Climate Conference (COP26) in Glasgow this year, the Climate Solutions Network is a tremendous example of collaboration to deliver hugely important new learning opportunities. Climate Solutions, developed by the Royal Scottish Geographical Society (RSGS) in association with the Universities of Edinburgh and Stirling and the Institute of Directors Scotland, is offered in two ways. One is the Climate Solutions Professional and the other, the Climate Solutions Accelerator. Both courses are designed to provide a thorough understanding of climate change, climate science, relevant policies and the solutions and tools available for businesses to use.

Jacobs partnered with the RSGS to help create the comprehensive learning resource, the Climate Solutions Accelerator, which we are offering to our entire global workforce to help employees understand the role they can play in climate change action.

Jacobs' own commitment of achieving net zero carbon for our operations and business travel was realized in 2020 and we're now focused on fulfilling



**Zoe Haseman**  
is vice president for  
global sustainability at  
Jacobs.

our science-based carbon reduction targets. Yet, our biggest opportunity to address climate change comes from the wide range of innovations and technology solutions we provide to our clients and the opportunities to help shape and develop the new standards to accelerate sustainability.

Some of these solutions are being used to improve the sustainability of our own operations. When we consider a group of the world's biggest companies have valued the climate risks to their businesses at almost \$1 trillion, it's evident that the global climate emergency is creating significant uncertainty for businesses globally.

We are working to understand our own climate risk and opportunities across the broad market sectors we operate in, and to help our clients understand theirs. We've developed the climate risk manager platform to help guide us on our journey to futureproof our assets and operations and inform our own climate risk and opportunities assessment. The cloud-based platform brings together global climate data and location intelligence, giving visual risk assessments, to enable more accurate and agile decisions on where to invest resources and guard against climate risks. Asset owners can understand the immediate and long-term impacts of climate change at an asset and portfolio level, anywhere in the world.

Having been on this journey, we understand the challenges first-hand and are now partnering with other organisations to help guide them from our own experiences. There are many positive examples of shared learning and climate solutions that businesses can take advantage of today - let's use them to inspire and enable meaningful action.





# Making waves in construction's digital renaissance

Tech company ALICE Technologies' vision is to help reduce the cost of construction by 25% globally. *Andy Walker* spoke to René Morkos, ALICE's founder and CEO, to find out more about their work.

**A**LICE is an AI-powered construction simulation and optimisation platform that helps to easily create, explore, and update construction schedules that reduce risk while cutting construction costs by 11% and build time by 17%. Founded in 2015, based on research from Stanford University, ALICE Technologies works with construction leaders across the infrastructure, industrial, and commercial construction sectors. Its founder and CEO René Morkos, an experienced civil engineer with years of experience in the industry, is an enthusiastic advocate of the transformational role that technology can play in changing the face of construction and what the industry delivers.

"ALICE is the world's first generative construction simulator – so what is that you may ask? The way I like to explain it is let's say you want to draw a cylinder or a pipe in 3D and then you want a smaller or larger cylinder then you have to redraw it every time. With generative or parametric tools you can generate lots and lots of options automatically. ALICE does this quickly and this simulation allows you to figure out faster and better ways to build something," Morkos says.

The ALICE platform is helping some of the world's leading contractors to solve their most pressing construction challenges enabling them to submit bids with confidence, make better data-driven decisions and to ultimately deliver projects faster and cheaper. "Construction hasn't seen a serious innovation in about 60 years and the way projects have been managed has been effectively by hand," says Morkos. "But in 2021, we are now in a position to apply technologies like artificial intelligence and machine learning to the construction process and that is exactly what we are doing," he says.

Such an innovative approach can save 17% of time and 11% of construction costs on projects, Morkos explains, and that's why construction companies want to use ALICE. Applying the power of AI to construction projects is the future as far as Morkos is concerned, though he understands why the industry has been reluctant to adopt its use in the past. "The reason why there has been a historic reluctance to go down this route is that a lot of people have been burned in the past as a result of poor software and solutions that have promised heaven and high water but



Companies like Parsons are benefiting from working with ALICE on the \$2.6bn Edmonton rail project in Canada.



ALICE Technologies founder and CEO, René Morkos.

didn't deliver," says Morkos.

"The beautiful thing about innovation though is that it's available to everybody and we are seeing people innovate, take risks and apply these technologies and techniques. Construction is going through an incredible renaissance right now, where there is a new ecosystem that is getting developed in our field. What's going to happen to construction today is what happened to manufacturing back in the 1970s and 1980s. We are becoming a highly sophisticated sector and that is happening as we speak," Morkos says.

Companies using ALICE software are able to build faster and more cheaply and ultimately more efficiently. This also means reducing risk and the software enables them to do this. Companies like Parsons are benefiting from working with ALICE on the \$2.6bn Edmonton rail project and the Hawaiian Dredging Construction Company has deployed ALICE on projects to enable them to manage them better.

Morkos says that he was driven to create ALICE as he felt that construction was lagging behind other sectors in its application of technology and he wanted to do something about that. "I have bet my entire career on changing that," he says. "I have focused on changing the impression that other people have of construction by the application of technology and algorithms that enable us to work better," he says.

Morkos is a strong advocate of getting people to view construction as a hi-tech sector that people want to work and make a career in. Rather than surfing the wave of change running through the industry, he says that he wants ALICE "to be part of what's creating the swell" and to work with others in the sector who feel the same way.

Looking ahead, Morkos sees the digitisation of the construction supply chain as crucial. "Our mission statement is to reduce the global cost of construction by 25% - that's 25% less emissions, 25% more people can afford a home, 25% of people can afford access to infrastructure and so on. Being able to provide infrastructure and modern facilities to communities is something that drives me and being part of all that is an incredible journey to be on," he says.

It's clear that the concept of changing people's lives for the better through delivering better infrastructure is a key driver for everything that Morkos and ALICE does. "With most of the people I talk to in our industry, that is what drives them too," he says. "This is an industry that builds most of the world's fixed physical assets and everything that you call life has infrastructure at its heart. ALICE is part of making that better and helping the people in our industry to deliver better, more effectively and efficiently," says Morkos.

Morkos's enthusiasm is infectious and leaves you wanting to find out more about the man himself and also ALICE Technologies. You might not have heard of them yet, but my bet is that you will soon enough and I have no doubt that he and they will be making waves and making a difference in the UK construction sector in the months and years to come.



# It's time to radically rethink procurement

Global challenges require a radical rethink in the way that the construction sector approaches procurement, says Turner & Townsend's *Richard Wood*.

**I**s UK infrastructure ready to shake off a narrative of spiralling costs and overrunning schedules and tackle the longstanding challenges of productivity and performance? In recent years we've seen significant progress, especially through the Project 13 initiative around industry self-transformation. Government, as the UK's biggest infrastructure client, has also rapidly built momentum over the last 12 months with the launch of the Construction Playbook and rebooted the IPA Project Routemap.

Yet the evidence suggests we are still continuing to miss the mark and one critical area is procurement. Last year, our research



**Richard Wood**  
is director for  
programme advisory  
(commercial strategy)  
at Turner & Townsend.

across UK construction found that the majority of client organisations are failing to learn from past projects when it comes to setting up programmes successfully from day one. In 2021, this matters more than ever as growing social and economic demands coincide with global growth in infrastructure on a scale not seen since the second world war. With surging investment and an unprecedented focus on social and environmental priorities, we have a unique chance to reshape industry capability.

## Reimagining the rulebook

The opportunity and requirement to act are finely balanced. The scale of global growth, coupled with the work of the National Infrastructure Commission over several years in the UK to coordinate and build a clear pipeline of opportunity, means that we have more visibility and stability when planning and investing.

At the same time, the pressures on getting it right are unprecedented. The government's levelling up agenda is building on the UK2070 commission's work to address widespread inequality and meanwhile the urgency of the climate emergency puts construction in the spotlight. Priorities around value – social, environmental and economic – must also be reflected in how we set up programmes.

It is no longer about what we build or where, but why and how.

Government is taking the lead, with a forthcoming procurement bill coinciding with a more ambitious agenda alongside the practicalities of a new regime post-Brexit. The objective is to radically re-evaluate value for money criteria that are cascaded through the budgets and programmes of government departments and their arms-length bodies in transport, education and health amongst others – putting social value and environment centre stage.

For private investment, the drivers are most compelling around alignment when partnering with asset owners, but also brand. Increasingly, private businesses are under pressure to demonstrate performance on a wider range of socio-environmental outcomes as part of their offer to their shareholders.

## Evaluating priorities

Whether public or private, infrastructure partners have a series of critical decisions to make.

The first is around the value given to the process, and the values it should follow. The great claims around purpose and priorities made in boardrooms and by decision-making bodies must be reflected in the way in which services are brought

into a programme. To achieve the transformation we so urgently need in our industry, procurement teams need to move beyond transactional and compliance-focused processes, to become purpose-led, inspired and empowered to make value-driven decisions that are aligned with programme outcomes.

## Need for a 'digital-first' approach

The second decision is around being data-driven, with an appreciation of digital requirements built-in to procurement models from the outset. With the use of digital technology and asset integration tools finally becoming commonplace, we now need consistency so that best practice can be readily understood not just within programmes, but between them. Once again, government can play a critical role here by adopting standardised performance measures for its own programmes – allowing better visibility on capability and expertise when identifying supply chain partners. Our goal should be to get to the point where this digital-first approach can create alignment between programme objectives and performance incentives not only for suppliers, but the individual contributors within that chain.

This in turn brings us to the decision around partnership. Within the last year alone supply-side pressures and soaring demand have seen a reversal of traditional supply chain dynamics. Our latest UK market intelligence report from June forecast that infrastructure tender prices are likely to see sustained inflation. In a market characterised by rising costs, asset owners are choosing to invest in long-term strategic partnerships where alignment of purpose and outcomes is as important as price.

Long may this approach continue where it allows both sides to work collaboratively on achieving efficiency in working practices, standardisation in design and visibility of pipeline that supports investment in new tools and skills.

## Smarter, more collaborative procurement

Importantly, those partners do not always need to be the major players and the UK government in particular is championing local skills and specialism. Smart procurement models must seek out the opportunities to bolt-in regional expertise in a way that will build long-term capacity and capability in UK infrastructure.

The final critical decision is around evaluation and staying on track. Historically, this is one of the biggest areas where infrastructure programmes fall down, with visions and ambitions outlined at mobilisation forgotten or eroded over time. The role of the procurement process must be to bring together the right partners, underpinned by delivery and commercial models which provide clear linkage and incentivisation back to strategic outcomes, not just outputs.

## A roadmap for change

At the heart of all these decisions is a need for fundamental change in the respect and energy directed at procurement. Far from being a mere transactional process or protocol, it is a fundamental translator from strategic intent into delivery of a successful legacy.

These are not just areas that secure better outcomes for the UK, but ones that are urgently needed worldwide. The change that has been so long coming for our sector is no longer just an opportunity, but an imperative.





# Clean energy goals need local leadership

To achieve the much-vaunted national commitments around a clean energy future for the UK, local leadership on the ground is vital, argues *Ally Kennedy*.

In November this year, five key themes set out by UK government will take centre-stage as Glasgow hosts COP26. The first of these - "Clean Energy" - is perhaps the most obvious and widely understood pillar of the government's strategy to achieving net zero by 2050.

The UK has the most ambitious climate target of its kind in the world. It is a global leader in the wind sector, has expanded its capability offshore across hydro-electricity, marine and wave, and seen an uptick in biomass and in particular solar generation in recent years. All to the good, one might think.



However, one persistent problem that threatens to undermine the government's strategy is a fundamental disconnect between the rhetoric from national government vs attitudes to clean energy projects and achieving net zero 'on the ground'.

One useful indicator on this issue is the position taken by many MPs, not just on projects affecting individual constituency interests, but on the net zero agenda as a whole.

Polls of Conservative MPs conducted over the past 12 months by the CBI, BECG Group and Conservative Home respectively show the scale of the challenge for those looking to win support from MPs, and the communities they serve, on clean energy projects around the country:

- When asked what the UK's top three priorities should be for 2021, net zero came bottom and received just 12% of the vote (CBI, March 2021).
- 60% of Conservative MPs do not believe the climate crisis should be top of the government's agenda (BECG Group, April 2021).
- 65% don't think there is a climate emergency (ConHome, 2020).
- And almost 40% don't believe human activity causes climate change (ConHome, 2020).

These indicators are arguably already affecting confidence levels amongst politicians away from Westminster, with our survey of English councillors this summer finding that just 30% think the UK will hit its 2050 net zero target.

So, what does all of this mean for the future of Clean Energy in the UK?

Some would argue that the UK's planning system is already set up to deal with the inevitable tension between national ambitions and local opposition in this area as with many others. Some level of friction is unavoidable and a healthy, necessary element of how the UK's planning system functions in striking a balance between the two.

However, there is a serious and growing risk that a lack of local support could derail the government's plans in tackling one of the most important challenges in the UK's history. And whilst the consenting regime for projects of national significance paves a (lengthy) path for 'big ticket' clean energy schemes, huge swathes of projects across the country will ultimately still rely on winning the

support of communities, interest groups and local politicians in order to come to fruition and contribute to the UK's clean energy future. Add the fact that some local planning authorities have even tighter net zero targets than the those set nationally and it makes for a challenging landscape.

Our research suggests that objection and opposition is often based on a lack of understanding (and arguably a lack of clear, plain-English explanation) about a project's purpose and – crucially – the wider context as to why it is necessary.

Communicating the needs case for these projects more effectively is a key part of solving this conundrum, and COP26 provides one such opportunity for the government to turbo-charge its public information campaign and bring communities on board with the urgency of the task in hand.

Whatever the solution, to bring forward the projects needed to make its ambitions a reality and to the timescales needed, it is perhaps now more important than ever that the UK finds a way to bridge the gap and connect national commitment with local leadership to achieve the UK's clean energy future.



**Ally Kennedy**  
is a board director at BECG, the specialist communications consultancy for the built environment.



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# Awards shortlist unveiled

Winners of the annual Consultancy and Engineering Awards will be announced at online ceremony on 16 September.



The shortlist for this year's Consultancy and Engineering Awards has been announced.

The prestigious awards, which celebrate the outstanding people, teams and projects from the world of consultancy, engineering and the built environment, return this year as a virtual ceremony on Thursday 16 September 2021 at 12 noon. The winners of the ten awards will be revealed in a broadcast via YouTube and on ACE's website.

Commenting on the shortlist, Darrell Matthews, director of membership and business engagement at ACE, said: "We're delighted with the positive response to this year's awards which have been among our most popular to date. This has made the judges' task even more difficult than usual, however, as it has resulted in an exceptional shortlist!"

"I hope that the industry will join us online on Thursday 16 September at 12 noon as we discover who has come out on top. This is a brief moment to reflect on, and celebrate, industry success – made all the more impressive in that it was delivered in difficult and uncertain times."

Thanks to the generous support of headline sponsors Bentley Systems and Griffiths & Armour, as well as category sponsors WSP and Arcadis, the awards are free to enter this year. Once again, Infrastructure Intelligence are the media partners for the awards.

The full shortlist in alphabetical order is listed left.

## Best UK Consultancy (micro)

Absolute Risk Technology (ART)  
Beattie Flanagan Consulting Engineers  
G B Card & Partners  
Rail Power Solutions  
Remedy Geotechnics

## Best UK Consultancy (small and medium)

Burroughs  
Clancy Consulting  
David Narro Associates  
Services Design Solution

## Best UK Consultancy (large)

Buro Happold  
Hoare Lea  
Stantec  
Tony Gee and Partners

## Inclusive Employer of the Year

Buro Happold  
Costain  
WSP

## Best Pandemic Response

Buro Happold  
Hoare Lea  
Pick Everard  
Ramboll  
Stantec

## Future of Consultancy - Best use of Digital

Atkins  
BWB Consulting (Deetu)  
RPS Group  
Royal HaskoningDHV  
Stantec

## Future of Consultancy - Client Advisor of the Year

Arup  
Mott MacDonald  
Royal HaskoningDHV

## Net Zero Advisor of the Year

Crofton Consulting  
Harley Haddow  
Max Fordham

## Emerging Professional of the Year

Dr Marzia Bolpagni (Mace)  
Taylor Young-Chambers (Waterman Aspen)  
Tom Channell (Ramboll)  
Ayrtton Dhillon (Arcadis)  
Samuel Elegbede (WSP)  
Joshua Lynch (Arcadis)

## Apprentice of the Year

Jared Harvey (Mott MacDonald)  
Callum Kantounas (WSP)  
Georgia Lilley (Waterman group)  
Hannah Mehr (Arup)  
Thompson Reed (Arup)

# Wellbeing workshop announced



Two practical member-only events will outline new approaches to help firms develop wellbeing strategies.

ACE and training and development specialist Accelerator have developed a practical programme across two exclusive workshops on workplace wellbeing. Filled on a first come, first served basis, the intimate workshops will provide attendees with a number of new approaches to help them devise impactful wellbeing strategies for their organisations and are open to anyone working for an ACE member company.

The first session takes place on Monday 11 October 2021 at 12

[Click here to Find out more](#)

noon and explores how best to actively build resilience. The pandemic pushed many people outside of their natural comfort zones and also revealed increased resilience. However, there are also a series of coping measures – which can be taught – that will help colleagues to do the same.

Following this, *Keep Calm and Carry On* takes place on Wednesday 3 November 2021 at 12 noon. Coinciding with National Stress Awareness Day, the session will ask what is stress, identify bad habits to cope with stress and how to assess levels with the 'Accelerator Stress Jar'.

Commenting on the virtual workshops' launch, Claire Clifford, director of people, skills, and culture at ACE said: "We're delighted to be working with Accelerator to offer these intimate and practical sessions to members. Whether building resilience or exploring stress, the sessions will provide the practical tools and approaches to help develop impactful company-wide strategies that will help deal with the challenges of home and hybrid working."

# SME guide to net zero now available

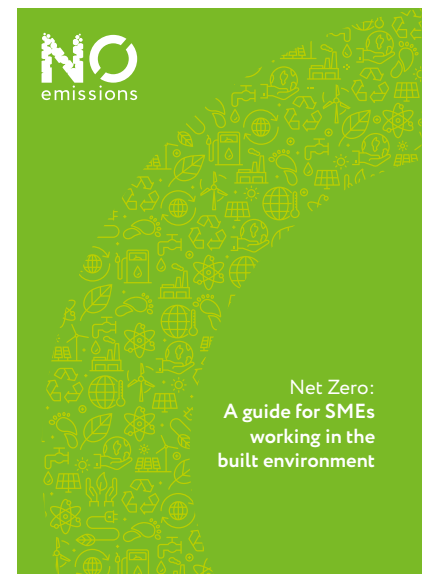
New guide offers SMEs practical and tangible advice to support their net zero journey.

A new net zero guide targeted at SMEs working in the built environment has been jointly released by ACE and sister organisation, the Environmental Industries Commission (EIC).

Aimed at small and medium sized members, the guide highlights the steps that should be taken towards a carbon free future, explores how net zero is already influencing client decision making and outlines how to meet new client expectations while seizing the business opportunities created.

The guide also provides a handy reference to previously released publications, reports, pledge schemes and sector plans, directly signposting to the most important and relevant sources of information.

[Download the guide here](#)



Commenting on its launch, Dr Sarah Prichard, UK managing director at Buro Happold, and chair of ACE's net zero group, said: "We designed this guide to help SMEs with practical and tangible advice to support them to make the right choices on their net zero journey."

"While much has been written around national targets and global conferences, the truth is that we will only succeed if we bring small and medium sized business on board. The UK economy is made up of six million SMEs making up 99.9% of the business population. Our guide is the first step towards this in our industries and I'm looking forward to further engaging both membership bases on this fundamental issue in the weeks and months ahead."



# It's business as usual at ACE

ACE's new interim CEO, *Laurence Brett*, introduces himself to members and the industry.

I have joined ACE in truly fascinating times for the industry. Whilst not quite in a post-pandemic world, we are nevertheless beginning to return to something that is closer to normality than it has been in the last year and a half. I won't attempt to predict where the pandemic will take society next, but a solid vaccination programme is rightly generating business confidence.

However, as one crisis starts to subside, another rises. The impact of post-Brexit trading rules, a new immigration regime and issues with global supply chains are all impacting on the wider industry's ability to make the most of this positivity as construction activity starts to stall.

It's certainly a topic that has raised its head at the Construction Leadership Council meetings that I've attended recently where I have been representing ACE. While many of the issues we are currently facing are outside of our direct control, there are still collective measures that the industry can take to soften their impact.

Furthermore, I hope that the collaborative culture and spirit – which helped us through the worst of the pandemic – will continue as we tackle the short, medium and longer-term issues we all face as an industry.

Joining an organisation with a strong and welcoming leadership team and full programme of activity for the rest of the year has made my arrival far easier. As well as meeting and supporting my new colleagues, I have particularly enjoyed



**Laurence Brett**  
is interim CEO at  
the Association for  
Consultancy and  
Engineering.

interacting with members and groups.

The enthusiasm shown by the emerging professionals has been particularly inspiring and I hope that, calendars permitting over the coming weeks, I will be able to join more group meetings. This will help me paint a true picture of our strengths and weaknesses for the future new ACE CEO.

While my strategy is very much about ensuring 'business as usual' for ACE and EIC, as an employee of a member firm I have also impressed on my new colleagues the need to continually strive to meet members' needs. This approach will ensure we remain as impactful as possible as we continue to build on the positive momentum built up over the years.

I will continue to bang this drum – on behalf of members – within the organisation as we await news of a new, permanent chief executive later in the year. Until then, I am very much at your disposal so please do not hesitate to contact me with any comments, questions or queries at lbrett@acenet.co.uk

# Protest, power and persuading people

Direct action on climate change has spawned a three-way tussle between protestors, citizens and democratically elected politicians, says *Matthew Farrow*.

The sight of Extinction Rebellion making the news again after a pandemic-enforced sabbatical reminded me of a meeting I had back in the dog days of the Gordon Brown government. At the meeting, also attended by a number of green groups, a senior Number 10 advisor lamented that while the NGOs were effective at articulating what they wanted the government to do, they had never been able to generate the strong public support for decisive environmental measures that would give politicians the political cover they needed to go for policies that would affect consumers.

The advisor had a point. At the time NGOs had a track record of targeted direct action against large corporates. And this was often successful – in 2010 Greenpeace had recently occupied Kingsnorth power station, successfully discouraging its owner E.ON from proposing a new coal power station on the site. And they often ran local community-based campaigns against proposals for development such as greenfield housing or energy-from-waste plants. But as the adviser rightly pointed out, NGO campaigns had not shifted the dial towards public acceptability of the sweeping policy changes that – as was already clear in 2010 – were needed to



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tackle climate change.

It seems to me that Extinction Rebellion have sought to rise to that challenge, albeit in a negative way. If the public are wary of supporting an end to gas boilers and mandatory expensive electric cars, then XR reason that upending our daily lives by blocking Oxford Circus or disrupting the transport network will cause such frustration that the public will support the government pursuing a more radical climate policy, if only so they can get back to travelling around without placards and protestors.

Whether this will work I'm not so sure. Despite the recent soothing advice from the Tony Blair Foundation that net zero can be achieved with minimal lifestyle change, ministers are only too well aware that the next stages of net zero action won't be popular. They will affect individual choices on issues which people feel are personal – what car they drive, how they heat their homes and who they let into their homes to insulate them. Voters may not like XR protests, but it's not clear how much support there really is for such direct state intervention in daily life.

EIC members are crucial to solving the net zero challenges. Consultancies are doing innovative work using digital and visualisation tools to improve community engagement, while other members create technologies that can minimise the behavioural change required to decarbonize. But, in reality, environmental businesses are largely on the side lines of this three-way tussle between protestors, citizens and democratically elected politicians.

At the meeting itself, all those years ago, I had little to contribute to the back and forth between the NGO elite and No 10 officials. But it's hard not to think that if we had started then to adopt the net zero focus that we have now, across mainstream business and government, we'd be in a much better position to stabilise our changing climate.



# Diversity in STEM worsened under Covid, say MPs

Marginalised groups in the STEM workforce have suffered disproportionately during the Covid pandemic, according to a new report by MPs and peers.

An inquiry by the all-party parliamentary group on diversity and inclusion in STEM (APPG on D&I in STEM), a group of cross-party MPs and peers, has found that marginalised groups in the science, technology, engineering and maths (STEM) workforce have suffered disproportionately during the Covid-19 pandemic. Without urgent action, the UK faces losing a generation of STEM workers, preventing this vital sector from fully contributing to the prime minister's science and technology agenda.

The inquiry, launched in November 2020, aimed to detail the current state of equity in the UK's STEM workforce, highlight the experiences of minoritised STEM workers and shine a light on positive sector-led initiatives and practices. Hearing from over 150 institutions, businesses, networks and individuals, MPs and peers learned how extreme the impact of Covid-19 has been for people of marginalised groups in the STEM sector, largely preying upon the existing inequity seen in the workforce, from finances and career opportunities to health and wellbeing, to recruitment, retention and the loss of vital funding and research.

While the evidence has shown the pandemic has exacerbated historic and systemic disadvantage for certain groups, the recovery provides an opportunity to address these structural issues. It may also allow for the government to work with the sector to tackle underrepresentation, creating more sustainable economic prosperity and opportunity for those impacted by the pandemic as well as future generations.

The key findings of the report are:-

- The STEM workforce is less diverse than the wider workforce, but consistent data collection and sharing is lacking.
- There is a need for the government to take a multi-pronged approach to drive equity in the STEM workforce.
- Intersectional barriers continue from STEM education into the workforce.
- There is awareness of structural inequity in some large STEM organisations, but no consensus on solutions.
- There is considerable inequity in STEM but Covid-19 is making it worse.

The report makes three key recommendations:-

1. The prime minister and government must lead on a bold vision for a diverse and equitable STEM sector at the heart of their ambitions for the UK.
2. The government must improve equity by delivering a statutory workforce data strategy to drive forward changes in policy and support employers.
3. The government must quickly look to address and reverse the worsening inequity within the STEM workforce which has been brought about by the pandemic.

*“Having worked as an as an engineer before entering parliament, I know too well the barriers that minoritised groups in STEM face. Sadly, diversity and inclusion in the STEM workforce was bad before Covid hit and our inquiry’s findings show how the pandemic has preyed on this disadvantage and exacerbated it even more. A generation of STEM workers from diverse communities, in particular, black people, women, disabled people and those from the LGBTQ+ community, will be lost from the STEM workforce unless the government takes action.”*

Chi Onwurah MP, chair of the APPG on D&I in STEM.

# Building on Team GB’s swimming success

Modern methods of construction are being used to deliver affordable and sustainable swimming pools across the UK.

Box Architects and the Olympian-led ReCreation Group are using modern methods of construction (MMC) to deliver affordable and sustainable pools to get more people swimming.

Box and ReCreation pledged to build on the legacy of Team GB's gold rush in the pool in Tokyo which saw Britain's swimmers winning eight medals, including double golds for Adam Peaty, Tom Dean and James Guy and a record four medals in a single games for Duncan Scott. However, the success came as the UK experienced its worst ever month for lake and river drownings.

Meanwhile, new research from Sport England revealed that one in three children in England still can't swim, a figure which rises to 59% among least affluent families, compared to 16% among the most affluent. This fact is exacerbated by the problem that post-lockdown it is expected that many existing pools will not reopen, being outdated and too expensive to maintain.

Tackling this challenge, Box Architects has been embracing the efficiencies of MMC to work in partnership with the ReCreation Group to deliver a concept that creates much-needed swimming pools. Its legacy was born out of London 2012, when ReCreation founders and Olympic swimmers Steve Parry and Adrian Turner toured the UK with temporary pools from the athletes' village to teach children to swim. Since then, they've been creating their own swimming facilities as well as affordable pools for local authorities.

Graham Place, CEO of Box Architects, said: "It's an exciting journey. We've used our specialist MMC design skills to create a modular approach that can be adapted and repeated. As a practice, we're committed to developing MMC thinking and promoting our healthy practice approach, so our collaboration with



ReCreation couldn't be better."

The MMC approach means a much quicker design, development and construction process with projects manufactured off-site. Building above ground also means that maintenance is much easier with no underground pipework, while environmental sustainability benefits come from input to community district heating systems. Projects now extend to community pools, a gymnastics project with fellow Olympian Beth Tweddle and also leisure centre projects for local authorities, all using modern methods of design and construction.

"We wanted to develop an entire pool facility above-ground, which would be faster and more affordable to build," said Adrian Turner, Olympian and co-founder at ReCreation. "We knew that making such a pool a reality would unlock our mission of breaking down the barriers for kids to reach their true potential. Working together with Box Architects we've designed a solution that hits the speed and affordability goals, realises social and economic benefits and creates a destination that the community are proud of," Turner said.

Box and ReCreation's work couldn't have come at a better time, with Swim England's recent *Value of Swimming* report highlighting that 1.4 million swimmers show reduced anxiety, and two million young swimmers 'feel happier'.

"We're proud to be working with ReCreation to deliver affordable and sustainable pools to get more people swimming," said Box's Graham Place. "By doing so, we're helping to save lives, increase wellbeing and produce Olympic champions of the future."





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