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# I INFRASTRUCTURE Intelligence

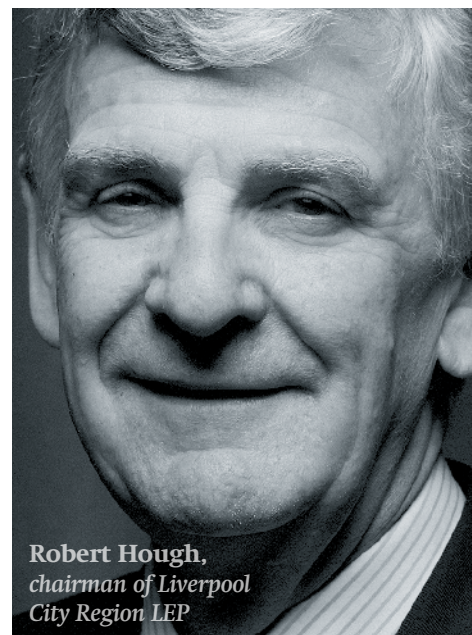
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chairman of M3  
Enterprise LEP

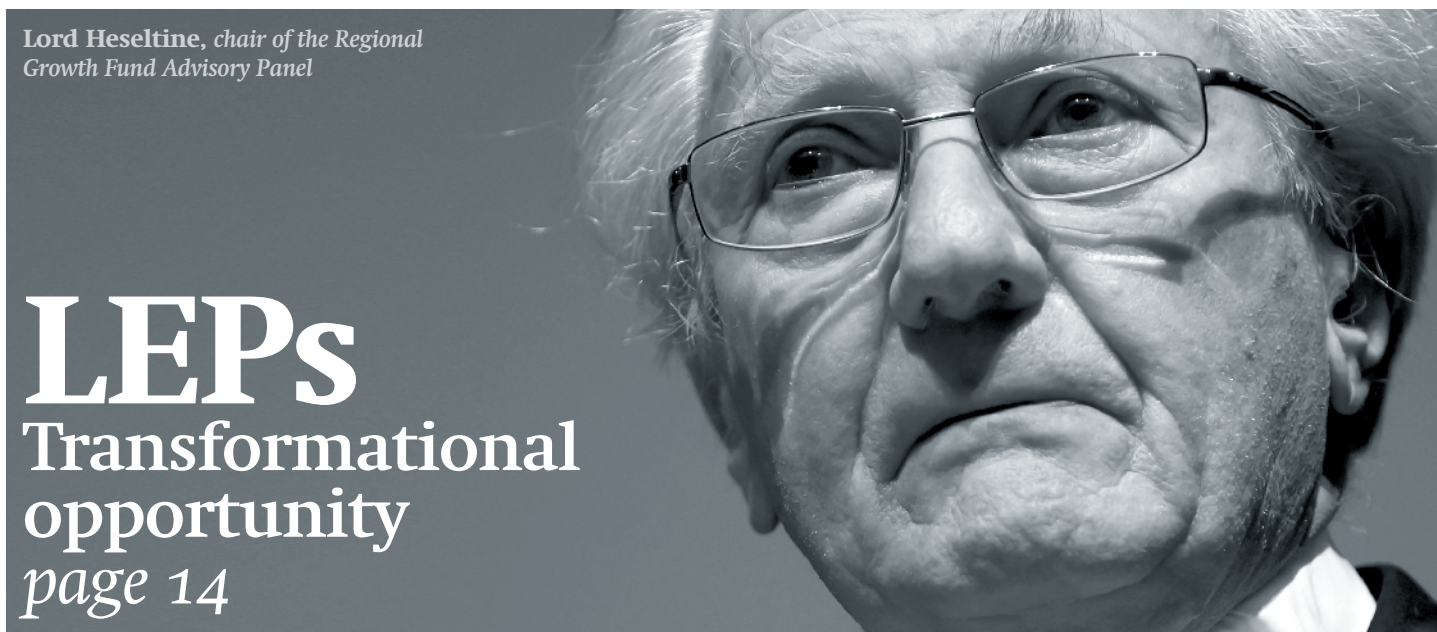


Chris Webster,  
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and Birmingham LEP



Robert Hough,  
chairman of Liverpool  
City Region LEP

Lord Heseltine, chair of the Regional  
Growth Fund Advisory Panel



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Transformational  
opportunity  
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# INFRASTRUCTURE Intelligence

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## MESSAGE FROM THE EDITOR

When Lord Heseltine published his No Stone Unturned report in October 2012 and its recommendations for helping the UK economy back into growth, he was quite aware that his views might be seen by many as challenging.

Central to his thought was devolving more power and resources to local regions – giving those closest to the “obstacles to growth” the tools and resources to use “limited public money to leverage greater additionality from the private sector”.

The aim was to move local authorities from being simply service providers to become partners with central government, agents for innovation and drivers of growth.

Nearly two years on we see the start of Heseltine’s vision about to take shape – albeit in a slightly pared back form in terms of the actual cash being devolved. Next month considerable amounts of once central funding will be divvied up across the regions and should, as per the vision, enable even greater amounts of private funding to flow.


Central to the process, of course, is the network of Local Enterprise Partnerships (LEPs) and, as Heseltine accepted during his recent interview at the ACE annual conference, many are indeed finding the path challenging.

As our analysis this week highlights, there is still too much mystery and confusion around the LEP process. And with a few exceptions, there is still too little “ambition” when it comes to the bids being submitted for funding.

It is early days in this competitive process. There will be winners and, hopefully, there will be learning amongst the LEPs who do less well.

From our conversations with the successful LEPs, leadership is clearly fundamental when it comes to bridging the gulf between the public and private sector. It is critical therefore that infrastructure professionals do engage with this vital, potentially transformational process now.

As Heseltine said in his vision: “There is opportunity on a grand scale... England’s cities pulsing with energy – unleash it. Every one of us needs to rise to the challenge.”



**Antony Oliver,**  
editor, Infrastructure Intelligence

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## News roundup

### ROADS

**Infrastructure Bill has first reading.** The bill which contains legislation to turn the Highways Agency into a government company had its first reading in the House of Lords, last week.

**A report from the National Audit Office** has warned that the lack of predictability of funding for highways authorities will lead to increased costs in the long term.

**Highway Code** to take account of driverless cars. The rewrite planned by ministers is to keep up with the US where in California the first licences for self-driving cars are due to be issued in the autumn.

**Balfour Beatty has been awarded a £43.9 million contract** to design and build the Highways Agency A1 Coal House to Metro Centre improvement scheme in Gateshead.

**Roads in Birmingham could be designated as special ‘cycle streets’** with a speed limit of 15mph where it will be illegal to overtake bikes. Birmingham won £17M funding as part of the drive by Government to create a cycle city. It has topped this up to £24.3M to be spent on cycling.

**Transport Scotland has awarded Amey** a six-year contract to maintain and improve the motorways and trunk roads in South East Scotland. The £90M commission will see Amey deliver engineering design and operational delivery services for 1000km of road.

### RAIL

**The High Speed Rail Bill select committee has published its timetable** for hearing petitions from parties affected by HS2 during July.



**The Road Surface Treatments Association (RSTA) is calling for larger budgets** for road maintenance from central government after Surrey County Council successfully lobbied Roads Minister Robert Goodwill to make funding rules more “fair”. The council, which has 4800km of roads wants to enable most frequently used roads to receive more investment.

The first hearing will be on 1st July and is an open address from the Promoter. Petitioners will be heard by geographic area starting in Birmingham and moving south.

**Crossrail 2 could be opened four years earlier than initially proposed in 2029** according to revised plans for the link published by the London Mayor. Changes to the line between south west and north east London include extending the northern branch to New Southgate.

**Edinburgh’s tram service opened on 31 May** and took 21,000 customers on it’s first day. The 14km route has taken twice as long to build as originally planned and the network has halved. A judge-led public inquiry is to be held into the Edinburgh trams project to investigate delivery of the over budget route.

**New HS2 chief executive and former Network Rail boss Simon Kirby** has announced the appointment of Network Rail’s Thameslink director Jim Crawford as HS2’s programme director for phase one.

**HS2 chief executive Simon Kirby and chairman David Higgins** are two of five recipients of Network Rail year-end bonuses of 12.5% of salary (around £50,000). Awards have been cut because of mixed results during the year – maximum possible was 60% of salary. Group finance director Patrick Butcher, managing director network operations Robin Gisby and group strategy director Paul Plummer also received the bonus awards.

**The new Thameslink, Southern and Great Northern rail franchise will be awarded to Govia Thameslink Railway Ltd.** The seven year franchise – the largest ever let in terms of passenger numbers – will open up new routes across London and improve services to many destinations.

**St Pancras station in London and Grand Central Terminal in New York** – two of the world’s most iconic railway stations – have signed a formal partnership designed to help share best practice.

### BUSINESS

**Laing O’Rourke appointed Buro Happold chief executive Paul Westbury as group technical director.** Buro Happold has appointed Roger Nickells as chief executive officer and Oliver Plunkett as Middle East managing director.

**Business Secretary Vince Cable is proposing new measures to help smaller firms get paid on time** including requiring larger firms to publish information of their payment practices. Government will work with the Institute of Credit Management to strengthen the Prompt Payment Code and to increase accountability of signatories.

**Balfour Beatty announced a record £1bn spend with SMEs across the country,** the largest ever by a construction contractor. It has also sold its 50% interest in the University Hospital of North Durham PPP project and its 100% interest in the Knowsley Building Schools for the Future (BSF) project to Dalmore Capital for £97M.

**CBI’s latest quarterly Service Sector Survey has revealed growing optimism,** business volumes rising briskly and firms taking on more staff. In the three months to May, firms were increasingly confident about the business situation, with optimism rising at the fastest rate since the start of the survey in 1998, while business volumes rose again, marking a full year of growth. The survey of 151 firms also revealed that companies have continued to take on more staff.

**Seven out of 10 construction firms in Scotland are planning to take on apprentices** as industry confidence continues to rise, a survey has found. The latest Scottish Construction Monitor found 69% of firms surveyed expected to recruit



apprentices in the next 12 months. This compared with 60% over the past year.

HOUSING

Existing towns and cities should be expanded and the cap on some councils’ borrowing lifted to allow more homes to be built, Sir Michael Lyons, who is overhauling Labour’s housing policy, has told the Guardian. Sir Michael also said that protracted delays in the release of land were the single biggest cause of Britain’s housing crisis. His inquiry’s first conclusions are due out in September.

The HBF’s latest Housing Pipeline report says that the moving annual total of 177,731 new homes with planning permissions in the 12 months to Q1 is the highest level granted in 12 months since 2008.

Redeveloping existing NHS buildings to include apartments above the service buildings could provide 77,000 new homes in London, WSP has said. This would represent almost 20% of the 400,000 homes needed in London in the next decade. WSP’s estimate is based on its analysis of 79 existing NHS buildings in London, allowing for 100m² per apartment and using a mixed height overbuild development strategy, with a combination of six, 12, and 18 storeys.

Governor of the Bank of England Mark Carney has warned that the housing market poses the biggest risk to Britain’s economic recovery as a shortage of new homes drives up prices. “The issue around the housing market in the UK...is there are not sufficient houses built in the UK,” he said. “(There are) half as many people in Canada as in the UK, (but) twice as many houses are built in Canada every year than in UK.”



Consultants prepare for boom in contaminated land services after new loans for infrastructure amounting to £400m were announced by George Osborne in his Mansion House address to support development of 30 new housing zones on brownfield land.

Tighter lending is reducing home buying says the latest residential market survey from the Royal Institute of Chartered Surveyors (RICS). Demand in London fell during May, the first decline since June 2012.

The Green Construction Board is hosting a free seminar on 3rd July on how innovative thinking around zero carbon housing can lead towards a future of sustainable homes that promote energy efficient lifestyles. The free seminar includes a guided tour of the Nottingham University Creative Energy Homes Project.

ENERGY

A 67 turbine wind farm above Loch Ness has been given the go ahead by the Scottish Government. SSE Renewables is to develop the Stronelairg project next to its Glendoe hydro electric scheme.

Cuadrilla has submitted an application to drill, hydraulically fracture and test the flow of gas from up to four exploration wells on a site just outside Blackpool. Environmental statement for the planning application has been produced by Arup.

Europe will need to tap more diverse sources of gas and develop increased supplies of shale gas within

the continent, according to a new energy security strategy unveiled by the European Commission.

There are between 2.2bn and 8.6bn barrels of shale oil in the Weald Basin of Sussex, Hampshire, Surrey and Kent according to a new report by the British Geological Survey. But BGS says there is no significant gas resource to frack. Also last week Government proposed that shale oil and gas companies are granted access to land below 300m from the surface. The companies would pay £20,000 to those living above the land, it suggested.

Two gas fired power station projects from Watt Power have been accepted for examination by the Planning Inspectorate. One at Hirwaun near Aberdare in South Wales will generate up to 299MW and the other of the same capacity is at Eye in Suffolk will require a Development Consent Order from the Secretary of State for Energy and Climate Change. Target date for operation of the £200M projects is 2018/19. Peter Brett Associates submitted the applications.

A new poll suggests that the number of people in favour of shale gas extraction has fallen to 49.8% according to University of Nottingham.

This is the lowest number in support of the technology since the university started its poll in 2012. 31.4% were against and 18.45 undecided in a poll of 3657 people.

Plans have been put forward for what is claimed to be the world’s first array of floating wind turbines off the Aberdeenshire coast. Kincardine Offshore Windfarm Ltd – a joint project between Pilot Offshore Renewables and Atkins – plans to put up eight turbines 16km off the coast. It says that placing the turbines on semi-submersible platforms would cut construction and installation costs.

A report from the Global Sustainability Institute claims that that Britain will have run out of oil, coal and gas in five years. Shortages would increase dependency on Norway, Qatar and Russia, it said, urging a new Europe wide drive toward wind, tidal, solar and other renewable sources of power. According to the report Britain has 5.2 years of oil, 4.5 years of coal and 3 years of its own gas remaining.

National Grid has reported it is preparing to start talks with around a dozen customers to encourage them to sign multi year deals under which they would have their grid supplies cut off at winter peaks in return for discounts on bills.

FLOODING

Flash flooding could increase dramatically by the end of the century with rainfall hitting 30mm in an hour, the Met Office and Newcastle University researchers say. Research based on a new computer model suggests that there could be five times the number of “extreme rainfall events” per hour, under extreme warming projections.

Somerset County Council has revealed how it will spend some of the £22.3M of funding given by Government

to repair flood damaged roads. The authority is to spend £4M on raising the A372 over the river Sowey, £1M for a deep clean of the drainage system and verges, £750,000 to raise the road into the village of Muchelney and £270,000 to study raising other roads in the area.

PROCUREMENT

Competitive bidding for local government transport funds could result in wasted expenditure on unsuccessful bids and could favour better resourced authorities, the Commons Transport Select Committee has said. Strategically important transport projects could end up not being funded if they do not deliver immediate benefits for Local Enterprise Partnerships or local authorities, it has warned in its report Local transport expenditure: who decides?

Government has published the Major Projects Authority’s second annual report into the performance of 199 major projects with a forecast lifetime cost of £488bn. The report notes that 47 new projects have entered the MPA portfolio. It also says half of the civil service project leaders have attended the Government’s new Major Project’s Leadership Academy. The result is that while in the past more than half of project reviewers were consultants, that figure fell to 13% in 2013 through developing in house skills.

INTERNATIONAL

The construction of a new railway bridge between Russia and China will begin in the next few months with completion targeted for 2016. The bridge will cross the Amur River and will shorten the journey between the two countries by 700km. It will also facilitate a new export corridor for gas and oil fields being developed in Siberia.

Russia has engaged two Chinese firms to expand Moscow’s subway. Developer Mosinzhproekt signed a deal in Beijing with China Railway Construction Corporation and China International Fund to build a 15km south western metro line.

Russia has signed a \$400bn deal to supply gas to China for 30 years. Chairman of Russian state giant Gazprom Alexey Miller was reported as saying the deal was a black moment for Europe. He told the St Petersburg Economic Forum: “The global competition for Russian gas resources has started. We have untapped the Asian market and this is going to have an impact on European gas prices.”

AND FINALLY..

Industry experts recognised by Queen in 2014 birthday honours include a Knighthood for former Arup chairman Philip Dilley for services to the profession, CBEs for Richard Coackley of URS and Valerie Todd of Crossrail

The first plastic banknotes in Britain will be introduced in Scotland next year and celebrate Forth Bridge builder Sir William Arrol. The £5 notes will be issued in March 2015 to coincide with the 125th anniversary of the rail bridge.

New mapping has revealed that London’s centre is 900m to the east of the plaque that marks it in Trafalgar Square. The new geographical centre of London is an iron bench in front of King’s College in London.

BRE Global has announced the launch of a new BIM Level 2 training and certification pathway for business that goes live on 1st July. Delivered on site, it is designed to help companies provide evidence that they have the policies and procedures required.

INTERVIEW: Cameron Cromwell, managing director, infrastructure, Capita



Cameron Cromwell is Capita’s new managing director for infrastructure. He joined the firm in January from Jacobs where he was executive director of operations – infrastructure and before that he was at Morgan Est (2008-09) and head of programme delivery at the UK Atomic Energy Authority (2005-08).

After six months with Capita, what are the big business challenges? In simple terms it’s very much about growth – organic but through acquisitions as well. Acquisition is perhaps the easy way but how long do you wait for the right thing to come along? The strategy must therefore also have a plan for organic growth and that is about recruiting the right people and building the right relationships. It is a long game.

Is the future about doing more things or doing different things? Certainly it’s about doing more. But it’s also about doing different things. Traditionally Capita has been more project focussed and it has a great capability of selling itself on the big projects. Where we want to go is to look at more frameworks and more towards a portfolio that has a blend of partnerships with client, frameworks and projects.

So is the future more about asset management than new build? It’s both. In my particular area we will be focussing on frameworks, for example the Highways Agency’s collaborative design framework, working with contractors – and we do need to be better at working with contractors – on the ASCs

(Asset Support Contracts) as well as the professional services framework for TfL. So it is getting on those frameworks for clients which is important.

What are the challenges? Our first challenge is that we are not big enough in water or environmental. We have some very good relationships with water clients and we do a lot of waste water work with for example Scottish Water. But we are not big enough.

Are you now seeing the upturn in the market? Budgets are increasing and while there is an increase in spend planned it is so far slow to come out. All the talk is that it is happening and the money is there – but in reality in many sectors nothing is really coming through yet. It is a worry for the whole supply chain. But there is a bow wave coming so how do we position ourselves to win that work when it comes?

You talk about needing the right staff – do the right staff exist? We will have to hire some people and recognise our talent. We have identified some people who are ready to move back to the UK from say Australia or Middle East. It is about matching the right people to the opportunities. We have had some really good appointments recently.

Q: What does success look like? We will certainly be larger and getting a good return for shareholders from a client base that trusts respects and values the Capita relationship. Not more relationships but better. I can see absolutely no reason why we couldn’t be two or three times larger than we are at present.



Fiona Woolf,  
Lord Mayor of London

# Tomorrow’s cities – the global opportunity

This year I have devoted my Mayoralty to the theme of Tomorrow’s Cities, focussing on the vast challenges an increasingly urbanised society faces as we travel further into the twenty first century.

Interest in cities, infrastructure and sustainability is very pragmatic, as it is linked to an issue that all cities face – dynamic change

The last 50 years has seen a revolution in the way we live, the way we work and the way we communicate, and the rate and pace of change is accelerating. Cities are at the very heart of this maelstrom as they are machines that suck in talent and energy and pour out economic activity, innovation and information.

However, if a city wants to continue to attract business, if it wants to continue to be a mecca for the brightest and best, it needs to think beyond tax law and think about what makes the city a place that people want to live, work and do business in.

In London we realise that in order to maintain the City’s competitiveness we not only need to ensure the quality of the physical environment, we also need to think about the arts offering, about education, about green spaces and about transport systems.

The latest estimates are that by 2050 there will be over 9bn people on the planet and the majority of these will live in cities. As world cities expand, housing, energy, sanitation, water, transport, health and education services will all require substantial investment. Cities which do not rise to rise to this challenge will fail.

Even before the economic crisis of 2008, about one third of all the world’s city dwellers lived in favelas and shanty towns, slums which will grow in size by one billion people over the next twenty years. This growth is not restricted to the booming cities of China, India or South America as right here, in London, we will face a population rise of 3M by 2030.

But if the scale of the challenge is immense, so is the scale of the opportunity.

Make no mistake, the three titans of scarcity, supply and demand indicate that this market will be the biggest the world has ever seen. I believe we are in the throes of a revolution. A revolution in how we make profits, and a revolution in how we secure the future of planet and people, and London is in the perfect position to take full advantage of these opportunities as they arise.



George Hutchinson,  
partner, StockWell  
Communications

# Maintenance – a price worth paying

Take the following two statements:

*We live in one of the richest countries in the world, in general people have a great quality of life, are better educated, have better services and will live longer.*

*Our population is getting older, our country is overcrowded, we are burdened by debt and we have to compete with newer, younger, hungrier economies.*

Depending on your outlook, you might agree more with one of the statements more than the other. But the second statement is a far more conducive call to action – “something must be done”. And we live in a world where the agenda of the shrill is the agenda listened to.

This is our challenge because our infrastructure works really quite well. For the majority of the time our lights stay on, our trains run on time, our motorways flow freely, our planes take off on schedule, our taps turn on and our networks are fast.

This is an incredible achievement, yet it also harms the industry’s case for the status quo, let alone when it ask for more. We know that just maintaining all of the above takes billions of pounds and the work of hundreds of thousands

of committed and skilled individuals working day and night.

An army hidden from sight keeps our infrastructure going and keeps us safe. During my time at Tube Lines, friends never asked how we found the time to maintain the Tube? Rather, the most frequent question was why the Tube, inconveniently, didn’t run all the time?

And, it is this lack of understanding, awareness and urgency that damages the industry when it makes its case to the wider world for current spending and about future priorities. This industry has become hugely adept at making things work without fuss or bluster and the consequence rebounding.

If the outside world doesn’t ever consider the work that goes into maintaining our assets, they will never get there emotionally.

The answer has to be more fuss, bluster and more of a spotlight -maintenance rebranded to tap into our basic tendency that values the negative more highly than the positive.

We live in an emotional news driven world, and as such we must have our maintenance call to action. The industry needs to get better at shining a light on what it takes to keep everything going and the unsung heroes that keep us safe.



Sir Peter Luff, MP for Mid  
Worcestershire

# Flash flooding is inevitable - plan now

The Met Office has now warned us that there could be five times the number of ‘extreme rainfall events’ which could cause severe flash floods in areas across the UK. To say this is unwelcome news would be an understatement.

Those whose properties and businesses were devastated as a result of the flooding at the end of last year and the beginning of this year, will be very concerned to think that they could be hit by flash floods in the future. Indeed, communities that might have narrowly escaped flooding in the past could now be vulnerable.

Although this is only one prediction about our future weather patterns, what we can be certain of is that climate change is real and the British weather is becoming much more extreme. We need to be prepared should the worst happen.

Properties that are at the highest risk of flash flooding must have the necessary barriers and protections to ensure that if a flash flood were to hit then the contents of the property is secure.

Individuals must take the lion’s share of responsibility for protecting their homes but the Government needs to bring about policy that helps individuals to do this.

What the Government must do is encourage localised solutions, as

different areas will require different flood defences and support and thus the advice and guidance will need to be tailored appropriately. UK Flood Barriers, in my constituency in Droitwich, are promoting the concept of a Flood Advisory Service which will do just that.

This service brings together the expertise of both private and public flooding organisations to work out the best solution to alleviate flooding, support victims and promote economic growth in that particular area. The key is the local aspect of it though, as this will ensure that the solutions are right for the community, with the community at the heart of its decisions.

The Repair & Renew Scheme, to provide flooding victims with up to £5000 pounds to help restore and then install defences for the future, that the Government introduced after the recent flooding episodes was very welcome. But, looking forward, it is much more cost effective to ensure properties are protected in advance of flooding rather than after the devastation of a flood.

We know that the weather is becoming more unpredictable and so we have no excuse to leave properties unprepared for this extreme weather.



Mark Whitby, director  
Davies, Maguire + Whitby  
and Whitby & Mojaher  
Middle East

# History for engineers - vital to our future

My Twentieth Century Society magazine arrived today, a coffee table quality magazine of a society that celebrates and campaigns for architecture and design from 1914 onwards. In the magazine are details of recent listings and, more critically, news on campaigns the society is supporting for the listing of threatened buildings.

One of the society’s visits this summer will be to the grade 1 listed wind-tunnel building at Farnborough. Not everything they like to celebrate is architectural, they even ran a series of lectures last winter on 20th century engineers.

What is interesting, as an engineer, is how whilst, for architects, history is a backbone to their profession and an academic subject in its own right, for engineers it hardly matters. Nowhere is engineering history taught and certainly there is little appetite for it as an academic subject.

The case is that engineers are about the future and certainly the past should not be allowed to get in the way of progress. As a consequence there is no need to appreciate the legacy laid down by our predecessors.

But is this how engineers really feel about their heritage? Sir Neil Cussons, a former chairman of English Heritage, in his defence of Stephenson’s heritage in

Manchester, likened the UK’s industrial heritage to the pyramids of Egypt or temples of Greece, making the case that in terms of modern world as we know it, it started here.

Looking forward I can imagine that our engineering heritage may be appreciated more and afforded greater protection, but currently as a profession we are at best careless and at worst delinquent. It is a shame that as engineers we should stand to one side, leaving it to architects and historians to describe what it was we achieved and a travesty that we stand aside when our engineering heritage is threatened.

Behind many of the artefacts that constitute this history is the potential to see into the minds of the engineers. Their best and worst moments are on record. These are not just great engineering objects, they are testaments to vision, collaboration and above all tenacity. It has to be that as engineers we are best placed to value this and perhaps society would value us a little more if it were we who made the case and told the story.

*Mark Whitby recently joined with English Heritage as a lone voice of engineering objecting to Network Rail’s plans for the Ordsall Chord scheme in Manchester.*



**Steve Elliott**, Britpave General Manager

## Sharing knowledge will deliver the infrastructure promise

Our global competitors continue to set the example for infrastructure funding. In Canada, pension funds are invested directly into infrastructure reducing the reliance on bank finance. In Australia, the government shares refinancing risk to allow short-term bank lending during the construction phase.

Meanwhile, Germany and Brazil, among others, have state-owned infrastructure banks that lend to projects. The UK is the only G20 country that does not offer tax relief for infrastructure investment in buildings and structures.

It seems that the government is recognising that something has to change. New funding announcements and prime ministerial photo-opportunities at major contractors underline the central role that infrastructure investment plays in the government's economic strategy. Recent announcements have pledged £36bn for over 200 projects during 2014/15. This announcement follows the 2013 Spending Review which saw the Treasury commit to invest over £100bn for specific projects in the next parliament while the National Infrastructure Plan outlined £377bn of public and private sector investment.

However, before we start to believe that the UK is on the verge of a golden age of infrastructure, we must remember that

announcements must be turned to action.

This is why the recent assurances from Lord Deighton that the 2015 General Election will not stop infrastructure investment, underlining government focus on delivery, are so warmly welcomed. There have been too many false dawns in the past.

The need to increase infrastructure investment is set against a background of decades of under-funding together with government's continued determination to balance the books.

This means that if infrastructure investment is fulfil its potential then in addition to government commitment, the construction industry must play its part. It must deliver infrastructure solutions that are cost-effective, offer long-term performance and durability and require minimum maintenance. We all need to work together and share information in order to achieve that.

As the industry focal point for cementitious infrastructure, Britpave, through its sector specific task groups, can help and is developing a range technical and best practice guidance to promote efficient and cost effective infrastructure solutions.

[www.britpave.org.uk](http://www.britpave.org.uk)

**Graham Dalton**, chief executive, Highways Agency

## Challenging but exciting times ahead in highways

Earlier this month an Infrastructure Bill was laid before Parliament, and all being well will be passed into law early in the new year. It is a huge milestone for transformation of the Highways Agency from an executive agency of government into a commercial, dynamic and high performing company. It means this ambitious change is for real. This time next year the as yet unnamed new company will be up and running.

What does this mean for our suppliers – some of the UK's best consultants, contractors and specialist sub-contractors?

Firstly, it means a growing market with good visibility of forward workload. It means being part of an innovative infrastructure supply chain, developing technical, commercial and project management approaches that will transfer to other sectors and international markets. And it means being part of a collaborative and cost efficient sector that genuinely puts the customer first.

The response from our suppliers has been encouraging, both formally from tenders and informally in our day to day dialogue. I have talked with a good few firms keen to break into or return to the highways sector, and the promise of a more predictable workload is attractive.

I have a great leadership team and our

absolute focus now is on preparing for incorporation and building a constructive but different relationship with our funder and sponsor – the Department for Transport and HM Treasury. We have to do the administrative tasks to operate under a new identity. More importantly, we have to build a dynamic business that is centred on customer service, innovation and excellent value for money.

The challenges are many. We have to continue to operate the network and deliver investment while managing the change. The appetite for the pace of change, for a new collaborative relationship with LEPs and local authorities, is huge. Government and our customers want to see an immediate difference – yet we know that a big business working in a big infrastructure sector is a slow ship to turn.

Then for us and our suppliers, there will be the challenge of genuinely independent scrutiny, from a cost monitor and from a road user watchdog.

I have no doubt that they will both be open, honest, and above all demanding in setting out where we need to deliver a better service more efficiently.

This is a really exciting time for the highways sector. It isn't going to be easy. But it really is going to be fun!



**Bob Reynolds**, partner at Odgers Berndtson

## Senior managers are ready for infrastructure challenge

Much has been written about the need for a long-term UK infrastructure plan which would not only serve society's needs, but also provide some certainty and continuity for the UK construction industry supply chain.

The good news is that if such a plan was implemented, finding the senior management talent will be no problem.

Ten years ago, in what we might refer to as the “pre-Olympic” era of UK programme management, the talent pool of large-scale project and programme managers who could point to a portfolio of successful projects that they had completed on time, on budget and to specification, was spectacularly small.

Compare that with today's situation where there has been enough proven, home-grown talent in the pool to supply leaders for several major programmes simultaneously, including Crossrail, HS2, Network Rail and Thames Tideway Tunnel;

with plenty in reserve for Hinkley Point.

It is encouraging to see the strength in depth that this new generation of programme leaders brings to the table - all well equipped with the modern tools of the trade. They are well-schooled in project architecture options, often favouring integrated teams with an embedded programme delivery partner.

They understand the technical/commercial aspects of setting up collaborative forms of contract, and establishing effective programme controls and risk management tools. And they understand that the “top job” is as much about managing stakeholders as it is about managing the programme.

I am not overly optimistic that the UK's infrastructure log-jam will unblock any time soon to yield a flowing pipeline of new projects. But I am optimistic that if it does, the senior talent pipeline will be up to the challenge.



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

## Define common meanings to solve ‘wicked problems’

Nowadays the mere use of the term SuDS in an article title causes concern.

Indeed the ‘movement’ itself lurches forward and backward with alarming regularity – the latest from Defra reporting yet more delays in the required implementation.

For those with a formal business education the whole topic is well described by the notion of ‘wicked problem’ – those that we are all increasingly involved in given the potential for complexity introduced by communication ease.

A central theme in arriving at tenable solutions often involves language itself, more specifically creating a common meaning, and in the case of SuDS updating ‘legacy’ meanings that might otherwise hinder progress.

Fortunately hints on ways forward can be obtained from the social science

academia that relates to ‘communities of practice’ that SuDS has grown from. To achieve its paradigm shift it must acknowledge not only the need to define its language but moreso modify it – ask a group of SuDS interested parties what is meant by treatment train and you are likely to get different answers. And Herein lies the problem. Not only is there no common definition, the once useful legacy meanings might actually perpetuate polarisation.

The wider European context lends a hand – Germany has sensible and achievable test protocols for manufactured products – the DiBT standards present a challenge, as they should. More importantly despite over a decade of development – they remain fluid. Just as any solution to a ‘wicked problem’ should.



**Richard Threlfall**, partner KPMG

## A spirit of activism drives changes

The construction industry is in a very exciting place right now and there are five key reasons to feel optimistic: the need for infrastructure investment is understood; the value of infrastructure is better appreciated; the general economic uplift is increasing demand; there is a pipeline of work and; there is a spirit of activism to drive changes.

Beyond that there is revolution that is about to engulf the industry comprising Building Information Modelling (BIM), offsite and modular construction, greener and more sustainable construction and information technology that will unite the supply chain.

We are heading for a younger, more diverse and ambitious industry.

Going forwards there is going to be a different kind of industry. What really strikes me is the universal desire for change and the desire to see that change happen as rapidly as possible. My spirit of optimism is driven by this desire.

We need to change not only the industry but also the image of it that we all portray. We need to believe in this industry as a key driver of economic growth. We need to believe in this industry as the creator of quality of life. We need to believe that this is an industry capable of being at the forefront of technology.

If we can do all that, then we will attract the brightest and best of future generations into this industry.

# Planning for growth

London is preparing for massive population growth. Transport for London's managing director of planning Michèle Dix is masterminding efforts to ensure transport infrastructure can cope with 11M people by 2050. *Antony Oliver* reports.

**T**he numbers are scary. London is currently home to around 8.3M people who rely on the capital's rail, underground and road networks to make some 27M journeys a day.

This population is predicted to grow to over 10M in the next 15 years and then to over 11M by 2050, a massive 37% increase as London continues to drive the UK's economic fortunes.

With this growth comes huge pressure on the capital's transport networks, the vital arteries that enable the capital to function as an effective business centre and focus for culture and leisure and tourism.

"We can cope with growth to 10M people," explains Michèle Dix, Transport for London managing director of planning. "We have planned for that increase on the transport system with schemes such as Thameslink, Crossrail and upgrades to the Tube. But what we have to start to plan for is the next phase because we can't get beyond 2030 [with the current investment]."

Hence the work by the Greater London Authority with support from Transport for London to produce a 2050 Infrastructure Strategy.

Dix is very clear that growth is good for the capital and good for the UK because of the jobs that this growth creates. People, she insists, are not choosing to come to London over other UK cities. The competition is with other global cities.

"Investment in London is justified. If you think that there are 27M trips on London's transport each day and



**"We can cope with growth to 10M people. But we have to start to plan for the next phase because we can't get beyond 2030 [with the current investment]."**

that 70% of rail travel starts or ends in London, then London needs more investment because we are playing catch up from the years of under investment," she says.

And while investment in the transport system is important, finding places for this population to live is

increasingly becoming the critical factor explains Dix.

"Transport has a significant role in delivering the housing that the capital needs," she says. "It is really about utilising existing transport nodes and looking at the transport schemes that allow new developments to happen. We are looking to densify existing areas of London rather than sprawl but we are also looking to create new nodes because we have to look to how we pay for the development."

For example, developments such as that planned at Old Oak Common in west London are a very big opportunity for creating jobs and houses. For Dix the key is how to make it into a transport hub in its own right by connecting it in

to the Underground, Crossrail and the West Coast Mainline.

Yet while overground rail and the underground network is critical to the capital's transport system. Dix also highlights the fundamental need to also invest in the massive road network to ensure that it adapts to changing needs and, alongside buses, taxis and cars, also accommodates increasing numbers of cyclists, pedestrians and, of course, delivery vans.

"We have had a massive increase in our business plan for roads and have some £4bn more to spend to improve the urban realm by 2022," she says. "Because of the growth in use something else has to be done (to meet the growth predictions). We need to either spread that demand across the day through more night time deliveries or rearrange the demand in other ways."

Congestion charging is, of course, one way to manage demand, and a way that is already in place in the capital. However, Dix describes this as "a tool of last resort" highlighting that it not politically very popular. More likely are measures to encourage deliveries outside rush hour.

The move towards electric vehicles and new technology is clearly also on the radar as Dix plans towards 2050. In particular work is on-going to see if this can be combined with specialist tunnel infrastructure to create a 21st century goods delivery network to update the current Post Office tunnel network.

"You could have autonomous goods vehicles in tunnels specially designed for them," she explains. "We are looking at the designs now and how different types of technology would bring different savings."

Of course finding the right strategies for funding future investments is also critical and Dix explains that it is discussing the current "shopping list" with London First and the business community to see how the increased value generated by investment in transport can be captured and ploughed back in.

"We are looking at whether there are new mechanisms that we can use to bring funding in – for example can there be some devolution of taxation to the capital such as Stamp Duty or a portion of council tax," she explains. "But we have to do this carefully as we do not want levies to make projects unviable."

**"Transport has a role in delivering the housing that the capital needs"**

## The airport hub expansion debate

Transport for London is supporting the London Mayor Boris Johnson's plans to replace the Heathrow Airport hub with a new airport in the Thames Estuary, plans which are currently being considered by the government's Airports Commission under the chairmanship of Sir Howard Davies (see page 12).

Having failed to make it onto the Commission's shortlist of schemes last December, options in the Inner Thames Estuary have been developed and are now being assessed by Davies' team ahead of a decision in September over whether or not to include the scheme on the shortlist.

"The Mayor has made it very clear that if the Davies Commission supports Heathrow he will continue to object to it," explains Dix with clear resolve to ensure that the radical scheme is not overlooked.

"We are hopeful that [Davies] will put the Estuary option back on the shortlist," she adds. "And if it is not then we will continue to make the case."

## Dix: Five key transport projects:

**1** Complete the work to upgrade the Tube, Crossrail and Thameslink as these must be in place to cope with the capital's growth to 2030.

**2** Implement the vision for cycling improvements in the capital to make it safer and more pleasant to cycle around London.

**3** Progress Crossrail 2 – it is essential that this is in place by 2030 to cope with the demand that expected beyond this date.

**4** Press ahead with plans for new river crossings – Silvertown and crossings to east are vital to get residents to the new growth areas east of London.

**5** Gospel Oak to Barking extension to Dagenham – this will underpin the development of 11,000 homes and by extending the Overground can be achieved for £150M rather than the original £700M price tag to extend the Docklands Light Rail. TfL will be going back to government with new proposals in the Autumn.

## First 100 years of women in transport

One hundred years ago, as young men headed from London to serve in the trenches of the First World War, women for the first time found themselves working in the transport industry keeping the capital moving.

The lives of these women, who were employed to do the jobs previously occupied by men – as bus conductors and mechanics on London buses and as porters and guards on the Underground – are celebrated in "Goodbye Piccadilly", a new exhibition at the London Transport Museum in Covent Garden.

As one of the most senior transport professionals in the UK, Michèle Dix points out that much as changed in terms of equality in the transport workplace.

"There are many more women coming into the transport sector but there are still fewer at senior level than you would like to see," she said. "We have got to change this. We need more role models and more women spokesmen."

Throughout her career in transport, Dix has managed, with support from here employers at Halcrow and then Transport for London, to balance career responsibilities with the demands of family life through both part time and job share arrangements.

Flexibility and trust, she said, was crucial on both sides of the employer/employee relationship.

However, Dix also highlighted that too often she still saw women who missed out on bigger roles through not being as assertive or confident about their abilities as their male peers.

"Young women in transport need to be more confident of their abilities," she advised. "Work hard but be confident that you can actually do the job well."





# No new runway until 2020

Any decision on new capacity will take at least a year following a General Election, reports *Antony Oliver* who hears airport rivals set out their surface access plans.



Planning consent for new airport runway capacity in the UK is unlikely to come before March 2020 despite government efforts to streamline the controversial planning process using Sir Howard Davies' Airports Commission

Speaking at the Runways UK Surface Access debate this month, Oliver Mulvey of the Airports Commission Secretariat confirmed that final go-ahead for any new airport expansion would take at least a year following publication of the commission's final report after the General Election in 2015.

"If the government was to decide in principle very quickly that it wanted to act on our recommendation we think that it would take about a year from that decision in principle to produce a national policy statement," explained Mulvey.

"Following that there are two potential pathways down which to move," he added. "The first is a planning application under the 2008 Planning Act the other is the Hybrid Bill route. Both have their own risk and costs associated with them. Which is the most

**"If the government was to decide in principle very quickly that it wanted to act on our recommendation we think that it would take about a year from that decision in principle to produce a national policy statement"**

**Oliver Mulvey,  
Airports Commission**

appropriate would depend on which recommendation was chosen. All our dates show the middle of the next decade as the earliest a new runway could open."

The knock on effect, added Pinsent Mason's partner Robbie Owen, was no planning consent was likely until 2020 at the earliest, pointing out that the on-going Commission work to assess schemes was still very much only a preplanning process.

"If government agrees with the outcome then we will move to the proper planning process," he said. "And if a national policy statement process was kicked off in, say, Spring or Summer 2016 you might just about get consent for a new runway by March 2020 before the election in May."

Former transport minister Steve Norris also warned that delaying a decision until after the election was a mistake saying that even if government did decide to act on the advice of the Commission – not due until after the 2015 election – it was unlikely that MPs would be able to approve this policy before the middle of the next Parliamentary term.

"We will see an answer [from government] at the earliest mid-2017," said Norris.

"The report will not appear until after the election and will then have to be considered by the department," he added. "It won't be covered by the 2008 Act and Infrastructure Act requirements so ministers will be able to take as long as they want to make a decision which I suspect means that the earliest it will emerge is the first quarter of the following year. Therefore a decision will not follow at least before the first half of the next parliament."

"It's reasonable to ask government to make its mind up as it then allows a national policy statement to actually be approved by parliament," said Norris, agreeing that even after reaching a decision, forming that national policy statement could take perhaps as long as two years.

However, Norris was less certain about whether the Davies Commission process would actually be able to deliver a decision.

"If Davies gives government the answer that it is looking for it will welcome it and might even do something about it," he said. "If it give the answer that it is not really looking for then it will welcome it but the reality is that government will shelve this if it believes that the result is politically undeliverable."

Norris described the estuary solution is "a brilliant answer to the wrong question" and said that he feared that expansion at Heathrow could be simply politically undeliverable.

"For any government to agree to further development would expose itself to being indifferent to the environmental problems and the issues around more overflying – it would be a brave government that did it," he said. "If there is a virtue in the Gatwick proposal it is that it just has more actuals in it and fewer imponderables."

## Airport expansion contenders set out their surface access options

### Thames Hub

"We have to look at the whole of the South East capacity not just central London," said Foster and Partners' Huw Thomas at the Runways UK debate. "How we grow to the east is our key task. Make no mistake we will have to because that is where people will live."

Thomas set out a range of surface access options to a new hub airport on the Isle of Grain including the use of the existing classic railway, new high speed trains and local services. Together these would provide some 17 trains an hour and 11,800 passenger journeys in each direction plus new road, park and ride capacity and freight transport solutions.

### Gatwick

Head of Airport development Julia Gregory set out Gatwick's vision to boost public transport access to the airport from the current 45% of passengers to 60% by the time a second runway was operational in 2021, putting some 15M people within 1 hour of the airport with a tripling of rail capacity.

The new "Gatwick Obviously" surface access strategy she said would see a new Gatwick Express service on line by 2016 and the upgraded Thameslink service reach the airport by 2018 which, with trains to London every 2.5 minutes and a connection to

175 railway stations, would provide an unrivalled public transport solution.

In addition to the improvement to the hard shoulder running on the M25 and M23, Gatwick has also committed to 100% fund a doubling of capacity at junction 9 of the M23, improving the local road network and provide 9km of new walking and cycle routes or the local population.

### Heathrow

Simon Earles, Heathrow Airport's head of surface access strategy said the airport had listened and engaged with its stakeholders so as to develop a surface access strategy that underpinned plans to expand the UK's premier hub airport.

A doubling of capacity for freight is included in the plans, but passengers are a key part of the Heathrow mix and building on the current London Underground lines and Heathrow Express service, Earles said the airport's plans included increasing from the current 18 trains an hour into the airport to 40 by 2040.

Critically the Heathrow plans also include major changes to the M25 access into the airport with new exit strategies and a new access route to the central terminal area via the south to relieve pressure on the northern entrance.

"A congestion charge is planned to control traffic flows around the Heathrow area – but only if required," Earles said.

### Heathrow Hub

Airports are only as good as their ground transport links, Heathrow Hub promoter Mark Bostock reminded the Runways UK delegates as he set out plans for a step change in access to the UK main hub airport using an innovative northern hub interchange.

The new rail hub would be sited between Paddington and Reading and connect passengers to the airport in five minutes using automated people movers at 90 second intervals. This would avoid the need to create any expensive new direct train connections to the airport from the west to achieve 60% of passengers using public transport.

In addition the scheme would see access from the M25 revamped by removing junction 14 and providing greater capacity exits at other junctions.

"The critical problem is not capacity but weaving traffic on the M25," Bostock explained. "Our solution is to use more dispersed access to the airport and it is a solution that I think has been welcomed by the Highways Agency."

## Future proof Terminal 2B saw first aircraft dock this month

On 4 June a United Airlines plane was the first to dock at Heathrow Airport's completed Terminal 2B. The project is the largest airside construction scheme carried out at the airport, measuring half a kilometre in length and is the latest addition to the toast rack of terminals and piers designed to increase Heathrow's capacity. Along with T2A which is currently under construction, the new £2bn T2 facilities can handle an extra 20M passengers a year.

As a sign of Heathrow's confidence in its future, T2B is something of an iceberg, with much of the £590M investment going into vast underground spaces for future baggage handling schemes and a light rail track transit system to a T2C not scheduled to be built for at least five years. To put the scale of the future proofing in



**The new terminal adds capacity for an extra 20M passengers per year**

context, the basement under the main T2B pier is 360m long, 60m wide and 15m deep.

Contractor for the project Balfour Beatty built the design and build job over five years. Phase one of the terminal opened in two stages through 2009 and 2010 providing six new aircraft stands and enabling the 20ha site to be released for T2B.

Phase two's opening has added another 10 stands plus associated retail space, passenger lounges and departure and arrival facilities. Ten of the 16 stands can accommodate the giant Airbus 380s and on its own T2B will serve over 10M long haul and departing passengers – more than Glasgow Airport.

Architect was Grimshaw, structural designer was Mott MacDonald and M&E consultant was Parsons Brinckerhoff.



# Next big leap for LEPs

Next month £2bn of Growth Deal funding will be shared with Local Enterprise Partnerships whose bids have hit the right buttons in terms of aspirational vision. *Antony Oliver* reports.

In March 2011, as the “worst economic crisis in modern times” continued to impact the UK’s growth ambitions, Chancellor George Osborne commissioned Tory grandee Lord Heseltine to prepare a report on what could be done to mobilise the nation’s businesses behind growth.

The result was the seminal “No Stone Unturned” report published in October 2012. At 225 pages it is a weighty and comprehensive tome, including 89 recommendations and considerable criticism and challenge to the government.

Core to the report’s findings was the need to decentralise local business support and place more funding directly with the local people capable of effecting change.

In its wide-ranging response to Heseltine’s report, Government committed to negotiating a Growth Deal with every Local Enterprise Partnership (LEP), through which, it insists “LEPs can seek freedoms, flexibilities and influence over resources from government, and a share of the Local Growth Fund to achieve their identified growth priorities”.

LEPs have a key role to provide the leadership and to establish a strategic vision of growth across the regions of the UK which lever in funding and support from public and private partners across the each area.

As Heseltine puts it in his report, what is needed is “a very significant devolution of funding from central government to Local Enterprise Partnerships so that government investment in economic development is tailored directly to the individual challenges and opportunities of our



**Devolution of funding to the regions was a key recommendation in Lord Heseltine’s 2012 report.**

communities, and can be augmented by private sector investment”.

Thus over the last 12 months the LEPs have been putting together their Growth Deal bids amounting to substantial amounts of money. Bids are now being assessed competitively by government ahead of funding decisions being made in July. The best will win most.

Funding for these Growth Deals amounts to some £2bn a year, in every year of the next Parliament, drawn from the existing Local Growth Fund, and will be competed for annually by the 39 LEPs across the UK. In addition, up to £5bn of the £10bn identified for 2016/17 to 2020/21 in support of multi-year capital programmes in Local Enterprise

## What is a Growth Deal?

Government envisages that Growth Deals will include:

- greater influence over key levers affecting local growth and freedoms and flexibilities;
- a share of the Local Growth Fund for Local Enterprise Partnerships to spend on delivery of their Strategic Economic Plan;
- commitments from Local Enterprise Partnerships, local authorities and the private sector on their resources and levers for delivery of the Strategic Economic Plans, including through;
  - better use of local authority assets to unlock resources to be reinvested in growth
  - commitments to pro-growth reforms, for example, through local planning reform
  - commitment to collective decision making involving all local authorities within a LEP.

**Assessment of Strategic Economic Plans will be based round three core themes:**

- A – Ambition and rationale for intervention for the local area
- B – Value for money
- C – Delivery and risk

Partnership plans, could also be made available.

Alongside this share of the Local Growth Fund, government has now also given the LEPs responsibility for drawing up investment plans for over £5bn of European Structural and

Investment Funds for 2014 to 2020.

This funding will sit alongside the local Growth Fund to give each LEP, as government explains it, “the flexibility to use their Growth Deal funding on combined or complementary activities”.

So while not perhaps quite up to the levels demanded by Heseltine in his report, which called for up to £70bn of funding responsibility to be devolved to the regions, the amounts available to drive investment out into the regions is now vast.

The “key principle” says Government, is for LEPs to create a partnership with the Government “in pursuit of the shared objective of growth”.

In return, Government said, it expected the LEPs “to demonstrate that they are committed to the growth agenda, by developing ambitious, multi-year strategic economic plans....” and to “prioritise economic development and work collaboratively across the LEP area”.

In a bid to ensure that the impact of these new Growth Deals are clear and long-lasting, LEPs have also been asked to put together so-call Strategic Economic Plans detailing how the investment will unlock and lever in additional funding to support public funding and truly support local growth through innovative planning and investment strategies.

These plans will draw on and variety of funding sources including the private sector, local authority and central funding pots such as the Growing Places Fund, Enterprise Zones retained business rates and City Deals plus the Local Sustainable Transport Fund and match funding from other local partners, such as Housing Associations, universities and colleges.

However, critically government also advises that LEPs come up with “ambitious” plans to make use of surplus and redundant public sector assets.

## What next?

**July 2014** Local Growth Fund offer made to Local Enterprise Partnerships Growth Deal negotiations completed  
**Mid-2014** Spending of European Structural and Investment Funds 2014-2020 begins, subject to approval of the European Commission  
**April 2015** Local Enterprise Partnerships and Government implement Growth Deals

## Q&A with Lord Heseltine



Lord Heseltine is chair of the Regional Growth Fund Advisory Panel and, along with vice-chair Lord Shipley, is advising ministers on which LEPs should receive what money. He talks to Infrastructure Intelligence editor *Antony Oliver* about progress and ambition.

At the recent ACE annual conference Lord Heseltine, author of the No Stone Unturned report, predicted that the outcome of the current Local Enterprise Partnership bidding process would be the big story of the year and “transformational” in terms of regional development

However, he warned that while the amounts on offer were significant they were still not enough and added that most LEPs still had some way to go in terms of delivering truly “aspirational” bids, pointing out that the competitive element of the process was vital to boosting performance.

“The process is in its infancy but central government has to change the means of handing out the money and LEPs have to prove they can deliver,” he said. “Competition is an incredible motivator and introducing it into the public sector is a game changer.”

LEPs, he said, “have to raise their aspirations in my view”, accepting that while there were a number of very organised and forward thinking LEPs, many had work to do to boost the quality of bidding.

**You have been critical of the “aspiration” by LEPs in their bids. Is this changing?**

We are making progress. What industry wants is certainty and that is now happening. The issue is still on what scale and at the moment it is happening on a relatively modest scale but I hope

that we can prove it works and therefore the figures will tend to go up.

**There is a variability of performance and success in LEPs? Do we have the right skills in place in LEPs?**

Every system that you set up will have patchy performance within it – that is the nature of the beast. But this is a competitive process. The best bids will deserve more support and that will produce more precedence and examples for the next rounds which will follow on very quickly. I think the people who don’t win [in this round] will rapidly learn how to get better. There is always a variability in quality but the thing is to get the quality up.

**The LEP process is still quite misunderstood. Are sufficient professionals engaged?**

I think that [professional engagement] will receive a major boost when the first report comes out in the summer. Once people see this working and the ability to influence locally a lot more people will take an interest.

**You say that the London centric nature of development support “very much needs to change”. Why?**

This country was made by our great cities and it is the way in which over the last century London has assumed more and more power that has done so much to diminish the discretion and initiative locally. I am one of many people who want to see that reversed.

**High Speed 2 must deliver regional benefit? Will development corporations such as those you pioneered 30 years ago, help?**

I have no doubt that there is a powerful argument for using development corporations [to help drive the development alongside HS2]. I personally would never have got rid of the London Development Corporation and would have extended its remit. It is a question of judgement about what works and a big part of the discussion with local people about what is needed. What is for sure is that within the Local Enterprise bids, the potential for HS2 is now widely understood.

*To view an interview with Lord Heseltine and his discussion with Antony Oliver at the ACE conference visit [www.infrastructure-intelligence.com](http://www.infrastructure-intelligence.com)*



# LEPs: Changing the game at local level

What makes a LEP successful? Infrastructure Intelligence spoke to members of three of the recognised high performers – Robert Hough, chairman of Liverpool City Region LEP, Chris Webster, director of Greater Solihull and Birmingham LEP and Geoff French, chairman of M3 Enterprise LEP to find out.

## The Local Enterprise Partnership process in general

**To many in the business community the LEP process is something of a mystery. Is that fair comment?**  
**CW:** Business communities are confused, different LEPs operate on different bases, Government encourages this to promote innovation. It is my experience that business expects benefits to be handed on a plate and far too many in our industry take a very short term view  
**GF:** Yes, this is fair comment. A good number of businesses have seen opportunities and have got involved but many more have not (yet).  
**RH:** Each LEP is very different because they need to reflect their local economy and local business base. Also, many LEPs are new – established after June 2010. Our LEP however has existed for 20 years (as The Mersey Partnership). The reality is that the policy agenda that LEPs cover will range from place to place and be complex – and there are lots of businesses out there (37,000 on our patch) so inevitably some will find a LEP a bit of a mystery. Our aim is to be there when they need us.

**There is potentially funding worth £50M a year for LEPs from this round of bidding. Has the process attracted the appropriate level of interest from the public and private sector?**  
**CW:** Our LEP is very aware of the funding available and very keen to bid, I would however say from my perspective Government seems intent on announcing various different funding schemes and then making the rules too complicated to actual make the funding stream deliver. Business is both sceptical and lazy about chasing the funds, I guess the two are related. It amazes me that we don't get chased by more for use of our funds.  
**GF:** Yes.

**RH:** Government has committed to £2bn of funding available for LEPs to bid but mainly from transport funding pots which inevitably mean the 'project' will be sponsored by the public sector. However, we made sure the schemes were ones that will enable growth and over 60 private sector companies provided bespoke letters of support to our Growth Fund submission. We are seeking £250m over a 6 year period.

**How could the local business community and SMEs in particular engage more effectively with their LEPs?**  
**CW:** LEPs need to articulate better the short term benefits such as access to business support and funding, and business needs to appreciate the need to help with medium to long term benefits.  
**GF:** In a perfect world they'd do this through the Chambers of Commerce, the Federation of Small Businesses, the CBI etc. As we live in an imperfect world we also give businesses of all sizes direct access to the LEP.  
**RH:** An SME business is focussed on running their business. When they want some support – we can help. How we are looking to effectively connect with SMEs is through a new product called advicefinder.co.uk which will allow a business, when they need, to enter what support they need and our system will help find that assistance.

**How have you approached the process of engaging the local community in your strategic economic plan and local growth deal?**  
**CW:** We have had many different forums, website, workshops, formal meetings but too often these get drowned in the detail.  
**GF:** The Strategic Economic Growth Plan and Local Growth Deal didn't just land "fully formed" they have resulted from



**Chris Webster**, chief executive of Miller Construction, is director for construction and property at the Greater Solihull and Birmingham Local Enterprise Partnership (GSBLEP).

GSBLEP submitted its Strategic Economic Plan (SEP) to government in April as part of the Growth Deal for the region and outlined 52 priority projects worth a total of £508M over five years and seeks funding of £86.3M for 2015/16.

GSBLEP estimates that its projects will create 41,000 new jobs by 2022, provide 14,315 new homes and almost 2M sqft of commercial floorspace across Birmingham, Solihull, Wyre Forest, Redditch, Tamworth, Bromsgrove, East Staffordshire, Lichfield and Cannock Chase.

**Geoff French**, former Scott Wilson chairman and current president of the Institution of Civil Engineers, is the chairman of the M3 Enterprise Local Enterprise Partnership which covers the M3 corridor through Hampshire and Surrey.

In March M3 Enterprise submitted its SEP, Growth Deal and Delivery Plan to Government setting out a £340M proposal for Local Growth Funds backed by £392M of local funding which together would, it estimates, leverage in some £3bn from the private sector.

Its plan came after over a year's work to develop a strategy and approach to accelerated the provision of 11,500 new homes, 30,700 new jobs and £757M of direct GVA.

**Robert Hough** is chairman of the Liverpool City Region Local Enterprise Partnership and was chairman of the Northwest Regional Development Agency from 2009 until 2012.

Liverpool City Region submitted its Strategic Economic Plan to government in March themed around key strategic projects including a new freight and logistics hub, improvement in the City Centre, access to the Port of Liverpool, funding to create a low carbon region plus a new city region capital investment fund to co-invest in key capital schemes that will deliver jobs.

a process of emerging ideas that have been publicised on our website and with as wide a range of public, private and third sector groups as possible.

**RH:** We use a network of network approach (lots of workshops for representatives of different groups) and also two major consultation events.

**Clearly there are high performing LEPs and others are on a learning curve. What do you think delivers a high performing LEP?**  
**CW:** All LEPs are on a learning curve, they were established without clear roles or even mandates. The smart ones get this, others have just got stuck in the local government bureaucracy.  
**GF:** Consultation and cooperation with others in all sectors.  
**RH:** Key things to have:

- Having the right capability to do what you want to do
- Being focussed – we are focussed on our key sectors and having the right capability sets to support those sectors
- Being private sector led but understanding how to change public sector ways of working

**Given the role that LEPs can play in drawing in private sector funding and creating lasting relationships in the business community, do the LEPs have the right skills on board?**  
**CW:** As LEPs mature they begin to realise the skill and resource levels required. I suspect many involved initially were just more of the same involved in local politics. We have a strong chair and board in GBSLEP. We have more recently got funding to more adequately resource the programmes we are running but we all need to be careful we are not duplicating what already exists.  
**GF:** Yes – although every Board could be strengthened by more good people.  
**RH:** Some will but some may not. We can only speak for our model but it works like this:

- We have a private sector led committee for each key sector – for example, our SuperPORT is chaired by the global logistics director of Unipart and the vice-chair is the commercial director of Stobarts.
- We employ a sector manager who operationalises what the Committee say.
- We have two 'Panel' meetings a year – all businesses in the sector attend.
- Ultimately, we add value to their business – that's why they engage.

## Strategic Economic Plan

**Engaging local public and private stakeholders is clearly critical. What advice do you have to make this process work more effectively?**  
**CW:** Everyone gets confused by too many initiatives and acronyms. We need to simplify terminology and clarify the timetable of potential funds and likelihood of success. Application requirements for many of these funds seems to be too complicated and at times made up as we go along.  
**GF:** Engage as much as possible, we have established a Joint Leaders Board to bring the public sector together, we have had many meetings with the private and third sector but they are more difficult to corral.

**Some areas will potentially receive major economic stimulus via national projects such as HS2. Does that present an advantage or disadvantage?**  
**CW:** Major programmes such as HS2 are a huge benefit. There will often be a mixed view across the LEP on such issues so you can't keep everyone happy and compromise can easily dilute the potential upside for the region.  
**GF:** Neither  
**RH:** We see this as an advantage but also a challenge. We want a high speed route all the way to Liverpool and are actively pursuing such – but we are planning strategic economic plan projects for the next 5 years. Our challenge therefore is to create a socket into which we can plug high speed rail in the future.

**To what extent can the work of LEPs and their strategic economic planning assist the planning of nationally important schemes?**  
**CW:** A major part of the LEP role is to pull people together in the region both cross party and cross function to try to generate a common regional view. Such an approach is essential for any region to make valued contributions to national strategic thinking  
**GF:** Groups of LEPs already come together to consider issues of sub-regional significance – it is these groupings that can identify and lobby for nationally important schemes.  
**RH:** That's a challenge for Government – unfortunately, departmental silos are still the biggest barrier to coordinated delivery.

**What makes your Plan work – what marks it out as aspirational?**  
**CW:** You need some deliverables that can be seen by others. The two major deliverables for my portfolio are the

Enterprise Zone – which includes considerable support to the Paradise Circus project – and a project we have underway to establish common approach where possible to planning and a consistent understanding of the housing needs in the area.

**GF:** Achieving more, and in a more coordinated way than would have been the case without the LEP. The aspiration comes as much from the freedoms and flexibilities we have requested as from the projects we have identified.

**RH:** Our plan is 100% market focussed. We are seeking £52M in transport infrastructure to enable key sites to be developed as part of our 'freight and logistics hub' supporting SuperPORT. We are seeking to enable these sights because we are seeing the market change – the opening of a widened Panama Canal combined with the £340M Liverpool2 Project already underway – means Liverpool once again becomes the logically port of call for trade from the Western Coast of both North and South America while also opening up an alternative trade route to China. The industry is changing and we are anticipating that change and enabling it.

**Local Growth Deal**

**Local Enterprise Partnerships rely on engaging the local business community. To what extents do some regions across the UK with established business communities have an inherent advantage?**  
**CW:** We all have local business communities and some of those are very diverse in many ways. The LEP provides an opportunity to breakdown historical barriers, bring different business communities together on the back of a better understanding of what is best for the region.  
**GF:** Every region across the UK has established business communities, it's just how well those communities really represent the businesses in their area – it's about trying to get to those businesses not previously involved.

**Gaining consensus across the multiple local authorities and stakeholders is a challenge. What advice do you offer?**  
**CW:** Business needs to understand what is the benefit and when can this be delivered. Short medium or long term is often the best criteria to judge the right audience.  
**GF:** Recognise it is a challenge and face up to it, do more consultation/engagement rather than less.



# Advancing BIM towards “Level 3”



Among the many viewpoints regarding a “new level” of BIM aspirations, Bentley Systems's CEO *Greg Bentley* offers a perspective on how and why each BIM advancement can accumulate advantage exponentially.

For context, we conceptualize the many potential advances, in technology and workflow processes, as pushing out a frontier arrayed across two axes (Fig. 1).

BIM strategies support better asset performance through increased depth of information modeling, while also enabling better project performance through extended breadth of information mobility.

BIM “Level 1” design modeling focuses on 3D visualisation to consistently communicate and document designs, reducing errors (Fig. 1).

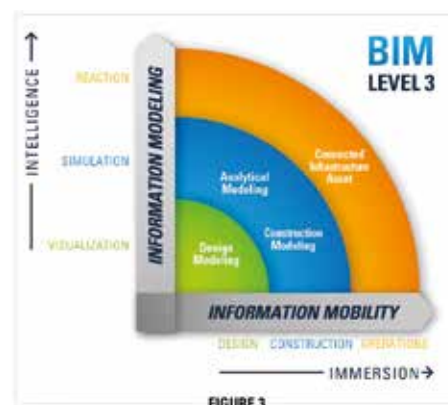
In “Level 2 collaborative BIM” advancements, benefits expand to performance improvements (Fig. 2):

At Level 2, “optioneering” captures the potential of deeper information modeling to simulate a design’s performance, to the extent of assessing trade-offs across disciplines and systems, in terms of cost, time, efficiency, and constructability. In effect, the design is enriched by way of “analytical modeling,” which predicts asset performance – for example, anticipated operating pressures at various nodes in a piping network for potable water supply.

At the same time, Level 2 BIM advances enhance project delivery by broadening information mobility through construction – and throughout extended teams spanning procurement, fabrication, and sitework. For their purposes, “construction modeling” adds in temporary structures like scaffolding and formwork, and detailed construction specs and sequences not explicitly modeled in the design – including, for example, the as-built configuration of conduits, gas pipes, and reinforcing elements within a wall.

In both Level 2 cases, it turns out that Level 1 design modeling contributes substantially toward optioneering and project delivery benefits. By accomplishing analytical modeling and construction modeling through “overlays” referencing (but preserving!) the design decisions, errors are further minimized, and performance improved.

As important as these advancements are in their own right, we can look forward



The BIM journey to immersion.

to a greater magnitude of BIM returns – the aspiration for “Level 3” performance during infrastructure’s operations lifecycle, after construction has realized the physical asset. In this Level 3 vision, assets and their components are networked and connected within their physical environment, providing feedback for operational controls, maintenance, and safety.

In effect, beyond visualisation and simulation, Level 3 information modeling supports “reaction”: enabling continuous real-time decisions for best performance. The infrastructure asset, connected through real-time sensors to an “information-modeled” counterpart, can operate with intelligence.

And for Level 3, it again turns out that the virtual environment, cumulatively enriched from Level 1 design modeling and Level 2 analytical modeling and construction modeling, is essential. The alignment and convergence of the physical and virtual environments can then achieve immersion, where information mobility is perfected through mobile devices serving as cursors into digital “hypermodels.”

These link the accumulated information modeling for an asset within its 3D real-world positioned context, making its intelligence intuitively accessible (Fig. 3).

For real-time data streaming from embedded sensors in Level 3-connected infrastructure assets, Level 2’s analytical modeling provides the frame of reference needed to support actionable decisions. To start with, observed readings can be compared against the benchmark of Level 2 predicted readings – then the analytical models are permuted systematically until varying design parameters appear to fully account for the differences.

Level 3 immersion, for literally “hands-on” access to design modeling and construction modeling intelligence, can even achieve breakthroughs in infrastructure asset safety and resilience. A first responder with a “wearable” display, for instance, could look “through” the positionally aligned and hypermodeled building wall to locate those as-built construction-modeled conduits and gas pipes.

Not only would this timely reveal the immediate risks, but also the potential mitigation strategies – through hyperlinked safety procedures. With immersion, the lifecycle information accumulated and managed through BIM Levels 1, 2 and 3 can become lifesaving!

For all of us, it is exciting to recognise the potential benefits of Level 3 BIM intelligence and immersion. But we can also anticipate that our cumulative advancements from BIM Level 1 (design modeling) and towards BIM Level 2 (analytical modeling for optioneering and construction modeling for project delivery) will thus pay off advantageously again, in sustaining infrastructure operations.

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# Factory thinking for the water sector

Moving into a new asset management period is the ideal time for the water industry to embrace factory thinking and smart construction says leading contractor Costain. And the impact will be felt through the supply chain. *Bernadette Ballantyne* reports.

Not many contractors would proudly state that their ambition was “to make work more boring and predictable” but Costain water director Matt Crabtree and supply chain manager Steve Fozard, are adamant that the industry needs a more structured and simple approach.

“The reality is that a lot of contractors have made their name over the years firefighting issues onsite where there is lots happening and its exciting, but what we are actually looking to do is take that excitement away. It needs to be more like a factory.”

To this end there is a lot happening at Costain and in the wider water industry which at the leading edge is showing signs of a new kind of collaboration between contractors and suppliers. The Water Sector Hub consisting of Buildoffsite, the Water Industry Forum, Costain, Skanska, Laing O’Rourke, MMB, Nomenca and NG Bailey was recently established to share best practice in the industry.

“We are now seeing an appetite for co-operation among the contractors,” says Fozard. “We work in alliances with parties who only make money if we outperform, so there is an appetite there to do things for the common good.”

In January this year Costain created its own factory thinking team to promote a more systems led engineering approach which includes offsite prefabrication. Ultimately this is leading to a more standardised approach to construction where product selection, prefabrication and offsite construction lead to a much swifter and safer onsite assembly process.

Results are already clear to see. In Liverpool the GCA joint venture consisting of Galliford Try, Costain and Atkins is building the UK’s first multi-story sequencing batch reactor (SBR) with cyclic activated sludge system (CASS) for client United Utilities. By introducing



**Costain's Matt Crabtree (above left) and Steve Fozard (above right) point to projects in Strensham (top) and Liverpool (second from bottom) as delivering early benefits of factory thinking.**

modularisation the team has shaved nine weeks off the programme, reduced the need to work at height and produced a better quality product. This began with the design and installation of the high-level decanter cover steelwork platform which was undertaken in collaboration with supply chain partner and steelwork specialist Peers.

The platform was an expanse of 2800m<sup>2</sup>, sitting at the top of the SBR (18m above ground floor level), with 7m open drops to the basins below. To reduce working at height, the platform was split into eight areas, (approximately 350m<sup>2</sup> each), which were in turn split into 14 separate modules. Each module was prefabricated offsite and then installed in a completed state, inclusive of all hand railing and edge protection. Each area took a total of two days to install and complete.

Success with this led to modularisation of other areas such as the 20m-high external staircases, which will be delivered to site in two modules and then lifted into position by a tower crane and bolted together in just three days. The 22m-high lift shaft will also be delivered in two modules and then covered with an inner and outer layer of cladding. The supports for this cladding will also be built in to the modular installation, simplifying on-site installation.

At another site in Strensham, Worcestershire, Costain is refurbishing 21 rapid gravity filters used in the water treatment works for client Severn Trent Water. The site has to remain operational at all times and so speed is of the essence when it comes to carrying out the work.

“We are doing parallel manufacture, manufacturing pipework and all the kit offsite, so that once the filter is offline we could just assemble those components in the filter,” explains Fozard. “Once we had done a filter we

would do an analysis of the work we had done and look at how we could do the next one so the potential for improvement was twofold from the standardised offsite approach and then the LEAN collaborative planning construction approach,” he says.

In this situation the offsite manufacture of the access platforms alone saved at least four days per filter. The prefabrication and offsite manufacture of the backwash water header and air scour pipework, which was standardised for each filter and pressure tested before being installed, saved another four days per unit. Reviewing of the works using collaborative planning has saved a further seven days per filter.

For the water industry heading along this standardization path will be challenging, as it has been for industries that have adopted this approach like retail and rail, following the techniques used in the aerospace, automotive and oil and gas industries.

“The water industry is perhaps behind others on the standardisation issue. This is perhaps down to the fragmented way that assets are being delivered but we do see that there is a different mindset emerging,” says Fozard. “We are moving away from project to programme mentality.”

With water companies such as Severn Trent issuing larger packages of work programmes for AMP 6, Costain says it can start to deliver a better service to client and customers alike. “As these are awarded we will be able to contract formally with our suppliers to deliver 20 schemes instead of one. That is where we can get the real benefits,” says Crabtree.

This also means that the relationship with the supply chain is changing. “We can enter into longer term trading agreements of between three and five years and we have introduced this concept to our supply chain and they have warmly welcomed it,” says Crabtree. This in turn means a closer working relationship with subcontractors and suppliers.

“What we are doing is embedding the supplier into the team; it is not about driving margins out of everything. If we can get a more standard solution and help suppliers their product development, in an ideal world get to a situation where they do not have to build slightly different products for different water companies. If they become more efficient then our business becomes more efficient as well,” explains Crabtree.

Other areas for improvement include

## A car industry for the water sector?

By embracing standardisation the UK water sector has the potential to save billions of pounds and create a world leading industry.

Richard Ogden does not mince his words when discussing the importance of standardisation in the water industry. As the chairman of Buildoffsite, an industry wide organisation that encourages offsite techniques for construction, Ogden has seen first hand the benefits that this approach has and is passionate about the importance of this for the water industry, and in fact global stability. “My belief is that we will be fighting wars over water in the future, not oil. It is very precious and it is a commodity that costs a huge amount of money and we are quite wasteful with it,” he says.

Being more efficient is therefore paramount and Ogden describes the approach that has historically prevailed in the industry – where every item is designed as if it were a prototype – as utter madness. “Every product is treated as being unique but in this market place you don’t need to do that because it is done in a very mechanical way.”

Look no further than the pioneering work undertaken by Anglian Water’s @one Alliance. Ogden points to their achievements as being the kind of replicable work that could spread not only through the UK but into Europe.

Early efforts began around nine years ago and saw Buildoffsite connect members NG Bailey with @one Alliance to create a standardised water booster pump that immediately brought the cost

operational efficiency with Fozard pointing to extended commissioning periods which allow contractors to monitor and further optimise the asset as being a positive step forward. “If you buy a component in other industries you get continuous upgrades, but traditionally in construction you get a completion certificate having done what was asked and everyone goes home. We want to take a much more whole life view of how that can develop.”

Furthermore the contractor is also updating its supply chain questionnaires to understand the level of receptiveness and awareness of BIM, which for the



**Buildoffsite CEO Richard Ogden**

down from £100,000 per unit to £60,000. Scaled up across work programmes and water companies the impact of this approach could be groundbreaking. “We are not talking about fractions of thousands here we are taking billions of pounds because we don’t need to have bespoke designs. If we take this broader we are talking about the UK, Ireland, and Europe. Just imagine if it became a car industry for water.”

To promote the sharing of best practice and information of the offsite approach, the Water Sector Hub has been recently established with Buildoffsite to bring together the key stakeholders. Major water companies, contractors, consultants and suppliers have begun enthusiastically sharing their expertise and the next meeting is scheduled for late June.

For more information go to: <http://www.buildoffsite.com/index.html>

water industry is more focused on asset lifecycle information.

Its factory thinking group may only be six months old but it has big plans for the future, extending beyond just the water industry. Costain has been working with universities such as Cambridge, Derby, Loughborough and Sheffield to develop post graduate modules in offsite manufacturing. “We feel that there is a gap in the market for this kind of thing. We need people that have an awareness of new tools and techniques. We need the skilled offsite smart constructors of the future, and we are prepared to invest in that,” says Fozard.



Factory thinking: A supply chain view

 Rethinking procurement could unlock efficiencies and encourage more offsite manufacturing in the water industry says Graham Cleland, offsite general manager for NG Bailey

We all know the story of the tortoise and the hare and it is to this fable that I turn to illustrate the pace at which the water industry has so far embraced the proven benefits of offsite manufacture. And, more importantly, for highlighting that with a degree of forward-thinking – and a leap of faith – it may yet overtake other sectors in developing a ground-breaking role for offsite, one with untapped potential.

The benefits of offsite are as far-reaching for utilities as they are for every other sector. Together – in terms of better safety, improved quality, faster work programmes, greater sustainability and less waste – combine to offer a compelling driver for change. Yet while many of the biggest names have been quick off the blocks and are now seizing these advantages in record numbers – we count Network Rail, the NHS, Arla Foods and Heathrow Airport among our offsite customers – the water sector has traditionally adopted a more pedestrian stance.

Yes, there are lessons for the water sector to learn in speeding up the pace of change to bring it upside other sectors, particularly by ensuring it has a greater and earlier opportunity to shape the design and development of a project. But the requirements of end-clients in the water sector in terms of products are not huge compared to suppliers in the automotive sector, which can expect massive volumes over a protracted period. Therefore the demand for products would not necessarily warrant a typical offsite provider to invest in production lines to streamline the process of manufacturing and assembling products in the same way as the automotive sector.

So against this backdrop, how can utilities best unleash the potential of offsite to drive up quality and ensure that every pound of investment goes as far as possible?

We believe that one of the keys to this is rebooting the procurement

process and transforming the way partnerships are developed with suppliers – creating an innovative contract model that for the first time brings together the technological capability of offsite with the intellectual property that sits hand-in-glove with it. Moulding these two facets of offsite together equips the water sector with a new way of thinking, a new way of working – and new solution for some of its biggest challenges.

Those savvy end-clients of the future might realise that offsite providers actually want to make their manufacturing capability and capacity available over the long-term, not merely sell one-off or small volumes of multiple-off products. A typical scenario might be an OJEU for 200 sampling kiosks, over the five years of an AMP. The intention of the OJEU would be for the specification of the sampling kiosk to remain constant over the full five years, in order that the offsite provider could benefit from some economies of scale with its own supply chain.

However, a savvy client might appreciate that the ideal scenario for the offsite provider would be to agree a longer-term partnership whereby it commits a fixed annual revenue spend which gives access to both intellectual capital and factory slots. In any one year, the required proportion of sampling kiosks could be manufactured based on designs that have been collaboratively developed to ensure efficiency and cost effectiveness.

Intellectual capital is a scarce resource and is often under-utilised or inappropriately applied on matters that are not directed towards helping clients conceive increasingly better solutions. Since there may never be sufficient volume of product required in the water sector for an offsite provider to invest in mass producing capacity (i.e. akin to the automotive sector), the key leverage might be to have flexible manufacturing and assembly space. The ability to innovate product solutions, or identify ways to integrate alternative technologies (from a range of different parties across the supply chain in some form of collaboration), is the core intellectual property that water companies might want to access.

The savvy client might eventually realise that “buying” or “retaining” this available intellectual capital (or at

least a portion of it) for a fixed period of time to work on whatever solutions are best suited to the capabilities and capacities of that offsite provider is money well spent. And, in the race for innovative solutions, the tortoise may yet – like Aesop’s famous fable – pip the hare on the finishing line.

**Anglian Water case study**  
Traditionally, to design and build a booster pumping station (known as a DG2) takes several weeks with multiple trades on site. Having heard about NG Bailey’s off-site manufacturing capabilities via buildoffsite, Anglian Water approached the company to develop an innovative way of solving the problem. NG Bailey’s off-site team immediately saw the potential to deliver an off-the-shelf product range of new pumping stations. The total cost saving of delivering this product, including design and engineering time, would be over 20 per cent, compared to traditional methods.



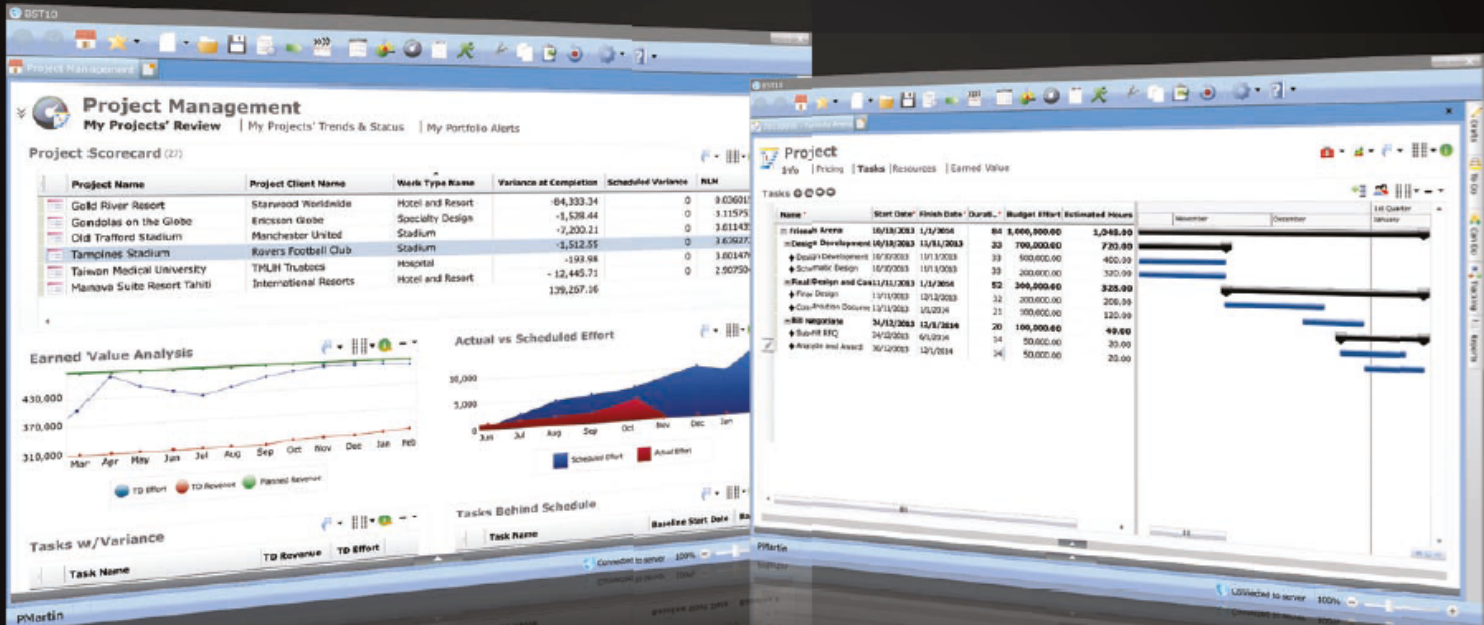
Construction time reduced by 50%

The result is not only a value-engineered design, with all the cost-advantages of standardisation and industrialised production, but also a ‘configurator’ installed on the client’s intranet. This system enables project managers to configure the specific model they need, by pumping capacity (from 5 to 50 lt/sec) and 17 other options.

The assembly process is also refined. A sacrificial template, set into the concrete base on site precisely determines the positions of all pipework coming into the plant room, so that when the unit is delivered it can be fixed and able to pump water in as little as four hours. The solution is now available under licence to other utility companies. “The new product has reduced construction time by 50 per cent. . The use of innovative off-site construction techniques is an excellent example to follow,” says Mark Enzer, technical delivery manager, Anglian Water.

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# Collaborative working – time to join in

Beale & Company co-hosted a seminar with the Garrick House Network this month examining some of the themes emerging from the industry's focus on increasingly collaborative ways of working. Here's a taste of what was discussed from Beale & Company associate *Ben Mullard*.

**A**cross industry and certainly on some of the larger projects and delivery programmes there is a move towards more inclusive and collaborative approaches and away from traditional adversarial methods of contracting.

There are various reasons for this shift in focus, including client and wider Government initiatives.

Approaches to collaboration may be internal, through the use of more collaborative forms of contract, or external, such as the increasing adoption of Building Information Modelling (BIM) and the Government Soft Landings initiative (GSL).

In practice, collaborative working may take a number of forms depending on the project, the client and its requirements and other factors. For example, a client on a



**“Behaviours can be as important as the technical and commercial abilities”**

**Ben Mullard, company associate, Beale & Company**

smaller project may want to engender a collaborative relationship without moving to an entirely new form of procurement and opt to use a contract which provides for this as standard. Examples include the NEC3 suite of contracts which includes an obligation on the parties to act in a “spirit of mutual trust and cooperation” and the JCT Constructing Excellence contract which provides for the parties to “work together with each other and with all other project participants in a co-operative and collaborative manner in good faith and in the spirit of trust and respect”.

It is also possible to include suitable obligations in existing forms of contract, or through the use of separate partnering type agreements or charters (although consideration must then be given to the effect of such provisions and their relationship to existing contractual provisions to ensure the parties' obligations are clear).

However, it can be argued that, for some projects (and particularly significant infrastructure projects), the true benefits of collaboration can only begin to be realised when the parties involved take a greater ‘leap of faith’, such as that required by the wholly inclusive “win together/lose together” culture of a pure alliance.

This concept was first utilised by BP in order to exploit North Sea oil reserves which it had not been possible to access economically using traditional contracting methods. It was subsequently developed enthusiastically on major infrastructure projects in Australia, alliancing is a radical shift from traditional client/supplier relationships.

Although various approaches may be adopted, ‘pure’ alliancing involves the client becoming an integral member

## Collaboration in action

Network Rail has successfully adopted an alliance approach to deliver some of its most significant infrastructure projects, including upgrades to the West Coast Main Line in the Stafford area (a project which is anticipated to cost £250m or less as a result of the collaborative approaches adopted, compared to the £940m previously estimated).

The Highways Agency has adopted a collaborative approach to its most recent procurement, inviting 35 parties (including a number of joint ventures) to tender for its Collaborative Delivery Framework, which will make use of various collaborative approaches to drive better value.

The Government is also in the process of trialling a number new procurement models which adopt a more collaborative approach to delivery. These include

- cost led procurement – where a number of integrated supply chain teams compete to beat the cost ceiling established for the project;
- two stage open book – focusing on early contractor involvement followed by open book development of proposals; and
- integrated project insurance – arguably the most radical of the approaches to be trialled, with delivery by an integrated project team and utilising a new form of insurance that covers various liabilities, including cost overruns up to an agreed cap.

of the delivery team. All participants then work together on a “win together/lose together” basis (that is, no one participant should benefit to the detriment of the others) and adopt a “no blame/no claim” culture which sees them making all decisions on a “best for project” basis. The participants are paid on an actual cost basis with further remuneration possible through gainshare/painshare, assessed by reference to a collective target cost for the whole of the project.

This highlights one of the key challenges faced by all parties involved in delivering projects more collaboratively. True collaboration depends on the culture and attitudes of the parties involved; it cannot be forced onto participants and enforced through the terms of a contract, but must be embraced and demonstrated at all levels

Even on projects let on more traditional forms of contract, the drive towards greater collaboration is likely to be felt at all levels as a result of the Government's wider strategies.

For example, the Government has committed to procuring all public projects using BIM Level 2 by 2016. As a minimum, this will require parties to work on a fully collaborative 3D BIM basis, with all project and asset information, documentation and data being electronic, which is likely to require much greater collaboration as well as the adoption of other new standards and ways of working than has been the case on projects to date.

The CIC BIM Protocol, co-authored by Beale and Company, addresses these issues and can be used with existing forms of contract to ensure the relevant BIM requirements are built in to projects from the outset.

The effects of the Government Soft Landing initiative also have the potential to be wide reaching. The initiative aims to align the interests of those designing and building assets more closely with those who will ultimately use and manage it (the idea being that the client has a soft landing, rather than coming down to earth with a bump following handover). This approach is likely to involve greater client involvement throughout the life of a project and much longer involvement on the part of contractors and consultants post-handover to ensure a smooth transition.

throughout the project.

These behaviours are often identified and cultivated through the use of extensive behavioural workshops and assessments, which can be as important as the technical and commercial abilities of the participants.

**Beale & Company**

**Beale & Company will be holding a round table event to investigate the impact of the Highways Agency Collaborative Delivery Framework. Watch out for more information.**

## What next for contracts?

This shift towards greater collaboration does not mean that the contract is no longer important. There remain a number of key questions that will need to be addressed as the various forms of collaborative working develop, many of which will need to be dealt with in the underlying contract or supporting documents.

For example, how will these increasingly collaborative approaches sit with more traditional concepts of contractual responsibility and dispute resolution? Is a dispute resolution mechanism still required where the participants have adopted a “no claim” culture? Collaboration must also be considered in light of the wider project team. Should the principles be restricted to those at the ‘top table’ who are parties to the collaborative form of contract, or can these approaches be extended further down the supply chain?

Other important considerations, particularly in the context of BIM, include ownership and management of intellectual property rights. The adoption of BIM brings many new challenges, including the prospect of loss of control for designers and more parties having input into design elements of a project.

Ownership of intellectual property may be retained by the consultant or passed to the client as before, but much more happens to the information produced and the impact will need to be considered carefully. For example, who will be responsible for managing the BIM model and who will be liable if it fails?

Similar issues arise in the context of the GSL initiative, which requires parties to move beyond their traditional roles (and comfort zones) to achieve the soft landing required by the client.

This gives rise to further issues, including insurance. As these collaborative forms of working develop we are already seeing new insurance products coming to the market. These include project specific PI policies and the integrated project insurance policies mentioned above, but are also likely to need to extend to deal with new cyber risks associated with these new ways of working.



# New video interviews from Infrastructure Intelligence

Lord Deighton, Lord Heseltine and Isabel Dedring head list. Join Infrastructure Intelligence and ACO On-Air for interviews with the industry's big names.

Infrastructure Intelligence has teamed up with ACO On-Air to bring you a regular series of video interviews with some of the biggest names in infrastructure and the built environment.

We kicked off the project at the recent ACE annual conference and Engineering Excellence Awards in May with short interviews with key speakers and winners to set the scene for the challenges facing the industry going forward.

And, for those unable to make the conference on the day we will also continue to roll out recordings of the key sessions to help you to catch up on what was said and discussed.

## Lord Deighton, Infrastructure minister



Future growth in the UK depends on a well balanced economy that is about both consumption and investment and that is where infrastructure fits in Lord Deighton told the ACE annual Conference.

He explained that the economic conditions were now right for infrastructure investment to be made.

"The things that are really making a difference are getting the deficit under control; convincing the markets that the UK is a good credit; creating the room to be able to contribute a bigger proportion of spending to public infrastructure. To be able to do that on a consistent and long term basis is an absolutely critical part of getting this right."

Deighton explained that he takes "every opportunity" to make the case for investment by focussing on two objectives: that building the right infrastructure and systems will improve the long term rate of economic growth.

And secondly that "getting the infrastructure plan right has an enormous impact on jobs and growth," he said outlining that the case for infrastructure should not be politically contentious.

[www.infrastructure-intelligence.com/video/deighton/2014](http://www.infrastructure-intelligence.com/video/deighton/2014)

## Lord Heseltine, chair, Regional Growth Fund advisory panel



Long awaited announcement in July of Government's £2bn cash allocation to England's 39 local enterprise partnerships (LEPs) will be "transformational" for local government, Lord Heseltine, chair of the body advising ministers, predicted.

The annual £2bn Local Growth Fund will be allotted for the first time in July this year and is being competed for by LEPs through Local Growth Deal applications.

"The announcement of the results of the bidding process will be the big story [this year]," he said. "There is billions available, it is transformational stuff. It is not as much as I asked for but no one has got this much before."

[www.infrastructure-intelligence.com/video/heseltine/2014](http://www.infrastructure-intelligence.com/video/heseltine/2014)

**ACO**  
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## Isabel Dedring, London's deputy mayor for transport



London's deputy mayor for transport Isabel Dedring wants suggestions from industry professionals as to what the capital's agenda should be in terms of infrastructure projects beyond the current mayoralty, she said during the ACE annual conference.

"I am genuinely keen to get your views and interested in people dropping me a line," she said. "Our overall objective is to protect London's big city status.... There are big questions as to how the city will look in the future, how its brand proposition of 'quality of life' can be maintained."

The issues the capital faces result from substantial population growth – double what was expected, from 10M in the 2030s to 11M in the 2050s. This requires a big increase in public transport, another 1.6M homes, 500 new primary schools, 160 new secondary schools and so on, she explained. "Our view is that population growth can't be stopped so how do we accommodate it."

[www.infrastructure-intelligence.com/video/dedring/2014](http://www.infrastructure-intelligence.com/video/dedring/2014)

## Alison Munro, chief executive, High Speed 2



High Speed 2 chief executive Alison Munro talks to Infrastructure Intelligence editor Antony Oliver about progress toward Royal Assent for phase 1 of the project and building the right team to take this £42bn project forward.

"Parliament has established very clearly that they want High Speed 2 to happen," she explained. "It is an incredibly positive place for the project to be. What we are now debating is the detail."

Speed of progress, she said, depends on how many petitions are received but also will determine how the parliamentary committee goes about its work.

"We hope that this process will go smoothly and in which case we still hope to gain Royal Assent in 2016," she said.

[www.infrastructure-intelligence.com/video/munro/2014](http://www.infrastructure-intelligence.com/video/munro/2014)

## John Dowie, roads director, Department for Transport



The Bill containing legislation to turn the Highways Agency into an arms length government company passed its first reading last month. Department for Transport director John Dowie explains the challenges as it begins the process of become more private sector in its thinking.

With a tripling of investment and new five year funding horizon planned for the Highways Agency it is a "transformational moment" for the road industry, said Dowie.

Road investment strategies that are key to the Agency establishing its forward work programme and funding requirement over a five year, regulated

investment period are expected to be released imminently.

[www.infrastructure-intelligence.com/video/dowie/2014](http://www.infrastructure-intelligence.com/video/dowie/2014)

## Jon Kirkpatrick, head of sustainability, Lend Lease



Don't talk about sustainability, talk about innovation, says Jon Kirkpatrick in this interview.

"You talk about sustainability but you stop talking about the outcomes. For me the issue is what you are trying to achieve through sustainability."

People are becoming over saturated with the word "sustainability". It is time instead, he says, for the industry to focus on innovation and creating positive social and business benefits

"It is very easy for the word to generate visions of environmentalism and people then either engage because they understand it or the switch off because they don't want to understand it," he adds

[www.infrastructure-intelligence.com/video/kirkpatrick/2014](http://www.infrastructure-intelligence.com/video/kirkpatrick/2014)

## Darren Caplin, chief executive, Airport Operators Association



The ongoing debate over whether to develop new airport hub capacity at Heathrow, Gatwick or in the Thames Estuary often overlooks the fact that the UK also needs vibrant point to point capacity across the regions, says Airport Operators Association chief executive Darren Caplin.

However he accepted that as part of the wider aviation policy for the UK, a decision on expanding hub capacity following the Davies review was vital.

"The most important thing is that we do get new runway capacity and

to get action," he added. "For years the decision has been delayed. We are saying that when recommendations are made politicians have got to back and make it happen."

[www.infrastructure-intelligence.com/video/caplin/2014](http://www.infrastructure-intelligence.com/video/caplin/2014)

## Roma Agrawal, WSP, Diamond Award winner



Having won the top prize at this year's ACE Engineering Excellence Awards Roma Agrawal of WSP tells Channel 4's Cathy Newman that engineers need to stand up and be noticed adding that encouraging more women into the industry is vital.

"We really should have more women in the industry," she said. "It is a great industry and I love it so why shouldn't other women be in the industry – we need to work much harder at that."

Newman describe Agrawal as a "brilliant role-model" and judges noted her passion to promote her profession as widely and as much as possible. As one of the judges on the night said: "Roma cares – she genuinely wants to make a difference for the good of engineering."

[www.infrastructure-intelligence.com/video/roma/2014](http://www.infrastructure-intelligence.com/video/roma/2014)

## Also available

- Mike Putnam, chief executive, Skanska UK and co-chair of Green Construction Board.
- Nelson Ogunshakin, chief executive, ACE.
- Andrew Boagey, director, Systra.

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## Deighton headlines ACE Conference

### Government remains firmly behind infrastructure

Next year's General Election will not lead to a hiatus in infrastructure investment or focus attention away from using the sector as a means of growing the economy, commercial secretary to the Treasury Lord Deighton told a very successful ACE annual conference last month.

Local council and European election results have demonstrated the potential upheaval that can be caused by voters but in terms of the argument in favour of infrastructure Lord Deighton said that "the Autumn Statement will continue to fill out the capital programme for the next seven years and it will be tough to change course.

"If things are going well, politicians tend to leave them alone and take the credit," he said.

He agreed with ACE chief executive Nelson Ogunshakin who said "that the challenge of accepting the importance of infrastructure is won, now it is about how we deliver."

"I have been in government for 17 months and the Chancellor asked me because he wanted to make sure government could be as proactive as it could be in getting infrastructure built," Lord Deighton said.

It is not a question of going faster, Lord Deighton said, but being on schedule. "It is better to establish a realistic programme against which progress can be measured."

He listed four areas of interventions that government needs to make to guarantee that happens.

1. Government needs to own the plan  
"Since the first iteration of the National Infrastructure Plan in 2010 it has evolved and we now try to run it much more as a programme with a series of deliverables," Deighton explained. "In the next one I expect there to be a clearer iteration of the science infrastructure we need. Also it will be the perfect place to achieve the next phase of the communications strategy – fibrelay of 100% from street cabinet to home. The next plan will also address harder problems like synergies across sectors – the road strategy properly co-ordinated with the ports strategy for example; when work is underway what can be done for other infrastructure at the same time; and plans for long term resilience.

2. Government needs to make sure the money is there.  
"The common view is that the principle constraint is money. That is not true. We are much shorter of investible projects than capital to finance them. Funders say there is no asset they would rather own than one in the UK offering inflation adjusted, long, reliable returns. For those sectors financed by taxpayers in June 2013 we laid out our capital programme to 2021. The vast majority is underway and of all the changes coming up, the six year budget for the Highways Agency is going to be transformational. The question we will be asking ourselves is why didn't we do it earlier."

3. Government has to own planning reform.  
"The one simple message we need to get across is that we need a 'yes' or a 'no' as fast as possible. We are happy with the regime, we just need to streamline it."

4. Government needs to make sure its own capability (central and local) is sharply delivery focused.  
"We are going in the right direction but the particular challenge ahead is that we are going to have to show the public we are succeeding ....and demonstrate against the plan that stuff is happening all the time; projects are starting, projects are finishing. We are moving into a phase where we will find that much easier."

More on the conference and associated international conference can be found on pages 28 and on [www.infrastructure-intelligence.com](http://www.infrastructure-intelligence.com)

Thank you to the ACE Annual Conference sponsors for their support: ACO Technologies, Thames Tideway Tunnels, CH2MHill and Beale & Company.

And thanks also to the International Conference sponsors Pinsent Masons and Ernst & Young.

**ACE Summer Reception is on Wednesday 16 July 2014 at St James' Court Taj Hotel, 54 Buckingham Gate, London SW1 from 6.30pm, featuring the launch of 'Energy Market Reform – Generating Results' the ACE Energy Research Paper.**

# Engineering Excellence Awards 2014: Winners revealed

WSP structural engineer Roma Agrawal scooped the coveted Diamond Award – the winner of winners – at last month's ACE's Engineering Excellence Awards

Agrawal's outstanding career to date stood out to the judging panel as an example of true technical excellence combined with passion for the profession and desire to communicate her world to a wider public audience.

She joined an outstanding group of winners on the night as over 350 people gathered to celebrate and reward the very best performances of the year from across the UK consultancy and engineering community at an event hosted by Channel 4 News anchor Cathy Newman.



**Winners: Roma Agrawal and Mott MacDonald. More pictures at [www.infrastructure-intelligence.com](http://www.infrastructure-intelligence.com).**

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## The full lists of winners, commendations and shortlisted contenders:

### Diamond Award for Engineering Excellence

WINNER

Roma Agrawal, WSP

### Building Services Award (companies with up to 250 employees)

WINNER

Crofton

SHORTLISTED

Clancy Consulting  
Caldwell Consulting Engineers  
Skelly & Couch

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### Building Services Award (companies with more than 250 employees)

WINNER

AECOM

COMMENDED

URS

SHORTLISTED

Hoare Lea  
Waterman Group  
WSP

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### Building Structures Award (companies with up to 250 employees)

WINNER

MLM Consulting Engineers

SHORTLISTED

Alan Baxter & Associates  
StructureMode

### Building Structures Award (companies with more than 250 employees)

WINNER

Pell Frischmann

SHORTLISTED

AECOM

WSP

URS

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### Utility Infrastructure Award

WINNER

Mott MacDonald

COMMENDED

GHA Livigunn

### Transport Infrastructure

WINNER

Roughton International

COMMENDED

Tony Gee and Partners

SHORTLISTED

Atkins  
Amey

### Project Design Award (companies with up to 250 employees)

WINNER

Skelly & Crouch

COMMENDED

Techniker

SHORTLISTED

BWB Consulting  
GHA Livigunn  
Clancy Consulting

### Research, Studies and Consulting Advisory Award

WINNER

IMC Worldwide

SHORTLISTED

BWB Consulting

AECOM

### Professional Engineer of the Year

WINNER

Peter Ayres, AECOM

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### Progress Network Award – Consultant of the Future

WINNER

Roma Agrawal, WSP

COMMENDED

Alice Berry, Arup and Chris Mundell, Atkins

SHORTLISTED

Christian Christodoulou, AECOM  
Natasha Watson, Buro Happold  
Thomas Webster, AECOM

Sponsored by ACO Water Management



### Judges

Geoff French, Institution of Civil Engineers (chair of judges)  
Amanda Fisher, Balfour Beatty Living Places  
Anne Hadjiry, London Underground  
Antony Oliver, Infrastructure Intelligence  
Drew Ritchie, Currie & Brown



## New anti-bribery standard on the way



A new international anti-bribery standard is due to be issued in 2016, writes ACE chief operating officer Anil Iyer. No organisation is immune from bribery risk. However, organisations can demonstrate they have adequate procedures in place to prevent bribery and the financial and reputational costs associated with it.

The international standard ISO 37001 will add to work in the UK that followed enactment of the Bribery Act (2010) which included BS 10500, a specification for an anti-bribery management system for which some ACE members had received accreditation.

As an insight to its development, ISO has established a project committee which has been tasked with drafting and agreeing the terms of an anti-bribery standard. To date the following key issues have been agreed:

- That ISO should develop an anti-bribery management systems standard.
- The standard would apply only to bribery and not be expanded to encompass other areas of corruption.
- The standard would apply to the public sector, the private sector and the not-for-profit sector.
- The standard would be applicable to all types of business and activities and be scalable for all sizes of organisation.

The document has been drafted and is undergoing various consultations and revisions. ACE will continue to monitor progress of the document and will report back to its members accordingly. In the meantime should you have any queries about the evolution of the new international standard, please make contact at [aiyer@acenet.co.uk](mailto:aiyer@acenet.co.uk).

## This is our best chance to address the STEM skills-gap challenge



The growing needs of the UK's engineering industry for skilled members of staff means more young people need to be encouraged to take science, technology, engineering and maths (STEM) qualifications in the coming years, writes ACE chief executive Nelson Ogunshakin.

This month Nicola Walker, the

Director of Business Environment Policy at the Confederation of British Industry, said that an additional 45,000 highly-skilled workers will be needed by 2021 to simply fill the requirements of the UK's offshore wind industry alone. And this is just the tip of the iceberg in terms of future demand for skills.

Figures from the Royal Academy of Engineering show the industry requires at least 50,000 STEM technicians to replace retiring staff every year.

To help address the issue, a new government campaign to boost the numbers of young people – especially women – studying STEM subjects was launched in May.

The campaign – called 'Your Life' – includes a call to action to increase the number of students taking physics and maths A-level, double the proportion of undergraduate engineering and technology degrees taken by women to 30% by 2030, and ensure more women pursue careers at all levels in the fields of engineering and technology.

Over 170 organisations have signed up in support and committed to creating over 2,000 new entry level positions including apprenticeships, graduate jobs or paid work experience posts.

At present, women make up 46% of the UK's workforce, but in STEM jobs this figure falls to just 15.5% and highlights an on going gender gap that must be addressed in the years to come if the UK is to remain at the forefront of the global engineering sector.

In the coming months I will be engaging with ACE member firms, none of which can afford to ignore this serious issue, and line up each and every one of them to sign up to the 'Your Life' campaign.

Possible measures that could encourage greater participation in STEM careers are subsidised fees for many university courses in this field, as well as the development of one-year crossover courses that can help those young people who did not train in STEM disciplines at GCSE to switch to this area prior to entering higher education.

With popular television presenters such as Dara O'Briain and Professor Brian Cox appealing to the youth of today, we now have one of the best opportunities that has presented itself in recent years to tip the balance and get children enthused and engaged in maths and physics – the very basics of engineering.

SME's are reminded to complete the ACE Benchmarking survey [www.acenet.co.uk/SMEBenchmarking](http://www.acenet.co.uk/SMEBenchmarking)

## Guidance vital for level playing field

Environmental laws and regulations are written by lawyers for lawyers writes Matthew Farrow, executive director of the Environmental Industries Commission (EIC). Of course, the impulse behind them comes from social and political desire to improve the environment we all live and work in, but the actual drafting is inevitably done from a legalistic point of view.

Guidance, on the other hand, is written for people trying to implement these laws in the real world. Guidance explains how to interpret words such as 'significant', or 'building' or 'economically practicable' in real world contexts.

The Government, however, has basically declared war on guidance. As Ministers have sought to follow through on pledges of deregulation, they have realised that although guidance is not really the same thing as regulation, it is much easier to cut.

This is all very well, but let me give three examples of the implications.

The waste management industry has worked hard in recent years to improve its health and safety record and has developed guidance which the HSE has approved and published. But no more. Because 'health and safety' is now viewed as a burden on SMEs, the HSE is discouraged from publishing new guidance on its website.

Secondly, the contaminated land industry has been asking the Environment Agency to produce guidance to define 'significant pollution' so that developers and land remediation companies can plan accordingly. The Agency is working on such guidance but it is unclear when, or if, this will be published.

The final example refers to recycling. Under EU Law, local authorities must provide separate recycling collections of plastics, paper, metals and glass 'where technically, economically and environmentally practicable'. Defra had intended to produce guidance to clarify matters but these plans have now been dropped, meaning that local authorities will find it harder to plan.

In these and other areas, Ministers' arguments tend to be either that guidance is simply not needed, or that it should be produced and published by the relevant industries rather than government. Both these points are sometimes valid, but as the examples above show, there are many areas where guidance plays a key role in the efficient and proportionate achievement of social and environmental objectives.



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