keltbray Group

SUSTAINABLE BUSINESS REPORT 2019

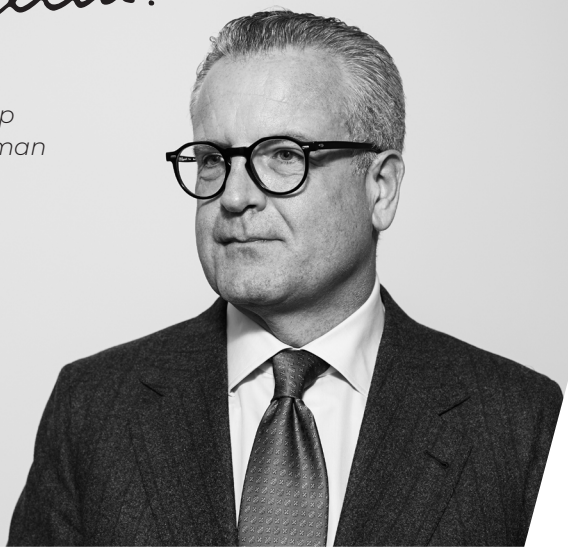
keltbray

introduction

"We have reported on our Group sustainability achievements since 2013. Highlighting the important work taking place across our business to reduce carbon, support greener practices, encourage good health and wellbeing whilst driving innovation and economic growth.

In 2019 we have aligned our sustainability commitments to support the five values our business lives by; with the view that sustainability runs through everything we do.

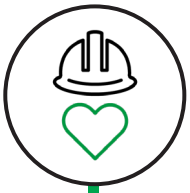
This report showcases some of our work from the past twelve months and looks forward to the programmes that are in development for 2020."



Brendan Kerr
Owner and Group Executive Chairman

our mission & values

Our mission is to be the UK's leading provider of innovative build and infrastructure engineering solutions that generate value to our clients, our stakeholders and our environment.



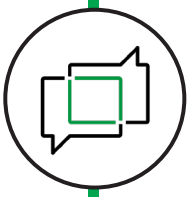
HEALTH, SAFETY & WELLBEING

Creating a culture where health, safety and wellbeing are at the forefront of everything we do



PEOPLE

Train & develop our people to build a valued and positive workforce



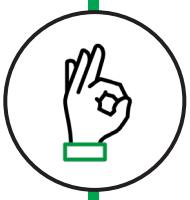
RELATIONSHIPS

Communicate openly with our clients and stakeholders to build long-term, valued relationships



INNOVATION

A cutting edge approach to driving efficient, safer and sustainable delivery of our works



CAN-DO ATTITUDE

Demonstrate a positive attitude and a willingness to ensure success in every challenge we face

SUSTAINABILITY runs through everything we do. From the **PEOPLE** we support, the **COMPANY** we sustain, the **LOCAL COMMUNITIES** we work in, the **INDUSTRY** in which we thrive and the **PLANET** we live on.

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health, safety & wellbeing



"Working in high-risk environments, the safety & wellbeing of our people and those affected by our works is our number one priority. This is why our workforce are directly employed, allowing us to invest in training and new technologies to reduce the risks our people face.

We have worked to put the emotional and psychological wellbeing of our people first, considering their mental health and their ability to recognise and respond to dangerous situations."

John Price
Keltbray Group Managing Director SCS

structure & governance

EXECUTIVE RISK COMMITTEE
Reviews control and management of risks, builds frameworks

STRATEGIC COMPLIANCE LEADERSHIP TEAM
Sets, measures and monitors strategic HSQE targets

OPERATIONAL COMPLIANCE LEADERSHIP TEAM
Provides operational direction to the group, training audits and support.

YOUNG SAFETY LEADERSHIP TEAM
Creates initiatives to improve HSQE performance

KML OH
in-house occupational health service

39

dedicated health, safety and wellbeing employees



OUR VALUES



Vital Facts 2019

MENTAL HEALTH FIRST AIDERS:

2018 136

2019 263

RoSPA Gold award for 8th year running

FORS Gold accreditation

SAFETY POLICIES:

Construction Logistics On Community Safety

Construction Skills Certificate Scheme

2019 HEALTH & WELLBEING SURVEY

our people experience more good days at work than the national average:

Keltbray people: *4.3 / 5 good days*

National Average: *3.6 / 5 good days*

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The Big 6



CONTAMINATION



WORKING AT HEIGHT



MOVING PLANT



DRIVING



FALLING MATERIAL



ELECTRICITY & SERVICE STRIKES

driving best practice

In 2015 following analysis of our activities and incidents, we launched the Big 6. Six trends that pose the biggest risk to our personnel and organisation.

The aim was to raise awareness through deeper understanding and safer behaviours, sharing innovations and learning to actively prevent incidents. This approach aims to change cultures, ensuring we plan and consider our behaviours before and during each activity to prevent incidents occurring.

Actions include:

- Taking time to plan activities
- Applying best practice
- Demonstrating expected safe behaviours
- Intervening if standards are not met

A senior director is appointed to champion each of the Big 6 activities. Their objective is to take a high-level view of the risk, identify cross-sector best practice and offer a Group-wide view on activities, incidents and accidents.

In 2019 our Workforce and Behavioural Engagement Team (WEBE) initiated an operational culture campaign to raise further awareness and provide technical and cultural support.

The campaign was supported by the Big 6 Committee, who were tasked with raising awareness of these activities. The committee is the perfect platform to innovate and share best practice. Meeting quarterly, their goal is to discuss and assess incidents to understand if there are shared learnings for the Group.



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LEFT *Mark Newns*
RIGHT *Brendan Kerr*

health & wellbeing

Keltbray is committed to the health and wellbeing of its people, by promoting their personal development alongside their mental and physical health.

TCUP and Thrive are our in-house programmes created to support our people and the pressures they face in our infrastructure and rail businesses.

TCUP

TCUP (Thinking Clearly Under Pressure) is a less formal approach to behavioural safety training, calling on lessons from the industry, outdoor pursuits, elite sports and the military.

The programme aims to raise awareness of people's attitude to risk, improve their knowledge of how they and their team react under pressure and give our people the confidence to challenge anything they feel is unsafe.

This innovative programme has supported over **1,000** people since its inception.



Thrive

Keltbray Thrive Health & Wellbeing programme was launched in 2013 focusing on stress, mental health, pressure and fatigue. It provides individuals with personalised, confidential reports and supplies business leaders with anonymised cross-business insight on the health and wellbeing of our workforce.

The programme aims to ensure work is a great place to be. Policies are then put into practice by the health & wellbeing team. A dedicated resource supported by trained advocates, mental health first aiders, human resource and an in-house occupational health team.

KML OH

Our emphasis on the occupational health and wellbeing of our people forms a vital part of making sure 'everyone matters'. We are proud to lead the industry by establishing our own occupational health business. KML OH ensures that those who work for us receive the best care possible.

In 2019 we completed **4,057** medical health assessments, referring **198** people **5%** who otherwise would not have been seen for further care. We also run a range of courses that we make available to other site contractors. Today KML delivers services to both Keltbray and the wider construction industry.

mental health

In 2019 we conducted **1,184** mental health training modules. We recognise the importance of the mental health of our people and we have started to embed a support framework to provide assistance to anyone in the group seeking advice.



workforce & behavioural engagement (WEBE)

WEBE is our in-house workforce and behavioural engagement programme and provides our people with the understanding to improve their habits, promote safer methods of delivery and to break down and simplify health and safety.

The focus for 2019 was to drive renewed operational support to the Big 6 through internal communications, behavioural sessions and HSQE inspections.

WEBE also began engaging with external clients, subcontractors and Principal Contractors through events such as Safety Step Ups, Project Introductions and Safety Stand-Downs to achieve the aim of completing works safely, without detriment to people or the environment.

looking ahead





LAUNCHING EMPLOYEECARE, POWERED BY LIFEWORKS

We are introducing a new employee assistance application called LifeWorks. This 24/7 support system provides employees with counselling and wellbeing support bundled into one simple app.

Our people can enjoy over **1000** perks with discounts on everyday purchases, access to 24/7 counselling for immediate support on any issue, or speak to experts for confidential financial and legal advice, should they need it.

Our commitment is to ensure Keltbray is a great place to work, where people feel that they can be honest and open about their mental health.

THE KELTBRAY CONTRIBUTION

In 2020 we aim to launch the Keltbray Contribution. A platform for our people to engage directly with senior management raising their concerns and ideas.

This aims to:

- Reduce and prevent accidents and incidents
- Drive our 'Serious On Safety' culture
- Deliver innovative safety cultures
- Achieve KPIs and deliver sustainable work-streams
- Provide trend analysis of safety performance

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people



"We have built exciting careers for young men and women and we have given everyone the opportunity to develop and progress through our training programmes.

With my responsibilities to the CITB, NFDC and the CYT, Keltbray understand how my ties to industry bodies can benefit the company and the industry as a whole.

Many of our leaders hold positions on industry bodies and committees and the knowledge they share back into our business is invaluable."

Holly Price
Keltbray Group Training & Development Director
Board Member of the Construction Industry Training Board (CITB)
President of the National Federation of Demolition Contractors (NFDC)
Board Trustee of the Construction Youth Trust (CYT)

Vital Facts 2019

£2.7m
invested in training

£££
all employees paid London Living Wage

39
dedicated health, safety and wellbeing team

SUPPLY CHAIN SUSTAINABILITY SCHOOL GOLD

76,000
training hours

256
trainees and apprentices

263
trained mental health first aiders

CN
Training Excellence Award

£4.2m
2020 projected training budget

41
apprenticeships

246
Learning & Development Catalogue courses

OUR VALUES



TfL and earls court

Following our successful partnership with TfL (Transport for London) at Earls Court, Keltbray Training has partnered with TfL and the Mayor's Construction Academy. They seek to provide the necessary skills required for a sustainable career in the construction industry, with the aim of devising a foundation framework for those seeking employment on TfL projects.

The training is designed to ensure learners are provided with the skills to make them more employable, construction industry ready and to ensure they are mentally, emotionally and physically prepared.

Our support will make sure our graduates are 100% employment ready, introducing key skills required to carry out specific works.

All frameworks built by Keltbray can be duplicated across other TfL hubs, with special focus applied to the roles which recruitment teams have identified to be most in demand.

All learners will be issued with a record of achievement to present to potential employers and frameworks will map into their ongoing qualifications once they are in sustainable employment.

460 people have benefited from the programme to date.

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keltbray's learning & development catalogue

Launched in early 2019 the Keltbray Learning & Development Catalogue provides access to over **200** courses in a wide range of subject areas across four themes:

- Employment fundamentals
- Personal effectiveness
- Leadership development
- Further education & skills

We recognise that our people drive our business and improve the communities we work in. The catalogue was created to give people the opportunity to develop skills that support their roles and allow them to continue their personal development.

At Keltbray we are committed to investing and developing our people, through traditional classroom learning, formal academic study and structured professional development with leading chartered status or professional institutes.

We understand that the professional development of our people underpins the success of our business.



keltbray female leadership initiative

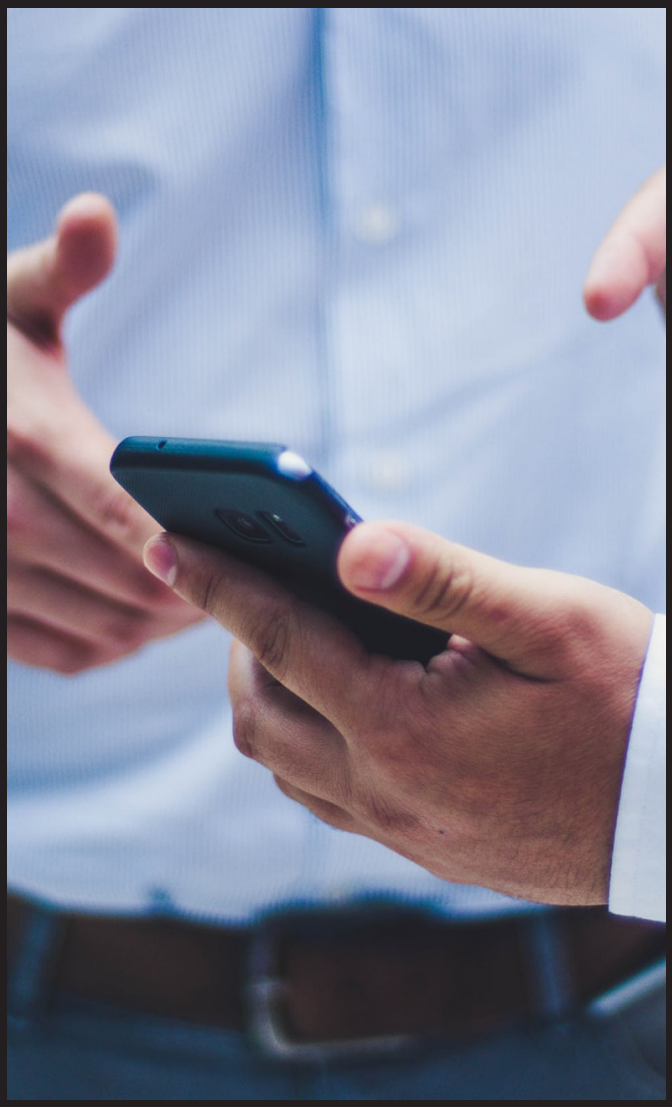
2019 saw Keltbray's first ERG (Employee Resource Group). FLI (Female Leadership Initiative) was created to tackle gender imbalance within Keltbray and the wider industry. Ending the year with three clear goals to champion throughout 2020.

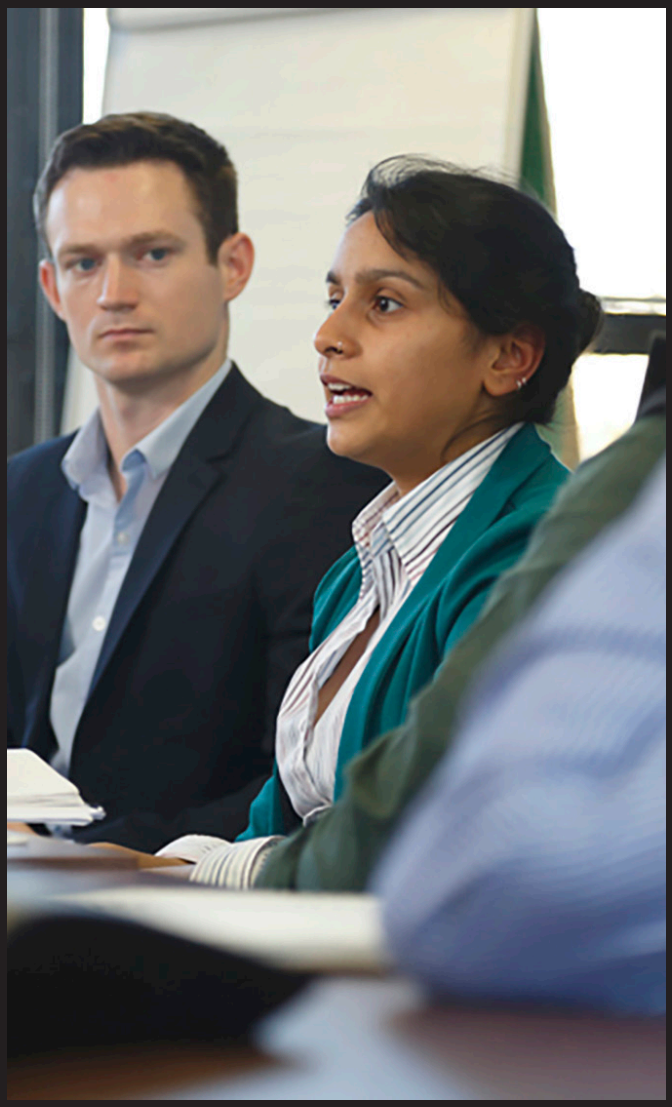
- Personal development training
- Greater workplace flexibility
- Open communication about women's health

Supported by an active Board Sponsor and a steering group looking to shaping the agenda, we hope to provide support, sponsorship and encouragement to Keltbray's future female leaders in the years ahead.



looking ahead





A DIGITAL HR

Our HR department has set itself the ambitious target of becoming a paperless department by the end of 2020. With a view to treating Keltbray employees as clients, these initiatives are planned to fully enhance the employee experience from the moment they are in contact with us.

This digital approach should improve efficiency, productivity, speed and greater security.

GREATER EMPLOYEE BENEFITS

In 2020 we will deliver an extensive review of employee benefits in order to attract and retain the best people.

Employee benefits are important to us and so are our employees' expectations. To support this, a brand new performance review process will be launched this year, looking at improvements in succession planning and personal development, with the aim to provide a strong and sustainable business well into the future.

keltbray

relationships



"It's so important that we capture the needs of every project and take our time to understand the communities we are working with.

We use our network of contacts and the full spectrum of community engagement tools available to us, to build a sustainable legacy into each project.

Building relationships within the communities we work is fundamental and allows us to support them in understanding change and how it can benefit them and those around them."

Lloyd Graham
Keltbray Group Community Engagement Manager

Vital Facts 2019

35

people recruited through community engagement partners



***7** people employed via collaborative work with prisons and ex-offender organisations*

bounce back.

£236,000

in charitable donations

- *Crisis Homeless Charity*
- *Construction Youth Trust (CYT)*
- *Ulster University*

16

people involved with industry bodies including:

OUR VALUES

building for the future

At Keltbray our aim is to build a sustainable industry that allows us, our collaborators and our people to thrive. That is why our leaders support multiple bodies, with the shared goal of driving an exciting and prosperous industry.



BRENDAN KERR

Chairman of Build UK & Honorary Fellow RICS



CLIFF BURTON

European Union Speaker on Construction Waste



JOHN PRICE

Build UK Main Group



TERRY GOOD

FORS Ambassador & Construction Logistics Practitioner



HOLLY PRICE

President of the National Federation of Demolition Contractors (NFDC), CYT & CITB Board Trustee



STUART MARCHAND

ICE Reviewer & CIRIA Guide Author



JOE JACKSON

Guest Lecturer at Imperial College



STEVE LEYTON

British Standard Lifting Code of Practice Review (BSi)



TIM LOHMANN

Director of the ICE Temporary Works Forum

keltbray

> *"Throughout the tender process the synergy between Keltbray and the SSE team was very clear. We now work as a fully integrated team to deliver these projects."*

Jim Kerr
SSE Project Manager

ferrybridge power station

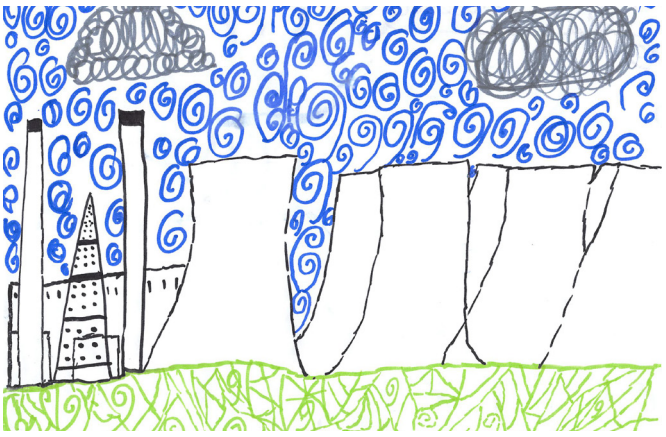
In 2019 following an extensive tendering process, works began on the landmark demolition and decommissioning of the iconic cooling towers at Ferrybridge Power Station on behalf of SSE.

Officially opened in 1966 and generating power since 1924, it took approximately ten seconds to bring down the towers in a controlled explosion.

As Principal Designer and Principal Contractor, Keltbray Decommissioning employed up to **220** staff and subcontractors.

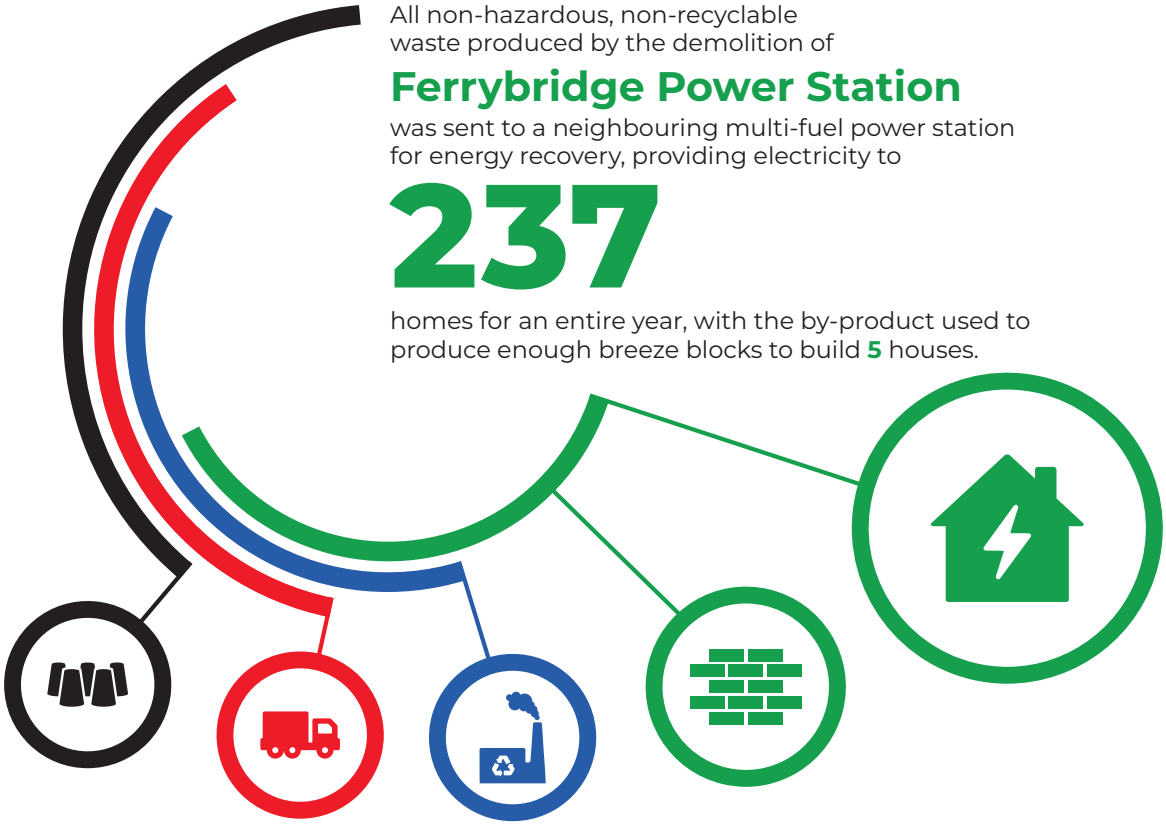
Labelled by the press as "*a significant milestone in the history of the UK energy industry*" the demolition was an important event as hundreds of spectators watched the four 114 metre-high towers collapse.

This fondness for the local landmark made our working relationship with local authorities and the community all the more important.



Winning entry in the Ferrybridge Artwork Competition

- Over **140** homes and businesses were evacuated within a **328**-yard exclusion zone
- We worked closely with Highways England to close nearby roads and all motorway traffic was brought to a complete standstill
- Open communication with local authorities was key, due to major electrical and telecoms running through the site, overhead HV lines in close proximity to the cooling towers and the close proximity of a National Grid sub-station which remained live throughout
- Throughout 2019 the site supported fundraising efforts with activities ranging from collection buckets, artwork auctions and donations. A Christmas raffle raised **£2,400** alone. In total the Ferrybridge team raised a total of **£6,251** which was proudly donated to the Prince of Wales Hospice
- The Ferrybridge team built close relationships with the local school, Willow Green Academy. Delivering health and safety assemblies, as well as donating to their fundraising campaigns
- Local families and children watching the demolition were asked to create their own interpretation of the local landmark. These drawings were submitted into our 'Ferrybridge Artwork Competition'
- Ferrybridge Power Station was awarded a Certificate of Excellence for a visit where we scored **44/50**, with praise for the overall look and feel of the site



All non-hazardous, non-recyclable waste produced by the demolition of

Ferrybridge Power Station

was sent to a neighbouring multi-fuel power station for energy recovery, providing electricity to

237

homes for an entire year, with the by-product used to produce enough breeze blocks to build **5** houses.




ERECTION AND INSPECTION RECORD
CAUTION
MOLA

> ***"Our long-standing relationship has been invaluable to us as an organisation and as one of our first champion employers we have always had a loyal and genuinely productive relationship with you as an organisation."***
>
> Francesca Findlater
> *Bounceback CEO*

relationships that last

Over the past 23 years Keltbray has built a close relationship with MOLA (Museum of London Archaeology) ensuring that artefacts uncovered on our historic sites across the UK are expertly excavated, studied and protected.

In 2019 representatives from Keltbray, MOLA and the wider construction and archaeology industry came together to celebrate our achievements. It was no coincidence that the event was held at The Old Bailey in London as we highlighted our partnership with Bounce Back.

We work closely with Bounce Back, a resettlement organisation that offers construction training and employment support to ex-offenders.

We are proud of the work we have done to help ex-offenders return to work and at Keltbray we have always believed in giving people a second chance.

We are proactive in enabling people access to employment opportunities, as well as CV workshops, mock interview sessions and job fairs in prisons in and around London. Keltbray also took part in the pilot scheme, 'Out for Good,' which links employers to suitable candidates before they are released.

With over **600** interactions with serving prisoners, **47** have been placed into sustained employment.

We know that people are our greatest asset. Our work with ex-offenders with limited access into employment will only make us stronger.

construction youth trust (CYT)

The Construction Youth Trust is a charity whose aim is to inspire and enable young people to overcome barriers and discover a career in the construction and the built environment sector.

We proudly donated **£20,000** to the CYT for the delivery of its Schools Partnership across the London boroughs.

We were involved in a number of events run by the trust involving mock assessment days, interview sessions, work experience, meet the industry events, strategy round tables and steering groups.

At an event we held at Chelsea Barracks our team took the time to inform and engage young people in High Level Degree Apprenticeships.

Lloyd Graham, Keltbray Community Engagement Manager chaired an open session and a question and answer panel that included Keltbray graduates and degree level apprentices.

In 2019 through our partnership with the CYT we directly employed two people, both of whom continue to work with us as assistant engineers and will be starting their apprenticeships very soon.

Following this successful partnership, Holly Price, Keltbray Training & Development Director was invited to become a CYT Board Trustee.



local authority & community support

Our close relationships with local communities and authorities plays a pivotal role in the successful delivery of our projects.

In 2019 Keltbray established a solid working partnerships with Westminster City Council (WCC) and Southwark Council (SC) to ensure collaboration and communication during long-term projects.

As a result of our relationship with WCC and the access provided to us, we were able to work with students at the City of Westminster College and become an active member of the Employer Alliance for Sir Simon Milton Westminster UTC, a college aiming to educate the next generation of professional engineers, technicians and innovators.

> ***"Keltbray delivered a number of key successes by establishing a professional working relationship with Southwark Council's Highways and Environmental teams. From discharging initial approvals, continuous monitoring of the works to their engagement with local residents and charities throughout the project".***
>
> Matthew Watkins
> *Matthew Watkins Projects Ltd Director*

AS A RESULT OF THESE EFFORTS:

71 *community engagement events were held*

18 *local unemployed residents into work*

17 *work placements*

14 *apprenticeships*

3 *graduate positions*

We have also worked with Southwark Council for many years and through this we have established a relationship with Southwark Construction Skills Centre.

WE HELD A JOB FAIR THAT TOOK ON:

64 *local unemployed residents*

13 *work placements*

7 *apprenticeships*

3 *graduates*


Ulster University
Shaping futures
ulster.ac.uk

looking ahead





2020 SOCIAL VISION

It is important that we continue to develop our social value offering, which we achieve through innovative ideas around ways to provide real social change and continuing this work is part of our vision for 2020.

The effect our social value team has on the communities we work in continues to grow. Developers now include social value in their plans and designs, which ultimately leads to projects becoming more sustainable and provides a lasting legacy to communities.

At Keltbray we are committed to social value and in the past we have provided both practical and technical support to people in communities where it is most needed.

FELTHAM YOUNG OFFENDERS

In 2020 our aim is to work with and support Feltham Young Offenders. Following reports of a steep rise in levels of violence and self-harm, it remains in a vulnerable position.

However, we are moving forward with our efforts and we have developed a strong relationship with Wandsworth and Lambeth youth offending services. In 2020 it is our intention to help them with reparation (community payback), training and employment opportunities.

innovation



Innovation is an integral part of our culture and is key to fostering productivity, efficiency and all aspects of sustainability.

We are one of the few Tier 2 innovators bringing about real change, thanks to our close collaboration with academia and manufacturing partners to drive safer and sustainable delivery of our works and help bring construction into the 21st century."

Michael Pelken
Keltbray Innovation Director

Vital Facts 2019

£1.1m | *project value invested*

£12.3m | *qualifying expenditure*

Innovation Partners

i3P

Cemfree

Innovate UK

CN

Construction News Specialist Awards' Innovation of the Year for rail innovation to Mobile Elevated Work Platform





These technologies allow digital content to be visualised in 3D to dramatically enhance training programmes, site visualisation and planning.

keltbray extended reality

2019 saw the launch of Keltbray Extended Reality (KXR) providing digital, immersive solutions to Keltbray, its clients and the industry. This technology will assist the pre-construction and delivery phases of construction, demolition and enabling works, with a view to project wide integration with contractors.

KXR's bespoke planning tools provide a collaborative experience allowing challenging and complex projects to be visualised in 3D and through integration with the project programme in 4D. It is widely recognised that project constraints, logistic challenges and geometrical or spatial issues are more rapidly understood when viewed in 3D.

Extended Reality (XR) encompassing 'Augmented Reality' (AR), 'Mixed Reality' (MR) and 'Virtual Reality' (VR), these technologies allow digital content to be visualised in 3D to dramatically enhance training programmes, site visualisation and planning.

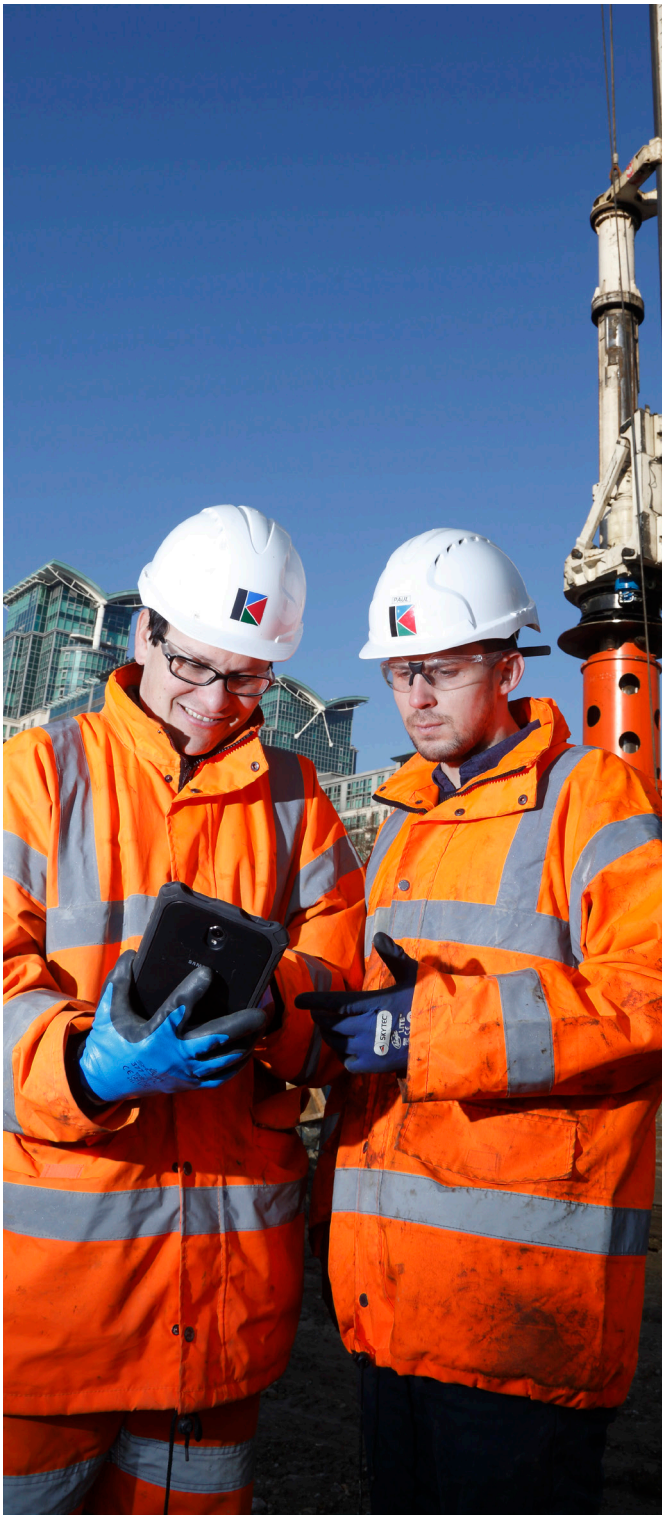
Unlike VR systems, mixed reality headsets such as the HoloLens are transparent; meaning that the user is still engaged and can collaborate with others in the real world, with added benefit of overlaid digital content.

KXR has developed a suite of holographic planning tools that can be deployed in an office or workshop environment as well as on site, in location and at true scale. This allows plant, equipment, new and existing structures and sequence of works to be viewed and discussed in location and at life-size scale. KXR's applications can also be viewed through a tablet or mobile phone in the form of AR.

KXR have developed VR based applications to provide a more immersive experience suitable for site familiarisation, method statement briefings and hazard awareness. These tools are extremely valuable when engaging with 3rd party stakeholders.

KXR are also producing a suite of industry leading VR competency assessments and training courses, built upon the knowledge and experience of our in-house training, HSQE and other departments, to ensure the competency of our personnel.

We are currently developing applications to assist with noise prediction and awareness of the impact of environmental noise to stakeholders and local communities, as well as air quality visualisation.



keltbray integrated piling system (KIPS)

Over the past four years we have invested **£250,000** in our in-house, fully integrated piling management software.

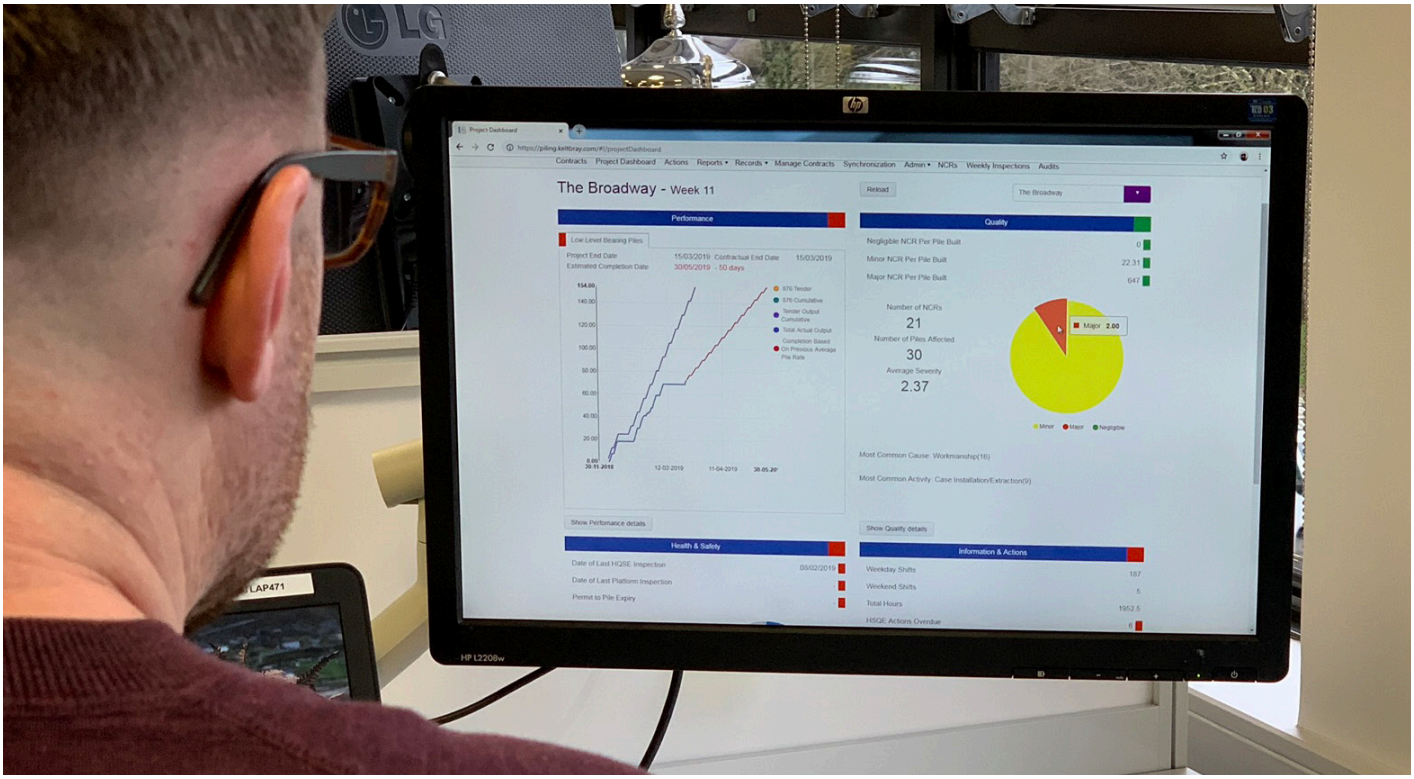
KIPS is effectively the brain of Keltbray Piling and holds performance data on quality, productivity and safety. We are able to complete the full piling quality assurance process on the KIPS system, together with project management reports and KPIs.

Since its introduction, KIPS has started a revolution within our sector, principally due to its ability to save each piling engineer on average **10** hours per week. This technology has made us more efficient and more productive.

Our clients love KIPS, as it ensures that we are able to submit all piling records within a 24 hour period to a uniformly high standard across the business. What's more, we have continued to develop this bespoke system throughout 2019, with recent improvements providing the ability to produce live as built drawings automatically and share these directly with our clients.

In the future we aim to provide access to a 'client facing' version of KIPS to ensure greater transparency of our delivery. This will allow up to the minute visibility of pile records, progress and quality assurance.

This technology has made us more efficient and more productive.



de-carbonisation

The HIPER Pile is a ground-breaking research and development project valued at **£1.1m** in funding that is aiming to disrupt the deep foundations industry. The sustainability driven project was funded by Innovate UK through a Knowledge Transfer Partnership grant and the Government's Transforming Construction Challenge.

The HIPER Pile looks to optimise the design of piled foundations and instigate an industry wide shift in the way deep foundations are perceived. From simple structural elements to efficient, sustainable and long-term valuable assets. The product is intended to be launched in stages as each stream of the development is concluded. This method of piling will offer up to **80%** reductions in embodied carbon through reducing the volume of concrete used in the foundation between **40-80%**.

The HIPER Pile also has the capacity to accommodate systems which can be designed and scaled to suit a range of needs.

Whilst most aspects of the construction industry are able to contribute to sustainable development and a circular economy, the impact from the foundations industry has been very limited owing to difficulties in recovering piles at depth.

The HIPER Pile uses a suite of the latest technologies to significantly improve the whole lifecycle cost and promote the reuse of piled foundations. No other piling products exist in the market which offer such measurable sustainable, environmental or economic savings..



looking ahead



EARTH FRIENDLY CONCRETE

In 2020 Keltbray will install the first ever pile using Wagners Earth Friendly Concrete (EFC®), with leading supplier Capital Concrete. The 900mm diameter, 25m deep anchor pile will be installed at Landsec's Nova East, London Victoria.

As the Principal Contractor on the project, we are undertaking the trial of the EFC® concrete mix in conjunction with further ongoing trials associated with the Innovate UK funded HIPER pile project.

EFC® is a product manufactured by Wagners and is a zero cement, geopolymer concrete. This innovative product typically offers a 50% saving in embodied carbon over and above standard piling mixes.

BIOFUEL

In early 2020 Keltbray will trial biofuels as an alternative sustainable energy source. A number of company vehicles will use waste oil provided to us by restaurants which will be stored at our Thames Road facility in Silvertown, London.

If successful this initiative will be rolled out across the Group.

keltbray

can-do attitude



2019 was a record-breaking year for Keltbray's environmental achievements. With four 'Green Apple Awards' it's a great reflection of the hard work and commitment made across the Group.

From cutting plastic cups and bag usage across our offices and sites, to innovative solutions for sustainable delivery and a focus on the reduction of CO2 emissions, we can make a huge difference through small changes."

Kiro Tamer
Keltbray Group Energy & Carbon Manager

Vital Facts 2019

BRE SMART WASTE

99%

of non-hazardous waste diverted from landfill

97%

of timber products from certified and reused sources

65,418

litres less of fuel used in HGV's in 2019, than in 2018

all fixed locations powered by 100% renewable energy

elimination of single-use plastics in all offices

carbon footprint™

member of Carbon Footprint





a bumper crop

KELTBRAY RAIL'S CROSSRAIL project team won their Green Apple award for its 'Eco-Village'. Installed to accommodate welfare facilities over the Christmas period.

By utilising hydrogen lighting, solartainers and launching initiatives such as planting a tree for every close call recorded, over the two week period we saved **5.01** Tonnes of C02 and **£1089**.

KELTBRAY PILING has used Cemfree (Cement Free Concrete) on five of its projects, achieving a new landmark for the construction industry.

Concrete manufacturing is responsible for approximately **10%** of the global CO2 emissions and using Cemfree in the piled foundations over traditional concrete has the potential to save up to **80%** in embedded carbon.

It will reduce the carbon footprint of construction works without reducing the performance of the pile element.

THE BOROUGH YARDS project won its award for improving how concrete wash waste was managed on site. The technology is a well-designed filtration system. The application of the system to manage concrete washout and re-introduce water into the concrete lorries and distribution network has huge potential.

It enables better management of concrete wash water operations preventing pollution and recovering water for collection for our concrete supplier to re-introduce back into their processes. This technology improved the environmental performance and efficiency of our concrete operations throughout the project's entirety.

Delivering annual carbon savings of **1,790** kg CO2e, attributed to the transport and waste processing.

The recycling and saving of **1,500** litres per week had an additional **25** kg CO2e annual saving.

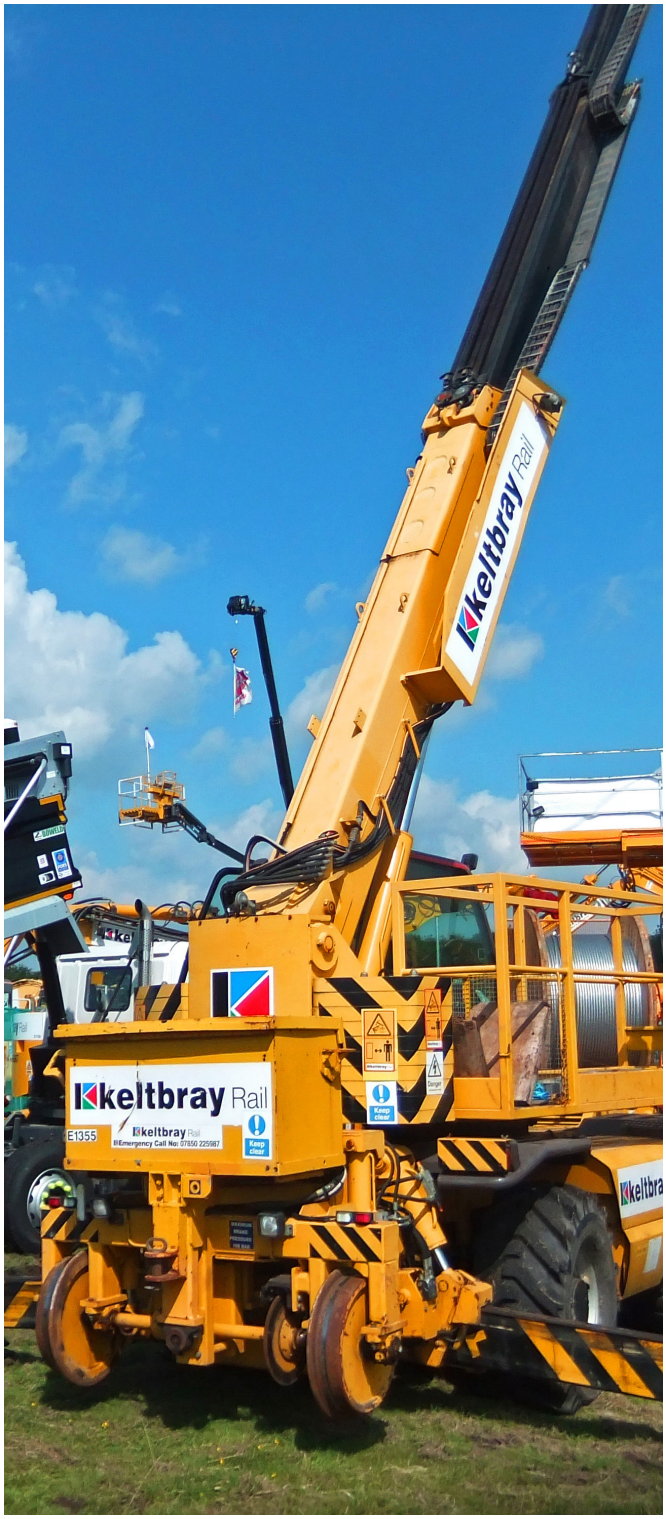
plant efficiency

Alongside the Fuel Saving Tournament we launched an initiative to use telematics devices on all our plant and heavy machinery, allowing the team to log and report all performance data.

We calculated a **£2m** expenditure on diesel per annum to power our plant and machinery, this equated to **7,000** tonnes of CO2 being released into the atmosphere. It was discovered that some of our machines idled for up to **50%** of their time on site, equating to approximately **10%** of total fuel costs.

It was clear that we needed to use our machines more efficiently with immediate effect. To help Project Managers visualise and understand the impact of their plant operations, toolbox talks were conducted with detailed reports of where immediate improvements could be made. Through practical tips and advice about limiting idling, using plant in the correct setting and reviewing monthly performance, we reduced emissions, fuel costs and plant maintenance requirements.

We must use our plant efficiently to reduce carbon emissions and increase the productivity of our operations.





fuel efficiency

At Keltbray we continuously strive to reduce our environmental impact and our HGV Fleet accounts for a large proportion of this.

In 2019 we upgraded our entire HGV fleet to Euro 6 to further reduce our impact on the environment.

We introduced the Keltbray Fuel Saving Tournament, aimed at encouraging our HGV drivers to think about their driving habits and become more fuel efficient.

A prize of **£250** in vouchers was awarded to the individual who recorded the highest improvement each month.

In the first month we saw an overall improvement of **1.6%** (mpg) with one driver demonstrating an improvement of **10.9%**.

This improvement equates to **£10,684** and **33,250** kgCO2e saved in the first month alone.

cutting carbon

Keltbray Environmental has been involved with some of London's largest infrastructure projects including the Thames Tideway Tunnel, Battersea Power Station and the demolition of the Earls Court Exhibition Centre.

This unique proposition allows us to accept projects in London via the River Thames, exploiting the use of barges and offering our clients an alternative to London's congested roadways.

The waste treatment process involves careful classification of materials from sites across the capital. Once this material is deemed acceptable, it is then brought a short distance to our hazardous waste treatment facilities.

Biological, physical and chemical treatment processes are then utilised to lower the levels of contaminants to a suitable threshold.

Following this treatment it is suitable for reuse and is loaded on to barges and transported down river to a restoration facility, to be used as a capping material or for shaping and sculpting new landforms.



766

barge movements in 2019

650,000

tonnes of waste transported by barge

36,144

lorry movements taken off the roads

3x

the carbon savings between HGV's and barges

OUR VALUES

looking ahead



A MORE EFFICIENT FLEET

In 2020 we aim to explore ways to reduce the impact our fleet has on our environment. All vehicles are FORS Gold accredited and are fitted with GPS tracking and CCTV. We must look to go further ensuring we are running our vehicles as efficiently as possible.

This includes a vehicle logistics solution, the possibility of a logistics hub at Thames Road and investigating 'Last Mile Delivery' ensuring we map what is required on-site and look at efficient ways to reduce vehicle movements and increase productivity.

ELECTRIC VEHICLES

With the absence of exhaust emissions and reduced noise levels, electric trucks offer huge potential in urban areas.

In 2020 we will look to trial a fully electric **3.5** tonne pick-up and the GVW Volvo FE Electric which has the capacity to take **27** tonnes. With a fully electric vehicle we can expect approximately **140** miles enabling us a full day's work.

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