

# Live

News and insight from Keltbray

## Opportunity knocks

Thames Tideway CEO Andy Mitchell

CONSTRUCTING INNOVATION –  
SOMETIMES SMALLER IS BETTER –  
BEHIND THE SCENES AT BATTERSEA –



# Message from Brendan



In this edition of Keltbray Live we give you a flavour for some of the recent milestones achieved by both our Rail (page 8) and Specialist Contracting Services divisions (page 4, 14 and 16).

We also look at how the newest addition to our Group, Keltbray Structures, has been firmly placed on the map after celebrating one year in business and securing some major contracts (page 12).

Our entrepreneurial spirit very much remains our USP. This means we continue to review and add to our service offering (page 14–15) and pioneer new initiatives and ideas. While our behavioural engagement and wellbeing programmes are helping to facilitate this from the bottom up (page 5), the appointment of Michael as our new Innovation Director enables us to take a longer term, strategic view of how we harness new ideas to remain competitive, while also improving efficiency and safety (page 10–11).

As we grow and mature we are also increasingly taking on a more active role at industry level, and I wholeheartedly agree with Thames Tideway CEO Andy Mitchell (page 7) when he says we need to be 'collaborative to innovate' and 'get the supply chain involved at an earlier stage'. Specialist contractors are key to the success of any construction project. This means we have an important role to play when it comes to solving the industry's challenges. By engaging with partners and industry bodies, such as Build UK, the Temporary Works Forum and others (page 18); we are helping to drive change on the key issues our industry faces.

I have always maintained that our people are the best. They are well qualified and good at their job. I am also immensely proud of our recent award wins; all evidence that our people. On page 16 you can read about our successful charity partnerships with food banks across the country, and some of those everyday heroes that work here (page 17); all evidence that our people really do go the extra mile.

Finally, all of the above would not be possible without the work we received from our clients, so a sincere 'thank you' from us to you!

**Brendan Kerr**

Chief Executive Officer,  
Keltbray Group

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I hope you enjoy reading Keltbray Live.

To make it better, feedback is always gratefully received to

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I make every effort to ensure featured articles, information and contact details are accurate at the time of writing, but cannot be held responsible for any unintended inaccuracies.

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# 16

BEHIND THE  
SCENES AT  
BATTERSEA



# 08

ON THE WIRES



# 10

CONSTRUCTING INNOVATION



# 12

NEW KID ON THE BLOCK



# 15

SOMETIMES SMALLER IS BETTER

# NEWS IN BRIEF



## BIG BERTHA

Our team at Earls Court helped to ensure that the largest single lift ever undertaken in UK history by a land-based crane was successfully completed. Weighing in at 1500 tonnes (the equivalent to 118 London double decker buses) the lift of 'Big Bertha', which was the heaviest of 61 portal beams on site, took 2.5 hours from start to finish and was carried out overnight to minimise disruption.

Since then, all 61 beams have been successfully lifted by the world's biggest land-based crane, the AL.SK190. This crane is an industry-leading innovation, designed and manufactured by specialist engineering firm, ALE, and specified by Keltbray to mitigate asset protection risks, minimise impact on local residents, reduce the carbon footprint of the project and shorten the enabling work timescales by two years.

The Earls Court project, which is a Joint Venture between Capital & Counties Properties PLC (Capco) and Transport for London (TfL) will create 7,500 homes and 10,000 new jobs as well as a new High Street and five-acre park in London.

## WASTE RECOVERY VIA THE THAMES

Keltbray Environmental has been awarded the Contaminated Waste Disposal contract for the Central section of the Thames Tideway Tunnel by FLO JV; a Joint Venture between Ferrovial Agroman UK and Laing O'Rourke Construction. Measuring 12.7 kilometres in length, this is the largest of the tunnel's three sections.

"We will be working in partnership with GPS Marine Transport Ltd to barge contaminated material arising from shaft excavations at seven sites along the Thames to our facilities at Thames Wharf, where we will remove any contaminants to divert it from landfill. Once treated, the material will be barged to Cory Environmental in Bexley where it will be recycled, used in restoration schemes or energy recovery," explained Managing Director of Keltbray Environmental, Dr Cliff Burton.



"In total, the four-year contract will involve the movement of over 115,000 tonnes of contaminated material. The barging aspect will save more than 5,700 lorry loads, and so also significantly reduce the carbon footprint of this contract even further," Cliff concluded.





### ULTRA LOW VEHICLES

As the first company in the UK, Keltbray has taken delivery of two new Scania Rear Steer Urban Tipper concept vehicles. These have been designed to enhance road safety in city centres and are more lightweight, have a more manoeuvrable chassis and record fuel efficiency.

In addition to the range of safety features, such as lane departure warning, advanced breaking systems and camera monitoring, they also have a chassis that can be lowered to give the driver better direct vision. Suspension can be raised to increase ground clearance in uneven terrain, and a passenger vision door with a large glass panel gives the driver direct line-of-sight to the front nearside of the vehicle.

"This £250k investment is part of our commitment to improving road safety. Combined with our recent purchase of 18 further tipper trucks this will ensure that all of our now 52-strong fleet will feature Euro 6 engines and comply with the new London Ultra Low Emission Zone well ahead of the London Mayor's 8th April 2019 deadline," said Head of Keltbray Group Haulage Operations, Terry Good.

### BEHAVIOURAL SAFETY

On the back of the Health & Safety Executive estimate that human behaviour is a key factor in over 80% of all accidents, Keltbray launched a Behavioural Awareness programme in 2016. This sets out to improve safety by fostering positive and sustainable behavioural and cultural change.

In addition to a reduction in accident rates by 11% last year, the programme has led to increased employee engagement, better safety awareness and more positive decision-making: "This initiative has grown to become an integral part of our decision-making process. We are reaping the benefits in the form of a safer work environment with people who are more positive and motivated to do a good job, and open to work in a more collaborative way," explained Keltbray's Workforce Engagement Manager, Sam Taylor (pictured above right).

"Our interactive behavioural awareness modules have proved to be successful in achieving positive shifts in safety cultures. While we have already provided Behavioural Engagement services to a number of clients and sub contractors, we are now keen to share this learning and extend these benefits to our key stakeholders as part of a tailor-made package that covers interactive behavioural programmes, tailored feedback reports and Personal Protection Equipment testing," Sam concluded.



### LOCATION CHANGES

The existing Keltbray depot in Warwickshire has been relocated from Rugby to Dunchurch, where there is now plenty of space for growth and to house combined resources from Keltbray Electrification Plant, Keltbray Aspire and Keltbray Power and Distribution. In London, our Leadenhall occupancy (pictured) has also been expanded to meet rising demand for meeting rooms and desk space in London. We have reconfigured the 6th floor and have taken on the 5th floor too.

Meanwhile, Keltbray Training has opened a new training centre located at Thames Road in Silvertown. This means we can now offer courses from our training facilities in Crewe, Basildon and London. In Thames Road you will also see our newly acquired Volvo Excavator and Demolition Plant Simulator, which is used to train new plant operators or to increase the existing skills of more experienced operators.



# opportunity KNOCKS

The Thames Tideway is a 25-kilometre, tunnel designed to bring London's 150-year-old sewers up to date. This £4bn construction project started last year and is due to be completed in 2023. It is the biggest infrastructure project ever undertaken by the UK water industry and will create around 4,000 jobs during peak construction in 2019.



"A quarter of these jobs will go to residents from the 14 boroughs along the tunnel route, and 1 in 50 of these jobs will be apprenticeships. One in 100 workers will also be former offenders," explains CEO Andy Mitchell (pictured left).

The July 2017 RICS Construction & Infrastructure Survey estimates that 30,000 projects will suffer from skills shortages in the

next five years. Thames Tideway is addressing this threat in a number of ways: "As an industry with an image problem, we need to work that bit harder to attract more women and other people, who may not in the past have considered a career in construction," explains Skills and Employment Manager for Thames Tideway, Scott Young (pictured above right).

## EDUCATION

"We need to start at a young age to get children and students enthused and inspired about construction," he continues. The around 1,500 people currently employed at Thames Tideway give more than 2,000 volunteering hours to the STEM initiative in the form of school visits where they talk about their work and career paths to do just that.

"We combine these visits with a focus on upskilling tutors and lecturers from 17 colleges to engage a broader cross section of students. This involves hosting CPD sessions to ensure the tutors and lecturers are better informed, and can take back learning to their students; thus multiplying our efforts," Scott concludes.

According to Andy, innovation also plays a key role in plugging the skills shortage, and Thames Tideway supports a number of industry initiatives in this area, including the newly launched SkillsPlanner: "This is an online platform that links employer demands for skills with the education and training sector. It brings together industry, training organisations and local authorities with a common goal of facilitating greater collaboration and efficiency," he says.





### INNOVATION

At Thames Tideway they also make a concerted effort to actively engage in fora that think differently about project delivery: “There is an urgent need to adapt our industry to one that works more productively and efficiently, and we have a lot to learn from other market segments. Like the car industry, which is

working towards a safer and more efficient future where remote controlled cars rule, we need to think more innovatively about how that next brick should be laid. This involves pushing for a more technology-driven industry that attracts a broader set of skills within a larger pool of people,” says Andy.

He also suggests we need more visionary people like Elon Musk, who after being stuck in traffic, developed a plan for easing city congestion by creating tunnels that transport cars on high-speed skates. It may have started with a tweet saying ‘Traffic is driving me nuts. Am going to build a tunnel boring machine and just start digging...’, but the first tunnel is now under construction in LA less than a year later.

Contractors also need to be collaborative to innovate: “We need to pull our thoughts, resources and efforts together in order to become more efficient. A paradigm shift also requires us to get the supply chain involved at an earlier stage and specify outcomes rather than outputs.

As Brexit looms, he sees this as another impetus for us to drive change and do things differently. “We are known for our innovation in this country, and rather than being a threat, I see technology very much as an enabler that will come to our rescue. It will help us accelerate the change needed to optimise production and efficiency, and holds the key to accelerating our competitiveness,” Andy concludes.

**T**he Great Western Route Modernisation is well on the way to providing a much-improved railway for both passengers and freight, and electrification is a key part of that.

# — O N — T H E — W I R E S

Our teams of approximately 50 people in Reading have worked day and night to ensure all critical overhead line electrification works were completed on time



system's integrity after installation work had been completed to facilitate electrification of the railway on this stretch," explained Head of Overhead Line Electrification for Keltbray Aspire, Paul Worsley.

"In the past few months our teams of approximately 50 people in Reading have worked day and night to ensure all critical overhead line electrification works

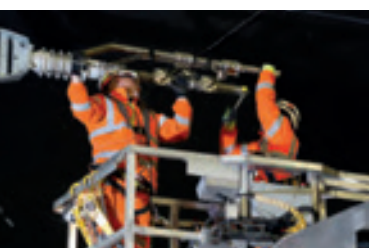
Since June 2017, electric train services have been running between London Paddington and Maidenhead. As the next leg, the section between Reading and Didcot has now been energised and commissioned following extensive testing of the overhead wires in the area in readiness for the electric trains which started running in January 2018.

For Keltbray Aspire, this marks the end of an era. After working on rail overhead line installation and associated services in the Reading area since 2015, this commissioning is a significant milestone for the project.

This last phase has included a combination of construction, planning, testing and commissioning as Keltbray Aspire prepared the overhead line electrification for train operations. "We had to carry out comprehensive testing to prove the

were completed on time for the connections to the essential energy network to be tested as part of the electrical commissioning. This meant putting the final touches to the switch works and completing the last contact, catenary and insulation installations."

While some further hard work and dedication still lie ahead before Keltbray Aspire can 'sign off' on this project, Paul is pleased about the part Keltbray has played in making it possible for electric trains to travel on more areas of our rail network: "Electric trains are better for the environment than diesel trains, and they're quieter for both those on board the train and those living close to the railway. Our work is playing an important part in making this transformation for a better future possible. We take great pride in that," Paul concluded.







# ELECTRIFICATION FIRST

**As a company that takes pride in its self-delivery model, Keltbray makes considerable investments in plant and equipment every year. Amongst this year's biggest investments, was a £2.4 million spend on six mobile elevating work platform (MEWP) road rail vehicles for use by Keltbray Aspire in providing electrification services on the UK's rail infrastructure.**

These unique concept machines have been developed by Keltbray in collaboration with SRS Sjölanders AB in Sweden and are a UK-first. In addition to the mobile basket they feature, they have also been equipped with a hydraulic arm, which can lift up to 300 kg in one go.

"In the past, our overhead line electrification installers would lift all steelwork manually and place it in the basket. This would then lift both the people and equipment up to installation height. By developing a crane, which now does the material lifting, we have removed this element of the manual handling from the process. This reduces the risk of materials being dropped, or injuries being caused

by incorrect handling methods. Put simply, this improves safety for our people and makes the installation process easier and much more efficient," explained Head of Plant for Keltbray Aspire, Dave Wright.

The new MEWPs have been developed on the back of Keltbray's experience in the overhead line electrification field and continued drive to make the industry safer and more efficient. It boosts Keltbray's existing road-rail fleet which now counts 41 vehicles and follows last year's launch of the award-winning Les Blake road/rail SRS/ZECK wiring unit, also an industry first, which halves installation times compared to using traditional methods.

"These pioneering machines will help us meet the growing demand for Keltbray's rail services and long-term pipeline of work. They also demonstrate our commitment to the development of our rail services capabilities," concluded Dave.

Arrival of the new machines to the UK was recently marked with a ceremony at Keltbray's new depot in Dunchurch in Warwickshire, where the MEWPs are currently passing through certification by Network Rail for use on the Great Western and Crossrail electrification projects.

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# CONSTRUCTING INNOVATION

**The construction sector represents 7% of GDP and 10% of employment in this country. This makes it a key building block for driving growth and productivity.**

Despite the sector's global reputation for architectural and engineering skills, and its ability to deliver low carbon and sustainable solutions for the built environment, UK construction is struggling with low productivity, project delays, skills shortages and volatile financial returns for contractors.

With Brexit on the horizon and a global construction market forecast set to grow by over 70% by 2025, there is a renewed focus on how construction can drive industry improvements through innovation and become better placed to take advantage of the major growth opportunities that lie ahead.

## **LEANER, SMARTER, CLEANER, SAFER**

In *Construction 2025: industrial strategy for construction* the Government sets out its vision for a Britain at the forefront of the global community. This Britain has a construction industry that 'leads the world in research and innovation, transformed by digital design, advanced materials and new technologies, fully embracing the transition to a digital economy and the rise of smart construction'.

In summary, this transformed industry is expected to be leaner, smarter, cleaner, safer and technologically advanced, and The Construction Leadership Council, which draws together business leaders from across the sector, has identified some key priority actions to help get us there. Their estimate is that we will need to...

- 1 deliver projects 50% faster
- 2 generate 50% lower emissions
- 3 develop projects at 33% lower cost
- 4 improve export to halve the import trade gap of construction materials

**We believe innovation will help future proof our business and deliver our goals for growth. It is key to keep abreast of future trends and be at the cutting edge**

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Brendan Kerr  
Keltbray Group CEO







## INNOVATION

Innovation is a critical enabler for this transformation process, and to help capture, harness and promote innovation within the Group, Keltbray recently created a new role and appointed Michael Pelken (pictured above) as Innovation and Research & Development Director.

About his appointment, Keltbray Group's CEO Brendan Kerr said: "We believe innovation will help future proof our business and deliver our goals for growth. It is key to keep abreast of future trends and be at the cutting edge of these. Based on his track record in award-winning patent development in design, architecture, engineering and construction, we are confident Michael is well placed to build on our innovation achievements to date and identify and drive future research opportunities to ensure we capitalise on these and keep evolving our business."

Keltbray is building its reputation for innovation, and last year, as part of its £15 million annual investment in equipment and technology, the company developed a range of new and innovative solutions. Amongst them was a road rail wiring unit that halves overhead line electrification installation times, a unique mobile batching plant for concrete foundations works on railway projects and an award-winning software application for piling projects that allows office and site based staff to share information in real time as the work progresses.

**With a global construction market forecast set to grow by over 70% by 2025, there is a renewed focus on how construction can drive industry improvements through innovation**

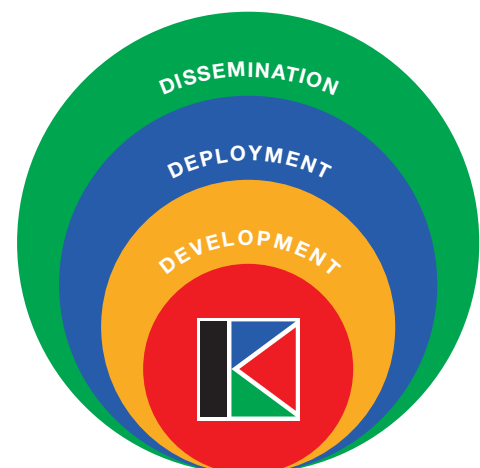
## TRANSFORMATION

"For me the most important thing is to get people excited across all disciplines and levels, and ensure that everyone within Keltbray has the opportunity to contribute and drive change through the innovations process; from idea generation to testing and deployment." Michael said.

At Keltbray Michael's work will be focused on defining and developing a framework for ideas around project delivery, product development and process optimisation, and to put in place a structure for all innovation work streams that progresses these ideas from development to deployment and dissemination. He is also keen to work with external partners to optimise opportunities: "I aim to ensure we claim our share of the Government support available for research & development and innovation, and plan to tap into external expertise and funding through collaborative research with academic partners.

"We are also looking to work with the supply chain to make improvements to the materials, processing or products we use. While creating novel solutions, we need to also make sure we fully explore commercialisation options and protect our innovations. With various opportunities for exploitation under review, we are currently preparing for a process-based patent application as well.

"I am passionate about both internal and external interdisciplinary collaboration and want to make sure we maximise our opportunities for development through research and innovation, and by developing a creative culture where good ideas are valued, nurtured and implemented to facilitate change for the better within Keltbray and beyond," Michael concluded.



**Keltbray's idea framework**

# 'New kid on the block'

## comes of age

**A**fter launching Keltbray Structures just over a year ago, the company secured its first standalone contract only a month later at the new Waterfront Apartments on Riverside Drive in Dundee for H&H Properties UK.



Following a successful completion of the second of the five apartment blocks at this award-winning £1bn regeneration project, Keltbray Structures successfully tendered for works on the third phase, which is currently underway.

In London, Keltbray Structures recently completed works at 150 Bishopsgate, on a top-down, four-storey basement, and is now engaged at Earls Court for Capco, to build out the basement and superstructure elements for phases two and four at Lillie Square. It has also just won a major contract at Battersea, to construct Phase 3a; a contract that includes the development of more than 500 homes, a 167-room hotel and retail space along The Electric Boulevard. At peak times the contract, which will take two years to complete, will involve 40 staff and 300 people on site.

"We are really excited to have secured this major recent contract at Battersea Power Station, where other parts of Keltbray have been working since 2012 (see page 17)," said Chief Operating Officer for Keltbray Structures, Andy McClafferty.

While it is a tough market out there, Andy maintains the combined model of providing clients with front-end advice and surety that construction packages may not need to be split up has proved to be attractive. He also believes the trend to appoint Keltbray Structures as principal contractor will continue: "We are seeing more tenders that require the delivery of a completed ground-floor slab to build on. This allows us to offer our demolition, civils and piling businesses, and we can successfully deliver all these services in one integrated package. This makes for an easier coordination and management process, and, potentially gives clients an additional six to 12-month window before a main contractor needs to be appointed," Andy continued.

For the first 12 months, steady growth was the watchword. However, after successfully delivering several projects on time and ahead of budget, Keltbray Structures has demonstrated what the company is capable of: "We are pleased with the progress we have made since the launch, and our ambitions of growing Keltbray Structures into one of construction's biggest players in reinforced concrete structure solutions is definitely a realistic target," concludes Andy.

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We are seeing more tenders that require the delivery of a completed ground-floor slab to build on. This plays perfectly into our hands, thanks to our demolition, civils and piling businesses



# ...and breathe

**K**eltbray is one of the first companies to successfully pass a number of certified external audits for compliance with the Non-Road Mobile Machinery (NRMM) Low Emission Zone requirements in London.



"We have retrofitted over 20 machines with custom made Agriemach units. Although this is a considerably bigger investment compared to using generic bolt-on units, we have found that the fixed design relative to kW output is not suitable for our demanding demolition environment. Our investment in retrofit technology means that we get full life value from our fleet, whilst maintaining environmental and NRMM compliance with best available technology," explained Keltbray Group's Environmental Manager, Altin Lleshi.

"Auditors have recently visited a number of Keltbray sites and we are pleased that the results confirm NRMM compliance. During the audit, an example of best practice, where non-compliant machines were taken out of service and notices displayed for them not to be used while awaiting removal from site, was also noted," Altin continued.

These requirements came into force in 2015 and aim to improve air quality by reducing key pollutants, such as Nitrogen Oxides and Particulate Matter from burning fuel such as diesel, petrol and natural gas.

Keltbray's Environmental Team has been working with Keltbray's in-house Plant Department to ensure the company machines meet these Low Emission Zone requirements. "We are committed to environmental improvements across our business, and although this is a tiered directive, we and a number of our clients are now working towards ensuring that our plant meet some of the stages ahead of the 2020 deadline, to demonstrate good practice.

In his report, Lead Auditor from Merton Council, Andrew Gordon, said: "We know what to expect on Keltbray sites, you guys always keep an eye on the ball. The systems in place are demonstrably effective in procuring compliant plant and identifying non-compliant items and implementing rectifying measures when required. Our thanks to everyone involved at Keltbray and for their efforts and actions in regards to Air Quality."

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We have retrofitted over 20 machines with custom made Agriemach units



## KES goes back in time



**Keltbray Environmental Solutions (KES) has just completed a near on one-year contract at the historic Old War Office in Whitehall.**

This involved the soft stripping of fixtures and fittings by Keltbray Demolition & Civil Engineering, and asbestos removal to all floors throughout the 54,000 square metre building.



“Permission was granted to transform this iconic building into apartments and a hotel on the condition that the historic character of the 1000-room Grade II listed Edwardian building is not lost. We therefore worked closely with English Heritage to ensure 75% of the original mosaic and terrazzo ceramic floor was preserved while we worked to remove the asbestos from perimeter floor trenches and any asbestos containing pipework below the central corridor mosaic flooring,” explained Senior Contracts Manager for KES, Stephen Finken.

KES developed pilot enclosures in smaller areas for English Heritage to progressively approve their working methods, and also used a quilling method to remove asbestos containing insulation beneath encapsulated paintwork and preserve the original perimeter basement corridor brick walls as far as possible.

“This is the first time KES has been appointed principal contractor on such a major and high profile contract. Despite having to adopt our working methods, I’m pleased to say our team, which counted 70 operatives at maximum levels, did a great job to help preserve as much as possible of this historic and important building,” Stephen concluded.

We worked closely with English Heritage to ensure 75% of the original mosaic and terrazzo ceramic floor was preserved

## Flood alleviation drives growth

**With a new office in Preston Brook, Keltbray Sheet Piling is now able to meet increasing demand across the country for sheet piling to infrastructure works.**

This follows the delivery of the company’s first contract in Wales, which involved the creation of flood defences along the river bank in Crindau Pill, Newport, where 17,000 square metres of sheet piles were installed for Natural Resources Wales.

Keltbray Sheet Piling secured this contract on the back of successfully delivering other contracts for the Environment Agency to provide river bank erosion protection in Northampton and Hensall.

North of the border, after opening an office in Bathgate in Scotland last year, the company has also been working with the Scottish Environment Protection Agency on contracts at Almondbank in Perth and at Huntly Flood Protection Scheme in Aberdeen.



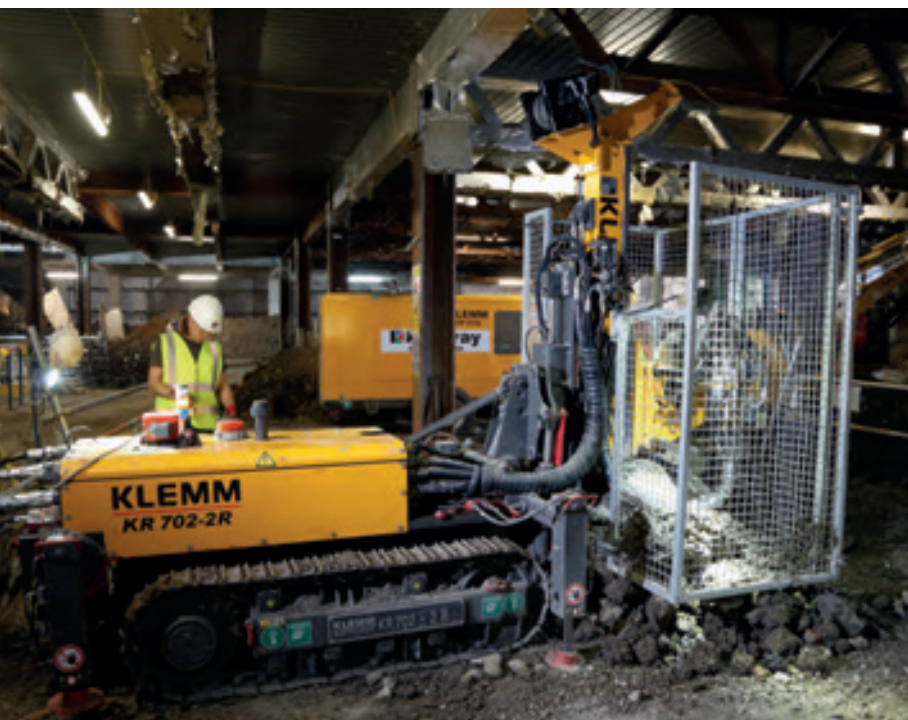
“With the telescopic leader rigs and pile presses we are able to offer technically advanced schemes to meet strict environmental and access constraints in sensitive locations using silent and vibration free methods,” said Managing Director of Keltbray Sheet Piling, Andy Appleton.

“Our modern equipment is supported by a forward thinking team based in three offices nationwide, and this enables us to provide sheet piling to meet the rising demands within the infrastructure sector; be for highways, flood alleviation, railways, water and sewage,” Andy continued.



# Sometimes smaller is better

**K**eltbray Piling is now offering mini piling as a new service after seeing an increase in demand for this technique, which in the past the company would have outsourced. The company has invested significant resources to realise the potential for growth in this area.



“They also comply with the latest NRMM emission regulations having Tier IV final engines, are equipped with adjustable electronic RPM control units, which can be operated from either the control panel or from the driver stand and can be easily adjusted, even in uneven terrain. They also have the capability to drill at angles,” he said.

Keltbray Piling was established nine years ago, and has since grown to generate in excess of £50 million turnover per annum and won numerous awards for its innovative use of technology and investment in the development of its now more than 140 people. “This new mini piling capability is quick and easy to deliver, and very much complements our existing piling portfolio. Given our piling expertise, it was a natural next step in the development of our ambitious plans for growth and expansion in the ground engineering arena. Our plan is now to establish this new service in the South East before widening our geographical reach.

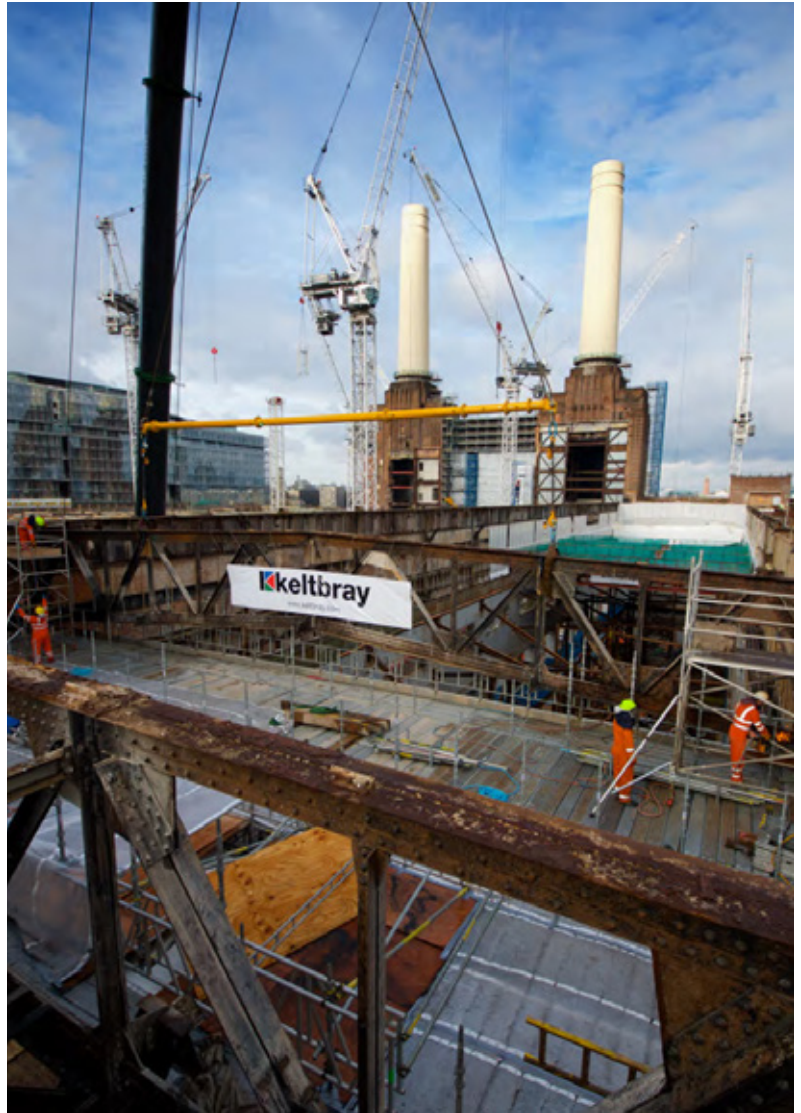
Mini piles are typically small-diameter (300mm to 600mm) rotary-bored or sectional flight auger piles, drilled to a maximum of 30 metres depth. They are predominantly utilised on sites where access is difficult or restricted, or where environmental sensitivity makes it a requirement.

Mini piling is being provided as a stand-alone service for clients, or as an integrated part of the Group’s service portfolio, and will be overseen by Keltbray Piling Operations Director, Lee Cain: “We have invested more than £600k in state of the art restricted access hydraulic drill rigs and associated equipment, including Klemm 702 & 709 drill rigs. These are compact and very lightweight (4 and 16 tonnes respectively), but still have great capacity and stability. They are designed to operate in confined space and can access through openings as small as 2 x 0.75 metres.

“I’m pleased to say the team and both rigs are already occupied on two London contracts, including one in the City and one in the West End. We also have several contracts in the pipeline,” said Managing Director of Keltbray Piling, Stuart Norman.

We have invested more than £600k in state of the art restricted access hydraulic drill rigs and associated equipment

# Behind the scenes at **Battersea**



As one of the most ambitious development schemes in Europe, the £9bn Battersea Power Station redevelopment is also one of the biggest building sites in Europe. Keltbray has been on site since 2012 when the company was commissioned to undertake pile enabling, piling, groundworks and reinforced concrete superstructure works for the Phase 1 marketing suite. This also involved the construction of foundations for a 50-metre tall tower that was erected to facilitate the successful relocation of two peregrine falcons, which had made the Power Station their home.

Recently 100 workers from Keltbray Demolition & Civil Engineering have been engaged in demolition of the 1,000-tonne turbine hall roofs

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## EARLY ENGAGEMENT

Keltbray was then engaged to survey the iconic chimneys, and has continued its involvement as part of enabling and main works, by undertaking asbestos removal, structural demolition and further sheet piling and piling works.

Most recently 100 of the 3,000 construction workers on site work for Keltbray Demolition & Civil Engineering and have been engaged in the process of deconstructing the massive 1,000-tonne roof structures of Turbine Halls A & B of the former power station as part of Phase 2.

These giant 150-metre long roofs sit 30 metres above general site level and consist of steel trusses spanning 25 metres at 7.5metres and 10 metre centres along the hall length. Secondary and tertiary steel supports the 0.2-metre deep concrete slab that weighs in at around 1,000 tonnes; the equivalent to more than 200 elephants!





Each 60-hour possession lasted up to 60 hours and required the employment of a 500-tonne mobile crane within the Boiler House.



### NOVEL SOLUTION

The work was carried out using a unique and innovative solution that involved utilisation of the existing gantry cranes rails in Turbine Hall A that date back to the 1930s. The Keltbray team used the rails to move temporary steel platforms along the length of the hall. To verify the safe load capacity of the existing crane rails in Turbine Hall A, a series of incremental weights were hung from the bottom of two of the steel platforms. This confirmed that the platform could carry loads of up to 60 tonnes.

To facilitate deconstruction, a working platform was constructed by erecting scaffold birdcage crash decks on top of the steel platforms to the underside of the roof slab. "This enabled us to cut the slab into 200, 2.5 x 3.75-metre sections; each weighing approximately five tonnes. These sections were then lifted from the roof using the site tower cranes for further processing on site before being recycled off site," explained Keltbray Demolition & Civil Engineering Contracts Manager, Oliver Long.

Secondary and tertiary steel supports the 0.2-metre deep concrete slab that weighs in at around 1,000 tonnes; the equivalent to more than 200 elephants!

### LONGER-TERM VALUE

"We first employed this method for the roof in Turbine Hall A. The three steel platforms were then adapted for use in Turbine Hall B. They have been retained by the project to further assist with restoration of the existing roof trusses and construction of the new roof slab," he continued.

Following demolition of the concrete slab, the roof trusses were dismantled during weekend posses and required the employment of a 500-tonne mobile crane within the Boiler House," Oliver concluded.

While Keltbray's roof works have come to the end, Keltbray is looking to continue its association with this landmark, seven-phased redevelopment project, which is one of the most high profile and complex projects in the UK's and Keltbray's history.

# Industry appointments



## **BRENDAN JOINS THE BUILD UK BOARD**

At the 2017 Annual General Meeting, Build UK members formally elected Keltbray's CEO, Brendan Kerr, as its new non-executive Vice-Chair. This appointment follows the announcement of Keltbray as a new member of Build UK earlier in the year. "I very much look forward to working with partners across the construction industry to drive positive and material change on key issues that our industry faces such as skills, improving efficiency and creating both sustainable and stable margins for all participants."



## **HOLLY IS ELECTED 1ST NFDC FEMALE NATIONAL OFFICER**

Holly Price, has been appointed Director of the HS2 Training College and second Vice President for the National Federation of Demolition Contractors (NFDC). Holly is the Federation's first female national officer, and was elected at the 2017 NFDC 76th annual general meeting. "While the number of women is slowly increasing, construction remains one of the most male dominated industries in the UK. With the industry at full throttle we need a dynamic and diverse workforce to help deliver it," she said.



## **TIM BECOMES CHAIR OF THE TEMPORARY WORKS FORUM**

Tim Lohman is Director of Keltbray's engineering design consultancy, Wentworth House Partnership. He has been appointed Chairman of the Temporary Works Forum (TWf). This is an industry body, which aims to encourage best industry practice and dialogue on matters relating to Temporary Works. Wentworth House Partnership, which specialises in the design of temporary works and geotechnics, was a founding member of the organisation in 2010.



## **DAVID IS APPOINTED DIRECTOR OF ARCA**

Keltbray Environmental Solutions' Commercial Director, David Harrison, has been appointed Director of the UK's Asbestos Removal Contractors Association (ARCA). David has worked in the asbestos sector for more than a decade and been involved with numerous major asbestos remediation and demolition projects. "It is a tremendous honour to be appointed to the ARCA governing council and I look forward to giving my full support to help ensure the quality of services ARCA provides to the industry is maintained," he said.



# Awards



## OPERATIONAL EXCELLENCE

Keltbray Piling won the Construction News Ground Engineering Specialist Contractor Award for its investment in raising standards, rolling out innovation and delivering state-of-the-art training. Keltbray Piling was also recognised for its role as Principal Contractor on a number of schemes including 150 Bishopsgate in London. Last year turnover grew by 30% and Piling delivered its largest ever contract at Battersea Power Station.



## ENVIRONMENTAL GOLD!

Keltbray Environmental has won a Global Green Apple Gold Award. The Building & Construction Waste Management award was presented to Keltbray for diverting waste from landfill as part of the London Bridge Station redevelopment. Keltbray was presented with the award for its treatment of 22,000 tonnes of soils, track ballast and concrete. Barging the material reduced the carbon footprint even further.



## SUSTAINABILITY RECOGNITION

At the Costain Rail Sustainability Awards Keltbray was presented with the Community Work Award for promoting and complementing Costain's own core values to 'Supporting local communities and leaving a positive lasting legacy'. Managing Director for Keltbray Rail & Infrastructure, Phill Price (pictured right), who was presented with the award by Director of Rail at Costain Group, Gren Edwards, (pictured left).



## EMPLOYMENT AWARDS

Keltbray Engineer Babak Atashi won the 18–30 Construction Award at the 2017 Land Securities Community Employment Awards. Babak (right) is pictured with (left to right) Development & Community Manager, Claire Coombs, Nathan Tate (shortlisted) and Mohamed Mahmoud (shortlisted). Nathan won the Bounce Back Breaking Down Barriers Award presented to former offenders who have built new lives with the help of the Bounce Back charity.



## RECRUITMENT TALENT REWARDED

At the 2017 Construction News Investing in Talent Awards, Keltbray won the 'Best In-House Recruitment Team' award for the second consecutive year! Keltbray has its own recruitment function internally through Qualified Recruitment and externally through Konstructive Recruitment to improve efficiency and reduce agency labour. Keltbray's Head of Recruitment Neil Patterson (pictured left with the award), was there with his team to receive the award.



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