

# Building a Sustainable Future

BAM Construct UK 2019 Sustainability Report





# Our vision

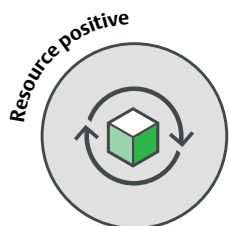
Our sector provides value to millions of people, but uses many resources in the process. That's why BAM is putting sustainability at the heart of our business, adopting a proactive approach to sustainable developments through our Net positive strategy.

It is BAM's mission to build sustainable environments that enhance people's lives. BAM aims to have a net positive impact on climate change, resources and people by 2050, through an approach that encourages innovation and offers new opportunities.

Put simply, it means doing things above and beyond business as usual.



By 2050 we want to have a net positive impact on the climate. We will work towards this goal by reducing our own carbon emissions and providing products and services to reduce the emissions of others.



We aim to be resource positive by 2050 by rethinking the way we design and build projects. By doing this, we want to eliminate waste over the lifecycle of a building to preserve raw materials and resources. We will also use safe, healthy and natural materials.




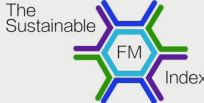

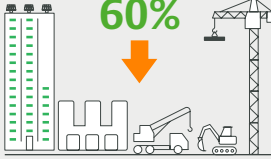


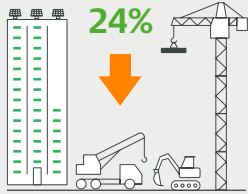

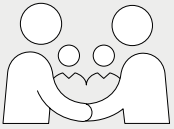







By 2050, we want to have a net positive impact on society by making a difference to the lives of people we come into contact with. We want to enhance the lives of one million people by 2020, through providing opportunities for education and employment and through engaging with community groups and charities.



Our net positive strategy aligns with the UN Sustainable Development Goals (SDGs). These 17 goals serve as a roadmap for good growth by 2030. Although our business potentially affects all SDGs, we have identified seven to focus on, as these best fit with the impacts our activities have.

# Sustainability Highlights 2019

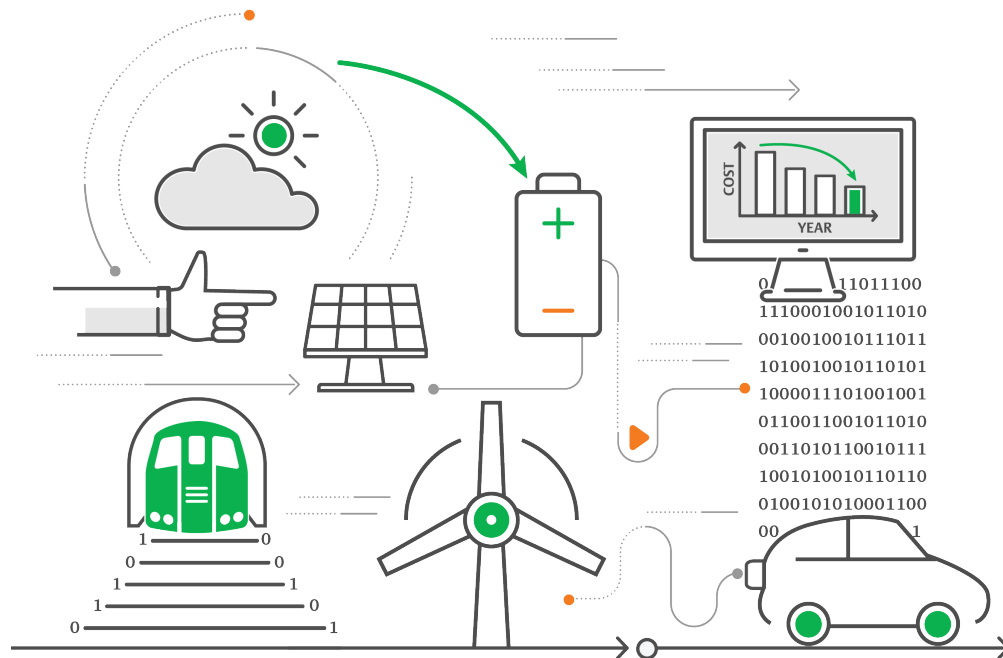


 <p><b>CDP A list for climate leadership</b></p>	 <p><b>Our FM business wins SFMI Gold award</b></p>	 <p><b>revenue through BREEM projects, 100% meeting or exceeding targets</b></p>	 <p><b>CO<sub>2</sub>e reduction since 2008 – 19,400 tonnes CO<sub>2</sub>e removed from business annually</b></p>
 <p><b>legal and sustainable timber sourced</b></p>	 <p><b>trees planted (10,000 in the UK) to mark BAMs 150th birthday</b></p>	 <p><b>reduction in construction waste since 2015 – 5,000 tonnes material safeguarded</b></p>	 <p><b>waste diverted from landfill</b></p>
 <p><b>£524,369 community investment during 2019</b></p>	 <p><b>lives enhanced by our employees and projects</b></p>	 <p><b>of projects achieved 35 or higher for CCS</b></p>	 <p><b>of volunteering time provided to community projects</b></p>
 <p><b>£265,000 raised for our national charity partner, CLIC Sargent over 3 yrs</b></p>	 <p><b>students supported through lessons related to STEM, arts and business</b></p>	 <p><b>£57,337 support provided to CRASH Charity</b></p>	 <p><b>£150m added social value from 8 projects through Social Value Portal</b></p>

# Climate positive

Climate change is receiving more attention than ever before, as people become more concerned about the need to cut carbon emissions. That is why BAM has a long-term ambition to have a positive impact on the climate, both by reducing our own carbon emissions and helping others to reduce theirs too. It is part of our Net positive strategy, and means we will:

- Reduce the energy we use by digitalising our business and by improving the efficiency of our operations
- Use as much power, fuel and heat from renewable or non-polluting sources as possible
- Work with our clients and supply chain to reduce their emissions
- Bring low or zero carbon products and services to market to scale-up our positive impact



BAM is delivering Lincoln University Medical School. The University has a net zero carbon aspiration and BAM has supported this, improving the design with an all electric solution, improved energy efficiency and performance in use focus.



## Our performance

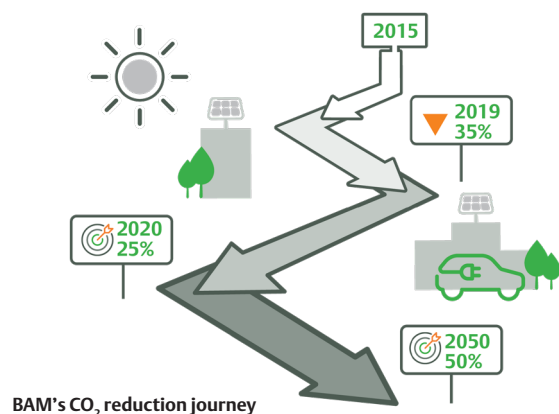
In 2019 our emissions were 9,868 tCO<sub>2</sub>e and our normalised emissions were 10.6 tCO<sub>2</sub>e/£1m turnover. This represents a reduction of 35% against our 2015 baseline and 60% compared with 2008 levels, removing 19,400 tCO<sub>2</sub>e from our business. We are on track to surpass our 2020 target (a 25% reduction compared with 2015). At group level we have set a further approved science based target to reduce emissions by 50% based on 2015 levels. We have committed to procure only 100% renewable energy and will begin reporting separate 'market based' carbon performance to demonstrate the impact this is having.

Following our work with the Carbon Trust to assess our 'scope three' emissions, we have also committed to reduce emissions from our supply chain and of the buildings we deliver for our clients.

## Low carbon construction

Construction projects are the largest source of BAM's direct emissions, so we set CO<sub>2</sub> reduction targets for every project, focusing on using less energy and fuel. This has resulted in our projects becoming more efficient and we aim to continually reduce our energy intensity on site. We are now using 49% less energy per £1 million turnover than in 2010.

This is a result of using energy monitoring and management tools, more efficient equipment, lighting and accommodation.



## Reducing wider impacts

Beyond our own direct impacts, we are increasingly focused on the materials that go into buildings and the energy they use over their life. We want to work with supply chain and our clients to reduce their emissions.

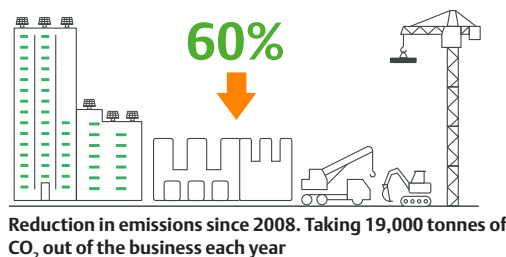
Whenever possible we track the actual performance of our buildings in addition to design targets. We work with our clients to carry out post occupancy evaluations (through a soft landings approach), to ensure their buildings perform as well as possible. BAM Energy also finance, install and manage renewable energy installations and carry out energy efficiency improvements for our clients.

During 2019 we became a program partner of BAM Construct UK 2019 Sustainability Report Advancing Net Zero Carbon Buildings Program, co-developing a framework definition for Net Zero and advocating its take up with clients.

## Low carbon transport

Transport is vital to our business but travel leads to emissions, higher costs and affects employee wellbeing. Since 2008 we've worked hard to reduce these impacts. Our staff now spend less time on the road, which is good for the environment and their wellbeing. In 2019 total business miles and average business miles per employee reduced by 4% and 3% respectively.

The average efficiency of our company car fleet is now 103gCO<sub>2</sub>/km, a small rise due to real-world emissions tests. We are introducing more electric vehicles into our fleet and avoiding travel altogether, for example through our roll-out of Skype. A new employee incentive was launched in 2019 to encourage greener car choices.



T Zone, Kings Cross: Working with our client, Argent and the design team from an early stage, we had a drive to reduce embodied carbon from the outset. By optioneering alternate designs (structure, façade, M&E) and challenging concrete specifications (>60% GGBS), we have collectively reduced embodied carbon by circa 8,000 tonnes CO<sub>2</sub>e. We are now using this experience to inform new projects, advise clients on opportunities to reduce carbon as part of tenders and integrating carbon assessments with BIM.

# BAM Construct UK CO<sub>2</sub> summary 2019

Our emissions inventory and carbon management plan have been independently audited and are certified through the international CEMARS scheme.



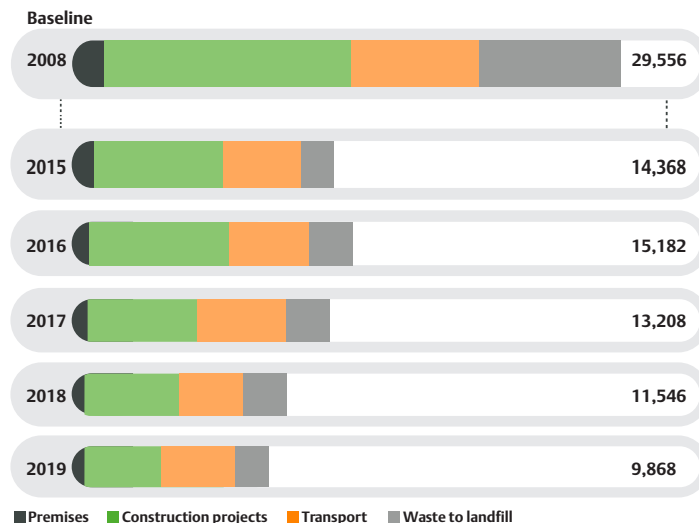
## Emissions by key activity area

Our 2019 emissions were 9,868 tCO<sub>2</sub>e, this is a decrease of 14% compared with 2018. Despite a reduced turnover, significant reductions in both electricity and fuel use mean we have reduced our normalised carbon emissions (tonnes per £1m turnover). This is also due to reductions in the UK Grid Carbon Intensity. We track emissions by key activity. This includes premises (fixed offices and depots), construction sites (electricity, gas and fuel), transport (cars, commercial vehicles and air travel) and waste sent to landfill, as required for our CEMARS certification.

## Emissions by individual source (tonnes of CO<sub>2</sub>e)

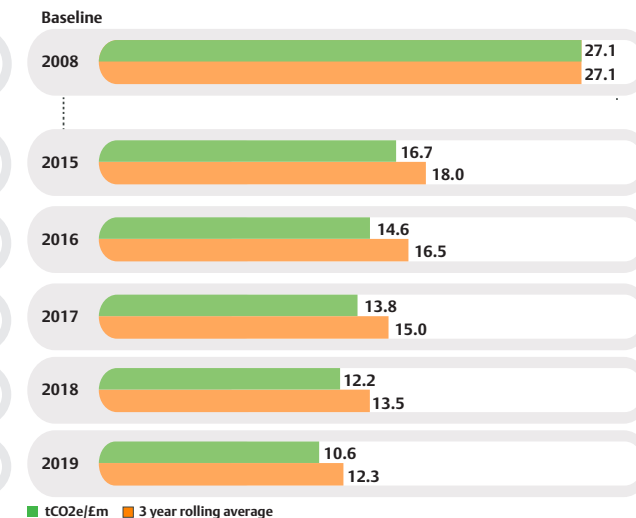
Electricity: 7,999,957 kWh	2,219
Gas: 1,031,652 kWh	190
Gas Oil: 751,131 Ltr	2,072
Diesel: 334,468 Ltr	866
Company car (business) 1,434,862 miles	274
Car allowance (business) 7,735,070 miles	2,061
Company car (commuting)	48
Car allowance (commuting)	853
Air miles (domestic)	195
Waste to landfill	1,176
100% renewable energy	-562
<b>Total</b>	<b>9,953</b>
<b>Market based</b>	<b>9,392</b>

## Emissions by key activity area



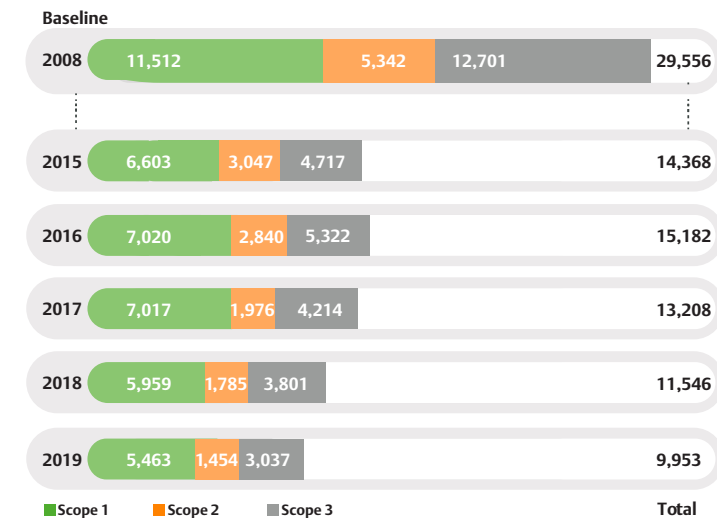
## Emissions normalised against turnover

The continued downward trend of our normalised emissions shows we are performing well.



## Emissions by scope

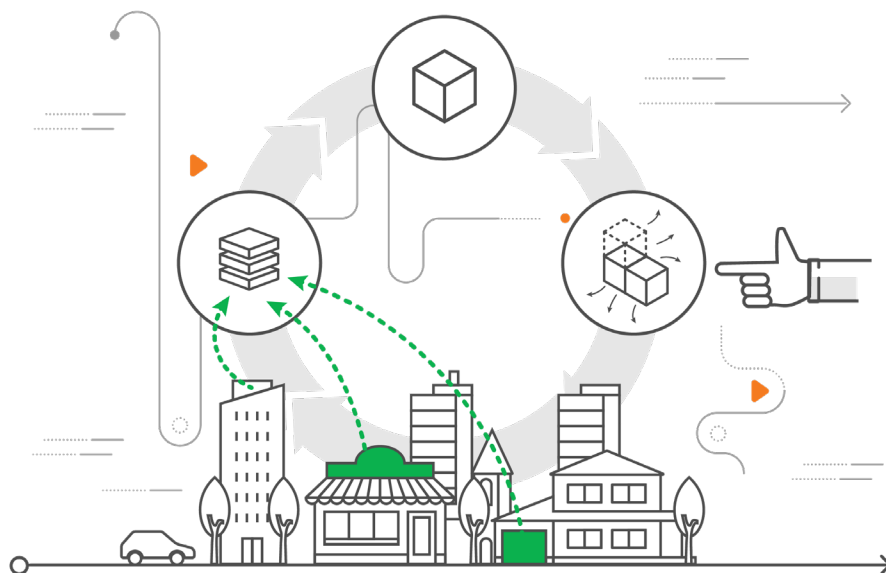
'Scopes' are a way of defining emissions.



# Resource positive

Resources are vital to all our lives - whether it's the water we drink, air we breathe, or materials we use to make our buildings. But buildings use large amounts of materials in their construction and generate lots of waste over their whole lifecycle. That is why as part of our net positive approach we will:

- Eliminate wasteful construction practices and deliver projects that produce less waste in operation, aspiring to zero construction and office waste (to landfill and incineration) by 2025
- Procure materials from certified responsible sources, including procuring 100% certified sustainable timber
- Be part of the circular economy, by using products and materials that can be easily maintained, reused or repurposed in the future, avoiding low grade recycling



Our work with Whitecroft lighting over 3 years on circular economy has led to their design of a new circular lighting solution during 2019, with little to no waste and improved performance over its life.



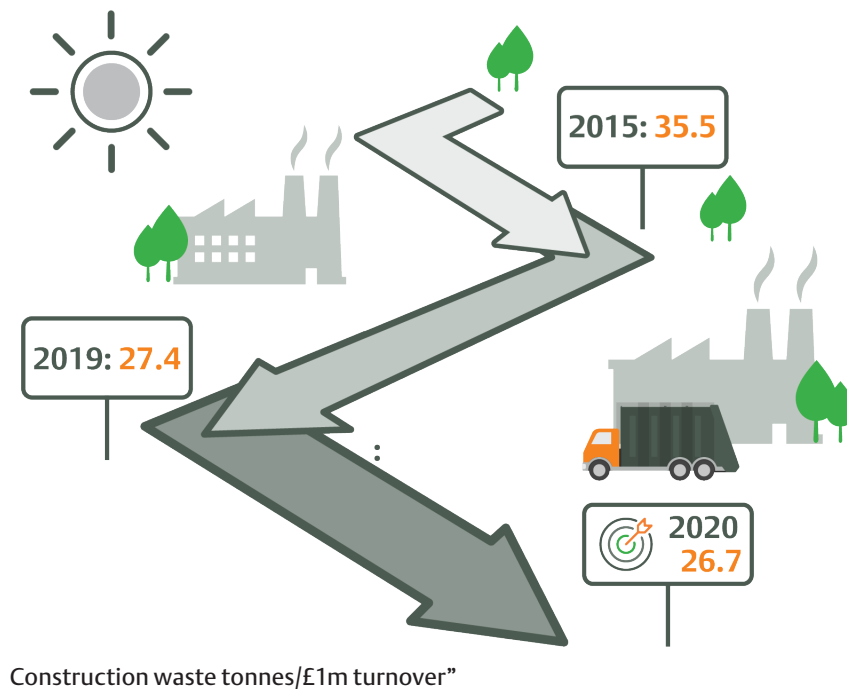
## Eliminating waste

We aim to eliminate wasteful construction practices and deliver projects that will produce less waste in operation. BAM, and the industry as a whole, is more efficient than it ever used to be. We are an industry leader: we share our experiences and drive the performance of the construction industry by working with the UK Green Building Council, Supply Chain Sustainability School and Build UK.

As a priority, we try to prevent waste through the way we design and build. To achieve this we hold design for resource efficiency workshops with project teams. Based on WRAP's resource management planning approach, these take place as early as possible once we're appointed to identify design and procurement strategies to minimise waste through construction and over the life of a building. A list of actions and measures is produced, and tracked throughout the project. During 2019 our sustainability teams facilitated four workshops.

We also continue to track the quantity of waste removed from sites. We always aim to maximise reuse and recycling, and as a last resort, recovery and landfill. This is done by using specialist waste transfer stations that achieve the highest possible value from the waste materials taken from our sites. There are also a growing number of suppliers offering takeback schemes for their materials, using our waste as a feedstock for the production of new product.

For 2019 our waste intensity reduced to 27.4 tonnes / £1million turnover, a 23% reduction compared with 2015. If we sustain year on year improvements, we are on target to achieve a 25% reduction in 2020. The proportion of waste diverted away from landfill in 2019 was 92%.



In 2019, we completed the refurbishment of Studley Castle Hotel. Refurbishment and maintenance is a key part of the circular economy and this project required the careful dismantling of building elements such as roof tiles, which were refitted to the final building. This not only satisfied heritage requirements, but also minimised the material impacts of the refurbishment.

### The right materials

We aim to choose safe, healthy and natural materials to create spaces and buildings that are good for people and the environment. When purchasing materials, we focus on the positive impact we can have by selecting suppliers with high standards. We will always have a preference for sourcing products which are natural, safe and ethical; taking into consideration their impact on the environment and people, both locally and internationally. Increasing the use of digital construction will help us evaluate the environmental life cycle costs of the materials used in our buildings. This will help influence the construction sector as a whole, as a greater understanding of a product's environmental impacts will allow more informed choices.

In 2003, we made a commitment to procure 100% certified legal and sustainable timber by 2020 (current UK chain of custody schemes are certified by the Forest Stewardship Council and the Programme for the Endorsement of Forestry Certification). In 2019, more than 92% of new timber delivered to our sites was directly from FSC or PEFC chain of custody certified companies. In total more than 99% of timber delivered was from verified legal and sustainable sources.



### Driving forward the circular economy

BAM is committed to collaborating with others to make better use of resources now and for the future. During 2019 we saw an increase in interest from across the industry to move to more circular economy (CE) ways of working.

The Greater London Authority (GLA) developed the Draft London Plan and included policy (S17) to incorporate CE principles. BAM assisted the development of the CE statement guidance for this policy and participated in trials with developer Argent and on our North Brent School project in London. We also contributed to a CE tool to assess the circularity of building design, being developed by Sheffield University and AECOM.

BAM has also acted as a knowledge partner to the UKGBC's CE program, which during 2019 produced and launched a guide to help clients specify circular buildings. The guidance provides construction clients and project teams with the commercial information they require to drive circular principles forward. We are now actively promoting these approaches to our clients.

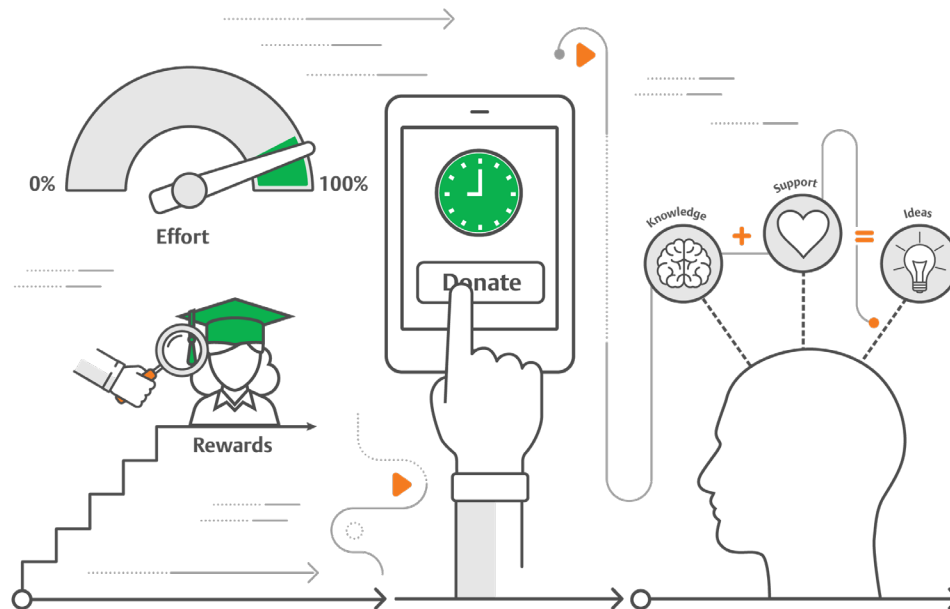


In 2019 BAM launched the first concrete 3D printing facility in Eindhoven Netherlands. The concept was further developed to include flying factories, which were showcased to clients around Europe, including Heathrow in the UK. This leap forward will lead to more efficient design and use of materials going forward.

# People positive

Our group-wide commitment is to enhance the lives of one million people by 2020 through the way we do business, not the business we do. To achieve this, BAM Construct UK is focusing on creating a positive impact through activities in local communities. Our enhancing lives programme aims to:

- Create life-enhancing opportunities to help people be socially mobile
- Educate and inspire a new generation of diverse people to join our industry
- Inspire and motivate BAM's people and provide them with opportunities to improve the lives of others
- Engage in positive value-adding partnerships with charities and community groups
- Maximise the social and economic impact we have through local employment and sourcing



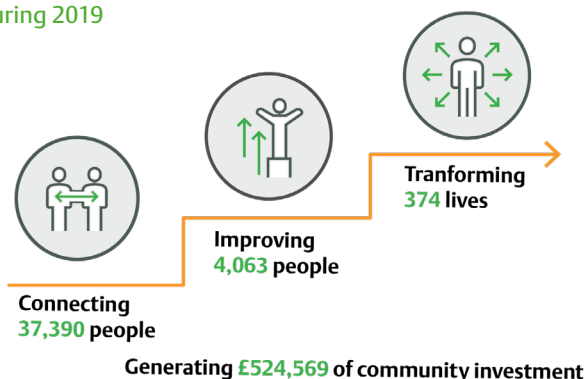
Each year, we task our new intake of graduates and trainees, to undertake an Enhancing Lives Challenge. This is a great way for them to develop their skills and for us to create a lasting commitment to community engagement.



### Enhancing lives

We aim to have a positive impact on people's lives by supporting and delivering projects that make a real difference. Our enhancing lives program includes, pro-bono or in kind support, fundraising or donations, volunteering, opportunities for social enterprises or small businesses, training, employment, and health and wellbeing. Since 2010, BAM has invested £4.7 million into local communities through these types of activities, which is defined and measured as connect, improve or transform.

"During 2019



### Enhancing education

In 2019, BAM's employees worked with 19,888 students providing support in lessons related to science, technology, engineering, maths, arts and business; offering employability sessions, conducting site visits and work experience, and providing CPD sessions for teachers and lecturers.

Our new Foundations, went live in 2019 and guides our work experience placements at BAM through a potential career in the industry as well as providing a suite of resources for teachers to use in schools.

### Supporting communities

We know our employees feel passionately about many charities and organisations; that's why we give two working days of paid leave each year to our employees to participate in voluntary activities.

In addition to this, employees can apply for a £1,000 grant for a team voluntary project – allowing them to not only to give their time, but also purchase materials and resources. To date, teams of staff have worked on over 60 community-volunteering projects, giving over 9,666 hours of support.

Over the last three years BAM employees have raised over £265,000 for our national charity partner, CLIC Sargent. This money will enable CLIC Sargent to support 1,665 children, young people and their support network. We will be launching a new national charity partnership soon.

As a patron Partner of CRASH Charity, BAM aims to help tackle homelessness in the UK. In 2019 we provided £43,383 of bono professional expertise and materials for their Helen & Douglas House Children's Hospice project. In total, we provided £57,337 of support during 2019.

### Creating added social value

All of our enhancing live activities create added social value and this is an area we are growing going forward. In 2019 BAM became a member of the Social Value Portal and began using the national Themes, Outcomes and Measures (TOMs) to assess, measure and report the social value impact of the projects we deliver. We also developed and launched a new social value policy.

Using Social Value Portal allows us to develop a consistent language that we use internally, with our clients and wider stakeholders, thus enabling us to tell a story about how our projects are adding social value locally. This in turn will allow us to target greater added value as we gain a greater understanding of the depth of impact different activities have. During 2019 we assessed eight projects in England, Scotland and Wales to identify how our existing activities were generating added social value. In total, these projects generated £149,139,872, which represents an average of 33.5% of project value. Going forward we are working with our clients, social value portal and supply chain to target, assess and deliver added social value on more projects.



At Dover Leisure Centre, a focus on local employment, working with local business, education and training, helped to create £6.4 million of added social value, 32% of the project value.





## Get in touch

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For live updates, visit our sustainability microsite, which is regularly updated.

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