



# UK CONSTRUCTION EXCELLENCE<sup>TM</sup>

FEBRUARY 2018



**UK** the **INFRASTRUCTURE**  
SHOW 2018  
Constructing the Future  
17 APRIL 2018 - NEC, BIRMINGHAM

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POWERHOUSE



# UK the INFRASTRUCTURE SHOW 2018

Constructing the Future

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## WELCOME from the editor

**WELCOME** to the February edition of UK Construction Excellence. With a turbulent start to the year, highlighted by the insolvency of construction powerhouse Carillion, many people are now looking towards Brexit and what its implications will be on the industry. Security is the theme for this issue. From physical site security to cyber security, and

securing your business for the future, we speak to experts across the industry to get their opinions on what needs to be high on your radar. We look at the impending arrival of GDPR and what it means for individuals, companies, and the cyber security implications for the industry. Information is becoming an invaluable commodity, and

it's only right you seek to secure it. And Steve Holliday at Lacerta, reflects on how we can create safer sites by creating a safer environment psychologically. And as always, the latest in news, views and opinions from around our industry.

Victoria Maggiani

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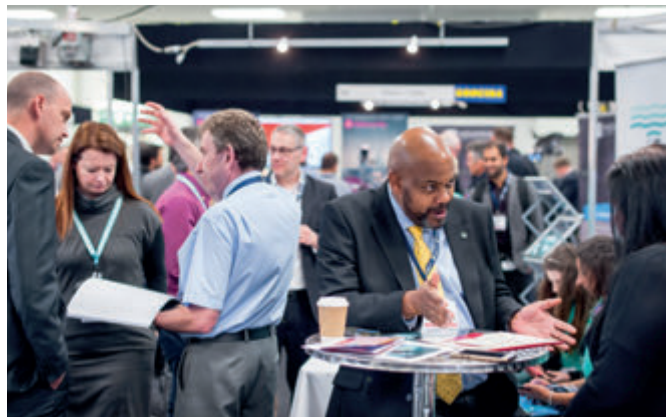
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# UKIS 2018 : KEYNOTE SPEAKERS ANNOUNCED

UKIS 2018, the UK's Leading Infrastructure, Housing & Supply Chain Event, has announced the keynote speakers for this year's event.



Infrastructure is the foundation upon which our economy is built; and with the government committing billions to delivering better infrastructure, the infrastructure industry represents a significant opportunity for businesses of all sizes.

The National Infrastructure Pipeline showcases some £600Bn in projects to be completed over the next ten years. Released at the end of 2017, the pipeline is backed by Transforming Infrastructure Plan aimed at revolutionising British infrastructure and boosting the construction sector's productivity.

Government investment is supporting some 40% of projects included in the pipeline, which is the largest and most comprehensive ever, with private finance making up more than half of the pipeline to 2020/21. The pipeline will help deliver important local projects across the country including transport, broadband, flood defence, and housing.

Major projects featured in the pipeline include, Thames Tideway Tunnel, the rollout of smart meters, and the upgrading of the A14.

## KEYNOTE ARENA

The Keynote Arena at the UK Infrastructure Show 2018 will showcase presentations from some of the organisations charged with setting the strategy of future infrastructure plans as well as some of the major projects currently underway across the UK.



**Andy Street**  
Mayor of the West Midlands



**Henri Murison**  
Director, Northern Powerhouse Partnership



**Roger Bailey**  
Asset Management Director, Tideway



**Greg Bradley**  
Head of Business Advisory, Arcadis



**Representative TBC**  
HS2

Through the pipeline, UK infrastructure investment is set to reach a record high. The investment fund includes infrastructure investments of over £2.6Bn to improve transport networks; a multi-million pound package to accelerate the future of broadband, and £72Bn to support the construction of new homes. Over 720 projects and programmes across transport, housing and digital to fire up the nation's infrastructure are featured within the pipeline, with around 20 new schemes added to the pipeline since March 2016, including the Oxford to Cambridge Expressway.

Investing in better infrastructure is at the heart of the government's ambitious plans to close the UK's productivity gap, and the NPIF is designed to boost productivity in the long-term. If the UK raised its productivity by one percentage point every year,



within a decade it would add £240Bn to the size of the economy; £9,000 for every household in Britain.

Officially supported by CompeteFor and many major ongoing and future infrastructure projects, the UK Infrastructure Show 2018 will provide participants with a unique opportunity to engage, connect and collaborate with a vast array of key projects, decision makers and influencers representing all areas throughout the supply chain.

UKIS is delighted to be working with HS2, Transport for London, Tideway, Horizon Nuclear, Consortium Procurement and Midlands Connect on UK Infrastructure Show 2018.

Taking the stand at NEC, Birmingham on Tuesday 17 April, are a number of experts with crucial insight into the infrastructure industry.

Keynote speakers include: Andy Street, Mayor of West Midlands, Roger Bailey, Asset Management Director at Tideway, Greg Bradley Head of Business Advisory at Arcadis, and Henri Murison, Director at Northern Powerhouse Partnership, as well as HS2.

UKIS 2018 is a must-attend event for those working in all areas of infrastructure, celebrating major ongoing and future infrastructure projects, including HS2, Tideway and Crossrail.

## PROJECT PARTNERS

Organisers, BiP Solutions, have confirmed several major partners for the event, including the Infrastructure Projects Authority, HS2, & Thames Tideway.

**THE IPA** works with Government and industry to ensure infrastructure and major projects are delivered efficiently and effectively, giving it exclusive insight into the sector.

**HS2**, the high-speed railway, will provide high-speed connections across the country by 2033. HS2 will be a catalyst for growth across Britain, opening up local and regional markets, attracting investment and improving skills and job opportunities.

**TIDEWAY** is the organisation delivering the Thames Tideway Tunnel, a 25Km sewer tunnel

## OPPORTUNITY AND TRAINING ZONES

Designed to educate delegates on the key issues common to large-scale infrastructure projects, these zones will take you through all you need to know in order to make the most of the supply chain opportunities available in this sector. You will also hear from representatives from some of the UK's leading projects, with details of supply chain opportunities.

## COMPETEFOR SUPPLY CHAIN ADVICE HUB

The CompeteFor Supply Chain Advice Hub is the go-to place for any organisation looking to improve their procurement capability, get a complimentary profile check-up or have your questions answered.

## PROJECT PARTNER PAVILIONS

Our project partners will each have a dedicated pavilion within the Product Showcase Exhibition. Come along and meet with representatives from these projects to learn more about the supply chain opportunities open to organisations like yours.

## PRIME CONTRACTOR ENGAGEMENT VILLAGE

The UK Infrastructure Show Prime Contractor Engagement Village will allow visitors the opportunity to meet directly with many of the key Prime Contractors currently engaged in the delivery of live projects, providing an insight into possible opportunities for developing ongoing working relationships.

needed to prevent untreated sewage discharging into the tidal River Thames in London. The tunnel will not only improve the environment, ecology, public health, appearance and reputation of London, but it will also give a much-needed and immediate boost to the economy by offering thousands of skilled jobs and hundreds of apprenticeships.

**CONSORTIUM PROCUREMENT** is the national procurement service of the Northern Housing Consortium, providing a wide range of framework agreements covering compliance management, asset management, telecare and financial inclusion including insurance and electronic payments. We currently represent over 300 members who between them manage over three million social housing tenancies across the UK.

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# Construction output drops

Office for National Statistics (ONS) figures have been released showing a drop in construction output to November 2017. However, overall output remains at a five-year high.

Construction output decreased by 2% in the three-month on three-month series in November 2017. This is the sixth consecutive period of decline in this series, and represents the biggest contraction since August 2012.

With the latest statistics giving a more comprehensive overview of industry trends than the more volatile monthly figures, the figures show a worrying development.

However, despite a continuing fall in the three-month on three-month time series, construction output grew month-on-month, with the figures showing a 0.4% increase in November 2017.

2017 saw some wide variables for the industry. March saw figures reach a level that was 31% higher than January 2013 – the lowest point of the last five years. With November's increase, figures now rest at 276% above this level.

Since the beginning of 2015, new work and repair and maintenance have been rising steadily, resulting in all work reaching a level peak in January 2017. The increase in output for November is a result of increases in both repair and maintenance and all new work.

In other sectors, all new work grew marginally, expanding by 0.4%, with levels remaining flat across all types of work. Only private housing provided a positive contribution to growth, the fifth consecutive growth period in this sector, increasing by £100M.

Positive growth is also evident in the three-months on year time series, with the 1.6% growth in all work occurring as a result of sustained growth in all new work and repair and maintenance. The 1.3% increase in all new work was driven primarily by growth in private housing, which grew 6.7%. The 2.1% increase in total repair and maintenance occurred as a result of private housing repair and maintenance expanding by 5.6% compared with the previous three months a year ago.



## Raab appointed Minister for Housing

Dominic Raab has been appointed Housing Minister, as part of PM Theresa May's recent cabinet reshuffle.

Previously Justice Minister, Mr Raab will work under Sajid Javid in the new Ministry of Housing, Local Government and Communities.

He will be the 15th housing minister in 17 years, replacing Alok Sharma, who was in the role for just six months.

The Prime Minister has previously stated that fixing the housing crisis is her personal mission, and by adding 'housing' to the job title of communities secretary there is room at the cabinet table for this issue for the first time.

However, industry members have criticised the continual changes in the role, stating that a long-term solution needs long-term planning and ministers need to have more experience within the role.

Commenting on the announcement of Dominic Raab as the new Housing Minister, Brian Berry, Chief Executive of the FMB, said: "Once again we have a new Housing Minister, which doesn't really help build the continuity and greater certainty that the sector needs. However, Dominic Raab is an able and influential Conservative MP who we hope will bring a new energy and focus to the brief.

"We welcome him to the role and look forward to working with him. We hope that his focus will be on continuing to develop and implement a range of good sound policies which have already been set out by Government in the Housing White Paper and other statements. And we hope that he will be given longer to take housing policy forward than too many recent Housing Ministers!"

## Building for people and wildlife

The Wildlife Trusts have released new guidelines for housebuilders, designed to guide developers in providing greener housing projects that also accommodate wildlife and their habitats.

The Trusts are hoping to reverse decades of wildlife and habitat decline whilst the Government commits to building a further 300,000 homes a year until 2022, saying that the two objectives can happily proceed hand in hand.

In 'Homes for people and wildlife – how to build housing in a nature-friendly way' the Wildlife Trusts assert that the natural environment must be put at the heart of planning. With some 36sq miles, an area bigger than Brighton and Hove, due to be given over to housing, the Government must look carefully at its commitment to be the first generation to leave the environment in a better state than they found it.

Rachel Hackett, Living Landscapes Development Manager for The Wildlife Trusts, said: "A huge challenge lies ahead – thousands of new houses are to be built yet we need to restore the natural world. We're calling on the Government

and local authorities to build beautiful, nature-friendly communities in the right places.

"Over the past century we have lost natural habitats on an unprecedented scale. Yet nature has its own innate value. It also makes us happy and we depend on the things that it gives us. Our new guidelines show that it's possible to have both, so people can enjoy birdsong, reap the benefits of raingardens which soak up floodwater, and plants that bees and other pollinators need to survive. With good design the costs of doing this are a tiny proportion of the overall cost of a housing development, but represent a big investment for the future."

The Wildlife Trusts are calling for the current focus on numbers of new homes to be replaced by a visionary approach to where and how we build.

Ms Hackett continued: "We should prioritise places for new housing that are already well served by infrastructure. We should avoid destroying wildlife sites and locate new houses in places where they can help to restore the landscape and aid natural recovery. It's possible

to create nature-friendly housing by planting wildlife-rich community green spaces, walkways, gardens, verges, roofs, wetlands and other natural features. These gains for wildlife improve people's health and quality of life too."

The Wildlife Trusts' blueprint for new nature-friendly homes highlights the myriad social, environmental and economic benefits of this approach:

- Benefits for wildlife – better protection for wildlife sites, more space for wildlife, improved connectivity and buildings that are more wildlife-friendly
- Benefits for residents – daily contact with nature, improved health, protection against climate extremes, safer transport routes, good sense of community
- Benefits for the economy and wider society – cost-effective environmental protection, employment, space to grow local food, healthier and happier communities putting less pressure on health and social services
- Benefits for developers – satisfied customers, market value, enhanced brand, improved recruitment, improved environmental ranking.





## Government confirms housing focus

The Government has confirmed its renewed focus on housing with the renaming of the Department for Communities and Local Government.

Following the appointment of Sajid Javid MP as Secretary of State for Housing, Communities and Local Government, the department will be renamed as the Ministry of Housing, Communities and Local Government (MHCLG).

The new name for the department was confirmed as part of the recent ministerial reshuffle.

Mr Javid said: "Building the homes our country needs is an absolute priority for this Government and so I'm delighted the Prime Minister has asked me to serve in this role. The name change for the department reflects this Government's renewed focus to deliver more homes and build strong communities across England."



## Flood defence for Starcross and Cockwood

Work has begun on-site which will see better protection for several Devonshire coastal villages.

The works will see increased flood protection for Starcross and Cockwood, with the construction of a new £4M coastal flood defence scheme.

More than 660 homes and businesses will benefit from the works, with the Environment Agency installing extra flood mitigation measures to the existing defences.

Two new floodgates will be installed in Starcross at Church Road and Generals Lane slipway, while car park levels will be raised at the Fishing and Cruising Club.

In Cockwood the harbour wall will be improved with a raised level along Dawlish Road in line with predicted sea level rises.

Construction is expected to complete within six months and be finished by the summer.

The Environment Agency said: "The storms hitting our coast in the past week demonstrate the importance of tidal defences. We are making a number of improvements to increase the level of flood protection in this area. Across England we are investing £2.6Bn in over 1,500 flood and coastal schemes to help protect homes and businesses at risk. This important scheme has been designed to reduce the risk of tidal flooding to more than 660



residential and commercial properties."

Construction of this scheme has begun just a few weeks after the £12M Dawlish Warren beach management scheme was opened by Michael Gove, Secretary of State for Environment, Food and Rural Affairs. The Dawlish Warren scheme provides increased flood protection to around 2,800 properties in the Exe estuary.

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# Positive end for 2017

The IHS Markit / CIPS UK Construction Purchasing Managers' Index (PMI®) figures have been released for December 2017, showing a positive end to the year for the industry.

Although construction output growth eased slightly, there were positive signs from housing activity and new order rises.

The seasonally adjusted IHS Markit / CIPS UK Construction PMI® posted 52.2 in December, down from 53.1 in November but above the 50.0 no-change threshold for the third month running. As a result, the latest reading signalled a moderate expansion of overall construction output at the end of 2017.

The figures show that the industry has been left on a steadier plane for 2018, and while recovery is uneven, a robust housing market is likely to bolster the sector.

New order growth has reached a seven-month high, leading to the strongest job creation levels since June 2017. In contrast, work is falling on commercial projects and civil engineering output has not moved for the last quarter.

A sharp rate of input price inflation continued in December, and intense supply chain pressures remain across the industry.

Speaking to respondents, researchers found that housebuilding remains a key engine of growth, with government focus on the sector helping to drive residential work into its 16th consecutive month of growth. Looking the other way, commercial work has seen falling figures since July, while civil engineering work has stabilised, ending a three-month period of decline.

Respondents also pointed to a resilient demand in new construction projects, with new orders growing fastest since May 2017. Clients are more willing to commit to projects, according to purchase managers, which in turn is leading to a growth in employment, as businesses welcome stronger workloads.

The latest upturn in input buying was the steepest for two years, which survey respondents widely linked to increased business requirements; however, this demand for construction products and materials contributed to another sharp lengthening of suppliers' delivery times at the end of 2017. Prices for products are also growing, with respondents noting rises in blocks, bricks, insulation and roof tiles, alongside continued rises in the cost of imported products.

Tim Moore, Associate Director at IHS Markit and author of the IHS Markit / CIPS Construction PMI®, said: "The UK construction sector achieved a moderate expansion of business activity at the end of 2017, although the recovery remained uneven and slowed overall since November. Construction companies indicated that another strong contribution from housebuilding helped to offset subdued civil engineering activity and reduced volumes of commercial work.

"Total new orders picked up at the fastest pace for seven months in December, which provides a positive signal for construction workloads in the short term. Resilient demand and forthcoming project starts also led to greater job creation and the strongest increase in input buying for two years.

"However, construction firms indicated that longer-term business confidence is still relatively subdued, largely

reflecting concerns about the domestic economic outlook. Exactly 37% of the survey panel forecast a rise in construction activity over the course of 2018, while around 11% anticipate a reduction. As a result, the balance of UK construction companies expecting growth in the year ahead remains among the weakest recorded by the survey since mid-2013."

Duncan Brock, Group Director at the Chartered Institute of Procurement and Supply (CIPS), commented: "The sector offered little in terms of comfort at the end of 2017. Though the pace of new business picked up to its strongest level since May, and purchasing activity rose to its fastest rate in two years, supply chains were under increasing pressure from all sides.

"The housing sector was the strongest performer again and materials for residential building were in greater demand, fuelling longer delivery times, shortages of key materials and sharper input cost rises.

"It appears that the continued fall in commercial activity was testament to Brexit-related uncertainty on the horizon and the sector's fear about the direction of the UK economy as clients still hesitated to spend on bigger projects.

"Business optimism was subdued at levels not seen since 2013, but the improvement in new order growth in December contributed to the biggest surge in job creation since June. Construction firms still anticipated future new work, in spite of the climate of continued uncertainty, and wanted to ensure that skilled talented people were in place should the New Year offer more success than expected."



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## Carillion declares insolvency as Government moves to protect public services

After months of speculation, the worst has come to pass – Carillion, the UK's second largest construction company, is to be liquidated having amassed a staggering £1.5Bn of debt.

Despite last-minute talks between Carillion, its lenders and the UK Government, no deal could be reached, leaving the beleaguered firm with little option other than to begin insolvency proceedings. The Official Receiver has since been appointed liquidator, with partners at PwC acting as Special Managers.

In the interim, the Government has forward the funding required by the Official Receiver to maintain all public sector services provided by the construction, facilities management and maintenance specialist – among them MOD housing, schools and prisons.

"It is regrettable that Carillion has not been able to find suitable financing options with its lenders but taxpayers cannot be expected to bail out a private sector company," said David Lidington, Minister for the Cabinet Office.

"Since profit warnings were first issued in July, the Government has been closely monitoring the situation and has been in constructive discussion with Carillion while it sought

to refinance its business. We remained hopeful that a solution could be found while putting robust contingency plans in place to prepare for every eventuality.

"It is of course disappointing that Carillion has become insolvent, but our primary responsibility has always been to keep our essential public services running safely."

The issue goes beyond public sector services, however. Despite assurances from the Government, there's obvious concern for Carillion's workforce, which numbers in the thousands – not to mention the wider supply chain."

According to Brian Berry, Chief Executive of the Federation of Master Builders: "Carillion's liquidation is terrible news for all those who work for the company and it will have serious knock-on effects for the many smaller firms in its supply chain, some of which will be in serious financial danger as a result of Carillion's demise."

Mr Lidington urged calm, adding: "We understand that some members of the public will be concerned by recent news reports. For clarity – all employees should keep coming to work, you will continue to get paid. Staff that are engaged on public sector contracts still have important work to do."

## MacRobert Award seeks North West's best and brightest engineers

The Royal Academy of Engineering has issued an open invitation to North West businesses for the much-coveted MacRobert Award, which celebrates innovative examples of engineering across the UK.

Applications for the MacRobert Award were due to close on 31 January 2018. The most outstanding engineering innovators – those that have proven to be a commercial success and delivered tangible social benefit – may well receive £50,000, in addition to a gold medal and national acclaim.

Past MacRobert Award winners have helped transform industries and had a positive impact on everyday lives. These include the minds behind the Pegasus jet engine used in the iconic Harrier jets, catalytic converters and the roof of the former Millennium Dome.

The 2017 Award went to the creators of Raspberry Pi, which is now the third best-selling computer of all time and has encouraged over 85,000 children to learn to code.

According to Dr Dame Sue Ion, Chair of the Royal Academy of Engineering's judging panel: "The MacRobert Award aims to showcase outstanding innovation across every sector of UK engineering.

"Over the years we have been honoured to judge engineering innovation from a variety of sectors – ranging from medtech to software, and electronics to aeronautics.

"Applications for the award are now open and we encourage companies to enter for a chance to win the UK's most prestigious engineering innovation prize."

All MacRobert Award applications are judged by a panel of Fellows of the Royal Academy of Engineering. Applicants will be whittled down to three finalists and announced in May.

The 2018 winner will be revealed at the Academy Awards Dinner in London on 27th June 2018 in front of a distinguished audience of top engineers, business leaders, politicians and journalists.



## Highways England focuses on design

Highways England has launched a new set of design principles developed to put people at the heart of road design.

With a £15Bn investment strategy to deliver, the agency has decided to focus on future road requirements and ensure its roads better serve the people who use them and the environments through which they pass.

As well as connecting people and places, the agency is looking to place renewed focus on improvements which are long-lasting, sensitive to their surroundings, and enhance the quality of life.

Together with the new design principles, Highways England has also announced the launch of a new body, comprising experts from across the industry.

This body will provide support to designers on major projects, and will review major projects such as the Lower Thames Crossing and the A303 Stonehenge improvements.

Highways England's Chief Highways Engineer Mike Wilson said: "We are delivering the biggest level of investment in England's strategic road network for a generation.

"We need to make sure that Highways England and the industry think in the right

way when it comes to good design. The ten principles of good road design are to help us achieve that and will underpin our major improvements going forward.

"We want roads that not only connect the country and communities, but also achieve a higher quality of life; that are designed in a way that is sensitive to their surroundings; and that provide greater economic vitality and use resources in a more efficient and innovative way."

*The ten principles of good road design were published following the recommendations of the Highways England Strategic Design Panel. They are, that good road design:*

- makes roads safe and useful
- is inclusive
- makes roads understandable
- fits in context
- is restrained
- is environmentally sustainable
- is thorough
- is innovative
- is collaborative
- is long-lasting

The panel was set up to support the development of a culture where good design is at the heart of everything within Highways England and the wider road sector. This coincides with Highways

England delivering the biggest programme of government investment in a generation.

Highways England has set out a design vision: "We aim to put people at the heart of our work by designing an inclusive, resilient and sustainable road network; appreciated for its usefulness but also its elegance, reflecting in its design the beauty of the natural, built and historic environment through which it passes, and enhancing it where possible."

Examples of previous good design include the use of traditional dry stone to reinforce the A590's connection to the Cumbrian landscape, the A3 Hindhead tunnel bypass and decommissioning of the old road, and the inclusion of a 'green bridge' on the A556 in Cheshire.

The ten new principles of good road design and vision will underpin the updated Design Manual for Roads and Bridges. The Design Manual for Roads and Bridges was first published in 1992 and is the standard for the design, maintenance and operation of the strategic road network and is widely used for other roads in the UK and across the globe. The new manual will be rolled out in phases and is expected to be complete by March 2020.

**Image: © Balfour Beatty Hindhead Tunnel**



# CARILLION

## SUPPLY CHAIN ADVICE



If you are a director of a company that worked for one of the Carillion companies now in compulsory liquidation, you must feel like you have just awakened from an extremely bad dream. You also have, for what it's worth, my complete sympathy. The demise of this large Contractor was sudden, unexpected by most and will undoubtedly cause considerable damage in the UK construction industry.

There are increasing calls for public enquiries into the role of Carillion's directors, its bankers and even Government ministers in the collapse. All of this will take time and let's be totally blunt about this, for many, if not all, any good coming out of any such enquiries will simply come too late to make any difference. It is over the next few harsh months that the impact on the cash-flow of Carillion's supply chain will wound many and may even prove to be fatal for some.

There are some 43,000 employees affected by this news as well as countless Sub-Contractors and Suppliers. The Official Receiver has appointed PwC to assist it and issued the following advice:

*"Unless advised otherwise, all agents, subcontractors and suppliers should continue to work and provide goods and services as normal, under their existing contracts, terms and conditions."*

*You will get paid for goods and services you supply from the date of the Official Receiver's appointment onwards. Over the coming days we will review supplier contracts and we'll contact you concerning these soon. Goods and services you supply during the liquidation will be paid for. A letter will be sent to suppliers shortly containing further instructions."*

If you are a Sub-Contractor or Supplier with an existing contract with Carillion, here are a few basic steps to take to protect and safeguard your position.

1. Identify all contracts in place with

Carillion. Review the conditions, particularly those on insolvency.

2. If you are unsure of your contractual position, seek advice.

3. The PwC undertaking to make payments going forward only applies to goods and services supplied from 16 January 2018.

4. If your contracts provide for automatic termination on the insolvency of either party this may mean that you will need a new order from PwC if you choose to continue to supply good and/or services.

5. Any new order issued by or on behalf of the Official Receiver needs to be considered carefully.

6. If existing contracts are to continue, payment notices are still required and you need to monitor these.

7. If you have provided any collateral warranties, remember that the beneficiaries of these warranties remain able to pursue you under the warranties.

8. If you are in possession of key certificates, licences or other sensitive materials, do not rush to hand these over. These documents may provide you with a stronger negotiating position when dealing with PwC.

9. It is possible that new parties will be introduced to take over elements of Carillion's works. You are not obliged to contract with these entities but it may be in your interests to do so.

10. If you have loose materials on site (subject to any contractual terms)

you may wish to think about removing them until a way forward is agreed with PwC.

11. If you have provided a design or specification you may have retained your intellectual property rights and this may provide you with a good bargaining tool.

Although the damage caused by Carillion is not your fault, you still have a responsibility as a director to satisfy yourself that your business is not trading insolvently. You have to assume that any monies owed to you by Carillion are gone but you still have to pay your creditors. Does this give you a negative balance sheet? Can you still pay your creditors as and when they fall due? Will you get support from your bank? Do you need access to an emergency funding line? These are all questions that you need to address, and quickly.

**If you need help, whatever you do, don't leave it to the last minute to seek professional advice.**

**For responses to specific queries call 01204 362888 and ask for Peter Vinden or Chris Duffill or email Peter at [pvinden@vinden.co.uk](mailto:pvinden@vinden.co.uk) or Chris at [cduffill@vinden.co.uk](mailto:cduffill@vinden.co.uk)**





# 2018 Outlook: Technology trends that will reshape the Construction Industry

The global construction industry continued to make progress this last year on efforts to leverage new technology to tackle its longstanding and well-documented productivity challenges, says Burcin Kaplanoglu, Senior Director, Industry Strategy and Innovation, Oracle.

That trend should accelerate further as forward-looking AEC firms embrace new tools, approaches and data-centric strategies to improve project and business outcomes.

Kin to the Bechtel dynasty, Darren Bechtel of Brick & Mortar Ventures recently noted in Wired Magazine that construction is "one of the last massive industries to be disrupted". There is growing consensus among industry thought leaders that construction, given its high volume of work and high degree of risk, as well as low profit margins and low productivity, is ripe for positive disruption. Indeed, there are many opportunities for the second least digitised industry (following only agriculture and farming). But what solutions in particular will drive genuine disruption and transformation in the near term?

Here are some thoughts on the technology trends that will most profoundly impact the industry in 2018.

## Cloud and mobile

Realising true, real-time collaboration across all stakeholders remains the biggest challenge on the job site – and the area where an integrated approach to data and processes in the cloud will have the greatest positive impact on project outcomes. The ability to leverage the cloud to quickly, easily and inexpensively stand up and manage an end-to-end project controls platform enables the collaborative workflows and communication needed to improve productivity and margins. In a field where project participants are

numerous, teams are highly distributed and project complexity increases with size, project team collaboration is critical to success.

The cloud and mobile applications enable these stakeholders to access common project data and work together more efficiently in real time.

## 4D & 5D BIM

There is a growing push to use building information modeling (BIM) technology, especially in the wake of 2016 UK government requirements mandating the use of BIM on government projects. The potential benefits of next-generation BIM approaches – including 4D (3D+schedule) and 5D (3D+schedule+cost) – are considerable, including enabling faster, less costly and higher quality construction, to improved life cycle costs. As the technology supporting this approach improves, traditional processes will also be challenged. Increased adaption of higher levels of BIM will bring about the industrialisation of construction. The lines between the digital and physical world will be much less defined. 3D models will be used to create digital simulations of physical objects – similar to processes in manufacturing – and technology platforms will be used to provide an integrated view of an asset throughout the manufacturing life cycle. 4D and 5D BIM is the starting point of this evaluation.

## Internet of Things (IoT)

Construction companies collect a large volume of data via systems such as ERP and project controls, but most of this information is collected and reported after the fact, rather than in real time. Such an approach limits the value of the data, with organisations forced to be reactive rather than proactive. The growing use of connected devices – aka the Internet of Things (IoT) – is changing that by enabling real-time data collection and proactive

management.

In IoT systems, thousands of devices will be able to connect wirelessly to routers. Those routers in turn pass data into the cloud, where we will be able to run fast analytics and leverage machines to make decisions. Those decisions will be communicated back to the devices, prompting the devices to take actions.

All of this happens at astonishing speeds, and artificial intelligence (AI) will play a big role in the decision-making. Some of these calculations have the potential to be made at the device level, as well as in the cloud. Rather than act individually, devices will communicate with each other and create a collective system similar to an organism. We believe robots, drones, exoskeletons and autonomous construction equipment are also part of the larger IoT ecosystem, as they will always be connected and provide data points to improve operations onsite. Virtual reality (VR) and augmented reality (AR) will also allow us to better communicate and act on the information collected and to collaborate more effectively.

The AEC world is experiencing a digital transformation. Early adopters and visionaries continue to test new technologies by forming partnerships with technology providers and other AEC companies. The promise of cheaper, faster, safer and higher quality construction operations is not that far away – and its arrival will be hastened if these technologies quickly prove their value and begin to be adopted at a larger scale.

We believe when industry companies embrace a centralised, modern platform to manage projects and data from end to end, they will then be able to fully reap the benefits of the emerging technologies that promise to disrupt the industry in 2018 and beyond.

## Cyber Security in Construction

Cyber attacks and privacy threats are now a high-profile concern across all sectors, regularly dominating the headlines. No business is immune to cyber criminals and hackers. The UK construction industry is exposed to cyber threats such as ransomware, phishing, hacking, computer viruses and more. UK Construction Media spoke to Rajesh Patel, B2B Manager UK & Ireland at Buffalo Europe, about the trends construction companies need to be aware of.

### The challenge of digitising construction

The industry has always been known to be a hands-on sector: building infrastructure, mining, supply of products and more. Nowadays, most if not all companies store personal data all the time. And not only for marketing purposes – in all industries companies store such data somehow.

Construction firms are continually collecting data and using cloud applications as a way to manage projects, for example holding information on its client base and on current, past and future projects, including addresses and payment details. Though storing data in the cloud can be handy, it can be challenging – especially with concerns over where the security accountability lies.

One of the key challenges the construction industry faces is the constant battle against cyber criminals.

There is always a new cyber threat happening and cyber criminals looking for weaknesses and loopholes where they can attack. British construction firms' security and operations teams are under an enormous pressure in multitasking between managing the company's infrastructure while detecting and preventing cyber attacks.

Furthermore, criminals and hackers are often attracted to targeting small and medium-sized enterprises (SMEs) due to the data collections such companies hold, which may be more vulnerable. No matter how big or small a business is though, cyber criminals will always be after sensitive and personal data, making the construction sector an obvious target.

### Keeping the supply chain secure

Construction firms must recognise they are as much at risk as firms in any other sector as construction contributes enormously to the UK's gross domestic product (GDP), making the industry a highly valuable target.

This means the construction sector needs to comply with the protection of the data it stores. This data needs to be stored systematically and protected from theft and misuse. Furthermore, British construction firms need to start preparing for the new EU General Data Protection Regulation (GDPR) which comes into force on 25 May 2018, as it applies to the processing of personal data.

The GDPR contains mainly information about how personal data should be processed and defines the roles of processor and controller of data. It also includes information on how to work with data protection by design and data privacy by default.

The British construction sector needs to be able to meet a GDPR data subject's rights, which are as follows:

- to be informed about data processing
- to access their data
- to rectify or delete their data
- to take their data to another organisation

Data retention is also an important factor. Some types of data need to be deleted after a certain time period has expired, for example personal data collected in connection with a product purchase and associated warranty.

Additionally, there are other types of data that need to be stored for a minimum amount of time, such as certain financial data. In practice, this means that SMEs need to know where personal data is stored and be able to respond to data requests promptly.

Those organisations that do not comply with the GDPR run serious risks in the event of a major systems breach, such as hackers stealing the contents of a customer database. Financial penalties can reach an upper limit of €20M or 4% of annual turnover, whichever is greater.





## 3 Key Benefits of 3D Laser Scanning

If you're a contractor looking to step up your tech game in the highly-competitive construction industry, 3D laser scanning could be the next logical step towards making your jobs more efficient— saving you time and money.

### How Does It Work?

3D laser scanning emits millions of laser lights and by timing their return, can accurately and precisely calculate their 3D locations, to produce multiple high-speed scans, brought together into one system. It works by digitally capturing the dimensions and spatial relationships of objects using the reflection of a laser light.

The technology has a wide array of jobsite applications, including:

- Pre-construction as-builts
- Building Information Modelling (BIM)
- Virtual Design Construction (VDC)
- Quality Control during construction
- Comparing design intent to as-built conditions

When objects or existing site conditions are scanned, millions of data points are recorded (invisible to the human eye) and the result is an accurate depiction of

the scanned site or object. This accurate depiction is called a point cloud. Point cloud data goes into a common reference system where it's merged into a complete model. This process is called alignment or registration, and dozens of scans can quickly be stitched together. The 3D CAD Model created from the point cloud can then aid in extending BIM workflows.

### Why Would You Need It?

3D laser scanning is quickly becoming the norm in the AEC industry. In fact, technology is advancing much faster than the industry itself. According to KPMG's Global Construction Survey from 2016, the industry is yet to fully embrace technology, and just over 20% of respondents said they're changing their business models to accommodate this rapid growth. In addition, data volume is rising quickly, causing most executives and project owners to struggle to make sense of the information. The result is an industry far behind others in adopting the latest tech.

The bright side? A small group of contractors now have the advantage. Since much of the industry has struggled to adopt even the most basic technology, firms that do are catapulted well above the competition. With the

ability to capture data at one million points per second, with a scan time of only three minutes, adopting 3D laser tech is a great first step. Although the benefits go beyond just three, the video below will give you a good idea of how scanning technology can catapult your firm well above the competition.

### 3 Key Benefits of 3D Laser Scanning

#### 1. Speed, Accuracy, and Consistency

3D laser scanning enables a fast and accurate means of collecting millions of measurable data points in seconds to provide pinpoint accuracy, every time.

#### 2. Valuable Data for Design

Datasets are dimensionally accurate, measurable, and shareable, so you can eliminate any guesswork back at the office.

#### 3. Works on Retrofits and New Builds

For detailed MEP installations, you need a high level of accuracy. If your project is complex, involves retrofits, or requires refurbishment, you can capture precise data over the full measurement range.

# 3D Laser Scanning Services

Trimble's 3D Laser Scanning Services mean you can reap the rewards of pin-point accuracy without the need to invest in scanning hardware or training.



### 3D Laser Scanning

Using Trimble's 3D Laser Scanning technology, a physical scan of your project will be conducted. Depending on the size of the project, the scan could take a few hours to several days.



### 3D Point Cloud

A fully registered "point cloud" of the existing environment that can be used as an export into your 3D Modelling solution as an as-built comparison to modelled components.



# What GDPR means for construction companies



## What you should do now to comply with the new regulation

The General Data Protection Regulation (GDPR) will apply to all organisations processing personal data within the EU and to other organisations offering goods and services to individuals in the EU.

"Personal data" covers data relating to a living individual, even if that individual could only be identified from that data together with other information in your possession – so the GDPR has a wide scope. The date on which the GDPR will come into effect (25 May) is fast approaching so the new legislation should be firmly on your organisation's radar by now.

### What it will mean for businesses

Businesses will need to ensure they comply with the data protection principles set out in the GDPR. These provide that data must be:

- processed lawfully, fairly and transparently
- collected for specific, explicit and legitimate purposes (and not used for anything else)
- adequate, relevant and limited to what is necessary
- accurate and kept up to date where necessary
- retained for no longer than necessary and;
- kept secure.

Extra safeguards apply to the processing of special category personal data (such as data revealing racial or ethnic origin or trade union membership) and data relating to criminal convictions and offences.

Many of the key concepts under the GDPR are much the same as those in the current Data Protection Act (DPA), so organisations complying with the current law will have a good starting point. However, there are new obligations and also some enhancements. The GDPR also emphasises the documentation that data controllers (the person or party that determines the purposes and means of the processing of personal data) must keep to demonstrate their compliance with the principles (called accountability).

Amongst the other new obligations

receiving the most attention are the introduction of a duty on all organisations to report certain types of data breach to the relevant supervisory authority (in the UK the ICO). Organisations will also have to report certain data breaches to the individuals affected too. Recent high profile data breaches involving the likes of Uber, Equifax and UniCredit demonstrate that cyber attacks and data breaches are a real and immediate threat for all organisations.

Crucially, the GDPR introduces tough penalties for non-compliance – much higher than the current maximum fines of £500,000 that the ICO can issue under the DPA. Depending on the breach, fines of up to four per cent of global annual turnover for the previous financial year or €20M, whichever is higher, can be imposed. Any individuals affected by a breach can also bring a claim for compensation – and while the sum that any individual is entitled to may well be relatively small, a data breach where thousands (and conceivably millions) of individuals are potentially affected could, cumulatively, have very serious consequences.

### How it will affect the construction industry specifically

Recent findings from the Cyber Security Breaches Survey 2018 have found that businesses in the construction industry have some of the lowest awareness, with only one-quarter aware of the incoming regulation, while organisations in the finance and insurance sectors have the highest awareness of the changes. Other recent research suggests that at least some construction businesses believe that the GDPR will not affect them. However, all employers should be reviewing their processes for handling employee data in light of the GDPR. Most construction companies these days do not directly employ many workers, but will have some and are also likely to deal with personal data about individuals even where that labour has been procured by third parties. Exchange of data between the various parties involved in a construction project is common. Personal data may also be collected through site access cards and

CCTV. In addition, construction businesses will hold personal data about customers and suppliers.

Buildings are also becoming smarter. The implementation of digital processes in the design, construction and operation of built assets will facilitate and entail more data collection, for example through smart management. As this becomes more commonplace the GDPR will have even greater impact and compliance should be factored in when designing buildings digitally (for example through use of technologies such as BIM) and passing these models on for management of the asset.

### What businesses need to action prior to the deadline

The GDPR will come into effect prior to the UK ceasing to be a member of the EU. New legislation (the Data Protection Bill) is also being progressed and that will adopt the provisions of the GDPR into UK law, so its requirements will continue to apply post-Brexit.

Therefore, they cannot be ignored.

As a starting point, businesses should carry out an audit of the personal data they collect and use across their organisations, and review existing processes for compliance with the GDPR, ensuring records are kept. Other steps to take include reviewing and updating privacy notices so they are GDPR compliant, raising awareness of data protection including through training and making sure the right processes are in place to detect, investigate and report a data breach.

The GDPR also makes privacy by design (an approach to projects that promotes data protection compliance from the outset) an express legal requirement.

With the deadline of the GDPR taking effect fast approaching, organisations who do not already have plans in place to comply should take action urgently.

**Helen Davenport, director at Gowling WLG**  
**Sarah Rock, senior associate at Gowling WLG**

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# Line of Sight: Put information security at the heart of your business, says Aconex

In the wake of last year's WannaCry ransomware attack, the fallibility of our systems has been exposed. In total, 37 NHS Trusts were among the many organisations affected, leading the wider world to wonder, 'Who's next?'

Steve Cooper is the General Manager of Aconex in the UK and Ireland – now the world's most widely used online collaboration platform for construction and infrastructure. Here, Steve speaks exclusively to UK Construction Online about attitudes to information security post-WannaCry and the construction SMEs in danger of being left behind.

**The UK is experiencing a noteworthy rise in the number of cyber attacks. What makes construction more susceptible than other sectors?**

I wouldn't say construction is any more or less susceptible than any other sector. It's an industry that is maturing. The rate of technology adoption in construction has historically been very low, but as this increases and more information makes its way onto the cloud, it becomes a very valuable asset indeed.

As for the individuals and organisations that create viruses, I don't think they're targeting a particular industry. They are after whoever they can get hold of.

**In light of the recent WannaCry ransomware attack, do you feel there is still a lack of awareness around cyber security?**

Absolutely. If you think about the construction industry, we have some very large clients who are mature and sophisticated, and you would expect those companies to be very conscious of the risks around cyber security.

But we also have tens of thousands of smaller organisations whose sole focus is securing jobs and they might not be as aware. What version of a browser are they using, for example, and why should they upgrade to the newest version of that browser? They may not have the governance in place to keep their software up to date. Perhaps they're unable to afford IT personnel, or they have someone doing it part-time.

Ultimately, there is a lot of naivety around information security across all levels of the supply chain. We at Aconex may deal with a project team comprising individuals from a fairly large organisation, and yet – to a certain degree – information security might not come up. Their primary focus is what kind of functionality they can get.

**In your experience, is the construction industry receptive to cyber security?**

It depends who you talk to.

Obviously, there has been a lot of work by the UK government to educate the industry and we are definitely seeing a higher level of demand around information security.

Some businesses are large enough to have their own people in place, while

others employ third-party organisations. In fact, one of the big challenges for the marketplace is that these consultants often have very different interpretations of the standards, meaning we're faced with a very different set of questions depending on the consultants used.

But that's okay, because the core requirements are pretty consistent.

In other cases, we aren't asked a single question about information security, and so we play educator to those organisations, helping them understand what they need and what they should expect from their systems. We make sure that they have their own information security policies in place.

**Central to the success of WannaCry was the amount of outdated software still in use. Windows XP was the operating system of choice for several NHS Trusts despite repeated warnings over security. Do you think the same is true of the construction sector? Are we relying too much on redundant software, and what alternatives are there for companies struggling to cover the cost of an expensive new suite of packages?**

The industry as a whole has a lot of internally developed platforms that do niche jobs or use niche applications from small vendors.

Those applications may well be sitting on an operating system that doesn't have the correct patch on it, whether Windows XP or something else. The use of out of date software is probably quite prevalent in our industry, though that's just my personal opinion. It's the nature of the industry that we live and work in.

In terms of cost, there are various funds and grants available in the marketplace. Sometimes you don't need to spend tens of thousands of pounds – £500 to £2,000 might do the trick for a lot of small businesses. But while the UK government can help bridge those gaps, you must have the awareness first before you can solve the problem.

It all comes back to education. If people aren't aware that there is a severe risk to their data, then they are not necessarily going to do anything about it. If you're an owner of a small business, for example, you will have a hundred things on your to-do list. But information security only becomes a priority once you actually

suffer from a cyber crime – that's the problem.

**What advice would you have for construction firms looking to shore up their online defences? What practical steps can business owners take in the immediate future?**

They have got to place information security at a high level within their organisational governance. That's really quite an obvious thing to say but it also has its challenges. A lot of organisations – even those considered successful, with hundreds of employees – are run by engineers, not technologists. Somehow you've got to get that skillset into your business and it's not always appropriate to bring consultants in, because people with that skillset tend to be quite expensive. They know what value they deliver and charge appropriately.

Perhaps this is an opportunity for an apprenticeship. Young people coming out of schools are technology-aware as far as usability is concerned. They're probably not very conscious of the technology and information security layer, but they could learn very rapidly.

**Ultimately, what would you like the construction sector to take away from the WannaCry ransomware attack? Can this be a catalyst for meaningful change?**

The big takeaway is that we are all in the line of sight. You could look at organisations like the NHS and think "that won't happen to me", but this could happen to any business, whether large or small.

But how do you get information security onto the agenda, because, to a certain degree, it's a bit like taking an insurance policy out, isn't it? There's no legal mandate; instead, it's something that you are being advised to do to look after yourself for your business. It's a choice – but it can be hard to choose information security as a higher priority over something else.

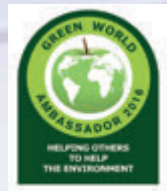
It's difficult, and it comes back to education and understanding the risks. I've said it before, but you tend to find that an organisation that has just suffered from a cyber security breach will put it on the agenda, belt and braces. These organisations don't risk remaining in the line of sight.



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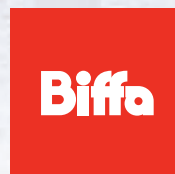
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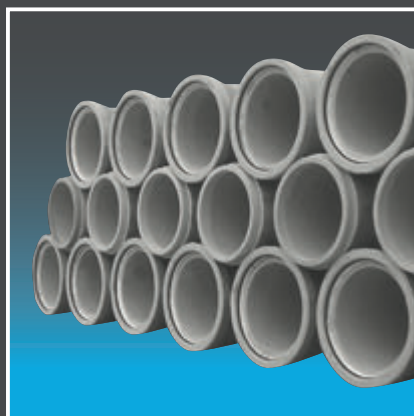
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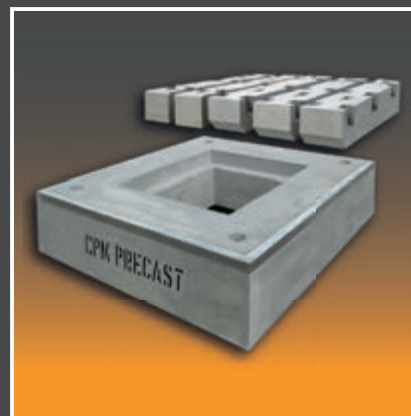




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## Improving physical on-site safety by creating psychological safety

In a high-hazard sector like construction, safety and health rightly remain very emotive topics. How individuals think and feel really matters: it motivates them into action, and is therefore closely tied to how a team operates and how tasks are performed. Too often within construction, however, workers don't feel that the organisational culture – the psychological environment – is safe enough for them to act on these emotions.

Despite organisations adopting policies telling employees they should raise safety concerns, there is a disconnect between the theoretical ideal and how this actually works in reality. What's preventing employees from speaking out and taking ownership, and how do we combat this so that accidents can be reduced?

When it comes to being safe, psychologist Abraham Maslow pointed out that after our first basic needs to breathe, be fed, watered and warm, the next most basic need is physical and psychological health and safety. To fully address physical safety in high hazard workplaces, we need to enable these workplaces to be safer psychologically. Can employees really say what they think, and act to change things? Do they feel secure that they will be supported and rewarded, not penalised?

In recent years, a lot of effort has been made in this area in various construction organisations around the world. They invite site teams and local leaders to understand the choices they make each day on safety, to be more open, and to feel safe to report anything they perceive to be a safety risk.

Whilst this empowerment may have been given, there is often a disconnect when it comes to implementing it in practice by the very people it has been bestowed upon. Organisations need to examine the extent to which this so-called empowerment is actually being lived, even during the most constrained of programme deadlines and complexity of works.

Following any serious near miss, incident or accident, emotions can be high and wide-ranging. These emotions are a very normal set of human responses to events, and so it doesn't feel unsafe to vent psychologically; whether that's through anger, frustration and sadness, or determination and conviction. Alternatively, it may be through a discussion of how obvious it was that an incident of that nature would occur, and subsequent feelings of guilt for not speaking out and acting to change things.

Exploring these emotions pre-incident doesn't always come as naturally or feel as accepted. It's important to say that being more tuned in to pre-incident emotions isn't a form of workforce 'therapy': it's about enabling powerful conversations and feedback loops in safety leadership, and ultimately delivering tangible business results.

The existence of different sub-cultures within the construction sector means that this isn't easy. Once achieved, however, its effectiveness is obvious. On a recent round of multiple onshore wind installation projects, the creation of a more open and responsive working environment, through safety leadership development work, contributed to a 73% reduction in incidents. It completely shifted management culture in the process.

What are the biggest barriers that cause construction workers to suppress their thoughts and emotions when they're concerned about safety, even when they've been told they should be open?

One very dominant theme that comes through is that of power and influence – and the fear of informal blame and subtle judgement from managers. The worry that they'll be quietly taken off the project for voicing concerns and 'sticking out' can be too great a risk for some workers.

On a recent project, one employee who had safety concerns about some practices that were unsafe, or at the very least not at the standard they should be, was reluctant to raise them as the required solution would delay the project by approximately one week. This is despite having confidence in his local supervisor and site manager that they would be supportive. The real fear was being taken off the job by a more senior local manager, who had a reputation for removing people who interfered too much. Real or not, this emotion prevailed.

In this instance, his organisation had a very powerful safety message from all levels, and had already invested in creating an open, safe culture of challenge and learning. Yet in reality, employee perception from the local leadership impact was that efficiency and productivity were more of a business priority – whatever senior leaders said. This signifies a clear contradiction between expectations of behaviour set from the very top, and those set by the people who oversee the day-to-day work.

How do organisations go deeper to really test reality and to make safety

leadership even more impactful? And what does exploring emotions at work, pre-incident, actually look like in practice?

The first step is clear – those with power and influence in organisations must work harder to develop Maslow's psychological safety. This work needs to be upheld as valuable and imperative, starting with them paying attention to their own leadership behaviours, whatever level of a hierarchy they are at.

Directors undoubtedly need to do this – and this is where the majority of existing work has been centred – however, it is crucial that those executing work on a day-to-day basis develop this craft as well. Project managers, construction managers and site managers are the ones with local power and influence, and it is their responsibility to improve physical safety by creating psychological safety.

The second, and more structured, means of promoting openness and testing reality is by creating regular action learning groups, where all the key players in a team, including all key managers, have the opportunity to really examine what's working in reality, and what needs to change.

In the example of the multiple onshore wind installation projects which saw a 73% reduction in incidents, key leaders from front-line leads to site managers, project managers and directors were held in peer groups for two years. They examined their own leadership behaviour and its impact on safety, as well as other performance measures. This was supplemented with site visits to test this out in reality, with all the key local players.

The aim of this work is to enable speaking up and taking action to become normal pre-incident, in the same way it is following an accident. The core task of leaders is to enable employees to choose to voice concerns when they know something is wrong or unsafe, and to know they can act to change it. Sharing what people think and feel is a vital part of this. This organisational development enables sites to be safe psychologically and, ultimately, physically.



**Steve Holliday** is a director at organisational change consultancy, Lacerta



Clarifying a worker's right to work in the UK is a thorny issue. In October 2015, the Home Office launched Operation Magnify, designed to highlight the issues (primarily in construction, care and cleaning industries) and to bring about a sea change in attitudes towards the need to check for valid documentation. In this article, Stephanie Fisher, Managing Director of MSite at Human Recognition Systems, looks at whether the industry is taking its responsibilities seriously enough.

#### Carrying out the right checks

Despite governmental focus, and subsequent fines (up to £20,000 per person) and prison sentences (of up to five years) being imposed on offenders, the construction industry is still perceived as one of the highest risk areas for illegal workers due to lack of enforced controls on right to work. Liability for illegal workers lies with their employer, who has a duty to carry out the correct documentary checks on their direct employees, including employment agencies who employ the worker concerned. Failure to carry out the necessary checks is considered a criminal offence.

In the first quarter of 2017 alone, over 900 workers were found across the UK without the correct permissions to work. Across the calendar year, the resulting fines amounted to over £40M. If the fines are so high and so many illegal workers are getting caught, why is the industry not taking its responsibilities more seriously?

#### Where does the responsibility lie?

Although main contractors do not have a legal responsibility to carry out documentary checks on sub-contracted workers, they do have to ensure that a system is in place to ensure that those with the responsibility to carry out the checks have done so. The Home Office believes that Tier 1 contractors in charge of overall project governance should be addressing this issue in order to reduce risks on site and improve the overall image of the industry. Speaking about this, Chris Blythe, Chief Executive of the CIOB, said: "It's too convenient for main contractors to duck out of their responsibilities by blaming the sub-contractor. Contractors who take that line risk reputational damage and are liable to incur significant financial penalties, delays and site shutdowns."

So the crux of the issue is one of responsibility – who should be responsible for ensuring that the industry is striving to employ 100% legitimate workers? Exploitation of illegal workers is not acceptable and it needs the whole supply chain to come together to increase transparency



## Right to work: where should the responsibility lie?

relating to employees. Tier 1 contractors need to be regularly auditing their own supply chain to check that right to work checks are being properly performed – it should be a contractual obligation. Tier 2 contractors need to ensure that the checks are being done properly by someone trained to do it. It is not a simple system – there are potentially 17 different documents that can be checked and a multitude of combinations therefore that can validate a right to work. The Home Office does offer guidance on the right documentation to ask for but it's very labour and knowledge intensive.

It might be a difficult process, but that's no reason to eschew full and proper right to work checks on employees. Knowing that the employees on site have the right qualifications and the right permissions to work there is all about protecting the reputation of your organisation. The Home Office has reserved the right to name and shame organisations employing illegal workers and this type of information can be easily shared. Whilst a single illegal worker can result in a £20,000 fine, a drop in the ocean to a FTSE listed company, the damage to reputation can result in falls in share prices, loss of confidence in a board, future contracts

being thrown into question and even prison sentences.

#### Tackling the issue

There is no doubt that right to work is a topic that is going to come under ever increasing scrutiny with continued focus on modern slavery in the media. With Brexit now firmly penned for March 2019, there will be a renewed need to ensure the rights of workers on construction sites around the UK. The key to successfully tackling this issue for the construction sector is twofold:

- Directors have to take it seriously – it is a responsibility that every part of the supply chain has to take ownership of.
- We need a simple and effective checking system that can be incorporated into the standard checks that all contractors (Tiers 1, 2 and 3) carry out on a daily basis.

The construction industry is no different to any other when it comes to being tarred with the 'slavery' image. Taking responsibility for performing the right checks at the right times for the right people will go a long way to protecting the industry and guaranteeing the legitimacy of all workers on UK construction sites.



## Commercial Management in Infrastructure Conference

**8 March 2018, Cavendish Conference Centre, London**

This conference returns with a renewed focus on improving commercial capability in the delivery of economic infrastructure projects.

Highlights on the day include:

- An opening address from Tony Meggs, CEO at the Infrastructure Projects Authority who will provide insight into the IPAs role in financing, delivering and assuring some of the major UK infrastructure projects, as well as the Government's commitment to improve project delivery as outlined in the recent Industrial Strategy White Paper.
- Expert insight and guidance from representatives at some of the major infrastructure projects currently underway in the UK including Heathrow Airport, Crossrail and HS2.
- Examine all aspects of the commercial manager role and understand it's crucial contribution in ensuring successful outcomes for infrastructure projects across a variety of sectors and disciplines.

Don't miss this opportunity to network with colleagues from across the profession and identify solutions for meeting the UK's growing need for high performing economic infrastructure assets.

Book your place now: [rics.org/infrastructureconference](https://rics.org/infrastructureconference)



# Closing the industry age gap is vital for hiring in the future

Attracting a younger generation to a career in the tool, plant and equipment hire sector is set to be a bigger challenge to businesses than the outcome of the Brexit negotiations, says Hire Association Europe (HAE).

Brexit will have implications for HAE members due to possible restrictions on workers from the European Union and potential tariffs for those who import and export capital equipment and goods. However, the need to reduce the average age of the hire workforce, which is over 50, and avoid a skills shortage in the future by recruiting and retaining more young people is essential for the industry now.

Tool, plant and equipment hire in the UK is mainly confined to these shores and is worth over £7Bn to the economy, though the public will usually relate the equipment they see operating on infrastructure projects, construction sites and motorway works with the main contractor rather than the hire companies.

By raising the industry's profile through its career programme, HAE hire leaders are trying to counterbalance an ageing workforce and potential skills crisis by encouraging young people to step up to the plate and equipping them with the skills needed for a sector supplying the operational resources and equipment to fulfil many important infrastructure contracts.

HAE has over 900 members across the world, including major British companies such as JCB and A-Plant, and yet hire is an industry that tends to get overlooked by young people leaving education and seeking a career path, despite the potential for a relatively quick route to the top for someone talented, even from junior level.

A broad cross-section of skills is required to keep the hire sector competitive. Job opportunities are varied, ranging

from depot managers, engineers and mechanics to customer service, IT, financial and logistics, but getting the right people is proving tricky – which is why HAE is promoting its apprenticeships and vocational degree courses.

HAE's Managing Director Graham Arundell said: "When I'm talking to members I'm not getting any negatives in terms of Brexit, but what I am hearing is the biggest challenge facing the hire sector is recruiting and retaining young people. It's not to say it's more difficult in our industry than any other industry, but the education system is not turning out people with the right skill sets even for such a diverse marketplace as ours.

"The average age of the workforce is over 50 because younger people are not coming into the industry in the numbers we need. Some members look to recruit 50-60 apprentices a year but it can be a struggle to find the right quality of individual. That's an issue going forward so we have to act now to ensure that a potential skills gap will not come to fruition."

As part of HAE's commitment to attracting and then supporting new people in the tool, plant and equipment hire sector, the association is driving ahead with initiatives such as the Future Hirers programme and the ILM Level 5 Graduate scheme, both aimed at 18-30 year-olds.

Future Hirers is all about working with educational establishments, explaining the opportunities and encouraging youngsters to consider a career in the hire sector by pushing apprenticeship programmes, while the Graduate scheme is a series of NVQ levels to encourage career progression within the hire industry to depot manager or even a senior manager or director role.

In a bid to win over young minds, HAE is also adapting gaming technology into

award-winning (Commitment to Skills category of the Plantworx Innovation Awards 2017) virtual reality training modules, which are proving to be a big hit.

Mr Arundell added: "We are doing a lot of work on virtual reality, the spin-off from this initiative is at career fairs where we have lots of young kids queuing up to have a go at it. It gives us the opportunity to engage with them and make them aware of the industry and the different career paths on offer."

It is hoped these initiatives will fast-track individuals on a career to reach the very top of the hire sector profession, like A-Plant chief executive Sat Dhaliwal, who has announced plans to retire next summer after 16 years at the helm of the UK's largest equipment rental firm. He started work on the old Youth Training Scheme (YTS) and worked his way up the ladder to run a successful multimillion-pound enterprise.

The hire sector is a vital component in enabling the delivery of economic activity, commercial and public, in the UK and globally. HAE members facilitate and provide the equipment for major entertainment, sporting and exhibition events. It is also enabling resource and capability behind much public and commercial investment: in land and buildings, infrastructure, national and international events, and corporate hospitality.

There is no doubt that the actions of HAE and its members will be crucial in refocusing career development, improving performance and creating ways of retaining the talent that can sustain the industry – and thus support other industries – through the decades to come.

**More information from**  
[www.hae.org.uk](http://www.hae.org.uk)

# Cost of new CAZ could be significant for business, says FTA



The Freight Transport Association (FTA) is urging West Yorkshire businesses to make their voices heard or risk incurring significant additional operating costs, as Leeds City Council consults on plans for a new Clean Air Zone (CAZ) in the city.

FTA, the UK's leading body representing the logistics sector, says the geographical size of the proposed new scheme announced on 5 December 2017 is more extensive than many local companies had been expecting. It warns they need to make their objections heard to the council and start planning now, to minimise cost and disruption.

Leeds is one of five English cities which were instructed to introduce a Clean Air Zone as part of government plans to improve air quality in urban areas. Leeds City Council has published a draft consultation document outlining proposals for its local scheme. Under the plans, trucks and buses which do not meet the Euro VI emissions standard will have to pay a daily charge of £100 to operate within the zone. The consultation period, during which businesses can register their opinions with the council at [www.leeds.gov.uk/](http://www.leeds.gov.uk/)

[business/pages/air-quality.aspx](http://business/pages/air-quality.aspx), will open later this week, and the final plans are likely to be implemented by the end of 2019.

FTA has been keeping its members updated on developments in Leeds and believes that, whatever the final extent of the scheme, many businesses in West Yorkshire are likely to face significant extra costs, which will ultimately be passed on to local residents or force businesses into potentially difficult financial situations.

FTA Head of Policy for the North of England, Malcolm Bingham, says logistics and freight firms are now facing tough choices: "The plans announced for the Leeds Clean Air Zone are much more extensive than anticipated, and will come as a shock to many West Yorkshire businesses. Whether companies operate a single van or a large fleet of trucks, they must establish how they will be affected by these proposals and send their comments to Leeds City Council. This is the last chance to have an impact on the final scheme."

Malcolm Bingham says whatever companies decide to do, there will be

an impact for Leeds residents: "Most transport companies operating in Leeds will choose either to pay the new charge, or purchase compliant vehicles. Either option will mean a significant extra business cost with little or no time to phase it into business planning – those with new, non-compliant vehicles will be forced to write them off. Operators will have no choice but to absorb the extra expense or pass it on to their customers. Some firms will sadly decide it's simply not worthwhile to continue serving residents and businesses within the CAZ. In the end, it will be local residents, as customers or employees, who will pay the price for this plan."

The Freight Transport Association is the UK's largest and most influential membership association in the freight and logistics sector, with more than 16,000 members operating over 220,000 goods vehicles – half the UK's fleet. Established in 1889, FTA's members move goods by road, rail, sea and air, consign over 90 per cent of the UK freight moved by rail and 70 per cent of the nation's sea and air freight.





# The construction gap and the Northern Powerhouse

Rejuvenation and renewal is underway in the UK's northern cities – a record 22 new residential projects began construction in Manchester last year. With Brexit looming and the global dominance of London looking increasingly challenged by rival European cities, there is consensus in the public and private sectors that it is in the UK's interest to spread investment and economic activity across the country, shifting concentration away from the South East. Delivering this initiative will require the successful implementation of the recent Budget announcements and policies outlined in the new UK Industrial Strategy to address the issues in sectors like construction, which are vital to driving sustainable urban growth in the UK's northern cities.

Increasingly more 18-35 year-olds arrive in the northern urban centres, attracted by employment opportunities and put off by the expense of living in London. Manchester, Leeds and Liverpool offer some of the world's top universities and lower costs of living, encouraging young people graduating from these institutions to transition to professional life locally. Data from the Office for National Statistics shows that between 2011 and 2015 Greater Manchester experienced a net migration inflow in the 22-29 age group, suggesting the city region attracted or retained a higher number of recent graduates than the number who left. Migration figures in the same four years for Glasgow and Edinburgh also showed a similar result. To sustain the appeal of northern cities over time, it will be necessary to provide high-quality, exciting and flexible city centre accommodations compatible with the busy lifestyle of young professionals in the period before choosing to own a home.

However, UK construction markets are overheated.

There are numerous residential projects in progress across the North but there is a dearth of available skilled labour to carry out construction, stunting regional development.

The 2008 recession forced many contractors to scale back regional teams, and large government projects like HS2 and Crossrail are absorbing much of the available skilled labour. In addition, the UK's construction workforce is ageing and there are fewer young people filling the vacancies. These challenges are underpinned by slow industry-wide innovation and digitalisation. In order to meet the Government's target of building over 250,000 new homes annually, nearly 350,000 construction workers will need to be employed across the UK. Currently, the workforce stands at less than 200,000 and this figure is only projected to decline. It is estimated that there will be approximately a 7,000 net reduction in workers leaving the housebuilding industry sector annually over the next five years.

The lack of skilled labour has been exacerbated by Brexit-induced uncertainty over the immigration status of many construction workers from EU countries. As the number of workers in the industry continues to decline, foreign labour has crucially filled the gap, keeping booming sectors like private housing development afloat.

In 2015, 122,000 construction workers in the UK were born in EU states. The prospect of losing this existing and pipeline of future foreign talent, coupled with little progress on recruiting homegrown talent,

is having a real impact on the ability of developers and construction companies alike to deliver projects on time and cost-efficiently.

The new policies announced in the Budget and the re-vamped UK Industrial Strategy are welcome acknowledgements from government that a significant pool of available skilled labour is critical to achieving the UK's regional urban growth ambitions. Setting up a National Retraining Scheme and committing £34M to scale innovative training models across the country to help close the construction skills gap by re-skilling and up-skilling talent are valuable steps in the right direction.

Nevertheless, it is essential that the various policy ideas announced become more concrete and the channels in which the private sector can engage are clearly established.

Collaborative action between private enterprises in urban development, local and national government and NGOs is required now to avoid further stagnation in the construction industry and fully realise the economic potential of the UK's northern urban hubs. Setting aside budget is important, but apprenticeships, training programmes and work experience must also be well crafted and offer a career trajectory that attracts more talented young people into the industry. Successfully executing these programmes has the potential to correct the major imbalance of skilled labour in the UK and fuel circular investment, luring more investors and developers to the north drawn in by its highly capable workforce and supportive policy environment for urban expansion.

## FORWARD FEATURES 2018



**CONSTRUCTION  
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**Construction Media** incorporates the **UK Construction Online** website and **UK Construction Excellence**, along with bespoke media and marketing solutions for those working for or looking to engage with the construction supply chain. Our forward features list for 2018 encompasses the key themes and topics shaping the industry now and for the future. UK Construction Online is the go-to resource for the latest news and insight for the construction industry. Our content keeps industry professionals ahead of breaking developments and fully informed on the factors influencing this multi-billion pound sector. UK Construction Excellence is our flagship magazine, which showcases the very best in British building, high-end projects, construction suppliers and influential construction companies. The publication is credible, vibrant and a voice for the industry. It offers a platform to position our client's company, products and services, and acts as the perfect vehicle to build a business's profile and brand in a publication which is read by the construction industry's leading players.



**UK CONSTRUCTION  
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### January | Review of 2017

Review of the year and previews of 2018.

### February | Security

**Deadline: Editorial - 15/01/18    Artwork -22/01/18**

Site security, cyber security, and GDPR.

We look at how cyber security affects the construction supply chain: from cyber security in Public Sector contracts, to GDPR and its implications. Physical site security is also an important factor in the industry, how do you keep people, plant and machinery safe on site?

### March | Transport

**Deadline: Editorial - 12/02/18    Artwork – 19/02/18**

HS2 and Crossrail are two of the largest and most contentious transport infrastructure schemes in Europe to date, we take a look at how these are progressing and at the many other opportunities for all types of construction business as a result of the UK government's £600Bn National Infrastructure Pipeline and Transforming Infrastructure Performance plan.

### April | Infrastructure

**Deadline: Editorial - 12/03/18    Artwork – 19/03/18**

Infrastructure is a key factor in government plans, with the National Infrastructure and Construction Pipeline & Transforming Infrastructure Performance recently launched. In April we look at major infrastructure projects and plans throughout the country, such as: AMP6, highways investment, rail strategy, waste water, water and utilities. We also cover the UK Infrastructure Show, which brings together leading infrastructure projects from across the UK.

### May | Sustainability

**Deadline: Editorial - 16/04/18    Artwork – 23/04/18**

Green building & sustainability. With the advent of the Clean Growth Plan – we look at what construction can do to assist in creating a greener society; from sustainable buildings to waste and recycling.

### June | Skills shortage

**Deadline: Editorial - 14/05/17    Artwork – 21/05/18**

Having weathered the economic downturn, the construction industry now contends with a worrisome shortage of skilled workers. This month we reflect on the contributing factors, the implications of the EU referendum for migrant workers, and the ways in which the industry is fighting back. Developing skills across the construction industry is core to ensuring it remains viable and effective.

### July | Health & Safety, legislation,

finance, adjudication

**Deadline: Editorial - 18/06/18    Artwork – 22/06/18**

Health & Safety is of paramount importance in the construction industry. From workwear to working at heights, we take a look at what's happening across the industry, together with the latest comments on litigation and adjudication decisions that affect the sector.

### August | Housing

**Deadline: Editorial - 16/07/18    Artwork 23/07/18**

Tackling the housing crisis. Hand-in-hand with the skills shortage, the UK's much-publicised housing shortfall continues to dominate headlines nationwide. The government has pledged to build tens of thousands of homes ahead of 2020, and during August we evaluate what is being done to address this, and what opportunities exist within the construction supply chain.

### September | Technology in Construction

**Deadline: Editorial - 18/08/18 Artwork 25/08/18**

Advances in technology are transforming the construction industry. From digitisation to drones, innovative new technologies are helping to increase quality, reduce costs and improve safety in all areas. This month we focus on the innovations that are moving the dial and helping to shape the construction industry of the future. Themes include software, BIM, UAVs and the Internet of Things.

### October | Education

**Deadline: Editorial - 17/09/18    Artwork – 22/09/18**

As the nation opens its doors to a new school intake, we explore the opportunities for the construction industry arising from the Government's education agenda. From renovations and refurbishments to the building of new and interactive learning environments, what is happening and how can construction play a positive part in improving educational standards?

### November | TBC

**Deadline: Editorial - 15/10/18    Artwork – 19/10/18**

### December | TBC & Annual review

**Deadline: Editorial - 16/11/18    Artwork - 20/11/18**

We take a retrospective look at some of the year's biggest stories.

**Additionally, each month the magazine features a project focus, as well as articles on BIM, construction software, legislation, Health & Safety, sustainability, fleet, and plant.**

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