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# INFRASTRUCTURE Intelligence

*Produced for the industry by the Association for Consultancy and Engineering*

# Planning for growth

## Lord Deighton looks forward to NIP14

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# INFRASTRUCTURE Intelligence

Produced for the industry by the Association for Consultancy and Engineering

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## MESSAGE FROM THE EDITOR

The message coming out of Treasury via Lord Deighton is clear – government support for infrastructure investment has never been higher.

Infrastructure "acts as a key enabler for future economic development, driving broader growth and regeneration' he says in his interview with Infrastructure Intelligence this month. "My focus has always been on delivery".

Industry headlines this month in many ways justify his claim as we continue to see projects move from pipedreams towards reality.

This month we saw the £43bn High Speed 2 project launch its presence to the market with two industry days designed to gear the supply chain up for real contracts; the £4bn Thames Tideway Tunnel project clear a major planning milestone; and the £16bn Hinkley Point C scheme leap forward with European approval for its financing deal.

All of this activity serves to underline the genuine confidence now flowing from government through developers and on towards investors that the UK is a good place to invest for the long term and that infrastructure projects can now be delivered in realistic timeframes.

But, and there always is a "but", as Deighton also makes clear, across the entire supply chain our game must still be raised.

In terms of efficiency of delivery, reduction in cost, building capability and decarbonising the built environment, the UK still lags behind the global best with a sector that has still not embraced innovation in the way that perhaps manufacturing or retail has.

And as Deighton makes clear, the intention cannot just be about chasing down the cost. Instead it must, as he puts it, be about "changing behaviours in government, clients and industry to encourage greater collaboration to drive sustainable change".

The message at this month's HS2 industry day certainly emphasised this thinking. As chairman Sir David Higgins said: "It cannot be business as usual. This is an opportunity to do things differently."

It is a message that must resonate across the sector and act as a spring board for change.

**Antony Oliver,**
**editor, Infrastructure Intelligence**

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# News roundup

## ENERGY

**Reduced government subsidies for solar generation and "meagre" support for other established and less established renewable technologies** have seen the UK fall in the latest global index of renewable energy investment attractiveness. According to the latest quarterly Renewable Energy Country Attractiveness Index by consultant EY, the UK's appeal to investors is now at its lowest level for almost five years, with China and other emerging markets of India and Brazil gaining ground.

**Government has announced funding of £8M for training the next generation of nuclear engineers and technicians.** The fund will create hundreds of new apprenticeships and traineeships as part of the Magnox led Nuclear Industrial Partnership.

**Renewable electricity projects will compete for £300M Contracts for Difference funding support this autumn** – an increase of £95M from the indicative budget published in July, Energy and Climate Change Secretary Ed Davey announced today. Less established technologies such as offshore wind and marine schemes would get £235M of the money.

**The European Commission has approved Hinkley Point C government subsidies** which clears the path for EDF to invest in the new nuclear plant. Revised and rebased cost estimate show that EDF's investment could reach £34bn. The EC agreed that revised plans by the UK government to subsidise the construction and operation of the power plant in Somerset were now in line with EU state aid rules. The final hurdle for the long delayed project is for the EDF's board to commit to the £17bn debt financing needed to build out the project – a decision expected by the end of the year.

## PARTY CONFERENCES

**Chancellor George Osborne backed investment in shale gas, nuclear and renewable power, high speed rail, airport capacity and new homes** in his speech to the Conservative annual conference, Osborne said the country could not afford to delay investment in infrastructure

**Fracking is not a magic bullet but simple opposition to shale gas is also wrong, energy minister Ed Davey** told the Liberal Democrat Conference. The country will need shale gas to make up the shortfall in North Sea supplies and it would also allow a Lib Dem government to outlaw coal generation, he said.

**The Liberal Democrat leadership was overwhelmingly defeated over its support for the building of a new runway at Gatwick** and the party was castigated for pre-empting and prejudging the decision of the Airports Commission which is due to report next year. "It is unhelpful to pre-judge the decision of the Airports Commission, which the Liberal Democrats helped to set up. All parties must endorse the Commission's final recommendation when it reports back next summer," said CBI director general John Cridland.

**Crossrail's completion in 2018 will be marked by the 'Year of the Engineer'.** Transport Secretary Patrick McLoughlin has said "I am immensely proud of what they (engineers) achieve. And so in 2018 – when Crossrail is complete – I want us to do something special. A year of the engineer – to excite a new generation of Brunels, Stephensons and Telfords."

**There was strong emphasis on the importance of business in Ed Miliband's Leader's Speech at the Labour conference**, highlighting the need for government to support business, and talking up the positive impact of the EU. Miliband also pledged to decarbonise the UK's electricity supply by 2030, a Green Investment Bank with powers to borrow and attract investment, and to provide government support to insulate 5M homes.

## PEOPLE & CAREERS

**After eight months as boss of the Major Projects Authority John Manzoni has left the role to take on the newly created post of chief executive officer of the Civil Service.** He has a brief to accelerate the government's efficiency and reform agenda and civil service transformation.

**New chair of Infrastructure Client Group Andy Mitchell plans a "renewed attack on the drivers of high costs and barriers to innovation".** The Thames Tideway Tunnel chief executive has taken over from HS2's Simon Kirby as chair of the Infrastructure Client Group (ICG) charged with delivering Infrastructure Minister Lord Deighton's ambition to continue to drive down the cost of infrastructure delivery in the UK.

**Students graduating from engineering courses are likely to be amongst the highest graduate earners**, according to The Times Good University Guide 2015. The Guide lists "salaries by course" and six of the top ten highest graduate starting salaries are engineering disciplines. Chemicals are claiming almost £30,000 a year and civil engineers close to £25,000 while lawyers are earning under £20,000.

**New boss of Vinci Construction Bruno Dupety who took over this month from chief executive John Stannion has put in place a new senior team.** Managing director Andrew Ridley-Barker and commercial director Paul Tuplin have left and will not be replaced. Regional director Chris Hamer has been promoted to be managing director of the building business and as previously reported Julian Gatward has moved from Roger Bullivant to take over from Taylor Woodrow MD Graham Stanley when he retires at the end of the year.

**Bechtel is combining its civil and most of its power business units to create the Bechtel Infrastructure global business unit (GBU).** Toby Seay, president of Bechtel's power business, will become president of the Infrastructure GBU, which will be headquartered in London. Peter Dawson, president of the company's civil business, will become Bechtel's head of corporate services and chief financial officer, a position he held previously. Dawson succeeds Mike Adams, who will lead new strategic projects.

Professor John Loughhead has been appointed DECC's chief scientific advisor. He is currently Executive Director at UK Energy Research Centre.

Former Atkins chief Keith Clarke has been named as non-executive chairman of Tidal Lagoon Swansea Bay, the company preparing to begin construction of the world's first tidal lagoon power plant in spring 2015.

## PLANNING

Arup and AECOM have been appointed as advisors for the Tokyo 2020 Olympics for the development of venues and infrastructure for the Games

## ENVIRONMENT

London has been recognised as a leading global city on climate change action by winning two of the C40 and Siemens City Climate Leadership Awards 2014.

London has also been ranked the best city in the world – after being judged on levels of health, safety, security, the economy and transport. The capital beat other world cities such as New York, Singapore and Paris to come top of Price Waterhouse Cooper's "cities of opportunities" index for the first time.

Government's flagship Green Deal finance scheme, which was intended to reduce energy bills and reduce carbon emissions, has been branded a "disappointing failure" after its first eighteen months of operation. A report published by the Energy and Climate Change Committee of MPs said the scheme to help householders finance insulation and other energy efficiency measures had simply caused frustration and confusion in the market.

Balfour Beatty has appointed Leo Quinn as its new chief executive officer, taking up the new £800,000 a year position and joining the Board on 1 January 2015. Quinn joins after five years as group chief executive of defence solution business QinetiQ. A civil engineer, Quinn began his career at Balfour Beatty in 1979 in the UK construction services business. Executive chairman Steve Marshall said: "Leo is an outstanding individual with an excellent track record in improving the performance of major international businesses. I am confident that Balfour Beatty will thrive under Leo's leadership."

A new type of cement is currently being tested on in India. Known as LC3, this new blend substitutes up to half of the carbon intensive materials traditionally used to make cement with highly abundant clays.

## BUSINESS

A new league table of the most attractive markets in the world for infrastructure investment shows the UK entered the global top 10 for the first time. The research by consultant ARCADIS shows the UK moving from number 13 when the research was first carried out in 2012, to number 10 in 2014.

Balfour Beatty revealed a new £75M black hole in profits at its struggling Construction Services UK business. Since May 2013 the group has recorded lost profits of £190M largely from Construction Services. Chairman Steve Marshall said he would be leaving the business when new chief executive Leo Quinn joins in January (see box above). The contractor has called in management consultant KPMG to undertake a detailed review of the Construction Services contract portfolio.

Mott MacDonald has purchased its long-standing UK water industry design and build joint venture partner Bentley Holdings. The price of the deal was not disclosed. Mott MacDonald, said the purchase was "a natural progression in the highly successful 15 year partnership between the companies through the joint venture Mott MacDonald Bentley". Bentley employs over 700 people with a turnover of £120M.

Carillion is the first company to benefit from the new Direct Lending Facility, which is being provided by the £3bn UK Export Finance (UKEF) to boost UK exports. UKEF has helped the contractor secure a £75M deal to deliver phase one of the Dubai World Trade Centre District.

## ROADS

Department for Transport's piecemeal and stop-go approach to funding for road maintenance in recent decades has made it difficult for highways authorities to deliver maintenance cost-effectively, the Public Accounts Committee has said. In its report 'Maintaining strategic infrastructure – roads' the committee said that there was "too much reactive work in response to flooding and other events and not enough focus on preventative work that is less expensive in the long-term".

Business Minister Matthew Hancock has announced up to £11M of funding for hydrogen cars. The money will help establish an initial network of up to 15 hydrogen refuelling stations by the end of 2015 and includes £2M of funding for public sector hydrogen vehicles

Cost of the new Forth Bridge has dropped £50M. Deputy First Minister Nicola Sturgeon has confirmed that the new budget for the Queensferry Crossing and connecting road network is down from a maximum of £1.45bn to £1.4bn. The Scottish government said the savings were down to "continued delivery of key construction milestones, successful management of the project and prevailing market conditions".

A new £50M bridge, funded from the £500M City Deal cash agreed in August, has been proposed across the River Clyde in Glasgow to link Yoker, in the west of the city, with Renfrew. It would slash travel times to Glasgow Airport. Renfrewshire Council is leading the multi million pound project, which is expected to begin in 2018 or 2019.

Stonehills roundabout on A38 in Gloucestershire has been named best in the country by the Roundabout Appreciation Society. Its centerpiece is a 4m wicker statue of a knight on horseback, designed to commemorate the Battle of Tewkesbury in 1471 during the Wars of the Roses.

New free flow payment arrangements will come into effect at the Dartford Crossing during late November, the Highways Agency has announced. The full benefits of the scheme will be delivered by the end of April 2015, when all changes to the road layout will be completed.

## RAIL

London Underground is planning to introduce "driverless" trains to the Piccadilly Line in 2022 but initially they would still have drivers. Only when entire fleets of old stock has been replaced by the new Priestman Goode fleet, unveiled this week, in the mid-2020s will trains begin running automatically without drivers - although each train will still have a member of staff on board.

Transport for London is consulting on extending the Bakerloo line from Elephant & Castle station through Southwark towards Lewisham, Bromley and Hayes. It is considering two options for the tunnelled section between Elephant & Castle and New Cross Gate.

The HS2 rail college is to be split between two locations, with the headquarters based in Birmingham's city centre Science Park and another college at Doncaster's Lakeside Campus.

Network Rail missed the efficiency target promised for the 2009-2014 control period (CP4) by 8%, achieving 15.5% rather than 23.5%, the Office of Rail Regulation has said, though this was in part due to taking on extra work. Target for the next five years is a further 20% cut in costs.

Transport for London has unveiled plans for a new Overground station at Old Oak Common in west London to connect with HS2 and Crossrail.

Remains of structures built by Isambard Kingdom Brunel for his Great Western Railway have been unearthed near Paddington in west London as part of works for the Crossrail project. Finds include the foundations of a 200m long engine shed, a workshop and train turntables. The structures were used for Brunel's broad-gauge railway, which first ran steam trains through the area in 1838.

## HOUSING

Housing Minister Brandon Lewis has announced new powers for councils to help them build affordable homes. The minister confirmed that 22 councils will be able to borrow an additional £122M over the next two years to deliver over 1,700 new affordable homes and support local growth. But with £178M still up for grabs, Lewis argued that more councils should be putting themselves forward for the scheme.

## WATER

VINCI Construction Grands Projets and Costain have won the £82M job to build the Shieldhall tunnel in Glasgow for Scottish Water. The 5km long, 4.7m diameter structure will be largest wastewater storage tunnel in Scotland and is designed to improve water quality and to help cope with the risk of flooding across the city and to mitigate pollution of the River Clyde.

INTERVIEW: The Green Construction Board's Infrastructure Carbon Review was launched a year ago. GCB co-chair and Skanska UK chief executive *Mike Putnam* explains the progress to date.

**How has the Infrastructure Carbon Review (ICR) helped embrace a low carbon future?**
By creating the ICR, government has provided a common standard that everyone can understand and work towards. With more of a 'master plan', we can bring developers, contractors and the supply chain closer together and should see standards rise across the industry.

**How will the ICR make the link between reduced carbon and reduced cost?**
The review focuses on carbon reduction, which improves the environment, but the associated innovation is perhaps more important. A low-carbon perspective changes our thinking. Frequently, we end up with more efficient or cost-effective outcomes as a result.

**Why is the ICR initiative so important to your business?**
At the risk of blowing our own trumpet, Skanska has been on a low-carbon journey for many years now. Initiatives such as our Journey to Deep Green™ and the industry-wide Supply Chain Sustainability School have helped to reduce carbon (and costs) in our own business as well as for our customers. The ICR is an opportunity for us to benchmark how far we've come.

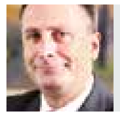
**What evidence is there that a lower carbon culture improves business?**
By insisting that everyone with a company car or car allowance drives a greener vehicle, our employees have benefitted from low-carbon tax breaks. And when we benchmarked this in 2008 we showed that the company saved £1.2M a year in fuel bills. Recent evidence from the World Green Building Council highlights that greener buildings are healthier buildings, with happier, healthier and more productive people inside them. Strong green credentials help us attract the best talent.

**What is the biggest opportunity of moving to low carbon construction?**
First there is an opportunity to collaborate – think about the Olympics and the success that was enjoyed by all. Second, the big opportunity is innovation. If we stay ahead we can market this expertise globally.

**How do we compare to other nations and other industry sectors?**
I believe the UK does well against other nations but we have a responsibility to influence across the globe. Our supply chains are global, so we have a far-reaching impact. The construction industry has the opportunity to make a huge difference, but we are not necessarily as nimble and entrepreneurial as sectors such as retail, as our purchasing is less frequent or consistent.

**What else should government do?**
Reward and recognition. Contracts should be given to those contractors who can demonstrate the largest carbon savings, as well as cost and social benefits.

**Should low-carbon policies be mandated in procurement?**
Yes. But my advice to those at the start of the journey is to embrace it early and go at your own pace. if you wait until government imposes legislation, you will lose out.



**Andy Mitchell,** chief executive, Thames Tideway Tunnel

# Rising to the infrastructure opportunity

I know that I am not the only one who senses that we are at a very important juncture for the industry and infrastructure investment. That we are facing global shifts in climate, global competition and population/demographics appears beyond doubt.

Whether we are talking irrigation, sanitation, coastal protection, power generation, telecommunications or transport, it is hard to imagine a time when engineering has had such an important role to play in our future.

In the UK we are very fortunate that at present there is cross-party belief in the immediate and longer term value of investing in infrastructure.

There may be differences of opinion as to how we should marshal our renewed confidence in our ability to deliver projects such as HS1 (including St Pancras – a building that stands out as a turning point in public awareness), the Olympics, the Shard and Crossrail, but for the first time in my memory we are seeing credible discussion and planning around an infrastructure plan that spans decades and many billions of pounds.

The Infrastructure Client Group (ICG) comprising many of the major infrastructure clients in the UK has worked very effectively over the past three years to develop a coherent plan to improve infrastructure delivery.

As successful as recent projects have been, we do, however, have to stop looking surprised when we get things right, but instead set out our vision as to how, year on year, we will continue to deliver infrastructure at visibly ever better value for money.

Our challenge may well come soon as the economic situation improves and questions start to surface as to whether the economic stimulus of infrastructure investment is as vital as it is now.

So the four key ICG themes of pipeline visibility, improving project initiation, whole life planning and cost control, and supply chain skills and performance have never been more important for the £380bn pipeline.

Quite simply we have a choice – to recognise the opportunity that we have to secure the national confidence to continue investing in infrastructure or start to figure out how we will explain to our successors that we inadvertently let this opportunity slip away.

So, is this a call to arms for the industry?

Yes it is, and as chair of the ICG I look forward to working with as many parts of the industry as possible on what must be another three very productive years of infrastructure delivery.

**Huub den Rooijen,** head of offshore wind, the Crown Estate

# More “cooperative competition” to boost offshore wind investment

This has been a landmark year for the UK offshore wind industry. We have 4GW of capacity now in operation and have seen substantial investment announcements, such as that from Siemens and AB Ports for manufacturing facilities on the Humber, financing from the Green Investment Bank for two projects and the establishment of a £1bn Offshore Wind Fund.

This is now an annual multi-billion pound market.

As a result, the UK continues to be the most attractive place to invest in offshore wind globally, with fantastic natural resources and a project pipeline that comfortably meets the most demanding Government scenarios. In fact, we estimate that offshore wind will be meeting around 10% of the UK’s electricity demand by 2020.

However, the technology is still young and relatively costly, and so it is imperative that costs continue to come down. One way - where appropriate - is ‘cooperative competition’.

We are already seeing such collaboration in the approach to health and safety, with developers and operators establishing the G9 group.

Another example is the SPARTA platform, currently in pilot phase, set up by the Offshore Renewable Energy Catapult and The Crown Estate, to improve operational performance by helping operators benchmark their assets against their peers.

Offshore wind is an international industry and we must seize the opportunity to share global learning.

The recent launch of SeaStar is a great example of this – a pan-European cost-cutting initiative aimed at spearheading at least 30GW of new projects in UK, Danish and German waters by concerted actions including collaboration on knowledge management and inspired by the UK’s Offshore Wind Programme Board.

With the conclusion of the UK Government’s Electricity Market Reform and the projects that have already secured funding and consents in the pipeline, a solid foundation has been laid for at least 10 GW of operating offshore wind by 2020 and continued growth beyond.

It is now in industry’s hands to demonstrate that costs can come down, thus securing offshore wind’s continued place in the UK’s energy mix and the transition to a low carbon economy.



**Sheena Sood,** partner, Beale and Company

# Forget the fines, corporate manslaughter is still a business critical matter

When the Corporate Manslaughter and Corporate Homicide Act 2007 (“the Act”) came into force six years ago it was anticipated that this new regime would give the HSE/CPS greater clout against large companies and organisations.

Penalties for successful prosecutions include an unlimited fine and the Sentencing Guidelines Council has advised that this will rarely be less than £500,000 and may be in the millions.

However, to date none of the prosecutions have been against any large companies. As such resultant fines for successful corporate manslaughter prosecutions have been below £500,000.

The level of fines should not be taken as a weakening of the judicial approach to fines and therefore the seriousness of corporate manslaughter but is reflective of a firm’s financial position.

For example, in the prosecution arising from the Princes Sporting Club fatality the judge fined the company £135,000 - “every penny that it has”.

In R v Mobile Sweepers (Reading) Limited the company pleaded guilty to corporate manslaughter and although the Judge commented that the seriousness of the case warranted a fine closer to £1M, the company was fined the totality of its assets – £12,000. However, the firm’s sole director was fined £191,000 under the Health and Safety at Work Act.

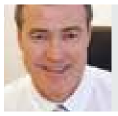
The Mobile Sweepers prosecution highlights a trend for charges to be brought against individuals for gross negligence manslaughter and other health and safety breaches to secure a successful outcome against the company.

Although made to fight all the way in Mobile Sweepers, in Lion Steel the gross negligence manslaughter charges against the directors certainly assisted in obtaining a guilty plea to the corporate manslaughter charge.

Similar laws regarding fatalities at work are spreading internationally. Companies working abroad must examine which relevant local laws, regulations, orders and guidelines apply and that obligations in appointments are compatible with such laws.

Health and safety remains a very important issue. Make sure all policies and procedures are reviewed no matter the size of your company and location of projects to ensure they are up to-date and being properly implemented.

It should not be forgotten that a successful corporate manslaughter prosecution results in a criminal record and can affect a company’s competitiveness and ability to win future work.



**Richard Hill,** managing director, ACO Technologies

# Trending topics and 30 years

Our business is celebrating 30 years of business in the UK this month and with a tendency to look forward rather than back I mused on some of the current macro “trending” construction topics – resilience, reliability, sustainability, collaboration, digital construction and the slightly more micro topics like SUDS,

I then wondered what the “buzzwords” were back in 1984 and was surprised at the number innovations that have since changed our world.

For example, the first “TED” conference was held - it now has over a billion viewers; Apple unveiled the Macintosh, its first personal computer; Professor Sir Alec Jeffreys developed techniques for DNA fingerprinting; Robert Gallo co-discovered, the AIDS virus, critical to fighting the disease.

One construction project stood out in 1984 – the Thames Barrier, protecting London from tidal flood, with “reliability” and “resilience” at its heart.

The fact is, there has been no shortage of innovation in infrastructure since 1984 as seen by the Channel Tunnel, T5, HS1 and the Olympics.

Today, Crossrail, Thames Tideway Tunnel and Tidal Lagoon Swansea Bay are all being designed and built to engage the world’s mega trends and incorporate future demand. Consequently the demand for innovation is embedded in all projects.

Perhaps the more acid test is whether the 200 or so smaller projects in the Government’s Infrastructure pipeline will be as progressive in their drive for innovation as their big brothers.

Thinking back to some of the “trending” terms, I wondered why it is that “innovation” is not still the preeminent “trending” term in building infrastructure. Is it just that it has been overused and abused and now no longer conveys that sense of action?

Obviously today’s “trending” terms emphasise the areas in which innovation is urgently needed, and we must engage with the words and what they represent. But surely we must focus more on how we can deliver the challenges of future demand.

So after 30 years and numerous awards for product innovation, our “business as usual” is still not enough. Like everyone else we must continue to drive for innovation – from incremental improvement to radical change, in products, processes and services and in so doing help create a difference.

**Michael Conway,** chief executive, FM Conway

## Why recession can be good for you

You won't find too many people saying that life is easy as we emerge from the worst recession in living memory – but the truth is, right now we're seeing more opportunities than threats.

At FM Conway we took some very difficult decisions at the height of the recession. We invested in infrastructure that would allow us to 'self-deliver' materials to our highways projects across London.

In 2008 we bought the site that would become our Erith asphalt plant; a £10M state-of-the-art facility that manufactures highways materials predominantly from recycled road planings. This investment was repeated in 2013, when we developed a second plant near Heathrow, also costing £10M.

With other businesses in our sector battening down the hatches and withdrawing from any major capital expenditure, these sizeable investments were undoubtedly seen as risky by our peers. However we had confidence that the efficiencies and environmental benefits of our model would allow us to take advantage of opportunities once the economy began to recover – and this approach has certainly been vindicated.

Our turnover has leapt from £98.3M in 2008 to around £180M today, despite these being some of the economy's worst years in modern history.

We are now competing for – and winning – the biggest and most sought-after contracts in the industry, which we're able to do because of the cost efficiency and security of supply that our own manufacturing plants guarantee.

Protecting against volatile materials prices is the other major benefit of the investments we've made. The two asphalt plants, coupled with our new bitumen import terminal at Imperial Wharf in Gravesend, mean that we are minimising and controlling the raw materials we use, therefore reducing our exposure to external market conditions. This all goes into making us a more commercially competitive and financially robust business; something clients see as vital in an uncertain post-recession world.

Of course, we're still facing challenging times; not least of which is a collective skills deficit across our industry. Ensuring we have the right skills set within the sector and bringing fresh talent to the table needs to be top of everyone's agenda. The work we are doing to support the London Highways Academy for Excellence is a good start, but there is always more to do – and this certainly remains one of our key priorities as we approach 2015.

**Frank Kelly,** chief executive, UK Flood Barriers

## Be Prepared!

With last week's long awaited European approval for EDF Energy's two new nuclear reactors at Hinkley Point in Somerset, the issue of Britain's long term energy security has again hit the headlines. These issues are of major concern and something the energy industry is tackling on a day to day basis.

But as the CEO of one of the UK's leading flood defence companies, alarm bells have started ringing in my ears for a whole other set of reasons. Think back just a few months. to last winter when much of Somerset spent weeks under water. The coast across our entire country took a battering too.

Having worked with EDF Energy to propose flood mitigation solutions to protect its nuclear plants in France and having installed automatic flood defence barriers to protect the Dounreay nuclear plant during decommissioning, I'm confident the utilities sector is 'blazing the trail' in ensuring flood mitigation is a priority in early project planning.

We're also working closely with other major water and electricity providers to ensure their vulnerable and at-risk site locations are adequately protected.

The burning question, however, is how prepared are other key sectors across the UK economy? What level of priority is flood defence being afforded in road, rail and aviation infrastructure, manufacturing and facilities management, design and planning?

The average annual cost of flooding to the UK economy is around £1.4bn. The insurance bill following the winter floods alone topped the £3bn mark. The international picture makes for equally alarming reading with figures of $70bn quoted for coastal flood defence alone.

The frustration for me is that much of the disruption experienced could be easily reduced by increased awareness and consideration of flood mitigation in the planning stages rather than as expensive post build retrofit.

Having recently won a $670,000 contract to provide flood defence to protect a new hospital in New York, it is no surprise that UKFB International, the appointed expert, is being involved at the early design stage of the project.

The US contractor appreciates that involving us early will save both time and ultimately money. More and more this is becoming the norm in the States. Isn't it time Britain woke up to the importance of flood defence as an initial requirement not an afterthought?



**Andrew Wolstenholme,** chief executive, Crossrail

## The case for lower carbon must be the case for lower cost

As an industry we need to work together to overcome scepticism in the industry about the business case for carbon reduction. The Green Construction Board's Infrastructure Carbon Review will certainly help in this respect.

But we must also look seriously at how all parties are incentivised to identify and table such opportunities.

Typically, the client incentivises for a reduction in capital cost. Items such as M&E design are often procured as a reference design or with the contractor required to develop the design or detail it.

These works will be sub-contracted as lump sum, again with no incentive to seek better whole life cost solutions. We need to look at these challenges differently.

Crossrail has committed to a low carbon agenda for a number of years and the ICR has provided us with a more tangible link with our tier 1 contractors.

Our journey on carbon reduction goes back to design work we undertook from 2009 onwards, when we engaged with WRAP to facilitate workshops to design out waste, recognising even then that driving out waste through design had an impact on our embodied and construction carbon footprint.

Subsequently, we have been using tools such as CEEQUAL and BREEAM which have provided a discipline in asking questions about our emerging designs and how they can be made more efficient in both material and energy use.

We have also created a high level forum, The Crossrail Carbon Working Group, which brings together the sustainability directors/managers of our tier 1 contractors to encourage collaborative thinking that will benefit Crossrail, but also help to leverage better results from their supply chains.

Another key thing not to forget is that we can save carbon by doing no more work than we need to. This means using the right equipment for the job and getting it right first time.

There is a clear call to action on carbon reduction, so the time is right for the industry to respond positively to this. There is opportunity, but before we even think about this, I would suggest that we are moving to a time when manufacturers, designers and contractors will need to respond to this carbon agenda just to keep in the game.

Increasingly developments, be they buildings or infrastructure, will require carbon budgeting and if you are not able to demonstrate that you can reduce lifetime carbon through the products or services you are providing you will not be in that game.

**Geoff French,** outgoing president, Institution of Civil Engineers

## Reflections on a vision for integrity, communication and engagement

My favourite definition of an engineer is "something that combines the tools of today with a vision of tomorrow to engineer the world of the future" and I have seen great examples of engineers doing just that everywhere I have been during my year as president of the ICE.

Sometimes this has been through enormous projects like Crossrail and the new Panama Canal. Other projects have been smaller, but just as vital due to the benefits they provide to the local community. Some are outstanding simply because they have re-thought a challenge. The Peacehaven Sewage Works near Brighton, for example, where the works are largely enclosed under a green roof and sited in a fold of the South Downs.

All of these projects were staffed by engineers who were clearly proud, but also extremely modest, about their achievements. This, I feel, is a common trait amongst engineers, however arguably one we should "shake off".

We are all ambassadors for our profession and so should enthuse publicly about our projects – capturing the imagination of the public, and inspiring the next generation.

The principles I stressed in my Presidential Address last November were Integrity, Communication and Engagement and each has progressed.

Integrity, by my definition, includes sustainability and diversity, words that risk losing impact through common misuse. But they are serious challenges.

We must ensure our behaviour recognises that we only have one planet at our disposal, that we must continue to encourage a diverse pool of talent, and we must train and professionally qualify more technicians.

The highlight of the ICE's communication and engagement this year was the State of the Nation: Infrastructure report - in my view the best State of the Nation that ICE has produced with a message that continues to resonate with all political parties.

The world faces some major challenges for which both ICE and the engineering community must be ready.

I will shortly hand over the presidential baton to Professor David Balmforth and I know this is an area he will tackle with enthusiasm – reflecting on the vision and tenacity of the early Victorian engineers and looking ahead to the global megatrends that will test our fragile networks.

# Delivery Delivery Delivery

Image courtesy of HM Treasury, Creative Commons via Flickr

As Treasury prepares to deliver its 2014 iteration of the National Infrastructure Plan, Commercial Secretary Lord Deighton explains the challenge of reducing cost and driving investment to boost the economy.

With reducing the cost of infrastructure in the UK still critical to maintaining high levels of investment, Treasury commercial secretary Lord Deighton is leading the charge to move the industry from talking about ideas to making them happen.

A former Goldman Sachs banker and the man who most recently led the commercial delivery of the 2012 London Olympic Games, Deighton certainly commands both clout within government and the respect of industry. He is a man focused on practical outcomes and backing success as the nation strives to deliver its £380bn National Infrastructure Plan (NIP).

His support has provided vital strategic focus on delivery through Treasury-backed initiatives such as the NIP – of which the 2014 iteration is expected with next month's Autumn Statement – plus industry engagement through bodies such as Infrastructure UK, the Infrastructure Client Group, Green Construction Board and Construction Leadership Council

And it is clear that this increased private sector engagement has garnered and maintained cross party political support for investment, breathing life into projects such as High Speed 2, Thames Tideway Tunnel and Hinkley Point C. Yet there is, he accepts, still much to do to drive forward reforms to secure investment support.

As he put the finishing touches to NIP14, Infrastructure Intelligence spoke to Deighton about leadership, culture change, industry collaboration, infrastructure as a catalyst for economic growth and low carbon opportunity plus the challenge of maintaining focus on deliver through a General Election.

## Interview by Antony Oliver

**Tackling the high cost of infrastructure in the UK is critical to enabling projects to be investable. What makes you confident reductions demanded can be achieved?**

We have already made strong progress in changing behaviours and driving cost reduction. The Infrastructure Cost Review published this summer set out evidence of around 15%, worth over £3bn per year. But there remains much more we can do together with industry to improve delivery and reduce costs.

To build on this success, we have launched a forward programme for the Cost Review in partnership with the Infrastructure Client Group, chaired by Andy Mitchell. I have asked the ICG to report to me next autumn on its progress.

**You have made a strong link between delivering the Coalition's long term economic plan and infrastructure. Why?**

Infrastructure strengthens and drives the economy, and improves living standards. It creates jobs directly; £36bn of investment planned this year could support over 150,000 construction jobs. And it acts as a key enabler for future economic development, driving broader growth and regeneration. I chaired the task force which published a report earlier this year on maximising the growth opportunities of HS2. This is a project that has the potential to re-balance the UK economy.

**You talk about leadership being the key to making infrastructure a reality. Can you point to examples of where this exists in the industry?**

My focus has always been on delivery, and – as I learned from the Olympics – delivery of infrastructure projects relies on having terrific people with the right capability. That starts at the top with the best leadership. We've made a priority of getting the right people in place to take our key projects forward, whether that be Sir David Higgins at HS2 or the likes of Chris Townsend at BDUK. But leadership needs to come from the private sector too – which is why we are working with industry on the Construction Leadership Council to drive performance. And leadership is not restricted to central government. Howard Bernstein and Richard Leese have shown in Greater Manchester what can be achieved at the regional level.

**Leadership is also identified by the Green Construction Board as critical to shifting the industry towards a lower carbon agenda. Does the industry really understands the benefits of a lower carbon future?**

The Infrastructure Carbon Review published last year set a clear link between lowering carbon and lowering cost, bursting the myth that the green agenda adds cost. I am encouraged that so many organisations have joined me in signing a pledge to implement the recommendations of the Carbon Review. They have made a commitment to bring leadership to this critical issue and we will be measuring their progress and performance it meeting these commitments.

**Investor confidence is based largely on certainty of government support for infrastructure. What has this government done to underpin this investor confidence?**

In the public sector, we're providing long-term funding certainty with settlements in key sectors such as roads, flood defence and science. This is the first time this has happened, and means that in transport, for instance, we will be spending more than £70bn over the course of the next Parliament, including the biggest programme of investment in roads since the 1970s.

But, of course, we know that around 60% of the infrastructure pipeline will be financed by the private sector. Where that is in regulated sectors, there is a strong track record of investment, and the Government is committed to the system of independent regulators which has delivered this. In unregulated sectors, Government has taken steps to support investor confidence, including the UK Guarantees Scheme, which now has now prequalified over 40 projects worth more than £35bn.

**The National Infrastructure Plan is an attempt to prioritise the infrastructure needs of the nation. With hindsight, could this have been better structured?**

The National Infrastructure Plan sets out the Government's long-term plan to meet the UK's infrastructure needs to 2020 and beyond. It has evolved since we published the first back in 2010. Last year we included the most robust pipeline to date, and we've since updated it, so that it now shows over £380bn of planned public and private investment. We also responded to industry feedback by including a list of "Top 40 priority investments", setting out how each one supports our strategic objectives in each sector. We continue to engage with stakeholders to make it better as we look ahead to NIP14.

**Economic upturn has put pressure on industry resources. How will government work to ensure that does not add to the cost of infrastructure?**

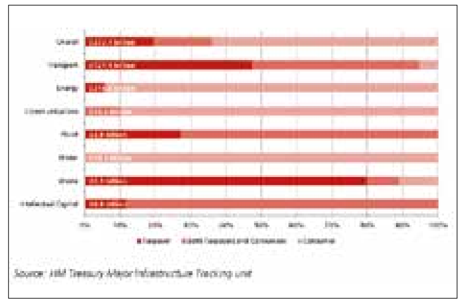
The government has committed to fund a pipeline of projects worth over £100bn over the next parliament, including over £70bn in transport. This includes the biggest investment in roads since the 1970's, trebling annual investment in major road schemes by 2020/21.

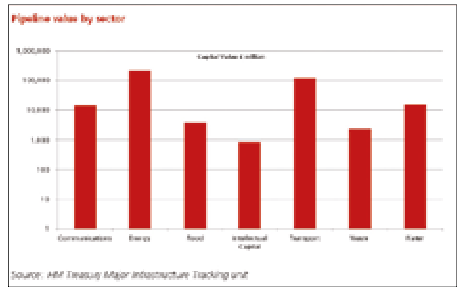
We now publish our infrastructure pipeline biannually. However, publishing the pipeline is not just about giving investors and the industry greater visibility and certainty. It can help us understand the resources we need to deliver our plans across all sectors and regions of the UK. For example, we now model the pipeline to profile the short and long term skills demand to ensure we have the right skills and resources in the right place at the right time.

We have set up a Skills and Supply Chain group chaired by Dr Diana Montgomery, chief executive of the Construction Products Association, with members from industry and government to develop strategies that target investment in training to ensure industry is ready to deliver.

**Collaboration across the supply chain is critical - how can we improve this aspect of the business?**

The Infrastructure Cost Review programme was not just about reducing the costs of delivery; it was also about changing behaviours in government, clients and industry to encourage greater collaboration to drive sustainable change. Feedback from industry is encouraging, particularly in the rail, water and highways sectors.





**The National Infrastructure Plan sets out £380bn of investment to 2020 and beyond and will be updated next month.**

**Geoffrey Spence, Infrastructure UK chief executive, warned recently that the public sector lacked the skills to collaborate successfully. What should be done to change the situation?**

One of my first jobs within Government was to make sure that our internal capability was right. I have conducted a review of Government's ability to deliver its key projects and programmes and have been working with infrastructure departments to ensure that they have the right commercial skills in place to deliver their plans – supported by specialists from Infrastructure UK.

**What are the biggest challenges for an incoming government in terms of maintaining focus on infrastructure?**

It is certainly true that infrastructure has risen up the political agenda since 2010. The Government has been clear on the legacy we wanted to leave – world-class transport, communications and energy networks that will drive economic growth. Things such as the publication of the National Infrastructure Plan have definitely helped in getting that respect.

Of course, the case for infrastructure isn't, and shouldn't be contentious, so the challenge is partly to keep on getting the message out – to explain why difficult decisions on day-to-day spending are needed to prioritise infrastructure investment.

And our focus then must be on making sure we deliver these schemes faster, better and more cost effectively than ever before.

# AECOM: "the most exciting adventure in the industry"

AECOM shareholders sealed the $6bn deal to buy consultant URS Corporation this month to form a new global mega-consultant with 95,000 staff and revenues of $19bn. Infrastructure Intelligence speaks to new Europe, Middle East and Africa Design and Consulting Services chief executive *Steve Morriss*.

Interview by Antony Oliver

**The AECOM/URS deal was a well-guarded secret – Did it surprise you?**
When Mike Burke became AECOM's chief executive this March, I knew he'd have bold plans, so this was a very pleasant surprise. The combined offer of these two great companies means that we can use our range of skills and talents to solve many of the world's most pressing challenges.

**Combining the AECOM and URS businesses gives you great critical mass – what will be your biggest challenge in the next 12 months?**
I don't see the primary benefit of this deal as being related to critical mass. What it really means is that we have an unbeatable group of people with a fantastic range of skills. In many ways, size means nothing, unless you can make it a benefit, which we will do. The main thing is that we continue to offer a great place to work and amazing benefits to our clients. The challenges will be to ensure that we remain properly focused on our staff and our clients and we have designed the integration process to that end, as a staged process that will run over the coming few years. It's a lot of work, but extremely invigorating.

**AECOM has great experience of integrating new businesses – what are the golden rules to getting it right?**
It's certainly true that we've had a lot of experience and while we made mistakes in earlier mergers, we've learned lessons too. It's always a big piece of work to bring other companies on board, and we treat the task with the respect it deserves, keeping focused on staff and customers. Success is all about people. Everyone needs to understand the benefits of making a bigger team — and we are very clear about that — as the world's challenges become bigger, more complex and more interconnected, we need companies like AECOM that can tackle things at that big scale. So I'd say that success in integration is about great vision and communications, respect for talents and then doing everything we can to facilitate new friendships.

"Size is not a problem in itself so long as leaders and teams can focus on looking after every client and every one of our people"

**How do you convince staff that a business of this scale is the best place to drive their careers?**
Once again scale is a positive for our people – there are more career opportunities in a place like AECOM than in smaller outfits. Also, whether you are based in Baku or Birmingham, it's the quality of the local leadership that counts. Where staff have great managers and are part of fantastic teams it doesn't matter what size your company is. Our recent staff survey showed continuing positive trends with people really enjoying being part of the business. There really is a buzz.

**How do you convince clients that working with a business of this scale is in their best interests?**
The reality is that most of our clients don't need a lot of convincing. They're almost universally delighted about what the combined AECOM and URS business can offer them. The only concern we've heard is in areas for example where AECOM and URS are on existing frameworks and clients want to be reassured that we'll still be competitive. In these cases we will be talking to clients to demonstrate how we'll be offering the best value for money.

**What is the most exciting aspect to the deal?**
For me, it's the fact that we will have drawn together two of the world's greatest pools of talent. Already, we can see it's a great fit, and everyone gets on really well. Staff and clients can see it makes sense to join forces, and the levels of enthusiasm and support are brilliant. We can tackle just about any client need in the knowledge that we'll come up with fresh and brilliant solutions. Clients will get a service that's fully integrated, which means they'll get projects off the ground faster.

**Do you think there could ever be a business that is too big?**
Yes, we are big now with nearly 100,000 people, and our size means that we are able to tackle challenges that are hugely complex. Size is not a problem in itself so long as leaders and teams can focus on looking after every client and every one of our people.

**Now that the deal is complete, what happens now in terms of restructuring the combined business?**
The journey of integration begins now. We have agreed a high level structure globally and are well advanced in a joint approach to selecting the strongest possible leadership team in EMEA.

**Why is AECOM the place infrastructure professionals should build a career?**
Promoting the company to new staff is easy. You'll have better opportunities here than anywhere else. Without a doubt AECOM is the most exciting adventure in the industry.





# ARCADIS begins Hyder union

Dutch consultant ARCADIS completed its purchase of UK-based Hyder Consulting this month. UK chief executive *Alan Brookes* sets out the rationale for the deal and explains how the integration will evolve.

**Bringing together ARCADIS and Hyder gives you much greater market clout – what is your biggest challenge in the next 12 months?**
The key challenge is to maintain a focus on delivering exceptional outcomes to our clients whilst we get to know one another and bring the two companies together as one. ARCADIS has a long track record of acquisitive growth and successfully coming together with other companies. We are confident that we can successfully create value as we bring Hyder into ARCADIS.

**Hyder brings with it a huge amount of history. Will you retain the name?**
There is great value in the Hyder brand, as there is in the other 11 active and successful brands that ARCADIS currently operates under. The Hyder brand will be maintained with the addition of "An ARCADIS Company" to the logo and description.

**What do you consider to be the most exciting aspect of the deal?**
Undoubtedly it is welcoming Hyder's talented professionals to ARCADIS. The complimentary and world-class capabilities that they bring will help us better serve our combined client base with global reach and help us deliver on our passion of improving the quality of life and being recognised as the best in our industry.

**You talk about cost savings from bringing the businesses together. Where are the big wins?**
Our focus in coming together is on creating value rather than cutting costs. We do hope to realise some cost synergies through improved utilisation of our people and optimisation of our suppliers and real estate footprint, but the main emphasis will be to bring value through winning new client work as well as expanding work with existing clients.

**How do you persuade Hyder staff that working for a bigger business is best for careers?**
ARCADIS is delighted to welcome Hyder's people to our firm. Working together will provide exciting career opportunities for all, including the ability to work on some of the most exciting and iconic projects in the world today; the ability to work in new parts of the world and learn from new professional colleagues within ARCADIS.

"Our focus in coming together is on creating value rather than cutting costs. The main emphasis will be to bring value through winning new client work"

**Now that the deal is complete, what happens now in terms of restructuring the combined business?**
Now that the deal has done through and Hyder is part of ARCADIS, we have now started the post-merger implementation process. A steering committee has been created featuring senior representatives of ARCADIS and Hyder who will be work together to create value from our joint future together.

**From a client perspective how does this merger help deliver better quality and more efficiency? Why is this good for them?**
The deal significantly strengthens our offering to clients through the addition of best in class design and engineering solutions to our service portfolio across the whole asset lifecycle. Our clients now have access to over 28,000 professionals worldwide, providing us with significant strength in the markets our clients need us most. We are now able to serve our clients delivering the most iconic and complex projects and programmes of work in the market today. The Hyder Centres of Excellence for Design will be deployed across the ARCADIS portfolio, giving our clients a flexible and cost effective solution to their design needs. Along with RKTL, Callison, EC Harris and Langdon & Seah, ARCADIS has the ability to attract leading brands in the global consulting market to its portfolio, giving our clients access to the best professional services and solutions out there.

**What new markets does this open up to you?**
With the addition of Hyder, we are able to increase our reach and presence in key markets, including the Middle East, Asia, more of the UK and open up a new presence in Australia. This means we are never far from where our clients need us, giving us the ability to operate in new markets for our clients and draw on additional resources for clients already in region.

**What has been the reaction from your clients so far to the deal?**
Initial reaction in the market has been very positive. It shows that we taking the right course in reading the market and taking action to both realise our strategy and respond to client needs by offering them the breadth of capability in the markets where they need it the most.

**Why is ARCADIS now the place for infrastructure professionals to work?**
We offer exciting opportunities to realise potential through working with the industry's best talent, on the world's most complex projects and, all the while, ensuring professionals enjoy the journey.

# The tricky bit

Growth following recession is notoriously hard to manage. At the Griffiths & Armour and Infrastructure Intelligence discussion SMEs debated the risks of walking away from low fees and of investing in BIM. *Jackie Whitelaw* reports.

Coming out of recession can be more risky than going in which is becoming increasingly clear with major blue chip construction businesses reporting serious problems. What about SME's in the consulting sector?

Infrastructure Intelligence and professional indemnity expert insurer Griffiths & Armour brought together a group of leading SME businesses to ask this month what were the major issues concerning them. And we wanted to know how they were planning to avoid financial and insurance claims risks as they reacted to the opportunities offered by a heating market.

The key concerns overwhelmingly were how to get margins back to a rate where firms can afford to retain and recruit the extra staff needed to respond to burgeoning contract wins. And how to manage the growing use of BIM and in particular the liability issues created by any shift to a fully functioning single collaborative model as the industry moves in the future from the BIM 2 2016 target to BIM 3.

The claims risk issue is an important one, all of our panel recognised. Griffiths & Armour chief executive neatly summed up the issues based on the 80 years of experience his business has to call on.

"We are at the classic stage of the cycle," he said. "We are coming out of recession, there is more work around but fees have yet to go up to reflect that. And increased workload means stretch and that leads to corner cutting. Three to four years from now claims will start to come through usually when workload takes its next cyclical dip which means contractors and clients looking for money are more likely to pursue them."

There was also a serious risk that issues that had arisen during the 2010 recession may turn into claims thanks to better times.

Right now, he said, businesses should be making sure they are not going to leave themselves exposed to future problems.

From the lawyers perspective Hill Dickinson head of insurance Ruth Lawrence said that there hadn't been a significant rise in disputes. Yet. "But consultancy claims have a long tail and we are finding that some claims are coming in with the big challenge that all the people involved are scattered."

As a group, the panel all agreed they were all in the positive position, after the worst recession anyone had ever experienced, of having a lot of work coming through the door. But there was concern that they were still operating in the recession mindset of saying yes to everything, whatever the price or the contract terms. As one panel contributor commented: "People have got back into bad habits and are still thinking 'just get the job' and not 'how am I going to deliver that, at that price'."

According to Pick Everard director Allan Cowie: "Growth is good but profitability is difficult to maintain and the sheer depth of the recession has been astonishing. We have survived better than most thanks to increased public sector work and in-house growth within our London and the south-east region. Now that the market has appeared to turn, the issue is do you reinvest and take people on or turn work away? And the issue is not just staff, you have to think about capital investment in additional office space, IT, etc. That conundrum is running all the way up the industry supply chain – it needs to be certain that we have turned the corner."

Alan Baxter & Associates senior partner Michael Coombs expressed the views of many. "The backdrop is that low fees have become almost habitual and that is a big problem especially against a rising workload and scarcity of resource. People have to look at what is best for their business and decide their focus. For us it is about maintaining the quality of what we do above turnover and growth. The growth opportunity is there but we see that as a secondary issue."

Many were struggling with the concept of how to increase fees. "We have done well during the recession," said Elliott Wood Partnership partner Paul Wood. "We have actually expanded because of the high end residential market. But we are trying to push fees up and every time we do that, we lose the job to someone offering half the fee. So there are some people out there taking huge risks."

Max Fordham director Henry Pipe had similar experience though he did detect some movement on the part of clients. "On some projects, we have just said no – we are not doing the work for a low fee but we would like to do the job and some clients have changed their thinking. But others have not budged. We are not being hard nosed, just balancing responsibility and risk. And people do come back and say yes, so possibly we are starting to turn a corner."

According to BWB director Andy Passmore that corner is beginning to turn for his business on fees. "Fees are increasingly becoming a secondary consideration in discussions. The challenge is accepting that we cannot deliver every opportunity and that we need to be selective to maintain our service levels. This means filtering out those clients who consider consultancy services to be a commodity, and focusing efforts on those who recognise the value we can bring."

For chief executives Neil Sandberg of Sandberg and Brian McConnell of Hydrock fees were going up. "It's wonderful at the moment compared to 2010," said McConnell. "Our clients are not going bust and they are paying us! And fees are not necessarily always an issue, they just want us to do the work."

Sandberg was also optimistic. "We

## The Panel

- Michael Coombs, senior partner, Alan Baxter & Associates
- Michael Lawson, senior partner, Campbell Reith Hill
- Henry Pipe, director, Max Fordham
- Neil Sandberg, managing director, Sandberg
- Paul Wood, director Elliott Wood Partnership
- Dr Brian McConnell, chief excutive, Hydrock Consultants
- Allan Cowie, director, Pick Everard
- Andy Passmore, director BWB
- Simon Offredy, director, Sweett Group
- Ruth Lawrence, head of insurance, Hill Dickinson
- Stephen Bamforth, group chief executive, Griffiths & Armour
- Chair: Antony Oliver, editor, Infrastructure Intelligence

## Q&A: Griffiths & Armour group chief executive Stephen Bamforth explains the basics of Integrated Project Insurance.

**What is Integrated Project Insurance?**
IPI is an innovative form of insurance that insures project risks rather than liabilities. It operates on a blame-free basis and insures outcomes rather than causes; all members of the project are covered – including the client – and all rights of subrogation are waived.

**Why is it needed?**
IPI supports collaborative working and the use of truly integrated teams, helping to drive out waste, deliver innovation and provide better, more cost effective solutions to the needs of clients. It is the only insurance product capable of supporting BIM Level 3.

**Is Government supporting it?**
Yes, government has committed to trialling IPI as part of its Construction Procurement Strategy.

**How and why?**
Government is supporting demonstration projects to show that (a) the hoped-for savings in capital costs and procurement times can be achieved in practice; and
(b) to encourage the insurance market to create a commercially viable product that can be made available to both the public and private sectors.

**How would it work?**
IPI insures the integrated project team's performance against specification, time and cost.

**How would liabilities work?**
Liabilities to third parties arising during the construction process are covered. There are no internal liabilities to consider; the project team operates on a completely blame-free basis.

**Who would be in charge?**
A project board, including the client. There would be a light touch audit of designs by an independent party.

**Would the auditors be exposed?**
No – that would go against the blame-free culture. This will be dealt with contractually.

**Would PI premiums be adjusted?**
Yes. Fees earned on IPI projects would not need to be declared under consultants' annual PI covers. There will be no duplication of insurance costs.

**Next steps?**
Demonstration projects will shortly be under way following which we will provide feedback.

**Why is G&A supporting IPI?**
As PI specialists we have first hand knowledge and experience that turning risks into liabilities really does not work!

are able to increase fees slightly and activity levels are very high. We are having to be very careful about contract conditions – we are still getting some real horrors. We see ACE Agreements, which is a comforting start, but the words have been carefully edited, never to our advantage! Normally when we explain to a client that the requested £5million PI and unlimited liability for a contract fee of perhaps less than £5,000 is unreasonable, we are then able to negotiate better terms and reach an agreement. However there are always some where we fail and at that point we have to decide if we wish to do the work and sometimes 'No' is the right answer."

Concern about exposure to risks imposed by external parties brought the conversation neatly on to the implications of BIM and particularly working on a single model and how to protect yourself against other people's mistakes.

"That is our biggest concern," said Campbell Reith Hill senior partner Michael Lawson. "With BIM there is increased risk of errors being made without people realising."

There was general agreement that BIM level 2 where each consultant manages their own BIM model with associated data was something that was achievable and almost enjoyable. "After the false starts we are certainly seeing a number of projects that are full BIM 2," said Henry Pipe.

"There are not many jobs, but they are starting to come through," Sweett Group director Simon Offredy said. "Even the clients who aren't using it yet will be imminently."

The wild west nature of the early BIM days had been a concern for insurer Griffiths & Armour said Stephen Bamforth. "Things have settled down now, the protocols are all in place and there is much better understanding so level 2 is of no real concern.

"Probably the greatest risks are for the practices who don't invest," said Ruth Lawrence.

However the group were all in agreement that the next stage of BIM3 with all parties operating via a fully integrated design process, is a completely different concern.

As Stephen Bamforth said: "Can BIM3 achieve its potential with traditional professional indemnity or will there be so many constraints that we revert back to level 2?"

It was a good question because the major issues for our consultants were around responsibility and liability for defects. The solution Bamforth maintained has to be Integrated Project Insurance covering the client and all the supply chain to encourage the full collaboration necessary to make BIM 3 a success.

"Without it, if there are any problems you will all rush off to separate lawyers and just at the time when you need a collaborative engineering solution you can't provide one because you have all gone for a legal solution."

Griffiths & Armour is involved in developing Integrated Project Insurance and Bamforth explained how it would work (see box). "The cost of IPI is included in the overall project cost plan, paid for by the client as the benefits accrue to the client. For the insurer it requires investment on eyes and ears up front as opposed to us becoming involved after the event and spending on legal and forensic costs. There would be a single, multi party contract, blame free, with a pain and gain share pre-agreed formula so everyone knows their maximum liability. And it is a shared liability so it makes it worthwhile for everyone to help each other out."

Everyone on the panel wanted to find out more and Paul Wood could see that "the insurance route is the only way to go. If you are going to have collaboration, you have to have a basis of trust and knowing that you are all insured together would help create that."

"It really is a culture question," said Ruth Lawrence. "IPI and BIM3 sound like project utopia but it would completely change the culture not just in claims but in how projects are run. For lawyers all the focus is on protecting your client's position. We would all be able to move and change to focusing on what is best for the project."

There were downsides potentially to IPI the panel suggested. "What does it do to our incentive to behave or be cautious. And what about the issues of knowing you are working with less cautious people in the team who may not be as scrupulous in design as you would like," was one comment.

"But if it potentially drives more stable relationships and allows us (as SMEs) to establish consortia so we can work as a team it would lead to more fulfilling projects."

Bamforth concluded;" I think IPI can be a real enabler for SMEs as under IPI the client would be free to chose the best resources (not the richest). That could be a two man team who at the moment would be required to provide at least £10M PI cover which blows them out of the water. Under IPI the decision would be about skills."

> "Probably the greatest risks are for the practices who don't invest"
>
> **Ruth Lawrence, head of insurance, Hill Dickinson**

# What are the challenges for 2015 – our panel make their predictions

**Michael Lawson:** "The focus will need to be on controlling our growth, retaining staff and maintaining cash flow."

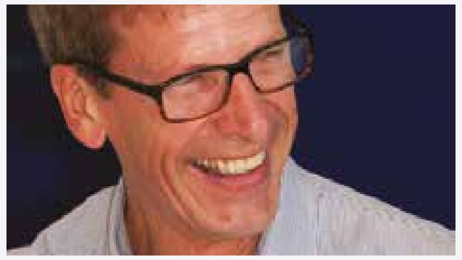
**Allan Cowie:** "We will be concentrating on controlling growth and maintaining profitability, getting paid and reducing bad debt – reducing the time period between doing the work and getting paid is essential for cash flow."

**Brian McConnell:** "We are becoming something bigger than an SME; we probably class ourselves as a full blown medium sized business and we're certainly competing with some of the big boys. We're feeling good about the future but we have to make sure we keep control of our expansion and bring the cash in."

**Ruth Lawrence:** "The challenge for 2015 will be ensuring we look at the claims that are made without hindsight and against the background of difficult economic conditions from earlier years – something often quickly forgotten by those bringing the claims"

**Henry Pipe:** "I am very optimistic for the future. We are seeing exciting jobs, the most enthusiastic graduates for a long time. But there is a problem with agreements – some clients are asking everyone on the design team to have £20M PI cover on projects where this is completely inappropriate!"

**Stephen Bamforth:** "I expect a hardening of the professional indemnity market. It has been soft until now. And you will see major withdrawals of companies providing PI. So work closely with your broker and make your risk profile distinct to make sure you can get the best PI deals in a hardening market."



**Paul Wood:** "The biggest issues are going to be margins and how put fees up."

**Andy Passmore:** "2015 is going to be all about strengthening our resource capability to ensure that we generate sustainable and profitable growth, without compromising our recognised service levels.

**Simon Offredy:** "For us it's going to be about staff retention, in house training, and growth, especially infrastructure growth. Our business in this sector continues to expand and in four years has grown by well over 150%. Given this success we also know that we have to keep a close eye on quality outputs at all times to ensure this continues.''

**Michael Coombs:** "Our issue will be matching workload to resources and retention. It would be nice to get margins up. There is a lot we need to do to invest in the future of the industry and we all need healthy fees to be able to do it."

**Neil Sandberg** "Expanding with the right strategy will be challenging and controlling the risk as we expand."

# Using data to decide transport investment

*Martin Tugwell* of the Transport Systems Catapult explains how intelligent mobility will turn business models on their head.

Transport is never far from the popular news headlines and it's clear to me that the pressure on transport authorities to balance their revenue books continues.

Economic growth will create greater demand for transport services, exacerbating the pressure on transport authorities and operators as they deliver their services.

A successful transport system is fundamental to enabling sustainable economic growth: securing the long-term business model for transport is therefore a challenge that the next Government cannot ignore. It is a challenge that the wider transport sector is already responding to.

Fundamentally transport is a socio-technical system: one in which the individual is at the heart of innovation. It is clear that new technology and innovation are challenging traditional approaches to transport. They bring new entrants into the sector: companies that are offering user-centric solutions to the transport challenges faced by individuals and businesses alike.

Such changes are symptomatic of a more fundamental shift in the way transport is viewed by society, with the emphasis increasingly on enabling access to services as opposed to ownership of a particular mode of transport. There is a growing need for the provision of personalised services that are valued and trusted by us: the consumer of transport. As a consequence we are likely to see further disruption to the traditional business model as a consequence of technology enabled innovation.

If there is a lesson to be learnt from other business sectors it is that transport cannot afford to only innovate within the existing paradigm or business model. Whilst it's important to continue to encourage the existing innovation activity across the transport sector, we must also be open to embracing new solutions – including ideas from other business sectors.

At the same time our technology enabled society is generating a huge amount of data that captures our use of transport services. Never before have we had access to such a rich insight into how, as consumers, we make use of the available transport options.

"Transport cannot afford to only innovate within the existing paradigm or business model"
**Martin Tugwell**

More could be, and needs to be done to share information more widely. A better understanding of transport consumer needs and requirements will benefit decision making. Collaboration amongst those who collect data is critical, as is the acknowledgement that infrastructure operators and service providers may not always be the best placed to provide consumer facing information.

Ultimately the key to success in the transport sector lies in having a stronger user-centric focus that has a systems approach at its heart – Intelligent Mobility: enabling the effective and efficient movement of people and goods.

The Transport Systems Catapult represents an investment by the UK in establishing a centre of excellence that champions Intelligent Mobility. The Catapult exists to help accelerate the application of technology enabled innovation, with a particular emphasis on providing the support that enables new ideas to cross the 'valley of death' and be implemented. Success will not only help the UK remain economically competitive, it offers the opportunity for UK based businesses to capture a larger share of a global market for Intelligent Mobility market estimated to be worth £900bn per annum by 2025.

Based in Milton Keynes the Transport Systems Catapult forms part of the wider Catapult programme established with the support of Innovate UK (formerly the Technology Strategy Board). Whilst the Catapult is a new concept for the UK, there are similar facilities in many of the leading economies around the world. Set up as a private company limited by guarantee, the Catapult has been established to act as a facilitator and enabler for the widespread application of UK research and development.

Fundamental to the Catapult's approach is the emphasis given to collaborative working with partners across the transport sector – from academia, through start-up and SMEs, to major private sector companies.

The UK has to be successful in addressing the challenges facing our transport system. As a catalyst for the application of technology enabled innovation the Transport Systems Catapult will have a key role to play in that regard: ultimately though realising the potential of Intelligent Mobility will require collaborative working at all levels in order to deliver a truly transformative systems approach to transport.

## Catapult's four targets

- Automated transport systems – as part of which the Catapult is delivering the prototype autonomous pods that will be trialled in Milton Keynes
- Information exploitation – exploring the opportunities that exist to realise added value through the application of data to enable intelligent mobility
- Modelling and visualisation – stretching the boundaries of current modelling techniques through the use of ideas from other business sector, including the computer game sector
- Customer experience – leading a strategic programme of work across transport modes, with the focus on enabling user-centric solutions to be developed on a system-wide basis.

# Infrastructure "is what we are about"

What is it like to work for Amey's consulting business? New managing director David Spencer gives his view after three months at the helm and three colleagues share the stories of their working life.

In the last three months Amey has won its first job in America looking after Dallas highways with joint venture partner Webber and with another partner, Keolis, is taking on the operation of the Docklands Light Railway for the next six and a half years. It has also confirmed its reputation in the rail sector by being selected for Network Rail's electrification and plant framework.

For David Spencer, new managing director of the company's consulting business who joined just three months ago, these wins have more than confirmed that his move from Capita's property division was a good decision.

"I can't take any credit, but things have gone far better than I ever expected," he says. He had been watching how infrastructure has become increasingly appreciated as a way of driving the economy. "I'm a civil engineer. Infrastructure is what I love. I realised that this was the right time to move somewhere with a particular focus on infrastructure and that is what Amey is all about. It is concentrated on infrastructure from investment through delivery to operation and maintenance."

Back in February the business, as part of the DBFO also reached financial close on the £500M M8/M73/M74 deal to build and maintain motorway in Scotland and Spencer is enjoying being involved in developing the operation and maintenance strategy for the roads.

"I am very interested in how we get the most out of our existing infrastructure and in particular running it smarter and more efficiently," he says.

As managing director of the consulting business he leads a team of around 3000 which is growing at some pace.

"It is a great place to be for consultants and design engineers who like to work in an organisation which understands how to deliver things. Working with colleagues on implementing solutions is a very rewarding career," he says.

"The key thing for us is to be able to relate to our customers, adapting what we do in terms of consulting as their needs change and evolve." That is external customers and also customers within Amey itself and the parent company Ferrovial. The plan is also to add new sectors and services such as utilities and power to the Amey portfolio.

"We have a lot of experienced people but there is always room for more as we grow and diversify – people with a variety of skills and level of experience. We like to make the best of everyone and find the right roles and ways of working to suit them.

"I am finding that Amey is a very agile organisation that offers a lot of flexibility, fascinating projects and opportunity for career development. We are an ambitious and growing organisation and there is room for all to come and help us." *by Jackie Whitelaw*

**"We like to make the best of everyone and find the right roles and ways of working to suit them."**

"I am very interested in how we get the most out of our existing infrastructure and in particular running it smarter and more efficiently."

**David Spencer**

## Charles Oldham
### Associate director

My job is to create a Strategic Consultancy Team for Amey. Our business is focused around improving the performance of businesses that depend on infrastructure assets.

We are addressing the technology questions in infrastructure using data and analytics to understand how assets are performing and to forecast future cost risk and performance which allows more effective planning.

The team is largely made up of infrastructure engineers with analytic or software skills. This allows us to combine technical knowledge with data gathering and use the information that has been collected, sometimes for many years, to form an understanding of assets.

We are diversifying into such areas as remote monitoring and the use of the vast amount of SCADA type data that is being collected, but is largely unused and then the implementation of change that is required to use assets more effectively.

Working with Amey I have been able to build a team of very bright and motivated consultants many of whom, but not all, are at the start of their careers.

I am really enjoying the intellectual challenge of the job and the opportunity to work with bright and interesting people.

## Emma Roberts
### Civil engineer, roads

I am currently working on Amey's Transport Scotland South East Trunk Road Unit contract, managing the design of structural maintenance schemes on the network. Amey has helped train me from school and next year I will be hopefully becoming a chartered engineer with ICE via the technical report route.

The biggest benefit I have found in my time at Amey has been the multiple opportunities that are available and the varying work on all sorts of different projects and contracts to get involved with.

I joined the company part time in 2004 after a summer placement and while studying for an HNC in civil engineering. After my HNC I asked the business to sponsor me to go to university, also part time on a BSc (Hons) in environmental civil engineering.

I graduated in 2009, and with Amey's training support achieved incorporated engineer status in 2013 following my professional review with the Institution of Civil Engineers (ICE).

My next career ambition is to fulfil the requirements to become a senior engineer within Amey and gain chartered status..

I've found that Amey is very committed to assisting with training and development of its staff and I will continue to get the support and mentoring I require to enable me to further my Professional Qualification with the ICE.

## Albina Jevsejeva
### Graduate engineer, railways

I have been with the consulting business for 14 months and I am currently working on a resignalling scheme at Bromsgrove and another at Birmingham New Street along with culvert assessments elsewhere on the rail network.

I am finding that the benefit of working with Amey is the variety of projects I can get involved with. I have also worked on a couple of bridge reassessment models for instance.

I am also very supported in my ICE training scheme. As a company, we always operate as a team. It doesn't matter if a colleague is sitting next to me or miles away in Scotland. We use technology so effectively to communicate, whether it is emails, Lync or phone conferences. And the colleagues around me are always happy to help and if they cannot, they direct me to someone who can.

I am also given quite a lot of responsibility. Each individual at Amey is responsible for delivering high quality work within given time constraints in a competitive market place.

What attracted me to this business was that Amey is one of the few consulting companies that has the capacity to deliver large scale projects at any stage of an asset's life cycle. This means I have the opportunity to gain experience in a wide range of services.

An important aspect of Amey is the safety culture. We put safety first through our Target Zero ethos and objectives and we all share our knowledge and experience in order to make things better. And safer.

# Never running from risk

Tony Gee and Partners is celebrating its 40th anniversary this year. The boss for the last eleven of those has been Graham Nicholson who has seen the firm grow four fold and diversify, all the while remaining a first choice for contractors and clients with a tricky problem to solve. He talks to *Jackie Whitelaw*.

Tony Gee & Partners has a reputation throughout the civil engineering industry as the company to go to when you have a difficult issue to solve particularly in terms of the practicalities of construction.

The firm is top of the list for problem solving for major clients and all of the UK's leading contractors; the sort of jobs that some firms might shy away from because of the associated risk profile.

"We are tempted by high tech, complex engineering work and where there is a particular construction challenge," says its executive managing director Graham Nicholson who leads the 400 strong business. "We do a lot of work helping contractors with multiple challenges and love difficult buildings, underground stations and helping solve the conundrums of constructing them."

Recent projects have included helping with the urgent repairs following the collapse of the Dawlish sea wall and cliffs in last winter's storms, establishing designs and construction techniques for reusing existing Victorian piers in the reconstruction of Blackfriars bridge in London and detailed design for segmental viaducts in Kuwait.

"We don't run away from risk," Nicholson says. "It is something to be managed, not avoided. And we are recognised for being able to take it on and push the engineering boundaries."

These abilities are things that set Tony Gee & Partners apart, along with its deep understanding and fascination with the hands on business of actual construction.

The firm understands the need to find cost effective, quicker, cheaper, cleverer ways of delivering projects. "You can never be complacent," Nicholson says. "You have got to work safely and we build that into all we do even if we are pushing the boundaries of engineering – the very thing that creates innovation that all our clients are asking for. We do have the benefit of having understanding clients who realise that risks are being managed by us on their behalf to deliver the innovation that they require."

**Recent Tony Gee projects have included detailed design for segmental viaducts in Kuwait (top), roads and earthworks for London Gateway (left) and reconstruction of Blackfriars Bridge (above).**

For the engineers working for the company this means that the workload is usually varied, stretching and exciting in terms of the technical challenges. As the business has grown, from 100 in 2003 to its current size, the staff that started out with it have in large part stayed.

The company runs a sponsored student programme, with 40 on the books at any one time and "they have formed the core of our technical expertise," Nicholson says. "We lose a few but generally they stay and our retention rate is 88%. By bringing them in early we can train them in our way of doing things and of designing. But we need new ideas coming in to the business too so we recruit at graduate level and mid career to bring in different thinking." The firm is also hiring and training apprentices with the intention that that scheme will be on the same scale as the student programme.

Why do people stay? "It's definitely the quality of the work we choose to take on and the fact that all the directors are involved in technical work on a daily basis. So people are working side by side in open plan offices with senior engineers with good expertise and they know they can learn a lot.

"The feedback we get is that we are a very supportive, approachable organisation with a very flat structure. A student can be working with a director on a job for instance or in a bigger team."

Nicholson himself is one of the employees who stayed. He started at the consultancy in 1982 when there was just 14 staff. He'd been a sponsored graduate too, though with the Redpath Dorman Long part of British Steel and at 24, two years after graduation was looking for a job offering something technically demanding and closer to construction. Tony Gee was an obvious home. Founder Tony Gee who left the business in 1987 to pursue his interests in the US was ex Redpath as was another partner Steve Harridge.

"I'd been here six months and was asked if I wanted to go to Hong Kong," he says. "The cost of the flight at the time was a quarter of my annual salary so the opportunity to go overseas was incredibly exciting. Steve was in Hong Kong too and was the recognised steel expert; I'd done a little bit of concrete bridge design and we ended up winning a big alternative design in concrete so I had to do it.

"They were really informative years which motivated me to be self taught and certainly developed my confidence. It wasn't so easy to be in touch with head office to get advice – there was just the telex. When fax arrived we thought it was marvellous because we could actually see sketches.

"It's tougher for graduates now, there are so many rules and regulations it is difficult to be creative and we are more constrained in the UK than overseas. So I always try and give people the opportunity of an overseas posting; take it every time I'd say."

Nicholson became a partner in the business in 1992, its sixth, and just over a decade later, at 44, found himself in charge. That sudden elevation though is a sad story in the company's annals. Its chairman, one of the founding partners and hugely respected engineer Frank Rowley died suddenly in 2003 at the age of just 61.

"It was a horrible shock and he will always be missed," Nicholson says. "But we had to work out how to manage the business. I had always thought of myself as a reasonable number two guy but the other partners knew I could run projects and had seen me develop the quality system for the firm so decided I could manage it all. They said, 'obviously, it's you'."

The firm was about 100 strong then and "Frank had told me a week before he died that he thought we could get the business to 200. I needed to get some training."

Nicholson went on a strategic leadership course with Business Link,. "It was all about strategic planning. Sometimes businesses spend too much time doing that and not enough actual doing. But we were the opposite case."

The upshot was the realisation that the business had to restructure, and bring people on and give them a share of the partnership to help manage and develop the company.

"We are an employee owned and managed firm in a world where consolidation is happening at a frightening pace. Getting the strategy right so we can maintain the independence we value so highly has been most important."

## Graham Nicholson on the opportunity and challenge for 2015

"In 2014 we grew 30% as a business. We'd planned on 10% but got caught out by winning quite a few highways projects – we spent years bidding and got nothing and then suddenly they all come along at once. We managed to resource up because our wins came in 2013 and we were ahead of the others in the resource race. The challenge now is about retention, paying people properly and keeping them interested while managing our growth more tightly.

"Our strategy is set not by the opportunity of work but by our desire to remain independent and self financing so we are being very selective about the work we do so we can limit our exposure to no more than 10% growth.

"We are happier when we are growing – we have to make space and opportunity for people coming through the firm – but growth is not the aim."

"After 40 years when winning work has been the top priority we feel the balance is changing and it is about selecting the right work. It is only in the last 12 months that we have had to say no because of capacity issues, even though we liked the look of the job."

## Tony Gee and Partners: Facts

**Turnover:** £20.8M
**Employees:** 400
**Growth expectation:** 600 employees in five years
**Sectors:** Rail (56%), Highways (24%), Power (8%), Marine (4%)
Repeat orders: 85%
**Key clients:** Network Rail, London Underground, major contractors
**Client/contractor split:** 30%/70%
**Current number of partners:** 24

# Innovation and collaboration

## Infrastructure Intelligence discusses the critical issues with major consultants

Large firms discuss delivering innovation and securing resources in a competitive and growing market, at our second round table event with software firm Deltek. Report by *Bernadette Ballantyne*.

In a growing market where clients want to secure the best resources at the best prices, consultants are facing major challenges when it comes to winning work, resourcing projects and most crucially remaining profitable.

These issues came to the fore in a discussion over the latest "Trends and Challenges in Architecture and Engineering" report conducted by software firm Deltek.

In the study the company found that firms were increasingly optimistic over work volumes in 2014 with this dominated by organic growth. Of the 235 firms questioned 75% said this would be a feature of 2014 with 19 per cent of companies expecting acquisitive expansion.

"The statistics really come to life when we discuss them in a forum like this," said Neil Davidson, UK managing director of Deltek. "We see more optimism in 2014, but there is also a huge amount of consolidation taking place in the market."

Evidence of this is clear with a raft of deals dominating the industry headlines in 2014, including AECOM's purchase of URS in a deal worth around $6bn (£3.7bn). In early September Netherlands based consultant ARCADIS won a bidding war for consultant Hyder valuing the company at £296M, and WSP announced it had successfully beaten off rivals to procure Parsons Brinckerhoff for up to $1.35bn (£820M).

Also in September UK consultant Mott MacDonald revealed its plan to buy long term joint venture partner Bentley Holdings. "As a business when we look at our forward order book today compared to a year ago it is certainly better than it was, in terms of volume and the scale of jobs," said Mike Haigh, UK managing director for Mott MacDonald. He also noted growth was evident in overseas markets where the firm has 60% of its business.

For some growth in the UK market was attributed to the pick-up in awards across regulated industries in 2014.

"We are optimistic now because the regulatory cycles have all fallen together well for this year and a lot of public sector opportunities have also come to market, which if you are exposed to those markets have increased the volume, but it does mean that for some sectors there will be less contract awards next year," said Richard Butterfield, director at Amey. "We are also seeing a lot more demand for asset management overseas. In the US and Australia there is a realisation that there are good things going on in the UK and they want to try it," he said.

Although firms were unanimously positive about the business outlook there was a feeling that this is concentrated in the south east with regional investment lagging. And in international markets firms pointed to infrastructure as leading the growth curve but said that property was recovering. At the same time markets that had been suppressed after the recession such as North America and the Middle East are seen to be rebounding.

### Rising costs, stable prices

With growth evident, firms discussed the issue of pricing which 66 % of firms in the Deltek report said was the biggest threat to the industry. The discussion drew out concerns over the unsustainable behaviours of some companies suppressing fees. "The volume of opportunity is increasing in every sector that we operate in, however it is not infrequently that we find bid levels the same as they were a couple of years ago and that continually surprises me," said Steve Canadine, managing director of Ramboll UK.

At the same time consultants are being challenged to deliver more for less, particularly in regulated industries. Several participants pointed to the water industry where work has successfully been delivered 10-15% cheaper in successive five year AMP periods, and yet margins remain flat at 5-7%. "This industry does not capture the value that it creates, not even close," stated Richard Robinson, director at AECOM. "As quickly as we innovate we give it away to clients because that gives us the edge and wins the framework for us," agreed Haigh.

Firms said this was partly because some clients were still operating in "recession mode" putting low cost above all else. Although relationships with clients remain crucial, companies pointed towards "transactional procurement departments" which focused only on price. In some cases this means that despite strong relationships with project teams, managers in the client organisations were being overruled on the basis of cost.

This was considered to be less of an issue for private sector clients, but regardless of the ownership model consultants said that delivering to time and budget is no longer good enough. Peter Begbey, director of Waterman, said that firms were having to perform better than ever. "Our private sector clients expect a high level of client satisfaction beyond delivering what is normally required in relation to time, cost and quality. They place great value on our advice and relationships which have been built up over the years. We walk the extra mile, we provide a personal service and we add value through the planning and design process which is recognised through the high levels of repeat business we achieve".

This means having a better understanding than ever about the businesses and needs of client organisations. "If you can understand

**Top: Mott MacDonald's Mike Haigh and Alex Tosetti of URS.**
**Above: Cameron Cromwell of Capita Infrastructure + Property with Deltek's Rolf Hansen.**

### Participants:

- Richard Butterfield, director, Amey
- Peter Begbey, director, Waterman Group
- Steve Canadine, managing director, Ramboll UK
- Cameron Cromwell, managing director, Capita Infrastructure and Property
- Neil Davidson, UK managing director, Deltek
- Eryl Evans, director, Sweett Group
- Mike Haigh, UK managing director, Mott MacDonald
- Rolf Hansen, senior director for enterprise, Deltek
- David Luscombe, director, Parsons Brinckerhoff
- Andrew Noble, director, WSP
- Richard Robinson, director, AECOM
- Murray Rowden, director, Turner & Townsend
- Alex Tosetti, director, URS

the value that a client needs, you can find better ways to do things and drive the price down and be more competitive," said Cameron Cromwell, managing director infrastructure at Capita.

Added to this, said firms, is pressure from staff, who are optimistic about the improved economic prospects and are seeking better remuneration. Coupled with the need to make new hires the recruitment challenge is huge. "Our order books are brimming and the biggest challenge we and our competitors are facing is recruitment," said Begbey. "Industry rates are not going up as quickly as they should, there is still a fixation with rates being at the levels they were 2 years ago and that is a problem when offering competitive salary levels."

Other firms agreed. "Growth will be constrained not by the sales, but by the ability to attract and retain the greatest talent in the industry," said David Luscombe, director of sustainable building solutions at Parsons Brinckerhoff.

This creates a complex conundrum. "We have a rising cost base, a price point that is not rising, and a quantity that is going to be shrinking in terms of client ambition but we are talking about recruiting more individuals," summarised Murray Rowden managing director for infrastructure at Turner & Townsend. "As industry we have to think differently about how we are delivering."

Looking overseas the issue of margins remained a talking point with firms explaining that profitability and payment terms vary worldwide. South East Asia was noted as a region that could be slow to pay, affecting cash flow in companies with a lot of exposure. Similarly the Middle East is known to have slow payment terms, but at the same time can offer higher margins.

### Data to drive decisions

With margins remaining flat across the industry much debate was had over the use of data and enterprise resource planning (ERP) software to help inform decision making and ensure profitability. "ERP adds benchmarking of data and processes so that you can actually use your data to see where you can improve margin. That is extremely difficult if you have different systems," said Rolf Hansen, senior director for enterprise at Deltek. He also advised that the tool was used to support project management decisions and not just to run back office functions. "Where we

**Neil Davidson, Deltek**

**Steve Canadine, Ramboll UK**

**Andrew Noble, WSP**

**Richard Robinson, AECOM**

**David Luscombe, Parsons Brinckerhoff**

**Eryl Evans, Sweett Group**



> "Our order books are brimming and the biggest challenge we and our competitors are facing is recruitment"
>
> **Peter Begbey, director, Waterman**

> "This industry does not capture the value that it creates, not even close"
>
> **Richard Robinson, director, AECOM**

> "It is really important to have detailed knowledge about the sort of margins you have in different markets with different clients"
>
> **Mike Haigh, UK managing director, Mott MacDonald**

see most success is where ERP is part of a wider change programme and a tool to aid better decision making," he said.

Consultant Ramboll is in the midst of expanding and unifying its ERP platform across its UK business. "We are genuinely looking forward to being on same system as the rest of the global business and I believe that will be very helpful," said Canadine.

Several firms pointed out that having the information to be able to understand not only the price base but how to challenge it and therefore bid smarter was vital to future profitability. "It is really important to have detailed knowledge about the sort of margins you have in different markets with different clients," said Haigh.

Other firms agreed but warned that overlaying this with sensitivity and intuitive pricing based on experience and client relationships was really important. "You have to know your clients, it is not accountancy systems that know the client," pointed out Andrew Noble, financial director at WSP. Others agreed. "Good data is essential for good decision-making. Data helps you understand your client and be more sensitive to their business needs," said Alex Tosetti, operations director at consultant URS.

### Big Future

With so many mergers and acquisitions in the industry it was not surprising to hear larger firms outline the advantages of growth from the use of global design centres, the ability to move work around the global business rather than the people and the diversification of income streams that comes with exposure to many countries and sectors. It was also pointed out that this creates the potential to take lead (including equity) positions in projects and change the role and influence of the consultant. Having these options, they said, is helping them achieve their margins at competitive prices. "From our perspective the industry is going to keep moving towards large organisations that are geared to help clients find solutions to the major infrastructure challenges of the future," said Luscombe pointing to the advantages of scale. "Big, with their large talent teams, will be beautiful for a while."

But AECOM's Robinson was quick to point out that size is not the only issue. "It is about quality and excellence of delivery. Acquiring URS enables us to be excellent in markets that we are not in at the moment," he said.

At the same time some of the larger consultancies said that growing in size would bring them closer in scale to some of the major clients and "raises the bar" for the profession, bringing it in line with prize accountants or lawyers with a global reach.

For small and mid-sized companies this means the potential for takeover from other acquisitive firms. "We are always going to be a target as our competitors are absorbed," said Eryl Evans, director of transport at Sweett Group. "It is a threat and it is something we are aware of, but it is not something that we are overly concerned about."

Others were more apprehensive. "I came from a small firm that was acquired by a global practice and the change was phenomenal. The way we did business with our clients changed overnight," said Begbey. "It became more difficult to maintain client relationships on a personal level."

Firms said that not only were some consultants getting larger, client organisations and project opportunities were too, giving rise to more collaboration between consulting firms. This might be to extend global reach or to provide additional resource. "We are winning massive projects by collaborating with our competitors. We are not too proud to partner with the best in class," said Tosetti.

Other firms said that they deliberately sought smaller independent consultants to work with that were not affiliated to larger competitors, noting that independence was a currency valued by many clients. At the same time it was also noted that many of the clients in the UK were contractors with smaller global footprints than the consultants they hire.

Looking to the future firms agreed that although pricing had remained suppressed it would inevitably rise as firms reached capacity and became more selective. Some remarked that the tight margins were really a catalyst for more innovation and lead to "huge creativity" with high margins creating complacency. "When do you innovate?" asked Canadine. "When you have to."

But perhaps most importantly for firms the business outlook for the industry is strong and on an upward trajectory. As the market adjusts to the new dynamics consultants are at the forefront of capturing innovation and deploying it for their customers. Those that can also apply some of this internally will be well placed to meet the challenges of the future.

### The report

For the "Trends and Challenges in Architecture and Engineering" report Deltek interviewed 235 companies in markets all over the world including Germany, Austria, Switzerland, the Netherlands, Belgium, Denmark, Norway, Sweden, The UK, France , South Africa, Australia and New Zealand.

Highlights include facts such as:

- 72% of firms forecast growth in 2014 (compared to 66% in 2013)
- Denmark is most optimistic with 90% expecting growth
- Netherlands least optimistic with only half predicting growth
- 66% see price competition as the greatest threat to the industry compared to 52% in 2013.
- Staff retention was considered the biggest threat by 53% of firms compared to 55% in 2013.

# Three changes that will help you in the global construction boom!

Is it time to relook at the way we plan and execute projects – as a matter of survival? asks WRENCH CEO *Daniel Varghese*.

Over the next five years investments in capital projects in power, transportation, energy and water will place unprecedented demands on the engineering procurement and construction (EPC) industry to complete projects ‘faster and cheaper’ but with existing resources and processes.

To meet this challenge the business-as-usual model comes under scrutiny. Even with lessons learned, the industry’s ‘invented here’ (ie change-resistant) mindset has slowed progressive action in almost all EPC organisations. So is it time to relook at the way we plan and execute projects – as a matter of survival? There are three paradigms that may reach you sooner than you think.

**1. Working ‘As One’...**

It’s a simple but fundamental switch – from collaboration to cooperation. Collaboration has always been a cornerstone of EPC projects but now it needs to evolve up one step to ‘co-operation’. Is there a difference? Yes. Collaboration is a way of distributing a task across multiple parties while co-operation is a way of thinking.

Consider: what is the difference between a shared GOAL and a shared TASK? Or a team that works as a single organism versus one that merely ‘pulls together’? That’s the difference between a company that dominates its market versus one that merely survives in it. When consultant, contractor and vendor ‘work as one’ rather than just working together, they achieve co-operation.

This paradigm shift is necessary because today the pie is a lot bigger (new mega-projects are cropping up everywhere) but it is also divided into a lot more slices. Projects are being farmed out to multiple partners, stakeholders, consultants, vendors – many of whom never worked together before – and while this delivery model allows sharing of both risk and cost it also requires complete control and accountability. Solution: Work as One. One team. One process. One culture.

**2. Make your people redundant. . .**

as supervisors, trackers, monitors, controllers. Use them less on routine everyday tasks and more on strategy, problem-solving, and customer service. Not every process or task can be automated but those that can be, should be.

It’s a no-brainer: as long as manual effort drives a process there is the possibility of error. When you choose to rely on individual effort to enforce a process you choose to risk delay, conflict, and litigation. Soon it won’t even be a choice. System-driven workflows will become the norm and those who don’t adapt – or adapt too late – will get left behind.

So now is the time to start expecting MORE from your resources – but qualitatively not quantitatively. Expect more from them as managers, leaders, and contributors to the company’s success. Increase efficiency all around, make outcomes predictable and reduce the number of man hours-per-task. Result: less manpower costs, less error and rework, happy workforce, happy clients.

But does this mean you have to go out and hire new people? No.

It means using your existing people differently. More efficiently. More intelligently.

A good place to start: stop using highly-paid managers for housekeeping and deliverable-chasing and updating and following up. Instead, replace your manual-driven processes with system-driven ones and human effort with no-effort, at least on the routine tasks which don’t need ‘intelligence’. And don’t reduce human error – eliminate it altogether.

So in a nutshell – automation. But not automation as we know it so far. Not in bits and pieces – a procedure here and a department there. No, automate globally, across the project lifecycle as a whole, in a cohesive, integrated way across the organisation. Because that’s how projects work best, as a single cohesive, inter-linked, integrated entity.

To sum up: automate your ‘dumb’ processes and use people intelligently if you want to watch their output double (or triple) and watch your bottom line grow with them. To put it another way undercut manpower shortages by making existing manpower more efficient.

**3. Don’t use information technology to optimise your process, use it to redefine your organisation.**

It’s time EPC companies woke up to the fact that there is more to project-related Information Technology than ERP and EDMS and collaboration platforms and project management applications. Or email and CAD and MS-Office, if it comes to that. The hype notwithstanding, today’s IT can indeed transform an engineering company from the inside out – but only if you make the effort to understand how it can improve your very business model rather than just your data/process management.

Unfortunately, far too many EPC organisations believe that they have already optimised their infrastructure as much as possible, as regards IT solutions/apps/platforms. They feel they have invested as much as can be reasonably expected, and so any further room for improvement lies in ‘bigger, faster, cheaper’. But the truth is that IT can do for the construction industry today what the automated assembly line did for manufacturing 70 years ago. Think about it.

To conclude, in today’s chaotic market climate it’s easy to overlook the fact that ‘adapting’ is not just a matter of reacting but of pro-acting – of changing the way we think from the inside out. As the saying goes “sacred cows make the best burgers’’. For companies willing to kill off a few such ‘cows’ that are in the way of progress, today’s project marketplace could be a goldmine rather than a minefield.

A matter of mindset over method, perhaps?

*WRENCH supplies end-to-end enterprise software for the engineering and construction industry. www.wrenchglobal.com*

## Case study

An engineering consultancy in the Middle East won a contract purely on the strength of its ability to ensure seamless ‘co-operation’ between the various project parties. The client at first was very hesitant about the multi-partner model and was concerned about tracking project progress. By switching to a radically new system of transparent and online-based project monitoring, the client’s fears were assuaged and work went forward.

## The World Wide Workforce

The internet changed more than the way we communicate and exchange information, it revolutionised the way we INTERACT as a species. It made possible ways of working that were pure pipe dreams a decade ago. It put control back in the hands of managers. It ushered in round-the-clock, remote, foolproof ‘transparency’ and ‘visibility’. But of course the flip-side is that not everybody is comfortable with transparency and visibility. So the question becomes, can we use modern technologies to increase efficiency at the process level without jeopardising it at the human level? Short answer: yes, we can. But only by changing things at the root, at the company-culture level not just process-optimisation level.

> “A good place to start: stop using highly-paid managers for housekeeping and deliverable-chasing and updating and following up.”

> “IT can do for the construction industry today what the automated assembly line did for manufacturing 70 years ago.”

## Functionally, what can IT do for you?

- Get everybody on the same page, literally. With the right technology, the entire project team or organisation can work off a single platform and a single schedule, regardless of location.
- Guarantee quality in every deliverable. By enforcing ISO (or any other industry best practice) exactly as defined on paper, you can be assured of doing it right the first time and every time.
- Cut costs dramatically. To start with you could reduce up to 60% of engineering costs simply by going paperless. You could save money by slashing the number of man hours-per-task, especially at senior levels. Also, think of savings in terms of less rework, errors, litigation . . .
- Enjoy efficiency and predictability. Think accurate and automatically-generated S-curves at the touch of a button. Think alerts of a delay BEFORE it happens. Think dynamic dashboards, online reports, digital collaboration, electronic approvals etc. Or, if you want to get technical, think as-build documents delivered electronically into the client’s asset. And so on. Automation doesn’t just speed up output in the short run, it changes the entire working culture, over time.

# Devolution jobs boost

Matchtech's *Grahame Carter* explains why the Scottish 'No' vote could boost engineering employment

**Investment in Northern Hub rail is an indication of what devolution could bring.**

Following Scotland's decision to remain in the UK, there has been much debate about what this will mean for business and jobs.

You could be forgiven for thinking that the Scottish Referendum is yesterday's news but actually the wider economic and employment impact has yet to be felt.

The result of the referendum has been to prompt commitments from the government and opposition to back greater regional devolution of powers, including income tax and infrastructure investment, not just to Scotland, but to Wales, Northern Ireland, key UK cities and potentially to England.

While I leave the politics for others to debate, devolution has the potential to deliver more jobs and employment for engineers across the UK, as long as the UK's national framework of employment laws and corporate taxation remains uniform and red tape is minimised.

What will almost certainly unite any devolved regional or city administration is a desire to build and invest in infrastructure, in order to encourage businesses to locate in their areas and to provide a backbone for growth.

Infrastructure is a statement of intent and a driver for business. The CBI in the north is already calling for the development of a High Speed Rail of the North. Regional airport expansion and investment in high-speed internet will almost certainly be other areas that regions look to invest in as a driver for local jobs and the economy.

> "What will almost certainly unite any devolved regional or city administration is a desire to build and invest in infrastructure"

Matchtech received almost a 35% increase in specific engineering discipline requirements, both AutoCAD and design engineering when major projects such as HS1 and Terminal 5 at Heathrow were delivered. We would expect similar increased levels of engineering requirements to be produced if the High Speed Rail of the North and airport expansion projects were backed and funded.

In September the International Monetary Fund released a report stating that infrastructure investment was one of the few policy levers left to governments to support growth. It calculated that raising public investment by 1% of GDP would increase output by around 0.4% in the same year and by 1.5% after four years.

Westminster led investment in infrastructure has increased significantly in recent years, with projects such as HS2, Crossrail, the Intercity Express Programme, AMP6 and fibre-based broadband projects all generating jobs and driving growth. The result is a buoyant employment market for engineers, with significant skills shortages emerging in some sectors of the industry as a result.

If the UK can strike a balance between devolved regional governments financing local infrastructure projects, and national UK government funding and commissioning UK-wide infrastructure then we could see a significant additional fillip for jobs and engineering as we move forward.

However, striking the right balance will be key; having to get four or five different parliaments to agree major infrastructure projects, and then get buy-in from a series of devolved regional assemblies may have the opposite effect and hinder the progress of the infrastructure investment and economic growth that the IMF identifies as being so beneficial. We need a plan for the UK as well as a plan for the regions.

Think tank ResPublica issued a report on the back of the Scottish Referendum making the case for Manchester to become the UK's first devolved city and in the process gain control of its £22.5bn public sector budget, in order to empower it to invest in the infrastructure and services it needs to drive economic growth. The impact on infrastructure spending and jobs for Manchester's budget could be significant – it could be a game changer.

Investment in helping nurture business and jobs in UK regions is frequently built on providing better infrastructure. Engineers are at the vanguard of change and the UK's infrastructure is now seeing renewed investment after several years of stasis and decline. That change could accelerate with greater devolution.

Whatever the final shape of the current devolution debate, new jobs in engineering look likely to follow.

### Want advice?

You can contact Grahame at grahame.carter@matchtech.com or on LinkedIn.





## Middle East growth momentum set to pick up speed

For the last eight years I have been visiting the Middle East twice a year, and am just back for my trip to the United Arab Emirates [UAE] and Qatar, writes ACE chief executive *Nelson Ogunshakin*.

In the last five years ACE has established its Middle East Group with support from Mott Macdonald regional managing director Ian Clarke and WSP Group regional managing director Tom Bower, operating from their Abu Dhabi and Dubai offices respectively.

Historically, UK companies have had a strong presence in the Gulf region. This is more so in the last 40 years, as the UAE and its neighbouring states continue to develop infrastructure to position the sub-region as the Middle East's most important economic centre.

As the region emerges from the recent economic slowdown, UK based firms continue to provide much of the consultancy and engineering services required to deliver mega projects across the region. Headline grabbing schemes such as the 2022 World Cup in Qatar and Dubai's Expo 2020 will add dynamism to an economy that is already on the up spurred by three critical sectors: huge non-oil sector investments, the buoyant trade and services sectors, and the booming tourism industry.

During my visit events were organised to cover issues from best business practices ranging from legal, terms and conditions, contracts and compliance issues through to HR and health and safety challenges and proved to be very successful.

In summary, this is a snapshot of what I found on my travels.

### Dubai

This emirate in particular was hit by the 2008 global financial crisis when the property sector and construction went into decline. But Dubai has been bold in its diversification and I believe is back with an increasing workload. Dubai's rebounding property market with many units now being bought off-plan, combined with a strong performance in trade and construction is lifting its GDP back to the pre-recession period. The focus on delivery of the social and economic infrastructure required for the Expo 2020 will be another major catalyst for renewed activities.

### Abu Dhabi

Since 1962 when Abu Dhabi became the first emirate to begin exporting oil, the country's society and economy has been transformed. With more extensive oil reserves than any other emirate, Abu Dhabi has remained relatively controlled in its path to diversification. What is evident is that there is a consistent, conservative and progressive approach to delivering their development plan. However, as the official capital of the UAE, there will continue to be steady investment in both economic and social infrastructure including major expansion of the Etihad Airport and delivery of the Etihad Rail.

### Qatar

This gulf state has bounded on to the world stage with its ambitions to host two of the world's leading sporting events, with the World Cup becoming a reality in 2022 but its Olympic bid for 2020 rejected by the IOC. The country now has a spotlight on it and intense scrutiny on how it is going to mobilise natural and human resource to deliver on its promises. With this heavy workload now in the pipeline, I think it is without exception that all of our ACE members from our large consultancy group along with a few more specialist providers are working on these mega-projects. What I have to be mindful of to help ACE members is to open conversations to ensure that any difficulties in institutional capacity within the Qatari framework are sorted out to guarantee a robust internal delivery on what is expected.

I enjoyed seeing a different region to the one I visited last year. There is a renewed energy, increased workload and greater pace of change, albeit with no improvement in the conditions of engagement and payment regime - a continued source of challenges for ACE member firms operating in the region.

## ACE CEO Awards finalists announced

Association for Consultancy & Engineering has announced the finalists for the 2014 European CEO Awards. The awards provide recognition to exceptional leaders within the consultancy and engineering sector, identifying innovative business professionals who have demonstrated strong integrity and contributed to the industry and wider society.

Finalists for 2014 European CEO Awards are:

- Richard Crowe, Nicholas O'Dwyer Ltd
- Philip Dilley, Arup
- Philip Jones, Philip Jones Associates
- Mårten Lindstrom, More10 AB
- Keith Mitchell & Paul Reilly, Peter Brett Associates LLP
- Steve Morriss, AECOM
- Mark Naysmith, WSP Global Inc
- Alan Poyser, ARP Associates
- Grant Rumbles, Mouchel
- Steve Wooler, BWB Consulting Ltd

The list of nominees was narrowed down by a judging panel with representation from ACE's sister associations throughout Europe.

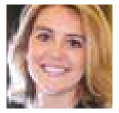
Geoff French, President of the Institution of Civil Engineers (ICE) and the chair of judges commented on the panel's decision:

"Once again judging was incredibly difficult illustrating the sheer strength of talent within the consultancy and engineering sector in Europe. The judging panel was able to draw up a strong short list and enjoyed the challenge of identifying the very best professionals to receive awards this year"

The winners will be announced and presented with their awards on 17th November 2014 at The Great Hall, One Great George Street, London during the European CEO Awards dinner. www.acenet.co.uk

**Awards venue: ICE HQ**

## Letter from: Scotland



Transport projects are high on the agenda as the country returns to business as usual after the referendum writes ACE's regional manager *Susan Hanley*.

Amongst many infrastructure projects currently underway in Scotland transport is playing a key part and ACE's members are benefiting from the continuing investment now the dust has settled following last month's vote.

The Scottish Government has had devolved powers within transport since 2001 and since its formation in 2006 Transport Scotland has been the agency responsible for the delivery of major infrastructure projects. In 2012/2013 its £1.9bn budget delivered a wide range of achievements including major national transport projects for road and rail throughout Scotland.

The New Queensferry crossing under construction over the Firth of Firth is the largest infrastructure project in Scotland for a generation and along with the Victorian rail and and fifty year old Forth Road Bridge will be a new draw for bridge engineering enthusiasts when it opens in 2016.

But it's not all about the new bridge. In May ACE member Fairhurst was awarded, as part of a joint venture, the first of three design deals for the A9 dualling programme for the 46km stretch between Glen Garry and Delraddy. A further member Jacobs has just been awarded the second 50km stretch between the Pass of Birnham and Glen Garry.

The £350M Borders Railway, due to open in summer 2015, will deliver 49km of new railway and seven new stations linking the Borders with Midlothian and Edinburgh. Atkins, URS and Fairhurst, all ACE members, are part of the team of consultants carrying out detailed design.

The ACE Scotland group chaired by David Macleod of Rybka has membership from firms ranging in size from SMEs to multinational organisations and covering a broad spectrum of disciplines.

Through our involvement with various government bodies, groups and forums we strive to promote our members' concerns in relation to vital aspects such as Government reform, skills shortages, procurement process, fees and payment schedules. Additionally as part of the Transport Scotland Forum, ACE brings its members together to consult on issues such as framework agreements.

Key publicly funded projects stimulate economic growth and support jobs within Scotland and the skills of ACE members will continue to be pivotal to the successful delivery of our infrastructure, ACE Scotland group welcome the engagement of members as we strive to ensure we support them in this delivery.

*If you would like to get involved with the Scotland Group or attend one of our events you can find out more on www.acenet.co.uk/scotland*

## New standard contract for track work launched

Contractors tendering for and working on Network Rail track projects should find their ability to evaluate the contract documentation vastly simplified thanks to an innovative collaboration between Network Rail, ACE and the Civil Engineering Contractors Association (CECA).

Over recent months a new approach to producing conditions of contract for Network Rail has been developed with Network Rail's current bespoke amendments for Track (NR8) being incorporated into the Infrastructure Conditions of Contract to produce a standard form of contract for such work. The opportunity has also been taken to refine the amendments to reflect current client requirements and working practices.

This amalgamation to produce a single document which contains all the terms and conditions will enable both contractors and client representatives to gain a clear understanding of roles and responsibilities which will assist in both saving time and costs as well as facilitating good working relationships as the work progresses.

Speaking on the rationale behind the collaboration, ACE chief executive Nelson Ogunshakin said; "I am confident that this is the first step in a long line of engagement with other partners seeking simplified and integrated contract strategies in the future.

Eoin O'Neill, commercial director (track) at Network Rail commented; "This collaboration and the resulting impact will only have positive connotations for both the Network Rail and contractor teams working on our new plain line contracts.

"As part of the overall contract strategy for track we set ourselves a challenge to introduce a more effective and simpler process for all our teams to follow. Its introduction made sense in an environment where everyone is looking for more efficiencies in resource and expenditure."

*The Infrastructure Conditions of Contract can be found in the publications section on the ACE website www.acenet.co.uk*
*Purchase price is £30.00/edition*

## Infrastructure will be an election battleground

Policy-wise, the latest conferences were far from the last chance the parties will get to make their pitch to the electorate, however they still represented an important stop on the road to May 2015, writes chair of ACE's Public Affairs Group *Alex Tosetti*.

All three of the main parties made strong pitches around infrastructure, a recognition of its importance, and testament to how far up the agenda it has been pushed in recent years.

At the Labour conference, Ed Miliband pledged to decarbonise the UK's electricity supply by 2030, to give the Green Investment Bank powers to borrow and attract investment, and to provide government support to insulate 5M homes. New Homes Corporations could also be created to allow development of large sites that cross local boundaries with infrastructure developed simultaneously.

UKIP continued to voice its opposition to HS2, to all green taxes and to wind farms, pledging to halt these policies should they form a government in 2015.

For the Conservatives, housing, roads, rail, airports, and energy production and distribution dominated the fringes. Although proud of the economic growth since 2012, the feeling that this is a prosperity free recovery for most families persists. Their answer is investment in new infrastructure to boost the economy, especially in the North. George Osborne's key aim is to rebalance the UK economy by investing in England's northern cities and so any projects that can deliver this goal stands a good chance of being approved.

Finally, at the Lib Dems a number of interesting ideas came out, including a proposal by Danny Alexander to invest


ACE news

in 'productive economic infrastructure – roads, railways, broadband, housing – as long as overall debt is falling as a share of the economy.' The conference also continued to take a strong position on aviation, ruling out any expansion in the south-east again, but voting through a motion in support of fracking.

The one clear thing is that each party wants to position itself as the best hope for the delivery of the infrastructure the UK needs, and this represents a fundamental opportunity. The industry industry to seize this opportunity.

## Conference sketch

Unusually, Labour's conference got the season underway, and the first thing commented on was the flat, even downbeat atmosphere. This did not seem to be a party convinced it was about to be swept back to power on a wave of public enthusiasm. Subsequent poor performances by Ed Miliband at the conference and in the polls will have done nothing to quiet the nerves as we enter the final stretch of this long campaign.

The UKIP conference by contrast was abuzz with energy following the high profile defections of first Douglas Carswell and then Mark Reckless. It is difficult to see that energy dissipating following their subsequent successful defence of Carswell's Clacton seat but also the showing in the Heywood and Middleton by-election.

With all this going on at the expense of the Conservatives, one might expect the mood in Birmingham would be less than positive. The reverse seemed true, however, and successive pieces of bad news appeared to have galvanised the faithful. Additionally, a new appreciation for David Cameron's successes added to the natural authority that comes with being Prime Minister, meant activists left the Midlands imbued with a new confidence that Labour, UKIP, and other threats were now beatable.

We finished this year with the Liberal Democrats, in Glasgow again, and while the party spin would have it that conference was a success, the spectacle of so many empty seats for key members of the cabinet does not paint a positive picture. The next twelve months could be tough for the junior coalition partners!

EIC news

# Shale gas: Not an easy win

Fracking for gas is going to be a major talking point in the years ahead. EIC executive director *Matthew Farrow* highlights his top three issues.

The last couple of weeks has seen a lot of activity on shale gas issues here at the Environmental Industries Commission. We were a sponsor of the European Shale Gas and Oil Summit (ESGOS), where I chaired a session on the environmental management of shale sites. Then last week we held a workshop for EIC members with the Environment Agency shale gas team and with UKOOG, the trade association for the UK shale gas industry.

About 30 EIC member companies attended, and we were able to get into real detail in small group discussion about how the environmental impacts of shale sites can best be managed.

From the debates and discussions at these events, three things have struck me.

First, it's worth remembering that there is still no guarantee that the UK shale gas exploitation will be economically feasible. A number of geologists spoke at the ESGOS sessions, and one made the point strongly that the US shales were extremely 'user-friendly' and UK (and most non-US shales) will not yield their treasures as easily.

The consensus seems to be that dozens of exploratory wells will be needed before we can really assess the economic viability of large scale UK shale gas extraction. So while perhaps unlikely, it is still possible that a decade from now we will look back and wonder about those strange few years in the 2010s when a shale gas revolution seemed imminent but then came to nothing.

Second, the impact of shale gas exploitation on climate change mitigation is complex. Gas is lower carbon than coal and virtually all UK energy scenarios indicate significant amounts of gas will be used well into the 2030s. The 'carbon footprint' of shale gas is likely to be comparable to or better than that of imported LNG so shale gas could help us increase our energy security with no medium term carbon penalty.

The green NGOs however will point out that existing identified fossil fuel reserves if combusted without any carbon capture technology would send atmospheric carbon concentrations well beyond levels most scientists believe would cause dangerous climate change.

The question there is could UK shale gas lead to a switch from coal to gas (perhaps in part by depressing gas prices compared to coal, though there is no guarantee of this) over the next 20 years without prejudicing the long term phasing out of unabated fossil fuels? If it does, then shale gas could be valuable 'bridge' to a low carbon energy system.

The problem is if the 'bridge' becomes more comfortable than the destination, for example if large supplies of shale gas helps depresses the price of all fossil fuels compared to renewables. Personally, I would like to see exploitation of UK shale gas combined with a statutory target for sufficient decarbonisation of our energy system by 2030 to ensure we remain on track for our climate change commitments 2030.

Third, EIC members have much of the expertise that will be needed by the shale industry covering field such as environmental monitoring, wastewater treatment, solid waste management, air quality and many others. While shale sites will need to be carefully monitored and managed, it does seem that the level of concerns raised are disproportionate to the expected risks.

Groundwater contamination from existing septic tanks or landfill sites is a bigger concern than from fracking, for example. And some practices in the US, such as storing wastewater from fracking in open lagoons at the well pad, would quite rightly not be allowed in the UK.

It does seem certain that both the macro and micro aspects of UK shale gas will continue to excite huge interest and debate for next few years, and EIC intends to be an objective, thoughtful contributor to that debate.

*The Environmental Industries Commission is the leading trade body for environmental firms. www.eic-uk.co.uk*

***Find out about the political parties views on fracking at the EIC conference "Establishing a Green Agenda" to be held on Monday 2 December. For details go to www.eic-conference.co.uk***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