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Produced for the industry by the Association for Consultancy and Engineering

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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

No power sharing or horse-trading required. Instead the General Election has delivered a new Tory administration, albeit one with a wafer thin majority.

And regardless of party allegiances, the result without doubt provides the infrastructure sector with more than expected political certainty – certainty that breeds vital market confidence.

Of course, as the latest Infrastructure Intelligence Pulse survey clearly highlights, it is an outcome that UK infrastructure leaders favoured, with 67% believing that Conservative policies are best for infrastructure.

Yet as David Cameron’s new all Tory cabinet begins the task of governing it is probably worth referring back to the manifesto on which policies for the next five years will be built.

“We have set out a plan to invest over £100bn in our infrastructure over the next Parliament,” says the manifesto. “This will fund the biggest investment in rail since Victorian times, and the most extensive improvements to our roads since the 1970s,” it adds. “And it will give us the most comprehensive and cheapest superfast broadband coverage of any major European country.”

All good reading for infrastructure businesses assessing the prospects going forward. Yet for all the certainty and confidence that this brings it is also clear that the next five years will not be simply business as usual.

There are difficult decisions ahead and Cameron’s depleted majority will undoubtedly leave him forced to keep a number of potentially rebellious MPs on side. Not least when it comes to decisions such as High Speed 2 and replacing the UK’s ageing power generation with lower carbon alternatives.

Or for that matter boosting aviation capacity in the South East – one of the first big infrastructure decisions promised and possibly the first big test.

The manifesto states: “We will ... respond to the Airports Commission’s final report” effectively leaving the door wide open. Could London Mayor Boris Johnson with his new cabinet “role” walk through it with an estuary airport alternative in tow? Don’t rule it out.



Antony Oliver,
editor, Infrastructure Intelligence

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News roundup

BUSINESS

Construction and services group Kier is to buy infrastructure and business services consultant Mouchel for £265M. The acquisition is expected to complete in June. Mouchel chief executive Grant Rumbles will leave on completion of the deal. Kier chief executive Haydn Mursell will be CEO of the expanded group. Rumbles has overseen a remarkable turnaround of Mouchel which went into administration in August 2012. Underlying operating profit was £27.7M on turnover of £617M in the financial year ended 30 September 2014.

Labour shortages are intensifying according to the latest RICS Construction Market Survey. Figures for Q1 2015 also show workloads are continuing to rise. Some 63% cited labour shortages as an issue followed by 55% highlighting finance. The private sector remains the principal driver of growth, with 48% of respondents reporting a rise in housing workload activity.

A new survey has found that infrastructure firms have a false confidence in their suppliers. In the survey by Achilles almost three-quarters (73%) of UK infrastructure companies said they were confident that the way they managed their supply chain helped them successfully identify and manage risk. But, in the last 12 months, almost a third (28%) of UK utilities, construction and oil and gas companies had experienced problems due to a supplier’s financial instability.

Laing O’Rourke-Interserve has dropped out of bidding for the £350M Midland Metropolitan Hospital which is to be the first hospital to be built using the PF2 model. Carillion is now the sole bidder, with final bids due in six months time. Sandwell & West Birmingham NHS Trust



Architect and masterplanner Broadway Malyan is urging the new government to rethink “outdated” Green Belt regulations following a new YouGov survey which revealed 67% of the public want more homes to be built. The poll of 4510 people also found that the same percentage did not want houses constructed on the Green Belt. Director of masterplanning Jeff Nottage said that brownfield-first policies systematically failed to supply the required level of housing and, as a result, house prices have continued to soar, homeownership is falling rapidly and homelessness is rising.

has said that the procurement process would continue to the same timetable. Construction of the 670 bed hospital is expected to start in 2016 and be completed by 2018-19.

Construction output is forecast to increase 5.5% this year before slowing to 4.0% in 2016 and 3.4% in 2017. The slowdown is due to an Election hangover which will see a break in private investment Construction Products Association has said. Strong growth in 2015 is due to activity in private housing, commercial and infrastructure.

In 2015, mergers and acquisitions in the Transport and Logistics sector will supersede the levels seen in 2014, according to KPMG’s latest Transport Tracker. The first quarter of 2015 has already seen completed global transactions worth £6.7 billion.

ENERGY

EDF Energy has halted site preparation for Hinkley Point C nuclear power

station until funding for the scheme is resolved. EDF will complete roadworks currently underway.

Lancashire fracking decision delayed again. Lancashire County Council has postponed making a decision on planning approval for two hydraulic fracturing sites at Preston New Road and Roseacre Wood until 30th June. Developer Cuadrilla said that the council requested more time to assess feedback from the public consultation. A decision was originally expected at the end of January, postponed until the end of April but now will not be decided until summer.

INTERNATIONAL

China has signed agreements with Pakistan promising investment of £30.7bn creating a China-Pakistan Economic Corridor. The network of roads, railway and pipelines running 3000km from Gwadar in Pakistan to China’s western Xinjiang region will give China direct access to the Indian Ocean and beyond.

Tanzania is planning develop its rail network spending £9.2bn (\$14.2bn) over the next five years on the central corridor line and others. The Central Corridor line will be a 2,561km link between the port of Dar es Salaam to Rwanda and Burundi at a cost of £4.9bn (\$7.6bn). Two additional lines, to will connect Dar es Salaam to the coal, iron ore and soda ash mining areas in the south and northern parts of the country.

Britain’s exporting businesses should be supported by a Minister of Trade who sits in Cabinet, according to the interim findings from a commission asked by the Labour party to examine how government can help develop Britain’s overseas trade. The report is being undertaken by AugustaWestland chairman Graham Cole who recommends in his interim findings that the new government “turn up the dial on exports” by the Prime Minister chairing a cabinet committee dedicated to exports and by the appointment of a senior, elected Minister of Trade who would attend Cabinet and be subject to scrutiny by a newly formed Commons select committee on international trade.

PEOPLE

Ex Balfour Beatty CEO Andrew McNaughton is to take on construction of Swansea Tidal Lagoon as director of engineering and construction for promoter Tidal Lagoon Power. He is taking over from Steve Hollingshead who left to become boss of Murphy. The 320MW installed capacity project is designed to have a net annual power output of over 500 GWh. Government will determine the project’s application for a Development Consent Order by June 10 this year.

Contractor Murphy has appointed Steve Hollingshead as new chief executive. Swansea Tidal Lagoon construction director and former Laing O’Rourke Australia boss will join the contractor on 1 June.

Capita’s property and infrastructure business has appointed Drew Ritchie as its new head of infrastructure. He joins Capita from running his own consultancy business, providing strategic and corporate development advice to a number of major civil engineering contractors. Former positions include chief operating officer for Currie & Brown, major projects and programmes director at Balfour Beatty, and head of rail for Amey.

Laing O’Rourke has appointed Peter Williams as its new technical director for Europe. Williams will join the contractor from AECOM where he is building engineering leader

The Institution of Engineering and Technology (IET) has launched a new website containing what it says is the world’s largest collection of engineering and technology video content intended to make it easier for engineers to share knowledge. The IET.tv platform includes over 6,500 multidisciplinary engineering and technology videos. ”It plans to add a further 750 clips every year.”

PLANNING

Plans for the Garden Bridge in London are to go to judicial review in June. Opponents to the project claim that the bridge will obstruct views to the north of the river, and that there is inadequate provision for maintenance in the funding. Contractor Bouygues is in line to build the bridge if it goes ahead.



Remains of a long-lost South London railway station have been uncovered by engineers constructing the Bermondsey Dive Under, part of the Thameslink Programme. Southwark Park station, perched on a viaduct above Rotherhithe New Road, only served passengers from 1902 to 1915 before it closed for good. Now engineers working on a massive project to rebuild the railway in Bermondsey have rediscovered the former ticket hall and platforms. The Government-sponsored £6.5bn Thameslink Programme is rebuilding much of the railway from New Cross Gate through London Bridge and on to Blackfriars and St Pancras.

The Greater London Authority has given the go-ahead to Chinese developer ABP to proceed with its 4.7M sq ft development in the Royal Albert Dock in London. Work on the 14ha site is expected to start later this year, with the first phase completed in 2018. The project includes upgrading the local transport infrastructure including Docklands Light Railway and Crossrail stations.

RAIL

Network Rail celebrated a successful Easter work programme with £100M in projects delivered on time. Chief executive Mark Carne and managing director for infrastructure projects Francis Paonessa were on site to oversee the investment in new station facilities, new platforms, new junctions and thousands of pieces of new equipment. Over 14,000 men and women worked round-the-clock across hundreds of locations. The successful delivery was a stark contrast to the overruns that beset the network during Christmas engineering works.

Plans to reopen the Lewes-Uckfield line as part of the proposed Brighton Mainline 2 project into London have been given a boost with £100,000 to progress studies into the scheme. Funding for the new study was announced in the final Budget of the last parliamentary term.

Paris is getting ready to build a new underground railway line. Promoter Société du Grand Paris is preparing to publish a preliminary information notice about the first eight civils contracts the railway. Work covers 33km of underground lines, 16 stations, and 38 related engineering structures. Eight main works contracts are planned, with bidding phases spread over the second quarter of 2015 up to the second quarter of 2016.

Go-ahead has been granted for the controversial but vital Ordsall Chord structure in Manchester which is part of Network Rail’s Northern Hub programme of improvements to the rail network in the North of England. The link will greatly improve connectivity between the city’s two major

rail stations of Piccadilly and Victoria.

ROADS

Highways England has revealed its five year Delivery Plan to 2020. It will spend £11bn over the five year plan investing in 112 major improvements, including 15 smart motorway projects providing 280 miles of capacity and resurfacing the majority of the network. Investment rises from £1.782bn in 2015/16 to £1.8267bn, £2.241bn, 2.527bn, £2.974bn and £3.658bn over the five years. Renewals spend as part of that total starts at £718M and rises to £744M by 2019/20.

Potholes are the number one gripe in a survey of over 2000 people by the Institute of Advanced Motorists with 70% saying reducing the number of them should be the top priority for the new government. The next biggest concern was general road maintenance, with more than 64 per cent stating this needed more attention. Third was reducing the number of road accidents and casualties.

The Asphalt Industry Alliance has called on the new government to recognise the importance of local road funding. AIA chairman Alan MacKenzie said: “Every mile of our motorways and trunk roads will receive £1.4 million funding over the next six years while our local roads will see just £31,000 per mile. This is only enough for local authorities to keep pace with repairs but will do nothing to tackle the backlog or prevent continuing deterioration. It is critical that any incoming government recognises the importance of the funding commitments that are already in place, and the need to reach a position where our roads are maintained properly.”

SUSTAINABILITY

The Green Construction Board has launched a new infrastructure practitioner network. In late April the “Economic Infrastructure Carbon Practitioner Network” was set up to enable carbon practitioners in economic infrastructure to meet and share ideas. Anyone interested in joining should contact David Riley at Anglian Water: driley3@anglianwater.co.uk or Mark Enzer at Mott MacDonald: Mark.Enzer@mottmac.com.

Environmental group Client Earth has made its case at Supreme Court against the UK Government over failures to reduce Nitrogen Dioxide (NO2) levels. Current plans are not expected to bring toxic NO2 emissions, which are often produced by surface transport, to within legal limits in 16 cities and regions including London, Manchester, Leeds, Birmingham and Glasgow until 2030 - 20 years after the original deadline. The UK is facing fines of up to £300M from the EU for the breach, with these costs likely to be passed to councils by the Government.

WATER

A flagship flood risk management scheme for Derby has been awarded to GBV, a joint venture of Galliford Try and Black & Veatch. Partnership funding is being used to combine flood management with urban regeneration. By creating three kilometres of flood defences GBV’s work will rejuvenate areas of Derby city centre currently under utilised because of insufficient flood protection.

AECOM has secured a position on Wessex Water’s new design capital delivery partner framework running from 2015 to 2020. The

initial five-year contract, which starts immediately, has the potential to be extended by a further five years. AECOM has worked with Wessex Water for the past 15 years and is currently assisting the delivery of the detailed design for the Corfe Mullen to Salisbury pipeline.

ESD, a joint venture of Black & Veatch, Galliford Try and MWH Global, is preferred bidder for the £560M framework to provide water and wastewater treatment services throughout Scotland. As part of the agreement ESD will take on 15 modern apprentices in the first year with six in each year which follows - a total of 45 apprentices, and employ 30 graduates over the lifetime of the deal.

AWARDS

The shortlist for the 47th Structural Steel Design Awards shortlist has been revealed. Winners will be announced on 1st July by the British Constructional Steelwork Association and Tata Steel. The SSDA shortlist 2015 is:

- Heathrow Terminal 2B
- Moorgate Exchange, London
- St James’s Gateway, London
- Milton Court, Guildhall School of Music & Drama, London
- Retail Development, Plateau, Bargoed
- First World War Galleries, Imperial War Museum, London
- Derby Multi-Sports Arena
- Kew House, Richmond
- 76½ Chartfield Avenue, Putney
- Merchant Square Footbridge, London
- Greenwich Reach Swing Bridge, London
- City Centre Bus Station, Stoke-on-Trent
- Tottenham Hale Bus Station Canopies
- Island Pavilion and Footbridge, Wormsley Estate, Stokenchurch.

INTERVIEW: Sir Edward Lister, London deputy mayor for policy and planning



Publication of the London 2025 infrastructure plan signals the capital’s commitment to investing for the future. Sir Edward Lister explained the plan at the recent London Infrastructure Summit organised by business lobby group London First

Why is the Infrastructure Plan so important for London?
We have a population growth of 80-100,000 a year and that kind of growth rate will be with us for the next few years. The direction of travel is forever upwards. We are 23% of the country’s GDP and if London catches a cold then so does the rest of the country so we cannot afford to let that happen.

What have we learnt about funding infrastructure over the last few decades?
With Crossrail we created the London Mayoral Community Infrastructure Levy (CIL) and we created a business rate and got various sums of money from elsewhere. Then for the Olympic Park there was a charge on Council Tax of £25. For the Northern Line Extension we again did a CIL but then created an enterprise zone around north Battersea to raise tax. We took the business rate uplift and created a Tax Incremental Financing (TIF) scheme and raised £1bn.

How can you prepare a plan without knowing where future airport expansion will take place?
It is a glaring hole but everyone knows where the Mayor stands on this - fundamentally we should be building a new 24 hour a day, 7 days a week airport in the

Estuary. That is not a view that is shared by others who want to put a sticking plaster on Gatwick and Heathrow to keep them going for another 10-15 years. To turn Heathrow into a 24/7 airport is not deliverable. The people who live around there will never agree to it.

Is it possible to deliver the scale of house building required in London?
I think it is but we have got to do things to the model. The models have changed but the numbers haven’t – in a good year we built 25,000 houses, in a bad year it is down to 18–20,000. So getting to 60,000 I don’t see. But getting to 50,000 I do see as a possibility. Already this year we will get to 30-40,000 completions.

Crossrail 2 has been granted its route safeguarding - is the project unstoppable?
I think it is. If you don’t build Crossrail 2 we will very soon bring to a halt Waterloo station, stop Clapham Junction and if you live in the South West of London don’t assume that you will be able to get into work. It is a problem today and when HS2 arrives at Euston the Victoria Line will not be able to take it. So we need it.

Is London doing enough to ensure it has the skills in the capital to deliver this infrastructure plan?
This is something that does worry us enormously. It is quite clear that far too many of the jobs being created are going to people coming into London to live and work either from other parts of the UK or abroad. That immediately identifies the skills gap which is severe. The industry is changing and the models at the moment are not creating the kids with the skills we need.



David Balmforth, president
ICE

Government
urged not to cut
flood defence
funding in next
Spending Review

This month I chaired the ICE’s 2015 Flooding Conference. It was an opportunity for the flood management community to come together to share ideas and examine how far we have come in terms of sustainable flood risk management and resilience.

We, of course, also discussed government funding for flood risk management. Flooding is a long-term challenge and we need an investment programme which reflects that.

There are 5.2M properties at risk of flooding in England, with annual flood damage costing £1.1bn. Maintaining existing levels of defence would require spending to increase to over £1bn per year by 2035.

This is not just about funding new flood defences; it is also about maintaining our existing defences and building resilience. Maintenance funding is still only allocated annually and we need a longer term investment programme that matches the six year “commitment” made to investing in new flood infrastructure.

I use the term “commitment” loosely, because the six year, £2.3bn capital investment plan is not locked in and is therefore vulnerable to spending review cuts.

We must also understand that

Government investment only part funds flood defence schemes; local authorities must generate the additional investment themselves from other sources. Attracting this “partnership funding” remains very difficult in fact only 25% comes from private contributions.

This means councils are forced to find the other 75% from within already stretched budgets. Looking forwards to more public sector spending cuts, the situation looks set to go from unsustainable to desperate.

Equipping local authorities so they can raise more partnership funding and do more to help communities build their resilience to flooding is part of the answer. But that also hangs on the fate of the six year £2.3bn capital investment plan. Local authorities rely on the certainty of this centralised investment to leverage private investment. A reduction in the spending review will further impede their efforts.

When pubic spending is tight, we know tough decisions must be made. But should protecting communities from flooding hang in the balance? ICE believes fundamental change is needed in how we view flood management, and our concerns are shared by many others. I hope government heeds our advice.



Tim Chapman, director,
Arup

Creating the rules
to manage carbon

The Infrastructure Carbon Review showed that infrastructure is responsible for over half of the UK’s carbon emissions, one way or another – the most damaging form of pollution that could threaten our whole way of living.

Management of carbon came late to infrastructure, with much of the last couple of decades spent focused on carbon in buildings, and specifically operational carbon burnt to heat and light the UK’s homes and offices.

While such carbon savings are tangible, there are much more fundamental gains to be made with carbon savings in the huge infrastructure systems on which this nation relies – transport, power, water supply and treatment and flood defences. They must be part of the equation if the challenging 80% cut in UK carbon emissions is to be made.

Because infrastructure has come relatively late to the carbon saving party, it has been able to address those carbon savings in a more rational way. Hence it is now starting to create opportunities to save carbon right across the full carbon lifecycle – in the initial capital (or embodied) carbon used to make the facilities and assets that form the networks, in the

operational carbon that runs them, and by facilitating carbon savings amongst those who use the facilities – end-user carbon, which can often be dismissed as unmanageable, but is a very big part of the picture.

The high level management of carbon in infrastructure needs to be matured rapidly, so that the whole supply chain can engage to create solutions. To do that, there must be a level playing field and well understood rules that clients, designers, contractors and suppliers can follow.

Accordingly the UK’s Green Construction Board (GCB) and Department for Business Industry and Skills (BIS) has engaged both BSI and an authorship team composed of Mott MacDonald and Arup to write a new Publicly Available Specification or PAS to show how carbon in infrastructure can be managed more rationally and strategically.

This will be a world first and so there are high hopes that this pioneering UK standard can form the basis for an ISO standard. The scope given to the standard is wide. The new standard should be completed in early 2016 and will be given the number PAS 2080 to fit within the family of other UK standards that address carbon management.



Emma McNab, business
excellence manager,
Taylor Woodrow

Can we inspire
the best women
to reach the top?

We have a huge number of very talented women working across the diverse range of skills and disciplines in the engineering and construction industry.

Yet to be successful as the demands on infrastructure grow, we need more.

At Taylor Woodrow I am pleased to say that we are increasing the number of female engineering graduates we recruit and have now boosted our overall number of female employees to 20% - still low but above the industry norm of 12%.

However our biggest challenge is to retain and develop these female employees throughout their careers. That means providing them with clear career paths and removing any suggestion of a glass ceiling so that this talent stays with the business.

And we have work to do – as a business and as an industry. For all our success in boosting the numbers of young women entering the profession with careers at Taylor Woodrow, we still only have a handful of women in senior positions.

At our first Women in Taylor Woodrow workshop we learnt that, with the exception of engineering recruits, the majority had ‘fallen’ into

construction as a career. Not only were they were not aware of the diverse number of roles available but also the opportunities were not something often discussed by careers teachers as being suitable for girls.

At last month’s Inspiring Women, Building Britain event we showcased the less well known roles available in the industry and showed that you don’t have to be out on site in a hard hat to work in the industry.

We intend to kick start to process of making the industry a more inviting place for women to work. Bringing in more women, who traditionally have a more natural ability to collaborate will improve the industry as a whole.

In fact research has shown that the most effective teams have a ratio of 40:60 men to women or vice versa. In other words, with the current levels of women in the industry we really are underperforming.

As a business - as a nation - we cannot afford for that to be the case. There are a huge number of large exciting infrastructure projects due to start shortly in the UK and we need the most competent and the best trained people possible on our teams to deliver them.



Steve Bamforth, chief
executive, Griffiths &
Armour

Consultant
Certificates: A
word of warning!

The very interesting the Hunts & Ors v Optima case highlighted the important issue of whether professional Certificates can be taken as warranties against defective work.

Contractor Optima had built two blocks of flats in Peterborough. Agent Strutt & Parker (S&P) had been engaged by Optima to carry out inspections of the building development and to produce ‘Architect’s Certificates’ for the purchasers and lenders of the flats.

S&P then carried out ten inspections and certified that construction flats was satisfactory but it did so prior to completion of all the works.

Optima’s solicitors advised that the purchaser solicitors Professional Consultants’ Certificates would be forthcoming. The purchasers then exchanged and completed the deal and the Certificates were provided.

However, subsequently construction of the flats was alleged to have been poor, and supervision of the works inadequate.

The purchasers complained of a range of issues including water ingress, floor movement and drainage issues.

As a result, some of the purchasers sued Optima for carrying out the

building works badly and S&P for negligence in its inspection duties.

The Court found that Optima was in breach of the sale agreements with the claimants which required that the premises be completed in a good manner and Optima was in breach of its repair covenants.

However, S&P was also liable on the basis of its Certificates. The Court found that the purchasers were entitled to rely upon the fact that the Certificates were going to be provided and the Court decided that they took the form of collateral warranties. S&P were found to have owed a duty of care to the purchasers both in inspecting the works and in the issuing of the Certificates.

It is without question a word of warning. Issuing of Consultant Certificates can, in the eyes of the courts, have consequences beyond initial expectation.

To learn more about the issues arising from the above case, contact Griffiths & Armour at piinsurance@griffithsandarmour.com or call 0151 600 2163.



Sue Percy, chief executive, CIHT

The new government must work with industry to ensure the skills capacity is available to deliver the road programme

With the creation of Highways England, we should begin to see increased transparency and accountability in the relationship with the Department for Transport and a new Government. This should enable a strong delivery focus on the performance of the network for road users.

The legislation that created Highways England underpins a £15bn programme of road maintenance and enhancements giving our industry the confidence to prepare for project delivery in terms of skills and labour force, equipment and materials.

Certainty and continuity of investment over a sustained period is important if overall improvements to the network are to be delivered effectively and efficiently. It is now crucial that the next government works with industry to ensure the skills, capacity and capability to deliver this programme of work are available.

Whilst we welcome recognition that Highways England will take the needs of customers into account, further work is needed to ensure that all customer needs are understood and addressed. That means clarity about how those needs are developed, protected and monitored by a combination of Transport Focus and the Office of Rail and Road.

Highways England has a significant challenge to identify the skills and capabilities required, including a clearer appreciation of customer requirements and an expanded commercial capability. It must also have greater freedom to allow more innovation and agility in decision making.

Other challenges include:

- Recognising that success of an improved strategic network cannot be met without the local highway network also being considered as part of a holistic solution
- Ensuring the consideration of other transport modes in any strategy and importantly the overarching policy for the local highway network
- Contributing to the needs of customers outside of the strategic road network, to contribute to the wider economic growth agenda.

As an industry supporting the employment of over 200,000 people with annual activity worth up to £25bn, we believe that Parliament’s actions on roads will deliver a better deal for motorway and trunk roads users while also securing improved value for taxpayers. CIHT looks forward to working closely with Highways England and establishing a constructive relationship over the next few years.



Peter Murray, chairman New London Architecture

Construction must take responsibility for cycle safety

When leading town planning consultant Francis Golding was killed in a cycling accident in November 2013 - one of six bike deaths that occurred in London that month - a group of friends and clients decided to do something to reduce the death toll of vulnerable road users on the streets of the capital.

They set up the Construction Industry Cycling Commission (CICC), chaired by leading developer Mike Hussey of Almacantar, to discover the cause of the large number of accidents involving HGVs and cyclists and what could be done to about it with particular regard to the high percentage involving construction vehicles.

This work was given new impetus with the death in April of Moira Gemmill, another key figure in the world of building design.

Research carried out by Transport for London (TfL) following the November deaths showed that the number of blind spots in construction vehicle cabs was huge, that road safety was not seen as important as site safety, and there was no industry standard for safety features. 53% of the deaths of cyclists on London roads involved HGVs although they constitute only 4% of traffic. In 2011 seven out of the nine deaths were construction vehicles.

As London continues to grow and the volume of building, and cycling, increases, this is only going to get worse unless something changes.

TfL set up the Construction Logistics and Cyclist Safety group (CLOCS) which has worked with industry representatives to improve the performance of HGVs.

To support the work of CLOCs the CICC commissioned transport planners Phil Jones Associates to investigate in detail the causes of the incidents and to come up with a code of practice that can be followed by the developers, architects, engineers and project managers involved with construction projects.

On Monday 6 July Phil Jones will be presenting his research and facilitating a workshop to discuss that code, how it can be disseminated to the industry, how cycling behaviour and infrastructure can be improved and what other measures can be implemented.

Anyone who feels they have something to contribute is welcome to attend the workshop in central London. For further information contact: peter.murray@mac.com



Anthony Smith, chief executive, Transport Focus

‘What do we want? When do we want it?’ - Transport User Priorities

When the new Government is taking future transport decisions there are some clear priorities emerging from Transport Focus’s research which could help guide it.

As the economy continues to pick up, more people will travel. Long-term, sustained investment is the key to successful transport services. The five-year Road Investment Strategy is a big step in the right direction for the users of the Strategic Road Network in England whom we now represent.

Backed up by significant funding, Highways England can plan, procure and deliver projects in a more effective way than was possible in the past. The supply chain can have more confidence to gear up and invest. The end result should be more effective and value-for-money investment.

This approach mirrors the way the rail industry has been working for some time. While it might be tempting to rob Paul to pay Peter, both road and rail users deserve investment. Now that we have five-year plans for road and rail, let’s stick to them.

All this investment has a by-product: disruption. While the end products, such as the London Bridge rebuild, will

be great, getting there must not be so painful that transport users lose faith along the way. It can be done. King’s Cross, Reading and Manchester Victoria are great projects – we have become good at rebuilding while operations continue.

But the problems at London Bridge underline the dangers of underestimating the cumulative impact of changes. Faith in the industry has been dented.

Highways England, Network Rail and their contractors should learn from each other. As the Smart Motorway programme is rolled out, schemes unfold and, at the very least, extensive resurfacing takes place, there will be a lot of roadworks.

Transport Focus will be working with Highways England on how and where road users want to see works done. Improved communication and information will be crucial to this.

Bus users outside London can look forward to more change as local decision-making is boosted. We welcome changes but make sure they are passenger-focused. It would be nice to have five-year plans for buses.



Lee Francke, chair, IABSE British Group

Future of Design – Inspiring the future talent of our industry

The UK needs more engineers to guarantee the long-term sustainability of the economic recovery and to lead the country to a sustainable future.

In addition to encouraging young people to study maths and physics and to take on STEM degrees, it is also important that we retain the best and brightest within our industry and avoid losing them to better paying industries once they have taken that first step.

Key to this is to create an environment where we can share the enjoyment and fulfilment for the work we do, see the future of our career as an exciting opportunity and feel inspired to go out and shout about the exciting career path we have chosen.

This has been the exact mission Jumana Al-Zubaidi and I set out on in 2012 when creating “Future of Design”, a re-energised version of the previous “Young Engineers Conference” held by IABSE (International Association for Bridges and Structural Engineering).

The event brings together the most eminent figures of our industry and gets them to talk about their latest cutting edge designs and share their vision and passion with the wider audience. Young designers also get the opportunity to

present their research or design projects and to share their innovative ideas with an experienced audience.

Debate sessions on the future of our profession allow everyone to get involved and often prove to be truly eye-opening, sparking discussion throughout the rest of the day.

The audience is typically a mix of structural and civil engineers, architects, contractors and academics. It is a reflection of the multi-disciplinary design environment we often find ourselves in and an opportunity to create long-lasting relationships.

In fact it is the mix of professions, nationalities, gender and age groups that contributes to the engaging vibe of the events and allows you to rub shoulders with the world’s most talented and experienced designers.

To me, Future of Design is an opportunity to get together with like-minded enthusiasts, a welcome source of knowledge and a reminder of why I became an engineer.

So if you have missed the past events, don’t fret: the next one is taking place on September 10th 2015 in London (<http://iabse.org.uk/event/fod-london-2015/>).



Maintain momentum say business leaders

As the Conservative government begins a new 5 year term infrastructure leaders urge David Cameron to make infrastructure planning more strategic and long term in the new Infrastructure Intelligence/Deltek Pulse survey

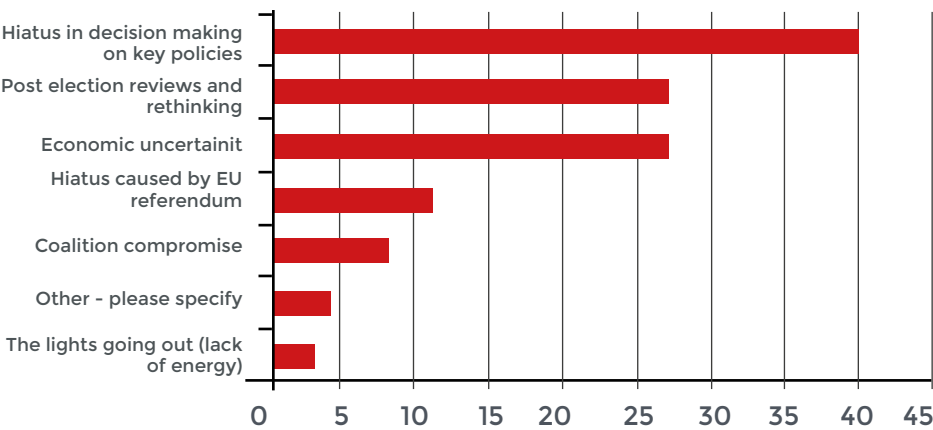
“Like health and education infrastructure should be considered outside of politics,” said the CEO of a consulting firm participating in the first ever Infrastructure Intelligence Pulse survey in association with global business software firm Deltek. Like many of the other 120 business leaders that took part in the research he called for the new government to take a much longer term view of infrastructure needs that would give more certainty and stability to the country and the industry. “Government should set a clear framework, with clear policies and let the industry do what it is good at,” said another senior professional working for a client organisation.

The Pulse survey studied the views of senior infrastructure professionals from consultancy, client organisations, contractors, suppliers and other businesses ahead of the May 7th General Election. It found that an overwhelming majority, 67%, believed that a Conservative led government would be best for UK’s infrastructure, with 49% planning to vote Tory. Only 23% believed that Labour would be a better choice with only 13 % were planning to vote for them. Liberal Democrats were more popular than Labour with 14% of the overall vote despite the party only considered best for infrastructure by 3% of business leaders.

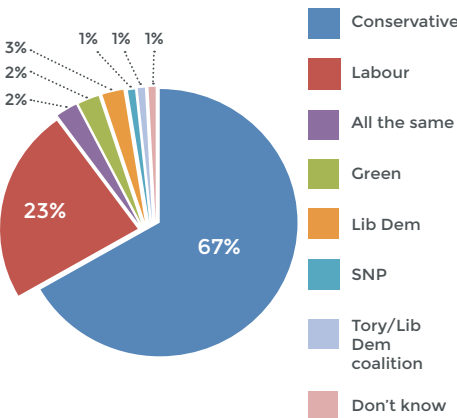
Plan strategically

However it was the need to improve infrastructure planning that dominated the views of professionals when asked what single thing the new government should do to improve business life. To support this more than half, 54% said that they supported the establishment of an independent Infrastructure Commission as proposed by Sir John Armitt and backed by Labour. A further 29% supported plans for a Department for Infrastructure within the new government. “Infrastructure planning should be independent of Government and Treasury, like the Bank of England, and staffed by people who understand

What are the biggest threats to your business post election?



Which is the best party for infrastructure?



the country’s infrastructure needs as well as the technical constraints of delivery,” said a business manager. “We need to plan and provide in a manner which is accountable and breaks down departmental barriers. So far Armitt’s is only proposal that ensures this whilst maintaining political oversight,” said another consultant at manager level.

As the UK moves forward under a new government, infrastructure industry leaders want to see momentum on infrastructure investment maintained along with improvements in the economy. Fears over a hiatus in

decision making, post election reviews and economic uncertainty were their biggest concerns. “Data shows that the UK economy is on a positive track,” said one consulting business manager. “We have a fragile recovery and would like to see some stability.”

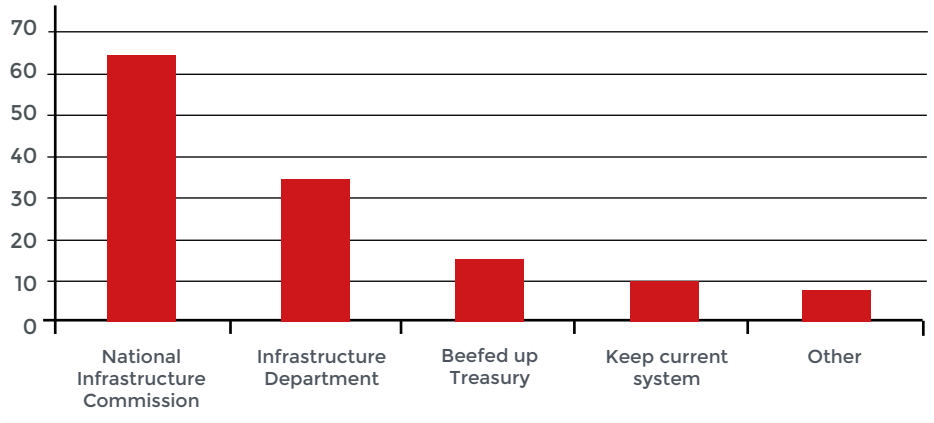
Others echoed the views. “A lot of work has already been done and has allowed the UK economy to gain momentum and both local and foreign investment through market confidence. Any immediate rethinking will lose momentum and confidence,” said a consultancy CEO.

The industry urged the new government to stick with existing plans and not get caught up in political wrangling. “We have built momentum behind the National Infrastructure Plan and invested accordingly,” said another senior consultant. “Rumours that infrastructure spend could be subject to reviews, emergency budgets and curtailment are worrying.”

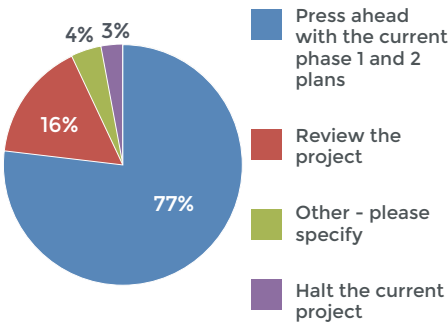
Lead on value

Survey respondents also highlighted that better planning for infrastructure could enable industry to better meet the skills challenge and urged the new government to promote a quality based procurement agenda with good design judgement at its heart. “The

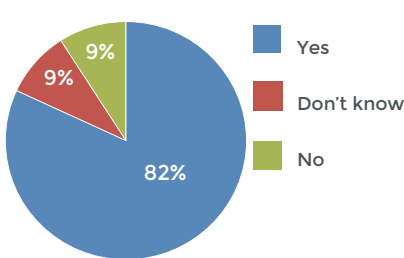
Which ideas to Improve Infrastructure planning do you support?



What should new government do regarding HS2?



Should the UK maintain 80% carbon reduction target by 2050?



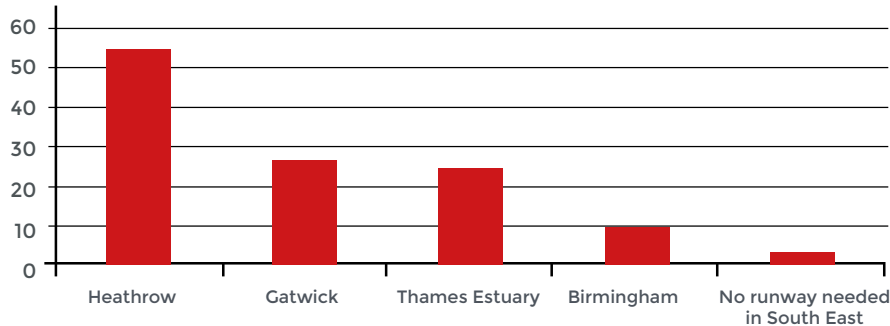
Infrastructure businesses call for Heathrow expansion

On aviation 46% of business leaders said new capacity for the south should be provided at Heathrow, 22.5% voted for Gatwick and 20% maintain support for a new Thames Estuary airport. “Heathrow has the best transport links into London and really must be linked to HS2 for access to the rest of the country,” said a senior business leader from a consultancy. “Both Gatwick and the Thames Estuary are the wrong side of London for the rest of the country. Investing there would increase not decrease the London centric focus of the UK.”

However several respondents called for expansion at both Heathrow and Gatwick. “We should pursue both. We are already behind. When we started this circular conversation about airport capacity, Dubai wasn’t even in the top 30 international airports. It is now number 7 and we are still talking and dithering.”

Recommendations from the Airports Commission chaired by Sir Howard Davies, is hotly anticipated this summer, but whatever the result of their findings infrastructure leaders urged the new government to press ahead. “There isn’t a perfect solution but making a decision is key.”

Where should a new runway be built for the south and south east?



new government must understand that they have a huge role to play in both smoothing the flow of work into the industry and in leading the way in value led procurement. Both have a profound effect on the shape of the industry and the levels of investment that can be afforded,” said a consulting CEO.

Several respondents also urged the new government to make public contracts more accessible to SMEs.

Not surprisingly business leaders said that the new government should press ahead with High Speed 2 with 77% supporting the scheme and 16% calling for a review. On carbon reduction targets 88% of the professionals believed that the UK should maintain its commitment to carbon reduction of 80% by 2050. “It’s called progress and we should strive to stay ahead of the evolutionary curve. If my children aren’t driving electric cars or using public transport in 2050, I will be disappointed. We have plenty of time to make it happen. The danger is that we procrastinate and don’t map out an effective plan” said a business manager from a consulting firm. “This is the reason why we need new, smarter infrastructure, and not allow arguments to flourish that we should stop,” said another.

Suggestions that the UK works wholeheartedly to become a world leader on renewable was another key suggestion to the new government with concerns over power capacity also being among post election threats. “Lack of energy is a real tactical risk to business operation that has been raised for a number of years. The historic opportunity to mitigate this risk through effective UK energy policy and planning has to some degree gone, we are now potentially at the mercy of geo-political uncertainty and long term volatile weather patterns,” said a client side business manager.

Looking ahead then the new government faces a plethora of major challenges not least the need to maintain economic stability and cut the deficit. But as the Pulse survey highlights having a long term, cross sector, strategic view on infrastructure investment can stimulate and support sustainable growth and international competitiveness. With schemes such as the Thames Tideway, Crossrail, HS2, major road programmes and housing schemes already underway and new energy generation, road, rail, housing and aviation capacity desperately needed, the message to the new government is maintain the momentum and don’t stop now.



Left: Arena Central from Centenary Square – one of the largest developments in Birmingham, being engineered by BWB. Right: Work in London is growing rapidly and including new developments at Lewisham Gateway and New Bermondsey.

BWB at 25: planning for growth



Consultant BWB has been in business 25 years. And while this year is about celebration it is the next five that has boss Steve Wooler's full focus.

Birthdays always make you look back. And for BWB, 25 this year, five years ago, it was having a pretty tough time. After a management buyout two years previously the firm had been plunged into a recession that bit it hard because most of its business in buildings, environment and infrastructure was for private developers in the Midlands.

The MBO team had had to almost halve the size of the company from 250 staff to 130 and had been fighting for survival. But when times are toughest you often have your best, and certainly bravest ideas and that's just what happened at BWB. "We'd had no resilience to the downturn," says managing director Steve Wooler. "We had to find some for the future."

The most simple problem to solve was geographical. Wooler and his team had seen the London property market was almost untouched by the recession. It was time to head south.

So right at the depths of the

economic crisis in 2010, BWB started up in London. Determination to succeed, and good relationships with clients who themselves wanted to tap into the capital's market, have ensured success and proved to be the best decision the firm could have made. It has come out of recession feeling stronger and with London now providing almost a fifth of its £12.5M income.

Along with that, BWB is picking up flagship projects in the capital won in competition with some of the best known consulting engineers in the business. In high rise residential for instance, the firm has been instrumental in helping to secure planning consent for Lewisham Gateway, New Bermondsey and Millharbour on the Isle of Dogs.

"That has been fantastic for us," says Wooler. "We were largely unknown in this specialist sector in London, but our clients gave us the opportunity to prove ourselves by appointing us at very early stages of each of these

prestigious projects. One of these, Lewisham Gateway, is currently under construction. These were golden opportunities that we grasped with both hands and together they have proven to be a real game changer for us – we have a certain cachet now."

Last year the company opened an office in the capital and has been continuing its national expansion by building up its presence in Manchester, Leeds and Birmingham as well as expanding its Nottingham headquarters. And the London effect means it is winning bigger and more high profile work outside the capital. Its latest prize has been to be appointed engineer for HSBC's relocation to Arena Central in Birmingham. "That's another game changer – it's one of the largest commercial office developments outside London," Wooler says. "I have no doubt that we secured our role on Arena Central on the back of the great work we were doing on the major projects in London."

The next move will be to consolidate presence and profile in the south east. "London has shifted our centre of gravity slightly but we won't grow the office there to any more than 30 to 40 people as quality office space is prohibitively expensive. But that still gives us plenty of scope to grow by attracting top talent to win and deliver prestigious work from a central London location and 'northshore' the bulk of the detailed work to our other offices which are perfectly capable of delivering it.

The plan is to double the size of the business in five years. We could do that organically, but if you grow too quickly the foundations can become shaky – your management processes become strained and the people you hire might not be the best fit. So it's likely to be a sensible mix between organic growth and selective acquisitions that come with staff and established clients."

Split in workload is now more than 80% in favour of the private sector, with the remainder being carried out for public sector clients, but Wooler is honest enough to admit the private sector element is likely to rise again. "Public procurement is just too frustrating and difficult," he says. "There's been a lost opportunity for the public sector to grasp the best consultants that have traditionally been focused on the private sector and deliver better value. Now the private market is back, that moment has gone."

Wooler also has a close eye on how the market for consultancy services is changing. "Our focus is going to migrate away from commoditised design to higher value consultancy where we can really add value by devising cost effective and sustainable solutions whilst not losing touch with a client's commercial drivers.

"Consultants that harness their ability to manage data effectively will be at the forefront of the profession. BWB is investing heavily, not just in BIM, but in data management generally. With standard products resulting from development of BIM and big data we see the future as provision of more strategic advice and less detailed design.

BWB is developing its own digital capability with an eye on the future. "We are surveying in point cloud and converting that to a digital model, for example surveying rail bridges without the need for track possessions by setting up three or four control points outside the rail corridor and stitching the data together. We've set up a BWB innovation hub and allocated funding to give our

bright, creative people time to develop digital engineering ideas – such as 'drive through' visualisation of road schemes and 'real time' flood modelling which is proving very effective for public consultation."

But he's keen to make sure that computing capability doesn't replace natural engineering instinct. "If as a profession we lose the ability to visualise and quantify the solution before we turn to the computer then we are in danger of getting it badly wrong! You always need to know approximately what the solution should so you can check the computer generated output."

Despite all the consolidation happening in the industry Wooler is confident that there is a clear place for medium sized businesses and sees a growing appreciation of them by clients. They are also good for the employees he says.

"Clients use us because we invest the time to understand their business and there's always someone on the end of the phone – someone they know, trust and can make things happen.

"The breadth of our service is our biggest differentiator as an SME. We offer 70 services across 15 sectors so we are a one stop shop and can compete on capability with businesses ten times our size.

"That creates fantastic opportunities for young engineers to develop their experience and understand the life cycle of a development project. At BWB relatively inexperienced graduates often go along to client meetings with a director and experience the cut and thrust of how development projects evolve, gaining invaluable understanding of the commercial realities as well as the technical aspects of a scheme."

Five facts about BWB

- 1,500 miles of roads have been constructed based on BWB's designs.
- BWB's school designs have provided over 1500 classrooms.
- We know everyone loves to shop! BWB's retail schemes have provided 1,500,000 sq.ft. of shopping space, so the nation can indulge.
- In January 2012 BWB's completed its first acquisition – DKS a mechanical and electrical engineering practice.
- National Heritage! BWB has been structural engineer for Blackpool Tower since 1992.

Steve Wooler reflects on the past 20 years at BWB

If the flecks of grey hair don't tell their own story, then maybe this will. Twenty years ago I became the first civil engineer in what was then a small consultancy specialising in structural work, run by three people - Boon, Wright and Blunt. We were in an almost Dickensian building in Nottingham's Lace Market doing a lot of small-scale structural engineering for clients like housing associations. Malcolm Wright, who ran the business in those days, had realised that we could get involved in development projects much earlier if we had civils capability. That's where I came in.

The breakthrough came when we were taken on to do the civil and structural engineering for the Alliance & Leicester headquarters. At £35M it was by far the biggest project BWB had ever taken on and it put down a marker in the regional market because we had shown we could deliver large, complex projects. The business grew solidly and by the mid noughties the owners decided to undertake a management buyout. This was successfully signed off in Spring 2008.

A couple of months later came the collapse of Lehman Brothers. The whole system completely froze and developers were ringing to tell us they were downing tools.

We had to rightsize, downsize; whatever you call it, it meant losing people. But I was always convinced we would come through - it was the market that was broken, not the business.

My marker for the point when the market turned positive again was Spring 2014. We had become very good at forecasting our pipeline fee income, geographical diversification put us in a strong position in the major cities, and management of the business by service grouping rather than office made us much more efficient.

We have a better balanced client base and financially we keep everything tight.

We're not the local business I walked into 20 years ago. We're not even a provincial business anymore. I think we're something special.

What next for the NIP?

The annual National Infrastructure Plan has been one of the big successes of the last Government and the hope is the new administration will continue to develop the content. Where should the NIP go next? *Jackie Whitelaw reports*

There are four things to understand about the National Infrastructure Plan.

One, it is a document produced by the Treasury which presents detail on the planned investment in roads, rail, local transport, aviation, ports, energy, flood protection, communications, water, waste, and science and research to maintain the country as a leading developed nation. At the latest count in the 2014 NIP that amounts to a pipeline of £466bn for the next 10 years. There is more detail in the plan on the years to 2021 and in that timeframe investment in infrastructure is expected to amount to £327bn.

Two, it should not be read simply as a plan for national infrastructure investment only but as a starting point for development and regeneration generally. Schemes in the plan are sited around the regions and knowledge that they are en route is intended to allow developers and councils to make their own local investment plans alongside.

Three, it increasingly underpins the strategy for UK economic growth. Infrastructure creates jobs while it is under construction – 5000 for every £1bn spent according the Treasury – and jobs when the schemes are finished. Alongside that investors and international business want to back countries that are modernising not declining. Good, up to date, well maintained infrastructure is part of that. The UK currently ranks 27th out of 144 for the quality of its infrastructure according to the World Economic Forum. The ambition is to rise up the rankings.

And four, it has forced infrastructure right up the political agenda.

For those working in the infrastructure sector all this is a remarkable turn of events and one they want to be confident will continue. For decades they have been used to governments employing investment in major infrastructure projects in a stop-go manner, providing enthusiastic support one day and then cancelling a scheme in a second to act as an instant brake on spending.



“The National Infrastructure Plan, when launched in 2010, was the first of its kind. It made us a world leader in infrastructure planning”

Mark Naysmith, WSP UK managing director

But the change in approach has put the sector rather on the spot. The construction industry which builds new infrastructure is notoriously inefficient and costly. This is something it has always been able to blame on a fickle government client that constantly changed the scope of a project and which never provided a pipeline of work to allow the industry to take the teams and the knowledge from one job to the next and do it better. It can't do that any more.



So there is a fifth element of the NIP to understand. Its existence and the political enthusiasm for infrastructure investment means the construction sector now has to deliver what it always said it could – project by project cost efficiencies and on time delivery by a well-trained workforce.

Industry knows it has been given a once in a lifetime opportunity to prove its mettle and the NIP is effectively forcing innovation and collaboration onto a notoriously traditional and combative sector. And as devolution takes hold in the English regions as well as the UK nations, NIP is also driving local investment and employment plans.

The original idea for a National Infrastructure Plan came from the Labour Government in 2009 but the thought was that it would be a one off, what do we need list that would focus the minds of spending departments. After the election of 2010 the coalition government picked up the concept but decided it should be an annual report from the Treasury alongside the Autumn Statement.

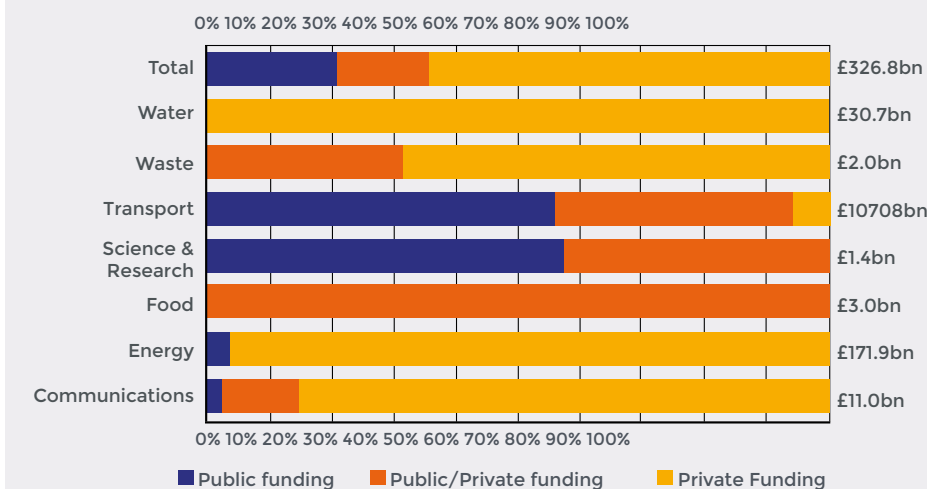
The first one appeared in autumn 2010 and they have appeared every year since with the 2014 NIP being the fifth iteration. Over that time the NIPs have changed from a shopping list to what

NIP 2014

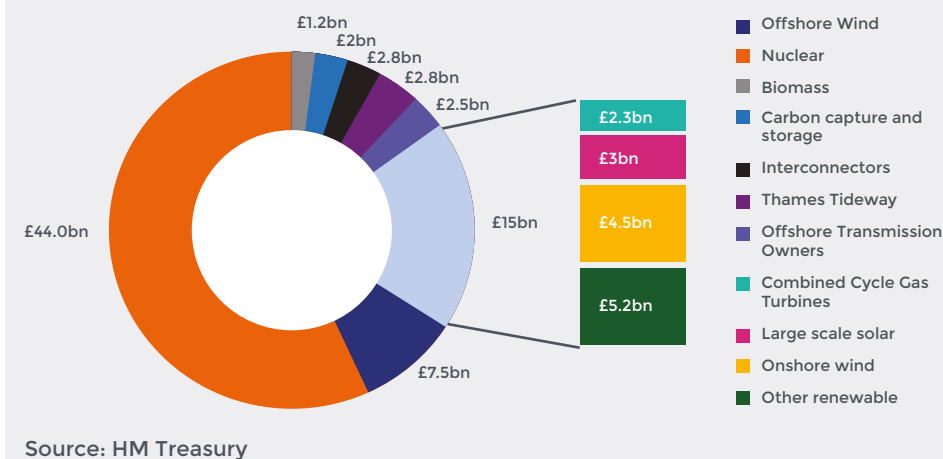
The NIP sets out the Government's infrastructure priorities up until 2021 costed at **£327bn for following areas: roads, rail, local transport, aviation, ports, energy, floods and coastal erosion, communications, water, waste, science and research. The NIP document lists progress on the top 40 projects. Other projects are listed on line.**

<https://www.gov.uk/government/publications/national-infrastructure-plan-2014>

Funding mix of 2014 Infrastructure pipeline, 2014-15 to 2020-21



Project finance investment opportunities in UK infrastructure to 2020 -21



now exists which is much more of a delivery plan.

“It is a document that sets out the investment strategy for UK plc,” says ACE chief executive Nelson Ogunshakin. He co-chairs, with the chief secretary to the Treasury, the National Infrastructure Plan Strategic Engagement Forum. NIPSEF provides feedback to the Treasury from construction CEOs, asset owner, investors and financiers and stakeholder groups representing end users like the CBI. “We started off by

saying there was no vision, structure or consistency and we needed a pipeline. We have that now and NIP has put shape on what the UK's intentions are for investors on its infrastructure investment programme,” he says.

A key change in 2014 was the inclusion of a chapter on funding and finance to explain how this infrastructure is going to be paid for. Last March the Treasury produced its first finance update on the NIP and that, with some additions and expansions, is

what ended up the final NIP document in December.

What it revealed was that public money is paying for 20.6% or £67.5bn of current projected spending up to 2021; public-private investment (with the private funding including contributions from developers benefiting from infrastructure construction) is providing 13.8% or £45bn and totally private sector investment makes up 65.6% or £214.4bn. This last lump of money in large part comes from on balance sheet corporate investments in sectors such as water, ports and airports. The private sector is being asked to provide just over a third of the finance or £79bn through project specific finance.

“Government is saying we are not looking to finance everything. The taxpayer is paying directly for a large part of that, or the consumer through the regulated industries. What needs financing is £79bn. The size of the challenge is much smaller than people perceived and that was a message the markets largely didn't want to hear. Also, aside from the £4.1bn Thames Tideway Tunnel, the financing government is looking for is all in energy and a lot of that (£45bn) is nuclear,” says partner in corporate finance infrastructure at KPMG Darryl Murphy.

The expectation is that the NIP will continue post election and if it does Murphy would like any future version to contain more information on social infrastructure – schools, hospitals, government buildings. These are lower risk projects compared to power plants, tunnels and railways, that developers are happier to get involved with. They could also come with reliable tenants and long term stable returns that investors, particularly pension funds, would be comfortable to support.

“A lot of people in the market think it is odd that social infrastructure is not included,” he says. “It would be easier for developers if there was a social infrastructure chapter to set the scene and ensure completeness.”

He is not on his own in this view. Following the recent Green Sky Thinking Week in London, Mace chief executive Mark Reynolds was keen to see a broader strategic role for the next NIP linking economic infrastructure with social infrastructure and housing. Without the ability to truly join up different silos of investment from transport to energy to housing to education and health, the country could struggle to create the vital business

The Project Pipeline

Alongside the NIP the Government publishes the Infrastructure pipeline which brings together projects costing more than £50M that are planned or underway in the UK – both public and private sector. It is not so time limited and includes projects with completion dates in the 2030s. This amounts to £466bn. It is intended to be indicative of the sale of requirements in terms of funding along with resources from the industries involved. Source: HM Treasury

Pipeline summary and analysis
Total pipeline

Sector	No. of projects & programmes	Total (£m)	2014/15 (£m)	2015/16 (£m)	2016/17 (£m)	2017/18 (£m)	2018/19 (£m)	2019/20 (£m)	2020/21 (£m)	Post 2020/21 (£m)
Communi-cations	6	£10,954.12	£4,746.05	£5,448.99	£759.08	£0.00	£0.00	£0.00	£0.00	£0.00
Energy	147	£274,931.23	£25,000.04	£25,718.47	£24,373.79	£24,901.81	£27,465.78	£21,183.89	£23,274.41	£103,013.06
Flood	26	£3,654.13	£493.85	£435.30	£404.83	£406.65	£402.67	£386.34	£395.54	£728.95
Science & Research	22	£1,374.86	£388.31	£531.30	£269.69	£105.39	£63.50	£16.68	£0.00	£0.00
Transport	270	£142,273.26	£16,499.39	£17688.87	£16,215.52	£16,084.60	£15,801.35	£11,680.84	£12,985.10	£35,317.58
Waste	20	£1,983.52	£899.00	£692.64	£315.48	£40.39	£0.00	£0.00	£0.00	£0.00
Water	60	£30,860.76	£4,940.43	£4,653.81	£5,139.92	£5,366.95	£5,356.20	£4,788.83	£454.34	£160.28
Grand Total	551	£466,031.89	£52,967.06	£55,169.40	£47,514.31	£46,905.79	£49,098.50	£38,056.58	£37,109.39	£139,219.87

cases needed to attract private sector investment and so underpin the public funds available.

For many, skills is the area that needs focus. The Construction Industry Training Board said in January that 200,000 extra workers were needed in the next five years to keep on top of rising demand. In the professional arena, demand is as intense.

“Infrastructure is a long term game, with major developments sometimes taking decades to build,” says strategic development manager for consultant Mott MacDonald Simon Harrison. “Without timely and orderly delivery of public infrastructure it is difficult to plan our investment in the growth of necessary skills. Engineers able to take leadership of complex infrastructure projects need to have developed rounded experience over perhaps 20 years since graduation before they are able to tackle the largest projects, and they need to have made decisions to chose science, technology, engineering and maths courses at school perhaps 10 years earlier still.

It was announced that there would be a skills NIP just before the election at the ACE annual conference. The hope is the new government will continue with this plan.

“What is important now is that a political consensus is built around the long term plan so election cycles do not derail the much longer timescales needed to plan and create new infrastructure and to develop the people

who can do this.” Harrison adds.

The general feeling is that the NIP needs to be linked to implementation over a longer time frame to give financiers, industry and individual confidence in its delivery.

“The National Infrastructure Plan, when launched in 2010, was the first of its kind. It made us a world leader in infrastructure planning,” says WSP UK managing director Mark Naysmith.

“By providing better visibility of the forward pipeline and national priorities it has enabled businesses to plan for the long term and having certainty in specific projects has meant businesses can plan for and retain specialist skills that might otherwise have been lost.

“But we are now at a crossroads. The plan by itself cannot deliver these projects and there have been calls for an independent body or a new department to oversee their implementation. We can see merit in this because the industry needs the confidence that they will actually come to fruition.”

“Post election, with the new government relying on the private sector to both fund and deliver infrastructure, continued strong commitment to the NIP is vital for maintaining business confidence,” says AECOM head of government and public John Hicks. “So my ask of the incoming government is this: build on the excellent foundation of the NIP but now focus on delivery.

However, for industry to develop the required capacity, it needs to see the

same level of clarity around delivery that is currently applied to specifying future projects. A step forward could be for government programmes to be packaged with funding streams and clear delivery plans to ensure there is an ample supply of company expertise and skilled workers to fulfil them. An early commitment to extending the NIP beyond 2020 would therefore be a welcome move.”

Last word, post election goes to ACE’s Ogunshakin. “Industry needs the government to honour the electorate’s wish for political stability and policy continuity to attract investment in much-needed social and economic infrastructure,” he says.

“Notwithstanding, it is crucial that infrastructure continues to enjoy the cross-party support that has characterised the past five years. It must remain above the fray when progressing with the planning, financing, funding and execution of the current project pipeline contained in the National Infrastructure plan,” he says.

“ACE and the wider industry will continue to be a strong advocate for working with the ruling government and opposition, Treasury, Infrastructure UK and other key delivery departments to drive forward investment in infrastructure,” he continued.

“We hope the newly elected government will also be keen to strengthen this relationship.”

A version of this article first appeared in Public Finance.

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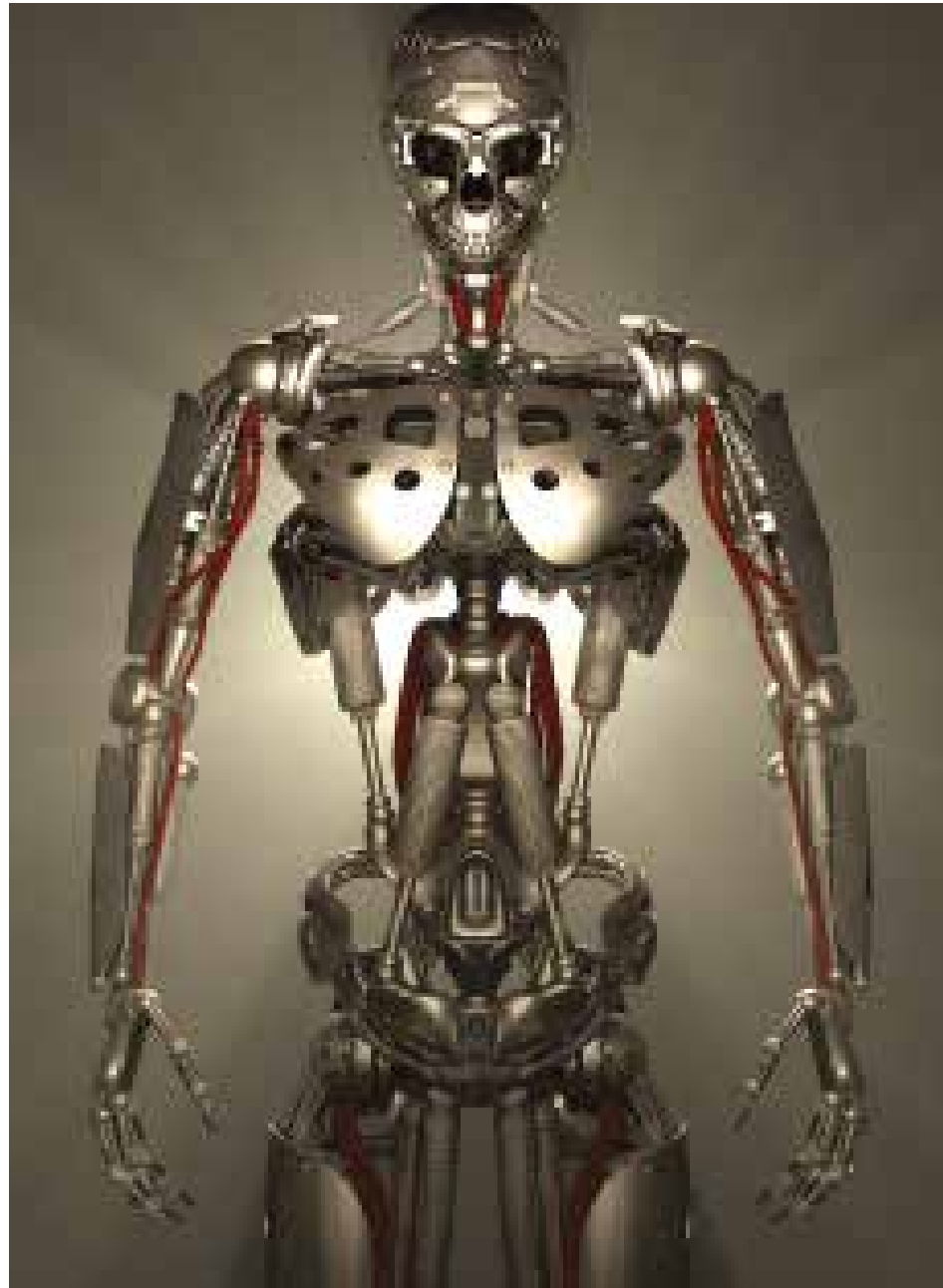
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The end of consultancy as we know it?



BIM is being seen as the beginning of a digital revolution that will have a profound effect on how consultants do business allied with the impact of big data, digital infrastructure

models and the collaboration opportunities provided by cloud computing. What is the technology challenge for consultants and how will they have to change to meet it? Infrastructure Intelligence and BST Global brought together a group of professionals to find out. *Jackie Whitelaw* reports.

In the end it wasn't the technology that the 12 people at the Infrastructure Intelligence and BST Global round table event debated in a discussion about the digital infrastructure revolution. It was how business culture had to change to meet the opportunities and upheavals that new technology is bringing. This ranged from how businesses worked, what they did, who they employed and how their culture had to adapt to suit. As BST managing director – international business Eduardo Niebles summed up: "Data is just an enabler. The main issues are about how you use it to work better with your clients and your own staff. People are your capital. But, here's the main caveat, if you don't have a view about what do with technology and big data, it will bite you. This is the time to mobilise collaborations, take advantage of the knowledge sitting in the cloud and build new skill sets to interpret the data. Which firms are really doing anything about it?"

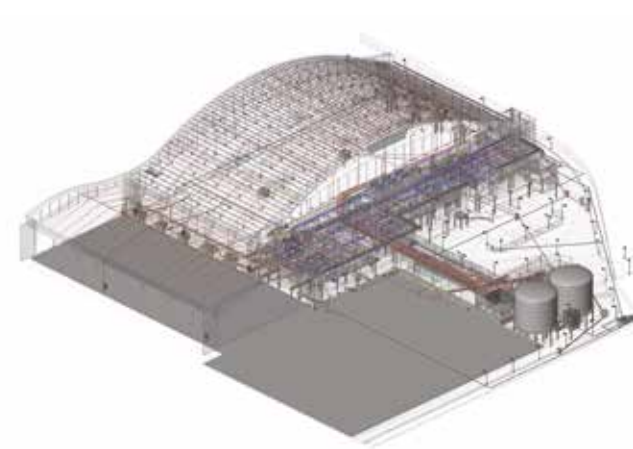
There was a general view around the table that people were nervous about the changes ahead, mostly because they couldn't really define what they would be, but also they were excited by the potential opportunities and the chance that more will be demanded of an engineer's intellect in the future.

"We recognise this is a transition stage with new technology coming forward," said chief operating officer at Waterman Group Neil Humphrey. "How disruptive the technology is going to be, and how we as a sector adapt is the key question. We don't know what the landscape will look like, how the role of a consultant will change, what the competition will be, and the likelihood is that key competitors do not even exist yet. You only need to look at how technology has disrupted other sectors, for example the hotel sector with AirbnB or Uber and taxi firms. Things are going to alter dramatically in our sector and we all need to sit up and take notice at the end.

According to Pell Frischmann director Tushar Prabhu "Civil engineering in particular is going to be turned on its head with new technology. A bunch of people will become extinct."

He introduced the idea to the discussion of a tank for a water plant that with development of BIM and libraries of standard products could be designed more cheaply in, say, China than as a bespoke option in the UK. "In fact, why design anything here that can be 'plugged and played'?" he asked.

For WYG regional director Marc



Left: Designing with BIM creates better solution (Singapore hangar design by Mott MacDonald)

Right: Map projection of a point cloud depicting reinforcement bars of beams at the second floor of the James Dyson Building at the University of Cambridge by Dr Manuel Davila, CSIC (Centre for Smart infrastructure and Construction)



Davies this development would create opportunity for UK practices. "Yes it's a tank, yes it's a standard, off-the-shelf object, but someone has to establish where to put it for maximum efficiency and whether it will work in practice; that bit requires people to do some thinking. We have to embrace the opportunity that technological change is bringing and adapt. And accept that the way our businesses use, and charge for, their time will be different."

Prabhu concurred with that. "You are right. It's the bits where there is no set answer that creates the opportunity for consultants. But much of what civil engineers are doing in consultancy at the moment will be extinct in 10 years' time. We are entering a disruptive phase in industry. In China, design is done to fit round the product – that will be a big deal for companies here as clients pick up on the power of that technology. When the old clients go, the old ways will go too and we will have to adapt accordingly or go with them."

Having time to tackle harder problems sounded, to Sandberg managing partner Neil Sandberg, like a good thing. "The idea of standard products is not a threat," said Neil. "What they will mean is engineers have more time to design more interesting and challenging things."

The group could all see their future value in having a business that had the engineering knowledge to underpin the technology. "You need that knowledge base," said GHA Livigunn director Stewart Tennant. "You can see a generation coming through that is good at the technology but doesn't have that knowledge, yet. I'm waiting to see the

first major project designed with BIM and FEA to have overlooked something fundamental. What is going to be key is having people with technical expertise, not people with expertise at using the technology."

"My take is that it's the people who should drive the technology rather than the other way round, and sometimes that is missed," Tony Gee & Partners executive managing director Graham Nicholson said. "The fear is who drives the technology? That's the big void as the software gets more and more complicated. That's why we are pushing for more technician engineer apprenticeships to combine the skill sets."

Niebles suggested to the group that collaboration, strength in unity and knowledge, is a way forward. "Is there an opportunity to collaborate and make the consultant engineering role even more specific?" he asked. "If you can refine the knowledge base, I see that as an opportunity. Your clients will be paying not for the numbers of hours or drawings you deliver, but for your experience and knowledge."

According to Pick Everard partner Mark Colby, the broader industry could do worse than look at what architects and structural engineers have been up to. "Structural teams collaborate well with architects," he said. "And they have embraced the technology better. Civil engineering has in general been much slower to engage."

Architect Harbinder Singh Birdi, a Partner with Hawkins Brown confirmed that cross discipline and cross company collaboration was a norm in his business. "But it's a myth that

computers will solve the co-ordination issues," he said. "It's about engineers and architects engaging with one another that solves design issues."

It is also working out which work needs to be done by whom. "It is easy to assume that outsourcing design services to can increase profitability, however we often find that working with a local collaborator requires less design direction from ourselves and thus making the process as economical!"

Everyone round the table was concerned at the cost of buying in new technology. Which software was the right one, for instance. But Niebles cautioned that buying new technology was one part of what would be needed. "People want to buy new technology but they are not interested in changing the business model," he said. "You need to think about how the business will look after the investment. Often companies go through a business restructure and then bring in the IT. But if you are looking to redefine your organisation you need to elevate the IT side so it's involved in the restructure."

His colleague, BST Global regional director Ben Ashmore added more. "You can use technology to win business," he said. "But there are also internal operating efficiencies that it can also bring about like taking out the cost of overheads or technology taking more of the load meaning that you can reboot the business model, cut costs and also help win more business."

Everyone was using technology to spread work around their offices. BWB managing director Steve Wooler explained that that option allowed his company to open an office in

London which has transformed the company, with projects in the capital now providing almost a fifth of the consultant's income.

The culture of offices was also changing with the advent of more technology and the company bosses present were detecting a clash between structural and environmental types who wanted to work outside the office in cafes using their own computers and picking their own hours, and a civils culture that preferred people stuck to their desks. All realised that their HR and management processes would have to adapt to keep staff, particularly the new, tech savvy staff, happy. They had also noticed that it meant they didn't need quite so much office space as in the old days.

"Use technology as an enabler," was Niebles' advice. "If one group wants to be in the office fine, and one wants to use a coffee shop, also fine. But if you try to put the coffee shop people in an office you'll find production goes to zero."

It's all about horses for courses and not established procedures. And he highlighted that in future consultancy will be competing with high salary paying hedge funds for the graduates that can do the predictive analysis necessary to make sense of big data. "You have to make your companies attractive to them so think about what they want," he said.

Round table attendees

Ben Ashmore, regional director, BST Global
 Peter Campbell, senior policy officer, ACE
 Mark Colby, partner, Pick Everard
 Marc Davies, regional director, WYG
 Neil Humphrey, managing director, energy, environment and design, Waterman
 Graham Nicholson, executive managing director, Tony Gee & Partners
 Eduardo Niebles, managing director international business, BST Global
 Antony Oliver, editor, Infrastructure Intelligence
 Tushar Prabhu, director, Pell Frischmann Group
 Neil Sandberg, managing partner, Sandberg
 Harbinder Singh Birdi, director, Hawkins Brown
 Jackie Whitelaw, associate editor, Infrastructure Intelligence
 Steve Wooler, managing director, BWB
 Stewart Tennant, director, GHA Livgunn



Top: Harbinder Singh Birdi, Hawkins Brown; Neil Sandberg, Sandberg; Eduardo Niebles, BST Global

Keep up with developments in digital infrastructure on the Infrastructure Intelligence Digital infrastructure hub. www.infrastructure-intelligence.com

Five emerging trends to reshape business

By BST Global executive vice president Javier Baldor

1. The Cloud

There is a significant transformation and fundamental shift emerging in computing architecture called Cloud Computing. Factors driving this growth, according to private equity firm KPCB, include:

- Rapidly falling processing costs, while the cloud and accessibility rise.
- Computing costs declining 33% annually (1990-2013).
- Storage costs declining 38% annually (1992-2013).
- Bandwidth costs are declining 27% annually (1999-2013).
- Smartphone costs declining annually at a 5% clip (2008-2013).

2. Web 3.0:

Web 3.0 will see everything connected, anywhere and all the time, over the Cloud. Not just computers, but also refrigerators, clothing, and cars will carry IP addresses. This is also known as the "Semantic Web."

3. Going Mobile: Anywhere, anytime

The consumerisation of technology has taken shape and is dictating what the business technology landscape will be. It is estimated that 1 in 8 people will have a tablet in their hands by 2017.

4. The wearables and everywhere computing

- Hands free, voice and gesture control,
- Always connected to the internet,
- Environment aware with built in GPS.

5. Surface computing: The vision of the future

Imagine a world where everything is a computing surface: your coffee table, desk, refrigerator, or windows. It is coming by 2020. Microsoft has developed a video at www.microsoft.com/office/vision/ to demonstrate this trend.

What is certain is that the world will witness unprecedented changes and opportunities in the years ahead leading up to 2020 and beyond.

The key question is, Will you be ready? You can read the full article on www.infrastructure-intelligence.com or in the July-August 2014 edition of the magazine available free on II's website.

AVAILABLE NOW



Intended for use where there is a clear and concise description/brief of the services the Consultant is required to deliver.

Drafted to be straightforward to use with Consultant and Client obligations set out in its first two clauses it fairly balances the rights and obligations of the parties.

The Schedule to the Agreement enables the Consultant to set out the basis on which fees and expenses are to be paid. The Schedule also provides for any limit of liability or exclusions to be stated as well as the amounts of public liability and professional indemnity insurance.

The Agreement can be used in relation to BIM projects, requiring the parties to comply with their respective obligations set out in any BIM protocol referred to in the Schedule. Notes to the Schedule highlight that a clear description of the services the Consultant is required to deliver and their intended use should be provided together with clear definition of project objectives.

The ACE Short Form, which is suitable for use in Scotland, is intended to have particular application to small and medium sized projects and offers a useful addition to the current ACE Agreements.

Available at WWW.ACENET.CO.UK/PUBLICATIONS
 in the following formats:

Paperbound Version – £36.00 + VAT

Digital Version - £34.00 + VAT

Licenses available on request

ACE Members receive **50% OFF** all ACE Agreements

Road to 2016 BIM compliance

It only seems like yesterday that Paul Morrell and Francis Maude signed the industry up to the 2011 Construction Strategy; we had just welcomed a new kind of Government and they were talking about a new approach. Chair of the government's BIM Task Force Mark Bew reviews the last four years.

The scene was set; Liam Byrne the outgoing Chief Secretary to the Treasury's note told us what we already knew, "I'm afraid there is no money". The country needed a new plan and so did construction.

But how was the digital Building Information Modelling (BIM) revolution in construction and five years of austerity going work together? Would the downturn completely obliterate the industry? Would we be able to get traction to survive, change and face a new future?

Well, four years later as the news of the Conservatives having managed to gain a majority sinks in, construction is fully in both domestic and international recovery. But how is the sector shaping up with its digital switch over in the run up to the 2016 BIM procurement mandate?

Is the infrastructure sector ready to meet the Government's 2016 mandate to use BIM level 2?

We have all come a long way. A combined Industry-Government BIM Task Group has been deployed and the team engaged in three key tasks.

1. Set the "rules of engagement" - a set of eight British Standards, implementation tools and guides clearly showed the basic methods of digital operation - all are available at www.bimtaskgroup.org
2. Set up a public sector client engagement group. Terry Stocks chairs this Stewardship Group, under the governance of the Government Construction Board. The group ensures delivery of individual department plans to achieve both the 2016 targets.
3. Engagement of the supply chain.



Mark Bew, chair of the government's BIM Task Force

There isn't a working day that someone from the task group isn't participating - digitally or physically - at an event somewhere, with locations as diverse as Sydney to Sydenham.

So the scene is set well from the Government side, but the industry response has been the really impressive statistic. The entire sector had been desperate to find a new way and BIM seems to have been the rather awkward hook on which we have all hung our hats.

There were always going to be challenges. But now as the date comes closer we see more and more projects declaring the BIM credentials.

We may not have every job using Level 2 on 6 April 2016, but very many will be.

What are still the biggest challenges for the industry supply chain?

The management of change in any business is a challenge and the last

four years have presented plenty of change. As we reach our 2016 target we see plenty of projects using BIM and delivering improved performance. We see a few that maybe haven't. But why?

We have proved beyond doubt that by implementing BIM, soft landings, project bank accounts and procurement change we can drive up to 20% savings. The 2013/14 numbers on the Cabinet Office website show that this equates to £1.2bn, a prize well worth repeating.

We need urgently to find much better methods of growing capacity to deliver and providing good leadership but this isn't exclusive to BIM. BIM is not a silver bullet to save poor businesses from failure, but it is a fantastic opportunity to work out what it needs to face a different future.

What are the greatest challenges for public sector clients?

Delivering good value for tax payer's money with the challenges of infinite demand, diverse public perception and political expediency has been the challenge for generations.

It is increasingly clear that more of the old medicine isn't the solution to these complex challenges. The use of data both BIM derived and other data used carefully is showing how in time we will develop better methods of providing transparency of future workload, decisions and reward.

The use of BIM data provided by the supply chain is a keystone of the BIM Level 2 processes. But we need the best quality clients possible to apply these technologies to the challenges of future demand.

Do you think the industry now sees BIM as a business advantage?

The best thing about an open market

economy is that nobody does anything that isn't exactly what is required in the contract. The amount of projects we see in the private sector and around the world where there is no mandate is good evidence that the market has identified significant value.

We should be rightly proud that the rest of the world is once again looking to the UK for leadership and direction. We need to start to look at digital and BIM as "proper" engineering. We have a real edge, but it won't last forever, I suggest we make the most of it while we can.

Where are the greatest successes for you?

There are a couple of big things which when I look back I really consider as important.

The first is the realisation that the UK made the right move in 2011. We haven't any better capabilities or technology than anyone else in the world, but the simple fact we have a plan is what has set us apart, along with the commitment to see it through. This is one of the reasons Government has committed to Level 3 and Digital Built Britain.

The second is the way BIM has worked as a "Trojan Horse" to allow us to focus us on how far we have drifted away from the basics of design and construction. Some of the old disciplines were in place for very good reasons but the transparency of good clean valid data that BIM provides quickly shows up poor performance. We must re-double our efforts to build on the basics so these new digital skills have context and value.

In hindsight was level 2 BIM too big a stretch for much of the supply chain?

When we launched in 2011 everyone said "is that it, only a spreadsheet?" Then people tried and discovered that being good at managing data is actually a tough job, one that perhaps some of us should have been better at before.

So from what I am seeing we got it just about right..."a significant stretch, but not a stretch too far". People can't expect to deliver poor performance and not suffer the consequences, they shouldn't expect to not develop their staff, products and businesses to deliver value to the client and remain competitive. Surely these are the critical measures of value?

How is industry leveraging the successes of BIM to date?

The market has already identified areas of competitive advantage. The use of models for tender pricing has already been a game changer in a number of sectors including power. However the real benefits are coming from using the project data to provide new insights into soft landings, user driven design development, health and safety and machine tool integration.

Does a booming market make embracing BIM easier or harder?

There's never a good or bad time to intervene in a market, you just need to make sure you have aligned your goals. The downturn provided opportunities including access to resources and capabilities that would have normally been deployed on site. However the boom has the opposite effect, but it does encourage people to invest and look slightly longer term.

Is a move towards BIM level 3 realistic for most in the infrastructure supply chain?

The Level 3 journey is vital for the UK construction and smart city services agenda. Without it we will fail to address the challenges of urbanisation in time to make any tangible difference. We face unprecedented global competition and need to continue to be at the vanguard of engineering.

It will be a challenge but like Level 2 we have set realistic time scales. We don't expect to see standards and early adopters before 2020. Level 3 is a big jump and we need to introduce it properly to enable the entire sector to enjoy the massive opportunities and benefits it will bring.

What are the priorities for a new government to help drive the use of new technology in construction?

Government has a responsibility to help join the dots to enable cross sector learning, co-ordination of pipeline, commoditisation of common products and most importantly to deliver greater value by focusing on whole life services rather than short term capital cost.

Government needs to be focused on joining the dots so the construction industry is delivering joined-up infrastructure for education, residential, communities, transport and healthcare. The digital construction economy will drive this, but we need a better joined up plan.



Bentley Connection - opportunity to learn on the road to 2016

Bentley Systems is inviting infrastructure professionals to sample and learn about the next generation of its construction modelling tools which it claims will deliver "better performing products and so better performing infrastructure assets".

The first in a series of Connection Events will be held in Manchester on 29/30 June and will demonstrate its new Connect Edition software and the way that it can assist the industry towards the goal of achieving the 2016 government mandate to embrace Building Information Modelling (BIM).

The new suite of product utilises cloud-based capability to enable users to draw down and customise the tools needed within the exiting MicroStation, ProjectWise and AssetWise products.

By giving access to the tools when they are needed to do the job, Connect, says Bentley, makes BIM software available across infrastructure delivery and management teams "to and from the right contributors, anytime and anywhere".

The CONNECTION event series is taking place in 30 cities across the globe and will provide an opportunity for infrastructure professionals to hear from sector experts, Industry thought leaders, and award winning users.

To attend this free event in Manchester contact Bentley and register at: <http://connection.bentley.com/manchester/>

Bentley Systems CONNECTION Event. June 29 - 30, Radisson Blu Hotel Manchester Airport, Chicago Avenue, Manchester M90 3RA

Infrastructure in the new political landscape

The people of UK have spoken and they have elected a Conservative government. ACE chief executive *Nelson Ogunshakin* runs through what this means for the UK engineering and consultancy sector and how ACE will seek to work with the new government.

The dust is now settling on what can only be described as the most surprising election result in over two decades. The Conservative Party has ended up, not just as the largest party, but also with a workable majority, having won 331 seats. Meanwhile Labour's collapse in Scotland and the Lib Dem wipeout nationally, will also be pored over by future psephologists looking to explain exactly what happened.

ACE of course congratulates all the candidates who won their respective seats and particularly the Conservative party who now have a clear mandate to govern.

It is crucial that infrastructure continues to enjoy the cross-party support that has characterised the past five years. It must remain above the fray when progressing with the planning, financing, funding and execution of the current project pipeline contained in the National Infrastructure Plan. This clear direction and leadership is what the UK, and in particular the infrastructure sector needs.

Not only will this provide us with the certainty and stability that will encourage the kind of infrastructure investment that will embed the economic recovery, it will enable us to reposition the UK as the economic power of Europe. In addition, the industry will be looking to the new government to begin delivering on the manifesto commitments that were made during the election.

These will include the creation of the Northern Powerhouse, an attempt to build on the strengths of the region and build it up economically through improved infrastructure. Both HS2 and HS3 will play a key role in this, as well the delivery of the Thames Tideway Tunnel project, new Roads Investment Strategy as well as the efforts to secure our energy supply.



Nelson Ogunshakin, ACE chief executive

ACE was delighted these measures were in the Conservative manifesto and we implore them to get on and deliver now they are in office.

ACE and the wider industry will also continue to be a strong advocate for working with government and opposition, Treasury, Infrastructure UK and other key departments to drive forward the delivery of infrastructure. Engagement bodies such as the National Infrastructure Plan Strategic Engagement Forum (NIPSEF), through which industry has had the ear of government for the past three years, will continue to be on hand to advise and instruct. We hope the newly elected government will also be keen to strengthen this relationship.

And engagement will be key if we are to overcome the challenges we face in delivering the much-needed economic and social infrastructure the UK needs. There is a skills shortage, with industry requiring some tens of thousands of new engineers by the end of the decade just to standstill.

That the UK is not building enough houses is an accepted fact too. ACE's own research shows that

there is a housing gap that means that by 2021 there will be a shortfall of around 886,000 homes or £185bn. The Conservatives have pledged to build hundreds of thousands homes by the end of the parliament and while this is a start, it still may not be enough.

Long term infrastructure planning is critical to the UK's international competitiveness. The government must make a quick decision on the final recommendations of the Davies Commission's report on airport capacity for the UK. Meanwhile, it is also imperative that the government provides clear leadership on future planning of the UK's national infrastructure. Ideas circulated before the election include Sir John Armitt's recommendations for a National Infrastructure Commission (NIC), or the creation of a full Department for Infrastructure which embraced the NIC. Clearly there is a great deal of desire for a body with high level planning functions that can help secure the much needed long term requirements for the UK.

Finally, the outcome of the election vote across the nations confirms the need to progress with the regional empowerment promised during the election. The implementation of these promises is critical, and ACE is well positioned, through our newly revitalised ACE Regional Group, to work on the development and delivery of appropriate infrastructure investment to secure a balanced economic growth across the UK.

ACE has never been better placed to use its voice and represent its members and wider industry at the highest levels of the government. And I make this pledge that we will spend the next five years doing just that for you, your business, and the industry.

ACE links up with the Growth Accelerator Programme

ACE has teamed up with the government backed Business Growth Service to support the recently launched GrowthAccelerator programme. This is part of the association's aim to deliver increased benefits to its members.



Anil Iyer, ACE chief operating officer

Designed specifically for SME's (up to 250 employees and a maximum turnover of £40 million) the GrowthAccelerator will help businesses get to the heart of the barriers holding them back and work alongside them to identify the critical steps needed to achieve the next phase of growth – rapidly and sustainably.

Support services will include coaching, workshops and masterclasses tailor-made to each firm and covering the full scope of subjects you may expect from business management and leadership programmes.

ACE's Chief Operating Officer Anil Iyer says the move "provides excellent opportunities for members with ambitions to grow. I encourage firms to get in contact to find out more".

The programme has a network

of mentors throughout England. Established in 2012 it can claim to have already successfully supported over 26,000 businesses. As the scheme has Government support the outlay to small businesses is relatively low. For example the full cost of the course for a micro-business (1 to 4 employees) is £3,500 plus £700 VAT. But as £2,900 is grant-funded the company pays only £600 plus £700 VAT. The services vary depending on the needs of the business.

Adrian Boulton, Senior Partner of ACE SME member Abstract LLP recently told ACE: 'As a micro-business I found this scheme tremendous value for money as I received an initial and very thorough business consultation followed up by around eight two-hour mentoring sessions in between for which there were course exercises that my mentor followed through. The experience has enabled me to steer the business towards rapid growth and positioning in the market. I would have no hesitation in recommending it to other ACE members.'

To find out more about the programme visit the weblink www.greatbusiness.gov.uk/ga

ACE's contact at the Business Growth Service is: Antony Beak on 0789 118 2409 or by email antony.d.beak@uk.gt.com. Please mention you are an ACE member

EIC Annual Conference 2015: environmental markets in uncertain times

Following its successful launch event in 2015, the Environmental Industries Commission is now planning its 2015 Annual Conference as the critical post-Election forum to discuss the expanding environmental agenda.

The event will bring together the UK's successful, innovative £100bn environmental sector with the aim of identifying the market implications of the new Tory government's green agenda over the next five year parliamentary term.

"Environmental markets, perhaps more than most are shaped by politics as much as economics," said EIC director general Matthew Farrow.

"With a new Conservative-led political landscape in the UK, an EU referendum now on the horizon, critical international climate negotiations only months away and economic uncertainty across the world, understanding the factors which will shape environmental business opportunities is harder than ever before," he added.

"The EIC annual conference will once again be a fantastic opportunity for professionals in the sector to come together with leading players in the environmental industries, politicians, NGOs and other experts."

The venue and date for the conference will be confirmed this month but it is expected to be held in Central London in mid-November.

Key issues set to be on the agenda will include:

- How will the changed political dynamic affect environmental markets and commercial opportunities in them?
- What more can UK do to encourage more innovation in its eco industries?
- How far is sustainability really embedded in the new government's infrastructure agenda? How can UK environmental firms access the infrastructure supply chain.
- The politics of the environment in the new Parliament.

For further details of the event as it is launched visit www.eic-conference.com

All change at ACE Middle East

Association for Consultancy and Engineering Middle East group has restructured its management board to meet the new challenges in the region and drive ACE activity going forward.



The restructure of ACE's Middle East group has been made to capitalise on the strong representation of senior executives within its member firms working in the Gulf. The changes will also address the increased attention the region will gain when the International Federation of Consulting Engineers [FIDIC] holds its global infrastructure conference in Dubai in September followed by Dubai Expo 2020 and the FIFA World Cup 2022 in Qatar.

Tom Bower, Managing Director at WSP | Parsons Brinckerhoff in the Middle East has been appointed Chair of the group supported by an experienced team of professionals including:

- Ian Clarke, Managing Director of Mott MacDonald Middle East and immediate past chairman of ACE's Middle East group.
- Wael Allen, Chief Executive of Arcadis/Hyder Middle East assuming the role of vice chair and secretary.
- Yaver Abidi, Managing Director of Ramboll New Markets who has agreed to champion the formation of ACE's Progress Network – the community for young professional consultants and engineers to network with their peers and develop their business skills and keep abreast of the latest industry news.
- Steven Yule, International Business Development Manager of Amey Consulting Qatar who

will concentrate on growing the membership in the Gulf region.

Speaking after the restructure was announced, Dr Nelson Ogunshakin OBE chief executive of ACE said: "ACE's priority will be to assist FIDIC in delivering a successful conference in September that will be a showcase for the region and foster better understanding of the market, improved working conditions and operations in the region.

"For the past four years Ian Clarke and Mott MacDonald have made a lasting impression in the region with outstanding leadership of ACE's Middle East group."

"Tom Bower has been very active in the team and is a natural successor to now take over as Chair and drive the agenda forward with an expert and enthusiastic team behind him. I have every confidence that the group will continue to prosper."

In response Tom Bower replied: "It is a privilege to accept the position as Chair of ACE's Middle East group and have the resounding endorsement of the main ACE Board. My immediate aim is to be active and engaged with ACE members, government officials, decision makers and wider stakeholders to showcase the UK's, innovation and leadership in the consultancy and engineering sector, skills that are transforming the infrastructure landscape throughout the Gulf."

Dr Alan Barr to boost ACE's Northern Ireland business focus



Water and flood management expert Dr Alan Barr has

been appointed to lead the Association for Consultancy and Engineering's activity across Northern Ireland.

As technical director with RPS Northern Ireland, providing expert consulting engineering, planning and environmental services to both the public and private sectors, Barr is well placed to understand the opportunities and challenges facing the sector across the region.

"It is a privilege to accept the position as Chair of ACE's Northern Ireland group," said Barr.

"My immediate aim is to be active and engaged with members, government officials, decision makers and wider stakeholders to ensure the voice of ACE is heard at every level of influence in Northern Ireland to help promote the best consultancy and engineering firms in the region."

Barr takes over the Northern Ireland regional group role from Phil Carson of consultant Williams and Shaw.

Nelson Ogunshakin chief executive of ACE welcomed Barr into the challenging role at last month's regional annual general meeting.

"The intricacies of engaging with devolved governance means it is imperative that we have strong leadership in the region that can elevate the importance of ACE members to delivering the infrastructure ambitions for Northern Ireland," he said. "Alan is well placed to fulfil that role".

For further details on how to become involved with ACE's Northern Ireland group please e-mail btaylor@acenet.co.uk

ACE meets the BIM challenge

ACE's BIM Engagement Group will present free seminars to ACE members in London and Manchester.



Get ready for the BIM 2016 deadline

With the looming 2016 requirement for centrally procured Government projects to be Level 2 BIM compliant, ACE has assembled an excellent panel of experts that will focus on the major challenges and concerns for those firms wishing to succeed on BIM compliant projects.

Many consultants have a valid worry that BIM working may expose them to disproportionate risk levels. As ACE's Legal and Compliance Director, Dwight Patten, explained: "Consultants will increasingly need to adjust their approach to contractual risk management in order to obtain work on BIM compliant projects. The best way to address the potential BIM-related risks is through proper early engagement in defining employer's information requirements, combined with appropriately drafted contractual protocols."

Richard Shennan, ACE's panel chair and Mott MacDonald's BIM Champion, said, "collaborative working around a well-organised common data set, using technology to reduce rework and inefficiency, handing over information to asset owners that will help consultants optimise performance through-life, if you strip away the 'BIM' label it all makes perfect sense."

The events will be held on 9 June in London and 17 June in Manchester. Go to www.acenet.co.uk for more details.

What is the future for the Green agenda?



Matthew Farrow thinks air quality and new runways will be controversial for the new Government and wonders if onshore wind development will really be halted.

Even before the Election, there had been some debate in the environmental industry community about what we could expect on environmental policy should a Conservative Government be elected.

On the positive side, the party's manifesto contained a strong commitment to the UK's legally-binding carbon targets (a commitment foreshadowed by environment minister Lord de Mauley at last December's EIC conference where he stated unequivocally that the Conservatives would not repeal the Climate Change Act), and a proposal to create a new fund to boost the building of new homes on brownfield sites.

On the other hand, there was very little content on the rest of the green agenda, and David Cameron's famous exhortation to 'vote blue, go green' from the 2010 election seems a long time ago.

The level of frustration with environmental targets and regulation in parts of the Conservative Party was indicated by the manifesto's insistence that new onshore wind farms would not be permitted. Given that onshore wind is one of the cheapest renewables, and the manifesto pledged to promote the most 'cost-effective' low carbon measures, a certain degree of 'fudge' seemed to be in evidence.

Some environmental issues though will force themselves onto the agenda whether the new Government likes it or not. The manifesto authors contented themselves with a passing aside on air quality: 'we will continue to do even more to tackle air pollution'. But this will not satisfy the UK Supreme Court, which just before the election decreed that the next government must take immediate action to make the UK compliant with EU air quality standards and should submit a detailed plan to the European Commission 'by December 2015'.

The Commission itself launched separate infraction proceedings against the UK for air quality non-compliance and will no doubt be keen to see what 'do even more' will mean in practice.

The new Government's support for shale gas will also bring the regulation of local environmental impacts into sharp relief. The issue of deciding what are acceptable levels of impact on local communities and natural environments is likely to feature strongly in the future.

The other issue that may dominate the environmental agenda will be the EU referendum. In his speech announcing his intention to hold an in-out referendum, David Cameron included 'environmental regulation' in a list of areas where the EU powers had become too extensive.

In 2013 he reportedly referred to renewables targets (which are set by the EU) as 'green crap'. However, most EU environmental regulation is highly technical and less 'political' than high profile issues such as free movement of people or EU employment law, so it remains to be seen whether the Government makes a major attempt to include environmental regulation in the forthcoming negotiations.

Finally, the smallness of the new Government's majority means that backbench MPs and select Committees may have a significant influence on all policy issues, including green ones. Some of the Conservative MPs most associated with the vote blue/go green thinking, such as Greg Barker and Laura Sandys, stepped down at the Election, though others such as Zac Goldsmith (who has said he will resign and trigger a by-election if a 3rd runway at Heathrow is given the go-ahead) remain.

The new SNP MPs are unlikely to take much interest in Westminster environmental policy as it is a topic largely devolved to Scotland already, but whether any of the new influx of Conservative MPs will see either supporting or opposing the green agenda as a way to make a name for themselves remains to be seen.

Matthew Farrow is director general of the Environmental Industries Commission, the leading trade body for environmental firms.

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Kier to buy Mouchel, powers of recovery at Holborn and future for Network Rail: Most popular stories

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TOP STORY:

Kier to buy Mouchel for £265M cash

Breaking news on Kier's successful bid to buy Mouchel was the best read story this month, which Infrastructure Intelligence swiftly followed up with an exclusive interview with Mouchel CEO Grant Rumbles

Property, residential, construction and services group Kier has taken the next step in achieving its target of double digit growth for the business by buying infrastructure and business services organisation Mouchel for £265M, paying in cash for the entire issued share capital of the company.

Kier is funding the acquisition through raising additional equity and the transaction will require the approval of its shareholders. The process is expected to take approximately five weeks with the acquisition expected to complete in June.

Mouchel's chief executive Grant Rumbles will leave on completion of the deal and Kier chief executive Haydn Mursell will be CEO of the expanded group.

Its purchase by Kier follows a transformation in Mouchel's performance thanks to a restructure overseen by Rumbles. During the last three years the group has grown underlying operating profit to £27.7M on turnover of £617M in the financial year ended 30 September 2014.

Revenues for the three months ended 31 December 2014 have increased by 38% compared to the same period in the previous year, with growth levels continuing this year at maintained margins. Its forward order book stands at £2.8bn. This is a stark contrast to 2012 when the firm was plunged into administration and delisted from the stock exchange after rejecting a number of bids which valued the firm at between £151M and £175M.

"The Mouchel Board believes that Mouchel and Kier together will provide even greater opportunities for our staff and clients. The combined company will be a sector leader in the growing UK highways management and maintenance market, servicing Highways England, Transport for London and local authorities," the company said in a statement. "The transaction will also enhance the range of facilities management and business process outsourcing services that the enlarged group can offer to local authority clients, as well as those in the water and regulated industries market,"



Haydn Mursell, CEO, Kier

it added.

Mouchel effectively put itself on the market when it hired Rothschild in the summer and Kier made an approach just before Christmas. A services business like Mouchel, with a strong presence in the highways sector and maintaining around a third of the £15bn English roads bonanza is about to kick in, had obvious appeal. Add to that margins of around 5%, solid contracts overseas in the Middle East and Australia and 6,500 staff who, with personnel a high value currency in a growing skills shortage, have their own glamour.



Grant Rumbles, CEO, Mouchel

says. "We have been very careful to find the best solution for the company."

It is this fit between the services, skills and clients of the two businesses which, he said, really makes the deal stack up and makes it stand out in terms of added value. For Rumbles the goal was to create more not just bigger.

"The whole of our thinking is around having complementary strategy in complementary markets – there is very little overlap with the sectors that we work in and that means that together we are stronger and can offer clients a wider range of services," he explained. For example, he pointed out that with Kier providing back office services to over 70 local authorities, Mouchel's expertise in highway and asset management means there is clearly an opportunity to widen the services offered to these clients. And across the growing UK highways management and maintenance sector the combined company will be better set to leverage the opportunity with combined clients now including Highways England, Transport for London and local authorities.

UK Power Networks on the Holborn services fire



Teams respond to fire on Kingsway

Shared determination and collaboration were the keys to coping with the fire in Holborn says UKPN's head of operations Tony Cohen.

On the 1st April, UK Power Networks was faced with an unprecedented event, one which received widespread media attention, and unfortunately caused inconvenience to businesses, commuters and residents in central London. The fire on Kingsway.

While we still work to discover the exact cause of the incident, in the intervening few weeks the work carried out by our staff and contractors to repair the damage caused to our network has, frankly, been nothing short of heroic.

Firstly we had to respond, in coordination with the emergency services, extremely quickly so we could ensure the area was safe and to limit further damage to our network.

Once there it soon became clear that we were dealing with an event unlike any other that the company has ever faced. Our first step was to isolate the power supply to the affected area. As a result of this fast and effective initial response, we were able to restore power to the majority of the 3,100 customers affected the same day as the incident.

For more on this visit: <http://www.ukpowernetworks.co.uk/internet/en/blog/Covent-Garden.html>.

Why a 'One North' economy wont work



Paul Swinney, senior economist, Centre for Cities

Paul Swinney from the Centre for Cities argues that plans for the north must focus on individual powerhouses.

The Government's recent publication of its Northern Transport Strategy, which sets out how it intends to improve intercity links across the North of England, is very welcome. But there's one thing deeply troubling about it and that's the references to the North being one economy.

Instead of geography becoming less relevant, the world has actually become spikier.

Our strongly performing cities have become more important to the national economy because of the benefits they bring – namely access to workers, access to other businesses, and access to infrastructure.

So if the aim of policy is to improve the economic performance of the North of England, it should be clear in its prioritisation of Leeds and Manchester, rather than attempting to spread jobs around. Instead of talking about one northern economy, politicians should be talking about the creation of a number of Northern Powerhouses. The role of transport policy, as is the case in London, is then to make sure that as many people as possible have good access to the high paid jobs in these city centres.

DOT EVERYONE – especially engineers



John Horgan, AECOM

AECOM's John Horgan urges industry to back the campaign for a national digital institution.

Baroness Martha Lane Fox - founder of lastminute.com - has made a compelling case for DOT EVERYONE – a national institution to make the UK the most digital nation on the planet. DOT EVERYONE would address digital exclusion, gender inequality in technology and the moral and ethical issues the Internet presents, as well as show what is possible when you put the Internet at the heart of design.

Our industry solves some of the most complex technical challenges known to humanity because of digital innovation. From managed motorways to high-speed trains, we depend completely on digital. Certainly at AECOM, we collaborate every day across continents in complex design and build activities on a real-time basis because of the Internet.

Digital enables us to make sense of data – the lifeblood of our industry. Isolated data is about as helpful as the score of a symphony that's been put through a shredding machine. It's all there but in an unusable form.

The Internet has transformed the construction and engineering industry. That's why I am calling for everyone working in the built environment to sign the Baroness's petition and support this vision.

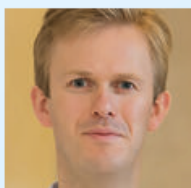
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TOPICS INCLUDE

- ▶ How to take advantage of growing **global infrastructure opportunities**
- ▶ How best to **manage the risk** of overseas business opportunities
- ▶ **The international role** for small and medium sized businesses?
- ▶ The infrastructure **growth hotspots** – by country and sector
- ▶ Establishing a **local presence** for your business when chasing international clients
- ▶ Overcoming the barriers to **international market entry**
- ▶ How to effectively negotiate the **bureaucratic and regulatory challenges** of building businesses abroad
- ▶ How to benefit from opportunities presented by **market consolidation** in consultancy

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Career paths: George Smart, AECOM



Winner of the IABSE Future of Design North Young Designer of the Year *George*

Smart shares Brunel's dream for a bridge across the Tamar.

The award recognised experience gained on Brunel's iconic Royal Albert Bridge project in Plymouth, where Smart was based full time on site with a key role in the inspection and design works on the project.

How do you describe your main role?

My current role is as a structural engineer undertaking bridge assessments and asset management. I work in a team of engineers with different experience levels, and between us we go out and inspect bridge structures, determine their condition and calculate the load carrying capacity. I am also a Sapper in the Army Reserve with 170 infrastructure support engineers.

Why did you decide to go into engineering/infrastructure?

Engineering as a career offers variety and even before that, an engineering degree is very rewarding. Bridge structures are the epitome of structural engineering and there are fantastic opportunities when working in this field.

What do you like about your employer?

AECOM is a very large company and so has many different projects all around the world, with some extremely experienced engineers. There is always an expert who is a phone call or email away! They are also very supportive of my Army Reserve career, allowing time off so I can go and train with my unit.

Forget quotas. Widening construction's talent pool starts at school says John Patch, director at Roger Bullivant



Are there still people out there who think we should be recruiting and appointing on criteria other than merit? Women and men must be given jobs on their ability to do the job, and for no other reason.

I would welcome more women into civil engineering and, particularly into infrastructure, but only because there are some women out there who are better than some of the men and they are not in the industry, primarily because they haven't had the chance.

So who is to blame? I'm very clear on this one. Parents and teachers. It is parental and academic input that influences young people on the direction that they will follow in later life. By the time young people get to University, college or into some form of tertiary training it's too late! We, within the Construction Industry, have to engage with and influence parents and

teachers to encourage them to influence the children in their care to go down the civil engineering route or, at the very least, follow the STEM subjects.

We have to try, somehow, to encourage parents to buy construction toys for their daughters as well as sons. We have to engage with schools to show young children what construction is all about. And we have to stop chuntering on about gender quotas and other nonsensical rhetoric about our inability to attract women into construction. It's not the women we need to influence, it's young girls, and, yes, it will take at least a generation. Let's start planning our campaign now.

Invest in skills if you want to win Government work industry told

Contenders for government work are now required to demonstrate their commitment to upskilling the current and future workforce in order to be considered for major government infrastructure contracts.

Initially this applies to deals with values over £50M but will eventually be rolled out to smaller jobs.

Government estimates that 10,000 new recruits would be needed to deliver the roads investment plan alone and has emphasised that the sector must take responsibility for future training. It also confirmed that a National Infrastructure Plan for skills was forthcoming.

HS2 LTD has welcomed the latest government initiative and signed up to incorporate the principles into its next bidding process.

The Construction Leadership Council has been tasked with setting the standard of good skills behaviour.

The change came into force from 1 April 2015. Requirements will be placed in contracts, monitored and may be used to inform future procurement decisions. Procurers will also be encouraged to introduce similar requirements, where appropriate, in lower value projects. Government expects more than 224,000 jobs in the construction industry will be created by 2019 and says that this move will play an important role in ensuring the industry has the skilled workers it needs to meet demand and support growth, while supporting people to progress or begin their careers in construction and engineering.

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For more information please contact Sally Devine
sally.devine@acenet.co.uk

The highly acclaimed EIC Conference 2014 brought together over **150 attendees** – including EIC members, influential industry clients and environmental experts. Tickets sold out 2 weeks before the event, and delegates heard from **22 speakers and panellists** including cross **party political leaders and senior industry experts**. They also enjoyed **3 hours of high level networking** during programmed breaks.

2014 Event Speakers Included:



Duncan Brack
Vice Chair
Liberal Democrats manifesto group



Maria Eagle MP
Shadow Environment Secretary



John Cridland CBE
Director General
CBI



Julia Groves
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Mark Watts
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