



Annual Review 2014

**Bentley**

[www.inbentley.co.uk](http://www.inbentley.co.uk)

Paul Bentley

# The Managing Director's View

**2014 was a particularly exciting year for the business. Our people continued to deliver many first-class projects, meeting the majority of challenges from our clients and, as always, they were fully supported by our great office teams.**

The commercial performance in 2014 was solid, particularly considering our AMP6 bidding and set-up costs with clients in the water sector. This AMP6 bidding will pay dividends as the process saw us secure multi-million pound opportunities that provide us with solid foundations for the coming years.

Clearly the big news of the year for all of us was September's acquisition of Bentley Holdings (including JN Bentley) by global consultants Mott MacDonald.

Being part of the Mott MacDonald Group starts a new and exciting chapter in our business, which will provide security and opportunity in equal measures. We have successfully worked with Mott MacDonald through the joint venture Mott MacDonald Bentley (MMB) for the last 15 years; it works because we share the same values.

It remains my belief that our people are our most valuable resource; the investment of £1million in training once again demonstrates that we want our workforce, whether site or office based, to be the best they can be.

It then always brings great pleasure to promote colleagues from within because it shows this investment is paying off.

Last year we promoted more than 45 employees within the company, including three into Director positions – Angus Ridge, Phil Cundill and Judith Jeffery. Well done to you all.

Internal re-structuring in 2014 saw us divide our operations into three regional areas to better suit the needs of our clients.

Our team led by Operations Director Jamie Fitton enjoyed a very successful year with Northumbrian Water, and we hope that on-going bidding efforts will enable us to continue the working relationship we enjoy with this client into AMP6.

The team is also working hard to align itself with the requirements of United Utilities in the North West of England. Establishing a new team with a new client isn't without its challenges; it takes time, patience and hard work but I am confident we have the right team to do it.

Our team led by Operations Director Richard Risdon covers our contract with Severn Trent Water, as well as frameworks with National Grid, local authority highways departments, and a new client for AMP6, Dwr Cymru Welsh Water.

Our Severn Trent Water team have completed some of the largest schemes ever undertaken by JN Bentley this year, and we look forward to working with this client into AMP6 and beyond.

Our team deployed in Wales is working hard to gear us up for the delivery of Dwr Cymru Welsh Water's AMP6 capital programme. They are currently collaborating with other Alliance partners to develop methodologies that will meet the client's aspirations and deliver added value to its customers.

In Operations Director Angus Ridge's team we are getting set to extend MMB's relationship with Yorkshire Water into its 17<sup>th</sup> year as AMP6 gets underway. This partnership continues to deliver results, but we must keep working hard to exceed expectations and show why we should remain their supplier of choice.

This team is also building a presence in Anglian Water's new Alliance to deliver our first ever framework together. With this comes challenges, but I am confident that, having delivered two great schemes with Anglian Water in recent years (and are well on our way with a third at Grafham), we will overcome these to successfully establish ourselves in the East of England.

**“When we are safe, efficient, happy and professional we are at our best and I believe that we have just the people within the business to keep making this happen in 2015.”**

**Paul Bentley | Managing Director, JN Bentley**

It was excellent to get our JBA Bentley team set up in their own offices in Leeds in 2014 as the joint venture continues to mature. Through the Water & Environment Management (WEM) Framework the team is delivering some impressive results with the Environment Agency.

It was excellent to extend our working relationship with the Coal Authority in early 2015 too; rich reward for the completion of a number of first-class mine water treatment schemes over the last decade.

Our operations wouldn't work the way they do without the effort of our support teams working tirelessly behind the scenes, so I must thank you for your continued dedication. Recent structural changes have been made to make your lives easier and to further improve the effectiveness and efficiency of performance in the years to come.

2014 was a tough year for safety. There were some undoubted success stories – including a record year of reporting – but four reportable incidents act as a strong reminder that we must stay on our game and all remain involved to reach our vision of Zero Injuries.

It was pleasing to see the re-launch of the Cost & Efficiency Focus spark a resurgence in commercial incident reporting, providing us with valuable data that we're using to make improvements in the way we work.

I would like to end by thanking everyone for their efforts in delivering some fantastic outcomes in 2014. When we are safe, efficient, happy and professional we are at our best and I believe that we have just the people within the business to keep making this happen in 2015.

The pages of this review could never cover all of your achievements, but they do provide a snapshot of some of the great things that went on around JN Bentley in the last 12 months or so. I do hope you enjoy the read.

Thanks again.

**Paul**

**Paul Bentley  
Managing Director, JN Bentley**

2014

# Financial Review

## 2014 was a year of change for the business.

The tremendous success of our AMP6 bidding teams allows us to look forward to a much larger and more geographically spread business in 2015 and beyond through new framework wins with Anglian Water, United Utilities and Dwr Cymru Welsh Water.

To facilitate this growth there was a need for further strengthening of the JN Bentley Board and we welcome Angus Ridge, Phil Cundill and Judith Jeffery into their new and challenging roles.

We also expect to open two new offices during 2015 to accommodate the new business wins.

There was one other significant change which was finalised in September 2014.

This change involved the partnership that we have enjoyed for the past three AMP periods with our colleagues in Mott MacDonald being extended to its natural endpoint through the sale of the Bentley family's interests in the holding company Bentley Holdings to Mott MacDonald.

Despite our collective knowledge of one another, this was a lengthy process which was undertaken with a great deal of care and professionalism and, like a lengthy courtship that has become a marriage, I expect the future to be brighter together than apart.

The businesses have commenced the integration process which will see the benefits of a larger organisation enhance what already is a fantastic business.

Unfortunately, my own site visits have been infrequent this year due to other commitments, but I remain extremely proud of our collective achievements which have once again helped greatly in bringing the successes achieved in the AMP6 bidding process.

A couple of special mentions: firstly, the team in Durham, who have turned a couple of difficult years into one of their best ever in 2014. Well done, guys.

Secondly, the team in JBA Bentley, engaged in delivery of the Environment Agency WEM Framework, where we are now seeing a sustainable, growing business. Thanks for your collective persistence.

We anticipate that the year end accounts for 2014 (once verified) will record a turnover of £114 million which, whilst

2014 in Numbers

turnover of  
**£114**  
million

• • • • •

**5**

water sector clients secured for AMP6, with bidding on-going with more

**4,403**  
commercial incidents reported...

...providing us with valuable data that will help us reduce costs and improve our efficiency

we welcomed  
**195**

new people into our growing team, based on sites and offices across the UK

our people spent the equivalent of  
**3,711**  
days on training...

• • • • •

...this is about **5** days for every single employee

**“It remains a core belief that safety and efficiency are mutual objectives, both being fundamental to the sustainable future of the company and its people.”**

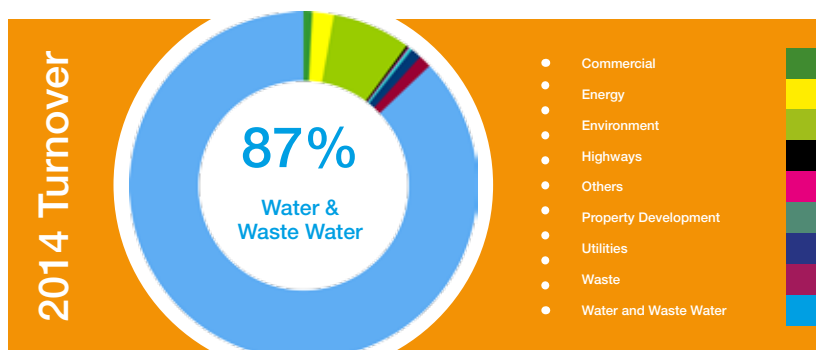
Andrew Davies | Finance Director, JN Bentley

marginally lower than that recorded in 2013, still represents a monthly average close to £10 million.

Consistency will remain a key requirement as the business activity level begins to ratchet upwards during 2015 and we expect monthly turnover levels beyond £13 million for the majority of 2015, with an overall annual turnover expected in excess of £150 million.

To achieve these activity levels, we will welcome many new faces to both sites and offices; please make them welcome and help ease their integration into the business.

**Everyone can help in this exciting new growth phase for the business.**



Our balance sheet remains strong with no reliance upon external funding and now with the addition of a parent company whose financial strength is far greater than our own.

We will continue to invest in our infrastructure and would anticipate some sizeable expenditures on plant, vans and the replacement to our current business system, CMS.

Our Cost & Efficiency Focus, re-energised in 2014, once again highlighted and helped deliver savings during the year.

It remains a core belief that safety and efficiency are mutual objectives, both being fundamental to the sustainable future of the company and its people.

Andrew Davies  
Finance Director, JN Bentley

**0**  
**injuries**  
remains our vision for **health and safety**

more than  
**£75<sub>k</sub>**  
.....  
**donated to good causes**

over  
**400**  
more **environmental incidents** reported than last year...  
.....  
...demonstrates that awareness continues to grow

**23**  
industry and client **awards and shortlistings** presented to our people, projects and initiatives



# 2014: In Brief

## January

Senior Managers roll-out JN Bentley's Business Plan for 2014 to all employees at a series of presentations across the company. Our Operational Board and its associated Steering Groups produce the Business Plan, building on our purpose of Engineering Sustainable Outcomes.

**Read more on how we engineer these sustainable outcomes over the page.**



## February

Paul Bentley visits the overall winners of our 'Be Recognised' employee rewards scheme. Voted by colleagues as the winners, Jon Lutman and our team working near Scarborough each won prizes to the value of £2,500.

February also sees the first monthly employee 'Be Recognised' vote, a positive change that has increased employee engagement in the process.



## March



We receive our certificate of accreditation from the Chartered Institution of Civil Engineering Surveyors (ICES) for our in-house Quantity Surveying Development Scheme.

The programme demonstrates our commitment to professional development and training, and complements our successful ICE-accredited Civil Engineering, and IET-accredited Mechanical & Electrical Engineering Development Schemes.

## April



JN Bentley becomes a member of the NFB, National Federation of Builders.

The NFB is the latest in a line of memberships and accreditations that demonstrate excellence in our systems and processes. These include an ISO 9001, ISO 14001 and OHSAS 18001-accreditation integrated management system, Achilles UVDB, the British Safety Council, and RoSPA.

## May

Representatives from MMB and Severn Trent Water attend the Institution of Civil Engineers' (ICE) West Midlands Annual Awards, where our project at Strongford STW was presented the Chairman's Award and a High Commendation for Partnership.

The project is one of the largest we have ever delivered and has seen major improvements made to the main sewage treatment works serving Stoke-on-Trent.



## June

JN Bentley's 'Big Tick' for the way we develop the engineers of the future is re-accredited by Business in the Community.

Our commitment to training and development is recognised at the prestigious Construction News Awards too, as we are highly commended for delivering a...

**"...very well thought through, business-led programme...which was adapted by the company with an individual and tailored approach."**



The Tour de France comes to Yorkshire in July, pictured here flying past our site at Baitings Gate Bridge near Ripponden.

## July

Mott MacDonald Bentley (MMB) signs a framework contract with United Utilities as one of four Construction Delivery Partners that will help deliver their AMP6 and potentially AMP7 Capital Programmes.

News of this contract award follows the extension of frameworks with both Severn Trent Water and Yorkshire Water into AMP6, and the announcement of our appointment to both Anglian Water's new AMP6 Integrated Main Works Capital Alliance, and Dwr Cymru Welsh Water's AMP6 Capital Programme.



## August



The generous nature of the people at JN Bentley is highlighted at the Shifnal office where, after months of fundraising efforts with the client and fellow supply chain partners, cheques for £2,500 are presented to two local charities.

As well as fundraising efforts, employees take part in volunteering projects too, donating skills, time and expertise to 'give something back' to the communities in which they live and work.

## September

Global management, engineering and development consultancy Mott MacDonald acquires JN Bentley. The move is a natural progression in the highly-successful 15-year partnership between the two companies through our joint venture MMB. [Read more over the page.](#)



"We are immensely pleased to welcome JN Bentley into the Group as a natural next step for our partnership.

"The delivery model we have forged with our water industry clients continues to help them maximise value for their operations and their stakeholders – now we're looking forward to using our collective ingenuity to achieve ever greater benefits across the triple bottom line of social, economic and environmental value."

**Keith Howells | Chairman, Mott MacDonald**

## October



Our involvement in the Engineering Development Trust's (EDT) 2014/15 Engineering Development Scheme is launched at RAF Cosford. Our engineers will spend time during the academic year supporting students studying STEM subjects at A-level.

We regularly call on the skills of our 'STEM Ambassadors' and other engineers to help promote the industry and related subjects to students across the country.

## November



The Marsh Award for 'Excellence in Conservation of a Public Fountain' is awarded to JN Bentley for our careful restoration of the Parterre Garden Cascade at the Bramham Park Estate in West Yorkshire.

Site Manager Mark Dolphin, who worked closely with the Estate during construction, was on hand with Contracts Manager John Gath to collect the award from the Duke of Gloucester at a ceremony in London.

## December



Paul Bentley visits Kyle Lister on site to present him with the JN Bentley Apprentice of the Year Award.

The prize is recognition of Kyle not only passing his Diploma in Construction, but his attitude to work, positive involvement in morning briefings, commitment to health and safety, and his ability to set an example to the rest of site.

In the News

# Joining the Mott MacDonald Group

In an exciting development for the business, in September 2014 Bentley Holdings Ltd (including subsidiary company JN Bentley Ltd) was acquired by the Mott MacDonald Group.

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The move was a natural progression in the highly successful 15 year partnership between the companies through joint venture Mott MacDonald Bentley (MMB).

Over 80% of JN Bentley's turnover is delivered through MMB, set up in 1999 to operate as a wholly-owned co-located joint venture combining all facets of design, programme management, site investigation and construction in one organisation.

The partnership has gone from strength-to-strength since initial AMP3 contracts in the water industry, and has enjoyed a successful period of AMP6 bidding to date, securing new and extended appointments with Yorkshire Water, Severn Trent Water, Anglian Water, United Utilities and Dwr Cymru Welsh Water.

Since its formation, MMB has earned particular recognition for its approach to driving quality and value, especially by developing time-and-cost saving benefits of process improvement, productisation and batch procurement, and delivering solutions using its own resources.

This next stage in the longstanding relationship will allow further development to enhance project delivery for clients, whilst at the same time maintaining the shared ethos and culture that have been a hallmark of the partnership's success.

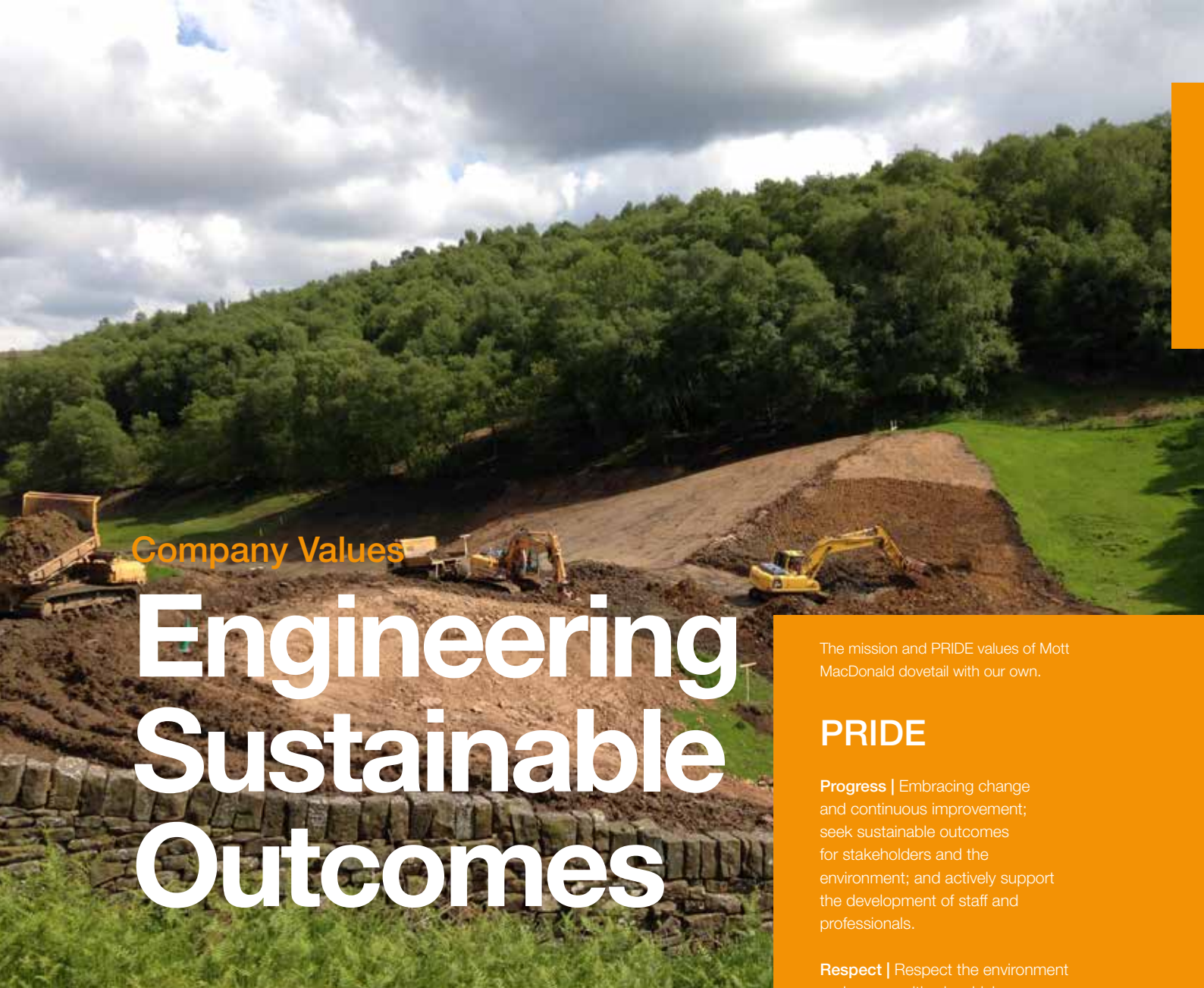
In practical day-to-day terms, the frameworks, projects, and support functions we are currently delivering continue exactly as before, with the same people, in the same offices, on the same terms and conditions,

with the same management team delivering a first class service to the clients we work with.

**Now that JN Bentley is part of the Mott MacDonald Group we have available to us new opportunities to seek and explore.**

**These opportunities will only enhance our business.**





## Company Values

# Engineering Sustainable Outcomes

## Our purpose is defined as Engineering Sustainable Outcomes.

**Engineering** is at the core of the services we provide to our customers, and great engineering that provides superior value is what will continue to differentiate us from the competition.

A **sustainable outcome** for us is one that is sustainable economically, environmentally, and right for our customers, employees and the community. It is important we find a balance between these interests, and strive to improve.

Effort is important, but it is results that matter to our stakeholders. That is why our purpose places the focus on **outcomes**.

Mott MacDonald's **mission** is to create satisfied customers through professional excellence giving commercial success and employee fulfilment.

**Everything so important and valuable in the ethos and culture of JN Bentley continues into 2015 and beyond.**

Our particular style of collaboration, combined with utilising our technical ability and our own resources to manage programmes of works, deploy our resources and construct the solutions to meet our clients' needs, will continue to drive all that we do.

The mission and PRIDE values of Mott MacDonald dovetail with our own.

## PRIDE

**Progress** | Embracing change and continuous improvement; seek sustainable outcomes for stakeholders and the environment; and actively support the development of staff and professionals.

**Respect** | Respect the environment and communities in which we work; value all people and cultures equally; and treat everyone with respect.

**Integrity** | Deliver on our promises; behave ethically and do not tolerate bribery or corruption; and promote a safety culture targeting zero harm to all.

**Drive** | Aim to exceed customers' expectations; encourage teamwork and deliver to the best of our ability; and work hard for professional and commercial success.

**Excellence** | Uphold leading edge technical, professional and safety standards; develop innovative, efficient solutions that create value for our customers; and remain proud of Mott MacDonald's heritage and achievements.



Our

# Operations

**Designing and constructing great civil engineering projects safely and cost-effectively is at the heart of JN Bentley.**

To achieve this we take our ever-growing team of talented people and develop lasting relationships with our clients, doing so by working collaboratively and with a spirit of openness and honesty.

Together with management and support functions, we maintain a significant, directly-employed, well-trained labour workforce. This allows for added flexibility when it comes to reacting to our clients' needs, and ensures everyone on site understands the highest standards we expect when it comes to health and safety, quality, and environmental stewardship.

The company's operations in 2014 focused on delivering improved performance in a consistent manner across our three operational regions.

We continued to look to innovate at every opportunity in order to derive best value.

Our standard product-based approach to delivery was utilised more than ever in 2014, yielding benefits for our teams on site and in the office – and of course for our clients too.

New bridge deck construction  
at Baitings Impounding  
Reservoir in West Yorkshire





**We keep our people safe and healthy by remaining committed to our Health & Safety Strategy and our vision of achieving Zero Injuries and zero instances of work-related ill health.**

Our standards, procedures, policies and responsibilities are robust, and we engage employees in a range of initiatives to keep them involved in health and safety.

2014 saw the roll-out of the Cost & Efficiency Focus, which continues to promote a culture where our people are passionate about reducing costs and increasing our efficiency. The Focus is a clear, concise set of principles and commitments. Everything we do must add value.

The Health & Safety Strategy and Cost & Efficiency Focus complement one another, and show that world class safety performance isn't to the detriment of the 'bottom line'.

We maintain three primary delivery vehicles for our Operations:

**JN Bentley** – offering civil engineering contracting services.

**Mott MacDonald Bentley (MMB)** – offering fully-integrated civil engineering feasibility, design, construction and commissioning services

**JBA Bentley** – offering fully-integrated water and environmental engineering feasibility, design, construction and commissioning services.

We utilise the 'right company' for the opportunity – but the approach to business remains the same regardless of who is delivering the works.

**>> The following pages take a look back at just a small selection of highlights from our Operations in 2014.**

# Impounding Reservoirs

Delivering work for our clients at their impounding reservoir (IRE) sites means we have the pleasure of carrying out schemes in some of the most scenic locations in the UK, whilst at the same time ensuring our clients meet legal compliance dates.

Situated high up in the hills, working in picturesque surroundings doesn't come without its challenges as these sites are often particularly remote. By carefully planning safe access for our people and suppliers we continue to make a success of maintaining, upgrading and discontinuing IREs which store water ahead of treatment and distribution for domestic and industrial use.



The type of project associated with IREs varies greatly.

In recent years we have honed our skills in the use of pre-cast concrete for spillway construction and restoration. We used this approach at **Watersheddles IRE**, in West Yorkshire.

Pre-cast concrete has benefits not only for safety in that fewer construction activities are required, but quality too, because concrete is manufactured elsewhere in 'controlled' conditions, rather than cast in-situ (and open to the elements in often challenging locations) on site.

Another aspect of works has seen us **restore reservoir catchment areas** above Marsden and Holmfirth, near Huddersfield.

Years of drainage installation for farming and shooting has dried out the landscape, preventing natural filtration of rainwater from occurring.

Using a helicopter to airlift materials into place across the 400Ha. site, our team have 'reverse engineered' the land to how it once was, aiding the restoration of moorland peat bogs which will help to naturally filter the water and improve biodiversity once again.

**Pre-cast concrete has benefits not only for safety but quality too. Fewer construction activities are required, and concrete is manufactured elsewhere in 'controlled' conditions.**





## Baitings Gate Bridge

We replaced a 105m long bridge deck at Baitings IRE to ensure the 60-year-old, 7 span structure over the reservoir remains safe for highway traffic for future generations. We removed the existing bridge deck and undertook remedial work to repair existing piers and abutments before replacing the deck with a new pre-cast pre-stressed beam bridge deck solution.

The project gave us opportunity to marry our knowledge of IRE sites with our highways and bridge experience, a sector in which we have worked since the 1980s. Given the nature of the site, we constructed a temporary floating pontoon to house the 90t crane required to lift and remove the existing 82 bridge beams, and lift into place 35 bridge beams and a further 28 parapet beam sections for the new bridge deck.



## Beaver Dyke

We have enabled our client to discontinue Beaver Dyke IRE, near Harrogate in North Yorkshire, reducing its capacity from 510,000m<sup>3</sup> to just 5,000m<sup>3</sup> and in turn reducing the risk to residents downstream in the event of a breach of the dam.

Over 20,000m<sup>3</sup> of embankment fill was excavated on site, so to reduce the environmental impact of the works (as well as minimise the traffic, carbon, and visual footprint of the scheme) all excavated material has been retained on site and used for landscaping to return the submerged landscapes at Beaver Dyke close to its original state.



## Eccup Siphon

We have installed a new siphon facility at Eccup 'En-route Storage Reservoir' (or ESR), which allows for the draw down of the water level of the reservoir by 1m per day should an emergency situation arise – a legal requirement of the site.

The original premise at Eccup was to install twin siphon pipes, a solution we challenged during the design phase.

Our alternative solution, the installation of a single 1.4m diameter pipe, achieves the same results and offers much improved value for our client.

On site we employed a team of skilled divers to install support brackets and gabion baskets before a 12.5t section of pipe was floated on the surface of the reservoir and sunk into position beneath the water.



## Operations

# Service Reservoirs

At MMB we have been designing and constructing service reservoirs for a number of years, and in 2014 reached site with projects for a variety of clients.

Service reservoirs provide a holding facility for clean water to be stored prior to distribution, as well as providing stored reserves in the event of a burst or high demand periods.

During the fifth AMP period we have worked innovatively to maximise off-site construction, using a product-based approach to building service reservoirs. Developed in collaboration with the client and key supply chain partners, component 'products' are delivered ready for assembly on site – generating efficiencies across the board.

The product-based approach – known as productisation – gives designers a suite of products at their disposal, reducing the number of up-front work and 'first principle' calculations. Buyers receive consistent information, and only have to gain multiple quotes once: at product inception.

On site, managers, engineers and operatives become familiar with designs, delivering safety, cost, and programme improvements. The client then receives consistent and timely information upon scheme completion.

Our service reservoir schemes have also pioneered MMB's use of **Building Information Modelling (BIM)**.



At **Oswestry** in Shropshire, we completed the construction of a new 4ML service reservoir on a particularly constrained site, placing the 30m x 40m concrete structure within just 5m of our boundary.

Due to the dynamic nature of the BIM structural analysis and 3D drawings, a number of modifications to the permanent works were considered as part of the temporary works optioneering phase. This speed and flexibility of BIM allowed the design and build team to consider all options, which yielded benefits for buildability, cost and programme.

**BIM is all about a fully-co-ordinated approach to developing, managing and sharing information throughout the whole project lifecycle.**

**Driven by advances in computing and backed by the Government, it offers the potential for substantial efficiencies to be generated.**



Jacksons Edge SR

## Bramley

We constructed a new £3.8 million twin compartment service reservoir with a 16ML capacity at Bramley, near Leeds, to maintain a critical link in the clean water distribution network for the surrounding catchment area.

Walls were constructed using 125 precast units and the roof structure made up of 5m precast slabs supported by 120 columns and 132 internal beams.

BIM facilitated the off-site methodology at Bramley; the interactive BIM model played a major role on site, engaging the team and allowing for updates to be made in 'real time', potential service clashes to be detected early, and carbon emissions to be significantly reduced.

## Jacksons Edge

We are constructing a new 18ML twin-compartment service reservoir with 1.4km scour pipeline in Disley, Cheshire.

The existing reservoir, which JN Bentley will demolish as part of the new works, was constructed in 1912 and serves 40,000 people but has reached the end of its asset lifespan.

The project, situated on a particularly tight site as the aerial photograph above illustrates, uses many of the methods and processes refined on previous service reservoir schemes of this type.

Minimising disruption to the local community is particularly important at Jacksons Edge.

To manage this, the programme has been expedited, and by using 'productisation' – manufacturing off-site – we are further reducing the length of time we are actually required on site.

Working hours have also been restricted to prevent teams from disturbing residents during the evening, and noise-reducing barriers have been erected around site.

The project is set for completion in 2016.

>> **By overcoming challenges and sharing lessons we learn on our projects, MMB is making a significant contribution to the adoption of BIM in the water engineering sector.**



## Operations

# Waste Water



A significant proportion of the water sector's effort focuses on transferring and then treating waste water and sewerage. We support this process both from an infrastructure perspective - designing and constructing schemes that provide more efficient sewer systems - and from a non-infrastructure perspective - working with clients and the supply chain to devise solutions that improve existing processes - in a cost and time effective manner.

Working with **Northumbrian Water** we deliver a variety of schemes at sewage treatment works (STW), refurbishing assets to ensure they continue to operate effectively and efficiently.

Two recent refurbishments were delivered at **Longhorsley STW** and **Cambois STW**, where inlet pumps, screens, reinforced concrete structures and electrical assets were upgraded on site.

We transferred learning to these schemes from a successful project we delivered at Knitsley STW, where our site manager, Grant Crawford, was presented with the Individual Contribution Award in Northumbrian Water's GEM Awards.

The team that delivered the work at Knitsley was also named runner-up in the Team of the Year category.

2014 also saw the completion of a project at **Sutton Waste Water Treatment Works**, with Yorkshire Water.

Here, by challenging the original scope provided by the client, we saved approximately £3.9 million.

The new solution that we developed meant that the modifications to the works required in order for them to meet discharge consent levels were much less substantial.

We operate a specific **sewerage networks** framework with Yorkshire Water too, working to efficiently repair, upgrade and replace existing sewerage networks.

Under this framework we completed a batch of schemes on the East Coast of Yorkshire, providing additional off-line storage on the existing sewer network to ensure **European Bathing Water Directive** standards were met.

We also commenced work constructing 5km of sewer in agricultural land at **Scotton**, near Harrogate. We developed a solution with the client to solve a flooding issue that regularly affects properties in the area.

## Welshpool

We have designed and constructed a scheme to replace the secondary treatment process at Welshpool STW, with Severn Trent Water.

New process equipment - including a 3,000m<sup>3</sup> oxidation ditch and two 13.5m diameter final settlement tanks (FSTs) - was installed to accommodate for predicted population growth in the catchment area over the next five years.

Early engagement with the supply chain drove efficiencies. Working closely with our steel fixing subcontractor, rebar detailing was designed to complement our on-site construction techniques.

By liaising with our precast concrete manufacturer we refined the FSTs, taking learning from installing similar structures on other Severn Trent Water sites.



## Minworth CHP

Minworth is the site of Severn Trent Water's largest sewage treatment works and is an important source of renewable energy for the client.

Biogas, generated during the treatment process, is used in nine combined heat and power (CHP) units to create 55GWh of electricity per annum – which then helps to power the works.

In 2014 we completed the £4.6 million installation of three new CHP units at Minworth.

The new more reliable and efficient units will drive cost savings as they generate an additional 2GWh of energy every year.

As well as civil works, the project enabled us to showcase our mechanical and electrical capability.

This included the design a new motor control centre (MCC), which controls the complex interface between the CHP units and associated plant on site.

## e5 Alliance

We completed two of our three Severn Trent Water e5 (efficiency 5) Major Projects Programme schemes in 2014, after two years on site delivering these significant works.

We expanded the sewage treatment works at **Rushmoor** to cater for increased demand in the catchment area, and completed the £20 million installation of a new activated sludge plant (plus construction of five final settlement tanks and sludge storage and thickening facility) at **Strongford STW**.

Our third e5 scheme, a major upgrade of **Worksop STW**, will be complete in 2015.

**The Strongford scheme received many plaudits in 2014.**

It was presented the Chairman's Award and a High Commendation for Partnership at the Institution of Civil Engineers (ICE) West Midlands Awards.

The Considerate Constructors Scheme (CCS) also recognised the achievements at Strongford, presenting a bronze award after the site featured in the top 10% scoring CCS schemes nationwide.

## What is e5?

e5 (efficiency 5) is a joint venture formed between four framework contractors and client Severn Trent Water. It has been established to deliver major waste

water non-infrastructure projects with efficiency, innovation and collaboration at its core.





Operations

# JBA Bentley




JBA Bentley is a joint venture between JN Bentley and Jeremy Benn Associates (JBA). The partnership brings together the specialist skills and expertise of the two firms: JN Bentley as a civil engineering contractor, and JBA as a water and environmental consultant.

JBA Bentley was established in 2013 as a vehicle to deliver schemes with the Environment Agency (EA) on their Water and Environmental Management (WEM) Framework.

**“The opening of the new office in Leeds represents an important step for JBA Bentley as we continue our development under the WEM Framework.”**

Ian Austin | National Framework Manager, JBA Bentley





## What is the Water and Environmental Management Framework?

The Water and Environmental Management Framework - or WEM - is the Environment Agency's primary framework for the delivery of flood and coastal risk management and capital maintenance projects. JBA Bentley is one of just six EA supply chain partners on Lot 4 of the framework.

Our role under WEM includes the provision of early contractor involvement (ECI), specialist design, and civil engineering

construction works on anything from flood banks to pumping stations to culverts. The contract sees us work across a wide geographical area – from Wales to Cumbria to the East Coast of England.

JBA Bentley is the ideal delivery vehicle because the framework utilises our expertise in disciplines including earthworks, pipe laying, pump station refurbishment, environment enhancement, and river and coastal modelling.

The WEM Framework can also be utilised by other risk management authorities, including internal drainage boards and local authorities. JBA Bentley has designed a scheme for Natural Resources Wales in Cardiff, carried out ECI for Leeds City Council, and is working with Reedness and Swinefleet Drainage Board on a scheme in Lincolnshire.

## Establishing a Presence

2014 was a year of growth for JBA Bentley. We established ourselves in a new office in Leeds City Centre to offer our client a 'one stop shop' environment where both design and construction teams co-locate under the same roof.

In 2014 we demonstrated our capability to deliver both programmed and reactive works. A proportion of our schemes under WEM have focused on reactive works to alleviate the immediate effects of the December 2013 storm surge and subsequent winter flooding on the East Coast of the UK.

**Schemes programmed for delivery have included a batch of 12 schemes in Yorkshire and the North Anglian region as part of the EA's Asset Recovery**

**Programme (ARP), set up to repair assets ahead of storm events in the future.**

In 2014 we opened a new office and began to establish a team in Peterborough, specifically to work with the EA. We were awarded a batch of 74 minor repair and refurbishment schemes in the Anglian region, totalling in-excess of £5 million.

JN Bentley also works with the EA on their Minor Works Framework in Peterborough, running 10 'minor works' schemes from the office in 2014.

Projects under this framework vary from bridge repairs to earth retaining structures to fish pass construction.

## Reedness

**Our scheme at Reedness is one of our ARP projects (pictured).**

Here we are raising the EA's flood defences to provide long-term protection to the area between two villages near Goole on the banks of the River Ouse. Based over a 3.3km stretch of land, to meet the programme we are undertaking work on several fronts at any one time.

We estimate there to be a total of 8,000 wagon movements throughout the scheme and, with the villages of Reedness and Swinefleet nearby, we have taken steps to minimise disruption.

Site teams have engaged proactively with the community to alleviate concerns, making house calls and even visiting the local primary school to hold an assembly.

**The project is registered with the Considerate Constructors Scheme:**

"The overall appearance of the project is driven by high company expectations incorporating a well-organised site with clear boundaries...Great care is taken to avoid negative impact on the community with good communications established."

**Keith Wigham | CCS Monitor**

Operations

## Security Works

We have been successful in securing a number of contracts with our clients in the water sector to carry out security enhancement works to their existing assets to bring them in line with new legislation.

Working closely with our supply chain, across the UK we have been designing, installing and commissioning a range of electronic and physical measures to further secure their sites.

Delivering works across multiple sites like this provides opportunities for us to take learning from one project to the next and derive cost and time savings.

Operations

# Mine Water Treatment

“JN Bentley, working collaboratively with the Coal Authority, delivered the scheme ahead of programme and below target cost...the scheme is already providing noticeable benefits to the water quality and has been extremely well received by the local community and tourism businesses.”

Tom Mills | Project Manager, the Coal Authority



**2014 marked the tenth anniversary of JN Bentley's appointment to the Coal Authority's first 'ENVision' framework for mine water remediation.**

Now in the final year of 'ENVision II', we continue to realise the benefits of long-term agreements based on collaboration and continuous improvement.

The framework itself takes JN Bentley nationwide, from the Lake District to South Wales, providing our client with ECI and

design and construction services at both coal and metal mining sites.

One of the key aims of the current framework is to drive improvements and efficiencies in how mine water treatment is delivered.

Using a standardised approach we maximise these efficiencies and reduce risk, capturing learning and taking this forward onto future works.

We used standardised products too, such as precast concrete aeration cascades, to further improve efficiency.

**>> In early 2015 we were delighted to learn that we had been awarded a place on the Coal Authority's new design and construct framework 'Confluence', so will continue to work closely with the Authority through until 2018.**

## Saltburn Gill

**We constructed a mine water treatment works at Saltburn Gill in the North East of England to stop untreated iron stone mine water from being discharged into the natural environment.**

Ochre deposits were polluting 2km of watercourse, generating large 'ochre aprons' on the slopes of the tributary and directly preventing salmon migration, as well as threatening 1km of Saltburn beach.

The works were delivered in two phases, and comprised the construction of four settlement ponds, each with pre-cast concrete inlet, outlet and aeration cascade structures, together with a sludge drying bed and new wetland.

Once Phase One had been commissioned, performance was monitored for six months.

Based on the information gathered during this six month period, the second phase layout was refined prior to construction to offer the best complete solution and value.

Once fully commissioned, the scheme will be entirely 'passive' - no chemicals required to assist process - and is expected to remove up to 99% of iron from the mine's pumped water.

**>> The works were also commended in the Project of the Year category at the CECA North East Awards for 2014.**

## Operations

# Water Supply & Resilience

In the Anglian Water region, our efforts in 2014 were focused on two major schemes that will ensure consistency of supply and water resilience.

We brought to a close the **Covenham to Boston Pipeline**, one of the largest and most high-profile schemes JN Bentley has delivered to date.

The 61km, 27ML per day transfer pipeline was required to address a water supply/demand deficit in the growing town of Boston, Lincolnshire.

By reusing and improving existing assets – and providing new assets – the water supply for a population forecast to reach 101,000 by 2035 has been secured.

This long-term resilience was delivered using a number of different water sources, providing an exemplar of good water resource management.

The second scheme is a project in Cambridgeshire that once complete will provide resilience to **Grafham Water Treatment Works**, a strategically important works supplying clean water to 250,000 homes.

The project comprises many different parts across a large geographical area. Construction will begin in 2015.

In a 'resilience event', the solution we developed with Anglian Water will enable flows in the existing trunk main to be reversed – an innovation that significantly reduced the cost of the scheme.

**Both schemes were delivered by Anglian Water's Special Projects framework. Six partners were appointed to the framework to deliver large, one-off collaborative schemes in an environment built for sharing ideas and working collaboratively.**

### ● Covenham to Boston | Accolades

- **Winner** Large Project Merit Award | ICE East Midlands
- **Winner** Drop CO<sub>2</sub> - Embodied Carbon Award | Anglian Water "We Love What You Do" Awards
- **Runner-Up** Civil Engineering Project of the Year (£10m to £50m) | British Construction Industry Awards



## Gearing up for AMP6

In May 2014, MMB was named as one of Anglian Water's six partners that will deliver a work stream worth up to £1.3bn over the next five years.

This meant that as well as delivering the two resilience schemes - the Covenham to Boston Pipeline and the works at Grafham - much of our work with Anglian Water in the second half of 2014 was spent gearing up for the commencement of AMP6.

As part of the Integrated Main Works Capital (IMWC) Alliance, we will undertake the design and construction of both water and water recycling schemes on infrastructure and non-infrastructure sites across the whole of the Anglian region, the largest in England and Wales.

We have begun to build a team in the region, co-locating with fellow Alliance partners and our client to stimulate

collaborative working and drive improvements in all areas, from safety to efficiency.

>> In conjunction with this, we have been developing early AMP6 cake reception schemes at Whitlingham (near Norwich) and Cotton Valley (near Milton Keynes) – the first of which began on site in January 2015.





“The way the team forged a strong working relationship from the start of the project was exemplary in terms of collaboration.

“They worked within our risk and value intervention process, challenging scope and cost through the optioneering and detailed design stages to realise an efficiency in excess of 19% on cost and a carbon reduction in excess of our 50% target.

“Of particular note is the way the team formed a strong relationship with our operational colleagues, the ultimate end user.”

Jason Tucker | Head of Capital Delivery and Supply Chain Management, Anglian Water



## Operations

# The Batch Approach

In recent years we have become adept at delivering 'batches' of work with our clients. We have done this with significant service reservoir schemes right through to small programmes making safety improvements at sewage treatment works.

Regardless of the size of project, working in batches gives us opportunities to innovate. We have enjoyed great success with our 'productisation' approach - developing standard products that improve efficiency across the board, whether it be reducing the burden on procurement or improving familiarity with designs out on site.

### What is a 'product'?

At the core of a product is a 'standard design' - a component that can be designed just once but constructed many times. Using standard products enables us to work far more efficiently.

Batching also enables us to take learning from one site to the next as we develop smarter ways of working.

This is a theme we are very much looking forward to carrying over into AMP6, where we must understand the efficiency challenges facing our clients to help them overcome ever more demanding targets.

## Solving Flooding Issues

To solve cellar and basement flooding issues at properties across Yorkshire, our engineers implemented a standard 'cut and pump' product that has yielded significant design and delivery savings.

Traditionally, upon a flooding event, initial investigations and estimates were carried

out, followed up by new calculations, drawings and materials requisitions, usually done from 'first principle', before works could finally begin.

Using standard products across the 20 sites has saved 30% over traditional design and 20% over traditional construction.

The solution negates the need to 'reinvent the wheel' every time a new scheme is initiated.

## Improvements on Existing Assets

We work closely with Northumbrian Water and Essex & Suffolk Water to deliver a series of different sub-programmes to make safety and efficiency improvements across their water and sewerage networks.

We visited in-excess of 30 different sites in 2014, as part of the water company's minor works sub-programme, to review and challenge existing standards and specifications.

**"We challenged JN Bentley to help us achieve our efficiency target of 20% across our capital investment programme. They took up this challenge...resulting in the removal of £1.1 million of candidates from the STWs minor works sub-programme."**

**Jonny Belmont | Project Manager, Investment Delivery, Northumbrian Water**



Over 15,000 surveys have been completed, which we estimate to have saved £1.35 million in staff time alone.

## Tablet Technology

We have delivered an investigation contract with Yorkshire Water, studying and suggesting solutions to reduce risks associated with working at height.

The programme utilises tablet technology to immediately capture information and quickly upload it, making it accessible to the design team via a web portal. We then submit this information to the client, saving about two hours of staff time per survey, and eradicating human error when inputting hand-written surveys into computers.

## • Operations

# • Highways, • Buildings & • Structures

## Adopting Private Drains and Sewers

New legislation is transferring the ownership of all private pumping stations serving two or more properties to local water companies in 2016. The water companies will then be responsible for their maintenance and upkeep.

Prompted by this new legislation we have been delivering civil engineering improvements at properties across Severn Trent Water's region since 2013.

We developed a standard telemetry panel and kiosk design that has yielded savings upward of 20%. We have also developed a tablet-based app that streamlines the scoping procedure and ensures the information we record remains consistent.

Working within Severn Trent Water's customers' property makes this batch of work particularly sensitive; maintaining good community relations is crucial.

Our approach to managing this was recognised by our client, who heralded the programme as an example for others to follow when, following surveys of their customers, we were awarded the highest Customer Satisfaction score across the entire Severn Trent Water framework.

**By the end of AMP5 we will have worked on upward of 120 PDaS sites since 2013, using standard products and significant off-site fabrication to improve efficiency.**

• It is important the company maintains a presence in other sectors outside of water; joining the Mott MacDonald Group will only aid our diversification in years to come.

• We maintained our long-standing relationship with blue-chip client **Procter & Gamble** in 2014, completing a scheme to install a 300m-long elevated enclosure, complete with conveyors, to transport pallets of products across their London site.

• We are also engaged on a framework with the **North Wales Trunk Road Agency**. We delivered two schemes with the Agency in 2014, erecting noise barriers and over 800m of vehicle restraint barriers on the A55, the North Wales Coast Road.

• We continue to work with the **National Grid** on two frameworks. We have constructed boundary walls, fencing, security and safety works on their property as part of a Minor Civils Framework, and recently secured a place on their Gas Asset Health Framework. Work under the new framework will encompass civil, mechanical and electrical works associated with maintaining the health of all National Grid gas assets.

## • Eaking Access Roads

• We constructed new access roads, areas of hard-standing with ducts, drainage, street lighting and fencing over a 1km-long site at the National Grid's Training Facility near Newark, Nottinghamshire.

Instead of importing material, the majority of the platforms required for the pylons were constructed using 50,000 tonnes of 'site-won' material excavated during the works.

Following our scheme at the training facility, the UK's very first new style 'T-pylons' will be installed on site to aid the training and development of National Grid employees.

## Hanningfield Multi-User Building

Our project constructing a new multi-user building on the banks of Hanningfield Reservoir in Essex was recognised for its environmental sustainability in Northumbrian Water's GEM (Going the Extra Mile) Awards.

The new building provides boat users with permanent changing and welfare facilities, and staff with much-needed storage space and mess rooms.

Adjoining a Site of Special Scientific Interest (SSSI) and situated within an open public access area adjacent to a raw water storage reservoir, the building had to comply with stringent environmental standards and planning conditions, as well as ensuring the needs of the end users were met.

**>> The project gave us opportunity to use our buildings expertise with a water sector client.**

[www.cntentary.co.uk](http://www.cntentary.co.uk)



“If I cannot do it safely, I will not do it.”

# Health & Safety

2014 was a busy time in JN Bentley's journey to Zero Injuries and was a year in which we were reminded that Zero Injuries and a Zero Injury culture are the only acceptable targets in safety terms.

A new Steering Group reflected the changes in the structure of the Company and the Business planning process presented a number of challenges for the year.

The themed areas were Incident Investigation, Supplier Engagement, Occupational Health and Safety Leadership.


**Major progress was made in all areas.**

## Health & Safety 2014

Below is a summary of our health and safety performance in 2014:

Year	Hours Worked	Near Misses		First Aid Injuries	Medical Treatment / Lost Time Injuries (<3 days)	RIDDOR Reportable
		Unsafe Acts / Unsafe Conditions	High Potential			
2010	1,849,346	2,287	101	83	16	2
2011	2,030,180	3,140	92	73	17	0
2012	2,237,691	4,550	75	98	9	1
2013	2,120,650	7,475	23	94	8	3
2014	2,215,675	9,516	14	49	6	4





"2014 was a good year for us. Incident reporting was up and we reduced the number of high potential near misses happening on our sites and in our offices."

"However, we must guard against complacency and keep improving. The business is entering a period of significant growth and health and safety will remain very much at our core."

John Greenwood | Engineering & QES Director, JN Bentley

A revised training course for **incident investigations** has been developed, which broadens the focus from 'why suitable investigations are necessary' to 'how to ensure investigations get to the root of the issue and suitable learnings and changes are agreed'. We have seen significant improvements both in the quality of our investigations and the effectiveness of our action plans.

**Supplier engagement** has delivered new and innovative methods for gauging and ensuring the involvement - both proactive and reactive - of our suppliers. This has seen unprecedented reporting levels and ever-diminishing injury frequency rates.

We have done considerable work to understand the **occupational health** concerns and hazards facing the workforce and are in the process of developing a revised training programme that will help site-based employees manage and avoid issues they face from tasks they undertake on a daily basis.

The recognition that the active involvement of our leaders on site has driven us to invest in both leadership and personal impact training for our first line supervisors. Included has been an essential tool kit to ensure that all health, safety and environmental communications are delivered in the appropriate manner to the teams undertaking the tasks.

Overall, our health and safety performance in 2014 remained strong but demonstrated that we must continue our targeted efforts towards the Zero Injuries culture to which we aspire.

2014 saw fewer colleagues injured than at any time in our recent history. This was achieved as a direct result of ever increasing levels of engagement and involvement from colleagues directly-employed, subcontracted and from third parties, whether client or visitor.

More unsafe acts and conditions were corrected and reported by more people than ever before and more **behavioural discussions** - challenging both unsafe acts and reinforcing safe behaviours - were undertaken by over 350 trained individuals. This, coupled with a record number of QES Inspections, shows we have firm foundations for continued improvement.

However, we still received stark reminders that we have some way to go before we can claim to have eradicated injuries from our workplace.

Amongst the record low number of injuries were four which caused colleagues to be absent from work for extended periods.

**All** of our investigations have shown that full compliance with our procedures, such as the Operational Safety Standards, prevents injuries.

**>> 2015 represents a massive challenge for JN Bentley to not only maintain but improve our performance as more people join the company to service the increased workload. We have a plan; we will implement the plan and will keep monitoring how we are doing.**





Our

# People

We are committed to creating a fun workplace, where people have a voice, are safe, reach their potential, prosper, and where rewards are shared.

2014 saw us focus on a broad range of activities for our people through initiatives aimed at improving health, safety and wellbeing, employee recognition, training and development, and communication.

The following pages review some of the achievements of our people in 2014, and showcase some of the different and creative initiatives we use to engage our employees and make JN Bentley a great place to work - all the more crucial as the company enters a particularly exciting and challenging period of growth.

195 new starters in 2014

30,000 hours spent by employees on training

261 Health & Safety Tests completed

30 employees enrolled on leadership training

10 weekly-paid foremen moved to monthly-paid staff

26 employees studying on further education courses

109 employees passed internal Cost & Efficiency training

# £1m

was invested in training  
and development in 2014



## Our People

# Recognition & Reward

Our people are our most valuable resource so it is of paramount importance that we recognise and reward their achievements and efforts.

We do this in a number of different ways, including our monthly 'Be Recognised' rewards scheme. With a team and individual winner every month, 'Be Recognised' praises employees and subcontractors for 'living' the JN Bentley values. The process gives us chance to share stories of best practice, innovation, community engagement, environmental

stewardship and exceptional workmanship with colleagues across the business.

In 2014 we broadened the scope of 'Be Recognised', with employees now voting for the monthly winners themselves. All employees can directly nominate individuals and teams they deem worthy of recognition too.

**The Overall Winners** | Paul Bentley and other members of the Board visited our overall winners and runners-up on their sites and in their offices to personally present the prizes in January 2015.

Individual Winner | Paul Craig



Team Winner | Cott House News



Individual Runner-Up | Katie Eytton



Team Runner-Up | AMP6 Bidding

Individual winner **Paul Craig** received a prize to the value of £2,500 after being voted monthly individual winner twice in 2014. On one scheme he built a great rapport with the local community, helping works run more smoothly. He then helped the company achieve cost savings of over £27,000 when calling on his past experience to suggest alternative methodology.

Team Winners **Mark Gott, Tom Fawcett and Andrew Goldie** were awarded a £2,500 prize for displaying an exemplary attitude to safety. They challenged a subcontractor who was all set to commence an organised lift without having run through their lift plan. Following the challenge the subcontractors were able to carry out the operation safely.

Over 100 individual and team nominations were made in 2014, with all monthly winners presented with a prize to the value of £75 - often a sum generously donated to charity. Every nominee received a personal thank you letter from Paul Bentley.

• **January** Mick Smith | Peter Gunn, Scott Arbuthnott and Andy Flesher • **February** Helen Frost | Mark Gott, Andrew Goldie and Tom Fawcett • **March** Jordan Watson | Dean Hart, Simon Dodwell, Jake Meredith, Callum Troy and Gavin Ellis • **April** James Wild | Peter Fletcher, Gary Milton and Gary G Smith • **May** Jon Pendle | Bill Headley, Graham Bexon, Michael Bexon, Keith Stables and Dean Edwards • **June** Charlotte Greaves | Steve Gridley, Danny Clay and Ross Lacey • **July** Ian Bester | AMP6 Bidding Team • **August** Katie Eytton | Gary Belcher and Adam Taylor • **September** Paul Craig | Durham Team • **October** Aimee Binns | Rob Tennent, Rob Cullledge and Ben Parker • **November** Mark Wood | Gavin Davies, Chris Norton and Anthony Grey • **December** Paul Craig | Jacksons Edge Site Team •

## Our People

# Development & Training



"Our aim is to promote from within where ever possible. This means employees are motivated to stay with us, work hard, and develop their skills."

Judith Jeffery  
HR Director, JN Bentley

**At JN Bentley we recognise the importance of building and maintaining a happy and skilled workforce.**

We continue to invest over £1 million every year in the training and development of our employees to ensure we can always readily resource schemes with talented people who can deliver high quality, innovative and cost effective schemes for our clients – on time and within budget.

## Employee Training

Training isn't limited to those courses that ensure legal compliance on site – we offer a variety of practical and management training to develop our employees and improve their skills.

Topics range from using abrasive wheels and working at height, to health and safety, financial management and leadership.

We added to our growing suite of training in 2014 with the introduction of new courses on concrete quality assurance, environmental awareness, levelling and setting out, and face fit testing.

We continue to utilise our own ConstructionSkills-accredited Training Centre at Head Office in Skipton to deliver a significant proportion of this training.

In 2014 we also opened our second training centre, at our premises in Shifnal. We first used this training centre with our new seven-strong group of Apprentices, who joined us in September.

**2014 also saw the expansion of our bespoke innovative two-day course on Cost & Efficiency & Leadership.**

Operations Managers, Contracts Managers and now Site Managers and Commercial and Design Teams are being trained on this in-house Cost & Efficiency & Leadership training course.

The two-day programme encourages leadership and highlights a number of tools and techniques that our people can take back to their 'day jobs' and use with their teams - both in the office and out on site - to help increase involvement in our Cost & Efficiency Focus.

## Supporting Students

We increased our annual intake of university placements in 2014 as 20 students joined the company as civil engineers, mechanical and electrical engineers, quantity surveyors and in a range of business-related roles (including communications, buying, plant control, HR and training).

Joining from universities across the UK, those placement students who demonstrate exceptional performance during their time with us go on to be sponsored through their final year at university before being welcomed back as permanent employees upon graduation.

In total we employed 20 graduate-level employees during 2014 – 6 of whom we sponsored through their final year at university.

**This is a figure that is only set to increase in the years to come.**



## Professional Development

Once working for JN Bentley we don't believe professional development should stop there.



In 2014 we celebrated the first graduates through our **Civil Engineering Development Programme**, which is dedicated to the advancement and promotion of professional standards and attributes in engineering and construction management.

Assigned a Mentor and Supervising Engineer to support them through the scheme, the course lasts up to five years and goes hand-in-hand with the ICE's development objectives, enabling a professional qualification to be gained at the same time.

In 2014 we launched similar schemes for our **mechanical and electrical engineers** and **quantity surveyors**, linked to the Institution of Engineering and Technology (IET) and Chartered Institution of Civil Engineering Surveyors (ICES), respectively.

26 employees are also currently working towards a variety of **further and higher education qualifications** across a range of disciplines. Employees study in a variety of different ways to suit their lifestyle, from day-release to evening classes.

30 employees began our internal **Integral Leadership** course in 2014. The programme improves leadership and management, focusing on areas critical to the future success of JN Bentley.

Upon passing the course, employees received a Level 5 Award in Leadership from the Institute of Leadership & Management (ILM). 135 members of staff have now gone through the training in total.



At this year's prestigious **Business in the Community Awards**, our 'Big Tick' for the way JN Bentley

develops the engineers of the future was successfully re-accredited for continuing to proactively address current and future skills needs in the construction and civil engineering industry.

## Apprentices

In 2014 we welcomed seven new apprentices onto our in-house apprenticeship scheme.



The group joined from all walks of life - from school, college and even previous professions.

The scheme is designed 100% in-house which means our apprentices have the opportunity to gain experience and competencies specific to the work we do, whilst working towards a professional qualification at the same time.

Each apprentice has been assigned a personal mentor (an existing JN Bentley employee) who will help guide their progress.

Over the next two years they will be working towards a Level 2 QCF Diploma in Construction and NVQ Level 2 in General Construction – whilst learning about our core competencies and values at the same time.

# Community

We are the public face of our clients when out on site so it is vital that we maintain a good relationship with the community, leaving behind positive legacies.

Our people are equipped with a wide range of capabilities, so we encourage staff to add value to these communities by giving their skills, time and expertise rather than one-off philanthropic donations.

## Partnerships with Schools

A number of our employees were involved in the **Engineering Development Trust's Engineering Education Scheme**, supporting students studying science, technology, engineering and maths (STEM) subjects at A-Level.

Basing a challenge around a 'real-life' JN Bentley scheme, our mentors work with students to develop skills in project management, team working, problem solving and communication.

A number of our employees are registered as **STEMnet STEM Ambassadors**.

Our Ambassadors and their colleagues visited a number of schools in 2014, leading the ICE's 'Bridge to Schools' challenge, where students build a 20m long suspension bridge.

Teams also attended a number of STEM Events, designed to inspire future engineers.

Events at locations such as the home of the Red Arrows, RAF Scampton, all provided opportunities to spark an interest in civil engineering in young people.

“Thank you for showing us around Linton Falls. All the adults and children at Lothersdale had a wonderful day. Thank you for your interesting tour and enthusiasm.”

Mrs Kingham | Year 5/6 Teacher, Lothersdale Community Primary School





Works underway renovating  
the Gateshead Crossroads  
Care respite centre

## Community Projects

Many of our employees give their skills, time and expertise to support a variety of community-based projects, 'giving a bit back' and building positive relationships.



### Gateshead Crossroads Care

The team helped renovate a respite centre for carers who require 'time out' from their challenging home lives.

Clearing a garden to make it a usable space, the scheme was delivered as part of our client Northumbrian Water's 'Just an Hour' programme.



### Shifnal Cemetery

Our employees joined forces with the client and fellow contract partners to upgrade paths and surrounding areas at their local cemetery.

The project was a great opportunity to bond with the local community and colleagues away from the office or site.



### Glusburn & Cross Hills War Memorial

We worked closely with the Glusburn and Cross Hills Parish Council to help with the installation of a new war memorial.

Preparing the site and constructing groundworks, our team of operatives were proud to have worked on the scheme in their local area.

We regularly hear stories of our people assisting their local community as part of their works on site. April's 'Be Recognised' prize, for example, was won by employees **Peter Fletcher**, **Gary Milton** and **Gary G. Smith**, who went above and beyond when looking after the public during coastal works in Cumbria. A local resident went out of his way to praise the team, thanking them for the consideration they had shown throughout the project.

## Linton Falls

The hydroelectric power station at Linton Falls in the Yorkshire Dales National Park, which we refurbished and brought back into service in 2011, continues to be popular with the general public and school children alike.

JN Bentley re-opened the site after fully-refurbishing the old turbine house more than 100 years after it was first constructed in 1909.

The electricity generated feeds directly into the national grid, effectively offsetting 75% of the electricity JN Bentley procures every year.

We open the doors to members of public three times a year as part of the **Heritage Open Days** and **British Festival of Archaeology**.

These public open days attracted more than 300 visitors in 2014, all intrigued by the opportunity to see up-close the workings of an operational plant.

We also provide local primary and secondary schools with **educational visits**, teaching pupils about renewable energy, the environment, and the history of the local area.





## Charitable Giving and Fundraising

Employees are particularly generous at JN Bentley, and the company supports their charitable efforts inside and outside of work.

Employees voted **Cancer Research UK** as the **JN Bentley Charity of the Year** and throughout 2014 our regional offices have pulled together and organised a variety of activities to raise over £1,500 for the charity.

Given that a significant proportion of our business is in the water sector, the support and donations we give to **WaterAid** remain as relevant as ever.

We sponsored and participated in a number of events with the charity in 2014, and continued our popular laptop renewal scheme, which enables employees to purchase their old laptops for a discounted price, with all proceeds going to WaterAid.

Last year our employees donated an impressive £2,550 through this initiative.

The scheme has the added bonus of reducing levels of electronic waste too.

Activity	2014 (£)	
Charitable Donations (including philanthropic giving, sponsorship of events, gifts in kind etc.)	Company Donations (WaterAid)	40,997
	Company Donations (Other)	11,681
	Employee Donations (WaterAid)	2,550
	Employee Donations (Other)	5,787
Fundraising	Employee Fundraising	12,510
	Company Matching	2,024

**Together with company-wide efforts, our growing network of regional offices has been busy raising money too.**

Our people in **Skelmersdale** have used fundraising to help bring the new team together, organising a range of different activities.

The **One Supply Chain West Community Group** is based in Shifnal and comprises employees from JN Bentley, our client and other supply chain partners.

This year the team was proud to present two local charities – **Hope House Hospice** and **Severn Hospice** – with cheques for £2,500 each after organising a range of events during the year, including a Spring Ball.

Our offices in **Skipton, Durham and Leeds** have been busy too, organising

dress down days, bake sales and five-a-side football competitions to raise money for charities such as the Stroke Association, ABF The Soldiers' Charity, and Marie Curie.

We support employee efforts through the 'Be Fundraisers' company matching scheme. This popular initiative allows employees to claim up to £100 to match their own fundraising. In 2014 our people raised over £18,000 for various charities, with 21 employees and teams claiming matched fundraising.



- **Ross Millward** – Great Glen Kayak - Yorkshire Air Ambulance • **John Gonnella** – 3 Peaks Challenge - Cancer Research • **Stephen Dobson** – Cycle Sportive - Pituitary Foundation • **Craig Soulsby** – All UK Tough Mudders - Alzheimer's Society • **Chris Beck** – Bentley Bake-Off - Cancer Research UK • **Les Hartland** – Leeds Half Marathon - ABF the Soldier's Charity • **Rachel Mythen** – 10km Run - Stroke Association • **William Sah** – Bake Sale - Cancer Research UK • **Mark Conway** – Great North Run - Children With Cancer UK • **Durham Office** - Various - Children's Heart Unit Fund • **Peter Brodie, Colin Watts and Andrew Shield** – Great North Run - WaterAid • **Kevin Bryant** – Organised Raffle - Help For Heroes • **Nigel Shepherd and Neil Fernyhough** – World Cup Sweepstake - Local Charity Junior Football Team • **Iain Riley** – RideLondon-Surrey Cycle Ride - Pancreatic Cancer UK • **Scott Heptinstall and Alan Sheldrake** – Yorkshire Marathon - Candlelighters Trust and Taylor Sheldrake Friends for Candlelighters • **Dave Pybus** – Head Shave - Oaks Special School • **Jonathan Mitson** – Boxing Day Dip - Stockton, Thornby & District Scouts •

Shifnal-based JN Bentley Lead Hand, **Peter Stealey**, provided us with one of the more memorable fundraising events of 2014. Peter volunteered to shave his 29-year old beard and, with help from the One Supply Chain West Community Group and a local barber, raised over £1,000 for the Severn Hospice.





Our

# Environment

**We understand that our operations can have a direct impact on the environments in which we work and recognise the importance of using our expertise to carefully manage associated risks and opportunities.**

These impacts can be to local environments in the form of protecting or enhancing biodiversity or more globally in terms of resource use and emissions.

Our expectation is to achieve zero environmental incidents or legal breaches on all of our projects and at all of our premises.

We monitor impacts associated with our operations and procure locally, ethically and sustainably to minimise our impact.

We communicate with all our employees, suppliers and subcontractors about the importance of responsible environmental

management, promoting environmental near miss reporting to encourage best practice and reduce the likelihood of environmental incidents.

We are committed to training our people in effective environmental management too, and have developed a thorough in-house course delivered by members of our QES Team.

We have identified three main impact areas on which we focus our efforts: pollution prevention, fuel and energy use, and waste management.

**We understand that our operations can have a direct impact on the environments in which we work.**

**Our expectation is to achieve zero environmental incidents or legal breaches on all of our projects and at all of our premises.**



## Our Environment

# Impact Areas

## Pollution Prevention

By encouraging employees and subcontractors to report all environmental incidents, we guard against a pollution event occurring on one of our sites.



# 35%

increase in incident reporting in 2014



Levels of reporting increased in 2014, up to 1,638 from 1,207 in 2013.

This demonstrates an improving level of awareness of environmental issues on site and around our offices, and provides us with valuable data to prevent incidents.

The breadth of employees and subcontractors reporting incidents increased too; it's not just managers who are reporting – we have seen higher levels of engagement from our site teams. They are now responsible for reporting over a third of environmental incidents on site.

## Fuel & Energy Use

Measuring operational carbon and directly associated energy consumption is something we have been recording since 2008. We measure all operational fuels at a company level and link this to turnover.

In 2014 our performance improved. Tonnes of CO<sub>2</sub>e per £100,000 turnover decreased to 5.81, from 6.50 in 2013. This demonstrates that efforts to improve the efficiency of our operations is beginning to pay off.

After signing up to the principles of the Infrastructure Carbon Review, we developed a set of strategic 'carbon commitments'.

We made good progress against these in 2014, including the development of a report that can easily be run to collate the quantities of principal materials delivered to our sites, at company and framework levels, to help us measure capital carbon.

Our company car fleet remains one of the 'greenest' in the UK and, as we continue to spread our geographical coverage, are investigating further methods by which journey times and distances can be reduced - or even eradicated altogether - by increasing our use of new technologies such as video conferencing.

## Waste Management

Our company aim is to maintain a diversion rate of waste from landfill of over 90%.

We achieved this in 2014 with a combined figure exceeding 99% including muckaway. We continued to seek methods to improve upon this figure in future years.

Description	Quantity						Conversion Factor kgCO <sub>2</sub> /Unit	CO <sub>2</sub> e (Tonnes)					
	2009	2010	2011	2012	2013	2014		2009	2010	2011	2012	2013	2014
Gas Oil (Litres)	2,535,083	1,374,923	1,632,811	1,325,883	1,765,482	1,321,011	2.762	7,002	3,798	4,510	3,662	4,876	3,649
Natural Gas (m3)	26,994	6,163	4,667	24,044	33,415	14,394	2.009	54	12	10	48	67	29
Diesel (Litres)	783,876	786,730	757,006	927,094	978,936	1,018,171	2.639	2,069	2,076	1,998	2,447	2,583	2,687
Petrol (Litres)	82,900	96,652	92,988	51,084	46,148	57,823	2.304	191	223	214	118	106	133
Electricity (kWh)	302,232	588,488	593,095	545,317	319,968	541,506	0.541	164	318	321	295	173	293
Linton Hydro	n/a	n/a	n/a	-424,354	-251,998	-252,300	0.541 (Assumed)	n/a	n/a	n/a	-230	-136	-136
Total Tonnes CO <sub>2</sub> e (Absolute)								9,480	6,427	7,053	6,340	7,669	6,655
Tonnes CO <sub>2</sub> e per £100,000 Turnover								11.02	7.82	6.72	5.28	6.50	5.81
Annual CO <sub>2</sub> e Reduction (%) vs. Turnover								8.4	29.0	14.1	21.4	-18.4	8.3
Total CO <sub>2</sub> e Reduction (%) vs. 2008 (Our Baseline) vs. Turnover								8.4	35.0	44.1	56.1	45.9	41.8

Our carbon calculation uses the methodology and conversion factors set out by the Carbon Trust. As well as consumption of gas oil on our construction sites and natural gas to heat our main offices, Scope 2 also measures emissions associated with the petrol and diesel used in our fleet vehicles (cars and vans) as well as any private vehicles used for business. All employees with a car (or car allowance) have a fuel card for business and private mileage. Strictly, emissions from private mileage should be excluded from our calculation and those from commuting should be included in Scope 3, however we do not have a process in place to separate business, commuting and private miles. We have therefore chosen to include all fuel in Scope 1 of our carbon footprint calculation. Indirect emissions in Scope 2 of the carbon calculation represent our electricity consumption.

## Our Carbon Calculations 2014



“We have a strong track record of making savings for our clients, and reducing our embodied carbon is one way we can take this further, helping us to deliver efficiencies in AMP6.

“As a responsible contractor, we take our environmental responsibilities seriously, taking action to reduce our impact for ourselves, our clients and future generations.”

John Greenwood | Engineering & QES Director, JN Bentley



## Environmental Training

2014 saw the introduction of a new **Environmental Training Course** delivered by our QES Team.

The course has targeted a wider section of employee roles than before and focuses on areas where there is significant environmental risk, opportunities for cost and efficiency savings, and client/statutory requirements. Training was attended by 140 employees in 2014.

After Operational Safety Standards proved successful in improving health and safety performance, we began trialling **Operational Environmental Standards** on site in 2014.

The first two standards look at Ecology & Mitigation and Waste Management.

## Green Construction

Managing Director Paul Bentley is a member of the **Infrastructure Working Group**, established by the **Green Construction Board**.

Through this Working Group, JN Bentley – together with 29 other organisations, including the Government – signed the Infrastructure Carbon Review (ICR), a joint initiative to reduce carbon in infrastructure.

This was re-visited at the **Infrastructure Carbon Review One-Year-On Conference**, held in October at the Department for Business Innovation and Skills.

The conference was an opportunity to share examples that demonstrate carbon reduction and cost saving go hand in hand within infrastructure construction.

## Measures of Success

The **Institution of Civil Engineers (ICE) in Yorkshire & Humber** recognised our commitment to environmental stewardship, commending a scheme we delivered near York, located on environmentally-sensitive land adjacent to the River Ouse.

We received further recognition from client **Northumbrian Water** in their GEM Awards, winning the Environmental Sustainability Award for the construction of the Hanningfield Multi User Building. Our project to safely abandon Throckley WTW was named runner-up in the same category.

**Business in the Community's Environment Index** is a detailed environmental assessment that enables us to benchmark our environmental performance against our peers in the construction sector and beyond.

**In 2014 we achieved 'gold' status, scoring 93%.**

This is a score we can be proud of and, although there is always room for improvement, assures us that the work we do to minimise environmental impacts is having an effect.

Our **Achilles** on-site audit score of 99.3% is one of the highest scores globally. Suppliers use the audit score to manage risk within their supply chain.



2015 and Beyond

# Looking Ahead

“The outlook for the company is clearly one of positive growth, which will bring many challenging, exciting and rewarding opportunities for all.”

Steve Tetlow | Bidding & Strategy Director, JN Bentley





In 2014 we secured AMP6 framework wins with **Anglian Water, United Utilities** and **Dwr Cymru Welsh Water**.

With the AMP period formally starting on 1st April 2015, these frameworks have already started to filter new work through to our teams. When combined with consistent revenues generated through our existing frameworks with **Yorkshire Water** and **Severn Trent Water**, overall workload volume will increase steadily throughout AMP6 (2015-20), exceeding £200 million/year by mid-AMP, and see MMB firmly established as a leading solution provider to the UK water industry.

2015 will also see us bidding for new frameworks with **Northumbrian Water** as we seek to maintain and extend our market share, with strong teams that already exist in the North East being at the core of our delivery service.

In the environment sector JBA Bentley's work for the **Environment Agency** will continue to grow, with annual revenues approaching £15 million.

Taken together with the recent renewal of longstanding framework work with the **Coal Authority**, we will deliver nationally important environmental work throughout the company's operating area.

We will continue to maintain other existing relationships, particularly with **Procter & Gamble, Rolls Royce** and **National Grid**, where we will seek to exploit attractive

opportunities that arise through existing frameworks and leverage our relationship with Mott MacDonald.

Our clients will demand continual improvement, evidenced through efficiency and innovation.

Our new Business Improvement Steering Group will help drive the necessary change, manage the **Cost & Efficiency Focus**, and establish ways of working for sharing information and best practice.

All of our clients will also recognise the important changes that will be made to our **Health & Safety Strategy** in 2015. As we refresh the strategy, and include environmental aspects, our approach will deliver significant benefits for our people and our environment and will set us apart from our competitors once again.

In 2014 we put in place the senior teams necessary to meet the challenges of an increasing workload, and in 2015 we will welcome a significant number of new colleagues into the business as we grow and improve capability and capacity.

All of our people will enjoy the support of the People Steering Group, who will focus on health, talent management and induction.

**>> The outlook for the company is clearly one of positive growth, which will bring many challenging, exciting and rewarding opportunities for all.**



Part of the Mott MacDonald Group

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