



AGGREGATE INDUSTRIES ANNUAL SUSTAINABILITY REPORT 2022

A MESSAGE FROM OUR SUSTAINABILITY DIRECTOR, KIRSTIN MCCARTHY

Welcome to our 2022 Sustainability Report.

It's been a year since we launched our Sustainability Strategy - "Building progress for a Sustainable Future", in which we set out our vision to become the UK leader in innovative and sustainable building solutions and our ambition to embed sustainability in the future of construction.

In that strategy, we identified five key pillars on which that ambition was based: climate, people and communities, nature and environment, circular economy and sustainable solutions. All are aligned to our business operations and all address issues which are critical to the success of our business, our industry and our society. This report mirrors those five pillars and reflects on the progress we have made this year.

We have achieved some important milestones. The launch of our carbon reporting tool 'Your Carbon Report', alongside a range of new, industry-leading sustainable products, will contribute to the drive towards a net zero construction sector. We have increased our capacity and our capability to embrace the circular economy and we have continued our investment in schemes which will reduce our CO₂ emissions by tens of thousands of tons annually.

We have renewed our commitment to invest in our people, supporting them to support their communities and strengthening our sustainability team. And have delivered on our promise to be a responsible neighbour, making positive contributions to those communities of which we are a part, while protecting and enhancing the environment which surrounds them.

It has been gratifying to see our progress recognised with awards from the construction and sustainability sectors, but we know that we must continue to move forward if we are to achieve the ambitions we set out one year ago. That's why we have published our Net-Zero Strategy, which outlines what we are doing today and what we intend to do in the future to decarbonise our operations across the business at pace and to achieve net zero before 2050.

And that's why we are also looking forward to another year of progress in 2023, with projects to deliver our first rooftop solar PV scheme at our Hulland Ward plant in Derbyshire, an 80 hectare woodland creation scheme at our Glensanda estate in western Scotland and the development of a comprehensive strategy for nature covering all of our sites.

It promises to be an exciting year ahead, but in the meantime I hope you find this look back on 2022 to be interesting and informative. If you have any comments on this report, please contact us - sustainability@aggregate.com



Kirstin McCarthy
Sustainability Director



CLIMATE

In 2022, we continued our progress towards our net zero ambition. Those net CO₂ emissions directly under our control (Scope 1) decreased by over 5% to 557.7 kilograms of CO₂ per ton of cementitious. This was the key target we set within our sustainability strategy, reflecting the fact that cement contributed to over 80% of our carbon footprint.

Investments within our cement plant and efficiency improvements across all business areas have helped to reduce emissions compared to our 2020 baseline. Highlights include a 6% year-on-year reduction in emissions for our asphalt business, a 7% reduction in our Concrete Products business and a reduction of over 5% on our specific net cementitious figures. This has led to overall carbon intensity CO₂ emissions directly under our control (Scope 1 & 2) decreasing by almost 29%, and a substantial part of those savings came from the divestment of our Cookstown cement plant. The business continues to shift its operations towards lower carbon products which has led to the sale of our Cookstown cement plant, enabling us to further invest in decarbonising our Cauldon site and lowering our emissions in other areas.

2022 also saw the launch of our net zero workstreams, bringing together key functions and business areas across the company to focus on:

- 1. Renewable energy**
- 2. Energy efficiency & demand management**
- 3. Low carbon fuels**
- 4. Alternative materials**
- 5. Carbon Capture Utilisation and Storage and waste materials**





These form the basis of our comprehensive Net-Zero Strategy for launch in 2023, mapping out how we will achieve net zero before 2050.

In 2022, we made progress in decarbonising our downstream transport emissions, which contribute significantly to our scope 3 carbon footprint. Our largely outsourced distribution network is one of the largest in UK construction and will be an important focus in our drive toward net zero. In 2023 we will trial new transportation technology, including the first full electric Ready Mix truck in London and full electric transportation of cement.





CLIMATE

KEY PERFORMANCE INDICATORS	2020	2021	2022
 Carbon emissions per tonne of product – Scope 1 and 2 (KgCO ₂ /Tonne)	27.41	25.10	17.90
 Specific Net CO ₂ Emissions (KgCO ₂ /Tonne) cementitious	611.7	591	557.7
 Transport Carbon Intensity (KgCO ₂ /Tonne)	3.61	3.59	3.45
 Zero emissions electricity (% of total supplied)	33%	100%	100%

CASE STUDY

CAULDON ALTERNATIVE WASTE FACILITY

Our Cauldon cement plant in Staffordshire has a long history of innovation. In 2022 we took another step forward when we completed a £13.5m investment in a new alternative waste facility at the plant.

It means we can replace fossil fuels with 100,000 tonnes of alternative fuels derived from waste materials each year - materials that would otherwise go to landfill. These include processed sewage pellets, Solid Recovered Fuel (SRF), from paper, plastic and biodegradable waste generated from homes and businesses, and Waste Derived Liquid Fuel (WDLF), a blend of waste found in everyday products such as paint, solvents and degreasers. All are supplied to us by reputable organisations and meet a strict Code of Practice set out by the Environment Agency.

The second part of the project is a new chloride bypass, built into the existing kiln equipment in the main cement plant. This removes any additional chloride which may be present in the new fuel sources, ensuring that the quality of the final product is not compromised. Any excess chloride is utilised at the end of the process, resulting in no additional waste materials. This latest step towards our sustainable future meets over 40% of the plant's heat requirement and reduces its CO₂ emissions by 30,000 tonnes annually

**SAVING
30,000
TONNES
ANNUALLY**



CASE STUDY

REDUCING CO₂ EMISSIONS AT BARDON

The extension of our Bardon Hill Quarry in Leicestershire, one of the UK's oldest continuously operated quarries, will require over 12 million cubic metres of overburden to be progressively removed, transported and placed within the exhausted quarry as part of its restoration.

We have invested in an innovative suspended conveyor system stretching 850m across the entire pit, capable of processing 1,000 tonnes of overburden per operating hour. Its introduction represents a dramatic improvement over a conventional road haulage solution, with a reduction in our dumper fleet by two thirds and annual savings of over 1.4m litres of diesel and around 4,000 tonnes of CO₂.

**SAVING
4,000
TONNES
ANNUALLY**



CASE STUDY

MAKING THE SWITCH TO WARM MIX ASPHALT

Decarbonising construction materials lies at the heart of Aggregate Industries as we strive to pave the way for a greener future. That's why we have transitioned to Warm Mix Asphalt (WMA) production as standard across our asphalt product portfolio.

Mixing at temperatures 20°- 40°C lower than hot mix asphalt means a significant reduction in CO₂ emissions, because less fossil fuel is used during the manufacturing process. If all production in the UK switched to WMA, it would save around 60,000 tonnes of CO₂ each year, the equivalent of cutting car journeys by around 480 million kilometres. Switching to WMA reduces build costs, enhances product life expectancy and brings safer working conditions during both manufacture and laying, all without compromising quality and performance.

**SAVING
60,000
TONNES
ANNUALLY**



CASE STUDY

POWERING ELECTRICITY SAVINGS

In 2019 Lafarge Cement achieved BS EN ISO50001:2018 for Energy Management Systems, which requires companies to show continuous improvement in reducing the energy intensity of their operations. This represented formal recognition of our commitment to meeting specific targets in monitoring and verifying our energy performance against measurable outcomes.

This year we have further bolstered that commitment by rolling out our POWER Program across the entire estate. Focussing on saving electricity, it includes detailed energy assessments through which we can identify efficiency projects to support site-specific energy plans. The programme aims to engage all of our staff in this vital work and relies on a network of committed energy champions to drive it forward.

**SAVING
13,000
TONNES
ANNUALLY**





IN 2023 WE WILL

- 1 CONTINUE TO DEVELOP THE FIVE WORKSTREAMS IDENTIFIED IN OUR NEWLY-LAUNCHED NET ZERO STRATEGY**
- 2 SUPPORT THE DRIVE TO CREATE A NET ZERO FUTURE FOR THE UK CEMENT AND LIME INDUSTRIES THROUGH OUR ACTIVE PARTICIPATION IN THE PEAK CLUSTER PROJECT**
- 3 PUBLISH A COMPREHENSIVE NET ZERO STRATEGY FOR ALL BUSINESS DIVISIONS**
- 4 ACHIEVE OUR CARBON INTENSITY TARGETS SET OUT IN OUR NET ZERO STRATEGY FOR 2023**



NATURE & ENVIRONMENT

Within our Nature & Environment Pillar we achieved 100% of active quarries having both rehabilitation plans and Biodiversity Management Plans in place. We have also made significant progress in establishing biodiversity baselines at our sites, following the Biodiversity Indicator and Reporting System (BIRS), a framework that enables us to evaluate changes to biodiversity through repeated monitoring and evaluation. 59% of our quarries now have BIRS assessments in place, with the remaining 41% to be completed in 2023.

We have also made strong progress in our management of water, most notably with the establishment of divisional working groups to focus on how we can further reduce our water consumption. Our Cauldon cement plant uses a world-leading closed-loop system to provide water for the cement production process. The Cauldon plant used to draw its water from the River Hamps, a site of special conservation status. Previously each summer, parts of the river naturally ran dry, but to avoid withdrawing from the river, an artificial lake was created in the old shale quarry allowing the plant to store rainwater and recycle process water, which is then used for the cement operations. It has now been 12 years since we last withdrew any water from the river.

The only freshwater we use at Cauldon is mains water to supply our offices. There was an increase in use in 2022 resulting in our target being exceeded by 19.9%. This was the result of a significant mains water leak, which has since been remediated. However, to put this into context in 2022 we used 14.27 litres

of fresh water per tonne of cement, which is a fraction of the average amount of water used by a typical cement plant. By way of comparison, our parent company Holcim has a target for cement plants to achieve on average 211 l/t by 2025.








Our Ready Mix Concrete Division continues to make progress in reducing water consumption, with a 2% reduction compared to 2021. A Nature and Environment Group has been established and as part of its work has set a freshwater withdrawal reduction target for 2025 of 3.9% when compared to 2018 levels. As is the case with cement, the UK Ready Mix industry is already efficient in the way it manages water, with the vast majority of sites having water recycling systems. Therefore, when we compare ourselves to much of the world, we are already significantly ahead, making opportunities for further improvement more challenging. This is particularly evident when comparing our 2022 water consumption of 148.03 l/m³ to Holcim's global target of 219 l/m³.

We have also refined our methodology for calculating water consumption within our Aggregates division and now use a moisture content calculation. This has improved accuracy when compared to our previous method but is an interim step until we have rolled out a more comprehensive water metering program. The change in methodology has also resulted in a notable reduction in freshwater consumption when compared to prior years.





NATURE & ENVIRONMENT

KEY PERFORMANCE INDICATORS	2018 (baseline)	2020	2021	2022
 Freshwater Withdrawal Intensity Cement (litres / t)	16.8	15.36	11.64	14.27
 Freshwater Withdrawal Intensity Aggregates (litres / t)	89.02	78	82.44	33.60
 Freshwater Withdrawal Intensity Ready Mix (litres / m3)	153.6	156.11	155.02	148.03
 % Compliant with water quality standards	100	100	100	100
 % of Quarry with Biodiversity Management Plan (BMP)	N/A	N/A	N/A	100
 % of cement and aggregates sites with BIRS baseline roadmap in place	N/A	N/A	N/A	59
 # sites with a place for nature	N/A	N/A	N/A	5

CASE STUDY

QUARRY RESTORATION WORK RECOGNISED

In November, we were proud to be announced as a winner at the Aggregates Europe - UEPG (the European Aggregates Association) Sustainable Development Awards in Brussels. UEPG represents aggregates producers across 25 countries in Europe and engages with European institutions & stakeholders on sustainability and other issues key to the industry. The triannual UEPG Sustainable Development Awards are the most important event for the European Aggregates industry and exist to promote the spread of best practice. They encourage projects that go well beyond what is required by regulators, set new standards of excellence and provide an inspirational example that others can follow.

Our restoration of Ripon City Quarry in partnership with Yorkshire Wildlife Trust and Middlemarch Environmental was selected as Best Restoration Project. We were nominated by the Mineral Products Association for the project, which saw the former quarry transformed into a nature reserve which opened in May 2019. It provides a haven for wildlife and adds to a suite of existing nature reserves along the River Ure corridor, contributing to the development of the Wildlife Trusts' 'Living Landscape' scheme, which aims to create bigger, better managed and more joined up wildlife habitats.



CASE STUDY

NEW PLACE FOR NATURE AT HILLHEAD

Our Hillhead Quarry, near Cullompton in Devon, has a new woodland after we teamed up with a group of local residents and members of local environmental group the Uffculme Green Team, to plant around 1,100 trees. Native species including English oak, hornbeam, hazel, blackthorn, hawthorn and holly were planted to provide more wildlife-friendly habitat in the area. The scheme will benefit all species, but in particular the hazel dormouse, an elusive and declining species whose numbers have dropped by 50 per cent since the millennium and for which the south-west is somewhat of a stronghold.

The new woodland will be incorporated into the quarry's biodiversity management plan to ensure its success, with monitoring for the target species being undertaken once it has become established.



CASE STUDY

ESTABLISHMENT OF READY MIX NATURE & ENVIRONMENT WORKING GROUP

In 2022 our Ready Mix division recognised that it needed a greater focus on our Nature & Environment pillar. The Ready Mix Nature and Environment Working Group, which includes members of the senior management team, was established to develop targets and drive best practices now meets on a monthly basis. It has set a water reduction target for 2025 of 3.9% when compared to 2018 levels and during 2023 will be working with our Ready Mix sites to implement best practice to further reduce water consumption. The group is also promoting our Place for Nature initiative and supporting sites in the creation of additional wildlife habitats.

**WATER
REDUCTION
TARGET
FOR 2025
OF
3.9%**





IN 2023 WE WILL

- 1** SIGNIFICANTLY EXPAND WATER METERING AT OUR AGGREGATE SITES TO IMPROVE OUR UNDERSTANDING OF WATER USE AND INCREASE OPPORTUNITIES FOR SAVINGS

- 2** ENSURE AT LEAST 75 OF THE SITES WE OWN WILL HAVE A 'PLACE FOR NATURE'

- 3** DEVELOP A NATURE STRATEGY TO SET TARGETS AND PUBLICLY DETAIL OUR COMMITMENTS TO SUPPORT A NATURE-POSITIVE FUTURE



CIRCULAR ECONOMY

We have made significant progress in developing our use of recycled materials in 2022 as we intensify our focus on the use of Construction and Demolition Materials (CDMs). The most significant contributor was our Surfacing Solutions division, which delivered 994,000 tonnes of Recycled Asphalt Planings (RAP), but we have progressed other schemes which will significantly increase the amount of CDM we are able to process and use.

We have expanded our portfolio of businesses to improve our access to recycled materials. The acquisition of leading companies such as Wiltshire Heavy Building Materials, which recycles 150,000 tons of Construction & Demolition Materials each year into aggregates and concrete with its state-of-the-art material recovery system, delivers enhanced expertise and facilities and an expanded range of products. Going into 2023 we will continue to make acquisitions such as this. They are an important part of our strategy as we promote a circular economy and strive to become the UK's leading supplier of sustainable construction materials.

Geocycle, a worldwide leading provider of waste management services, operates at our Caudon cement plant to provide energy and raw materials from waste. Meanwhile, we are developing the concept for our 'Super Hub' for the collection and processing of CDM.




From June we began the internal reporting of CDM figures on a monthly basis and have established a Steering Committee to further drive our circular economy ambitions, setting targets for each division out to 2026 and embedding a Circularity Collaboration Network to facilitate the easy sharing of knowledge between divisions.

In 2022 we saw further year-on-year improvements in our landfill avoidance moving from 90.5% in 2021 to 93.6%. This has been achieved through proactive and collaborative working with both our sites and our waste management contractors.





CIRCULAR ECONOMY

KEY PERFORMANCE INDICATORS	2020	2021	2022
 Volume of materials reclaimed or recycled (tonnes)	835,581	976,257	1,160,192
 % Waste to landfill	87.2	90.2	93.6
 # Circularity initiatives and opportunities	N/A	N/A	10

CASE STUDY

INNOVATING TO INCREASE THE VALUE OF RECYCLED MATERIAL

At our Croft Quarry in Leicestershire, we have been trialing an innovative approach to waste materials that aims not just to re-use them, but to move them higher up the value chain.

Waste material from our Ready Mix Concrete plants was collected at Croft, where a series of trials were conducted to assess the best methods of producing high-value recycled materials for re-use in concrete products and as an alternative recycled material in cement production at Cauldon. The trial assessed which combinations of crushing equipment and conditions are best at separating cement from stone to produce the required high-quality aggregate and fine materials. It also examined energy costs and the impact on plant to understand the overall cost and viability of the end product.

The results have been encouraging and will further inform our plans for developing a Construction Demolition Material (CDM) Super Hub.



CASE STUDY

CHAMPIONING CARBON- NEGATIVE AGGREGATES

Leveraging the support of our parent company, we partnered with Low Carbon Materials (LCM) in the Holcim Accelerator, a unique, intensive six-month acceleration program to foster innovation and collaboration in the construction industry.

LCM has developed OSTO – a potentially carbon negative lightweight aggregate for concrete, resulting in blocks that are lightweight, thermally efficient, and deliver a reduction in embodied carbon. OSTO is made from a combination of waste materials and by-products that couldn't otherwise be recycled and globally has the potential to save hundreds of thousands of tonnes of CO₂.

We worked with LCM to help them develop concrete products, which they showcased at the Holcim Innovation Centre in Lyon, where they were recognised as programme runners up.

CO₂

**PARTNERED WITH LCM TO CREATE
A POTENTIALLY CARBON NEGATIVE
LIGHTWEIGHT AGGREGATE**



CASE STUDY

CO- PROCESSING AT CAULDON FOR ZERO WASTE

Geocycle is a world leading provider of waste management services. At Cauldon they use over 100,000 tonnes of waste each year to provide sustainable energy and raw materials, applying the proven technology of co-processing.

Cement kilns are ideally suited to the safe and sustainable management of waste due to the very high temperatures within and the amount of time the waste is subjected to them. This completely destroys the waste with all mineral contents being recycled into the final product - cement - all without compromising its quality.

**USE OVER
100,000 TONNES
OF WASTE
EACH YEAR
TO PROVIDE
SUSTAINABLE
ENERGY AND
MATERIALS**





IN 2023 WE WILL

- 1 INCREASE CONSTRUCTION DEMOLITION MATERIAL (CDM) USAGE TO 1.2 MILLION TONNES**

- 2 OPEN A CDM SUPER-HUB TO ENABLE US TO INCREASE THE CIRCULARITY OF OUR PRODUCT**

- 3 WORK WITH OUR WASTE CONTRACTOR TO DRIVE CHANGES THAT WILL FURTHER INCREASE THE VOLUME OF WASTE SAVED FROM ENTERING LANDFILL.**



PEOPLE & COMMUNITIES

We are committed to respecting human rights and to empowering individuals and communities to build a better future. In 2022, we undertook Human Rights Impact Assessments for both the Aggregate Industries and Lafarge Cement businesses. Both assessments included workshops with key stakeholders, including operational and support services staff. Overall both assessments found that we were low risk and managed our Human Rights impacts well, most notably with regard to Health & Safety on our sites and ensuring that our supply chain is free of child labour. We are however committed to continuous improvement and in 2023 we will continue to proactively work in this area.

Our Sustainability Strategy commits us to providing new opportunities for apprentices and we have made strong progress this year, with 38 new apprentices joining the business in a variety of operational and non-operational roles. We will build on this success over the coming years and we are developing our engagement with pupils and teachers to demonstrate the range of rewarding career opportunities the building materials industry can offer.

We are continuing to make progress in the areas of female representation and leadership with year-on-year increases. We are actively working to promote Aggregate Industries as a place for women to work and progress as we understand the benefits that a wider, more diverse talent pool brings.










We recognise that our sites actively contribute to the social and economic well-being of surrounding communities, by creating employment opportunities and investing in community based social initiatives through volunteering, providing materials and by making monetary donations. In 2022, we have increased our activities in these areas, with the number of donations to social initiatives increasing by nearly 18% as a result. In terms of value, we also increased our spending significantly, to a total of £367,535. Donations included support for Leicester Pride and for many projects that are local to our sites, including the maintenance of play areas and the donation of materials for nature reserves.

We understand that our communities can benefit not only from material and monetary donations, but also from the donation of our time. This is why we relaunched our volunteering policy in 2022 to actively encourage colleagues to undertake volunteering activities. We have been delighted with the way our people have responded, giving over 1,070 hours of their time in 2022. It's a great start on our quest to achieve 3,000 hours of volunteering each year by 2025. Colleagues volunteered at a wide range of good causes from helping out at food banks, to redecorating a hospice in Wigan





PEOPLE & COMMUNITIES

KEY PERFORMANCE INDICATORS	2020	2021	2022
 Health & Safety Culture Maturity Level	Proactive	Proactive	Proactive
 Lost Time Injury Frequency Rate (LTIFR)	0.38	0.52	0.54
 # Of apprenticeships	3	0	38
 % Female Leaders	21	22	24
 % Female Representation	18	19	20
 % Of suppliers assessed	100	100	100
 # Of people benefiting from AI UK activity	N/A	N/A	26,747
 # Of volunteering hours	249	36	1,070
 £ Raised through fundraising activities	TBD	TBD	TBD
 % of sites with community engagement plans	-	-	100

*TBD = to be developed

CASE STUDY

VOLUNTEERING WITH NEIGHBOURLY

This year we have launched a partnership with the award-winning 'Neighbourly' platform. Neighbourly works to connect a network of over 20,000 organisations, large and small, to businesses that have a genuine concern for the world we live in and a commitment to social improvement.

We want our people to be engaged in their communities and we already offer one day each year for all employees who wish to volunteer. Our partnership with Neighbourly means we can now offer employees a wider range of opportunities and the flexibility to easily find volunteering activities that match their own skills, personal values and passions. We can also more effectively measure and understand the impact we are having, so we can be sure we are delivering social value and increasing employee engagement. It's an important step towards achieving our annual target of 3,000 volunteer hours by 2025.

3,000
VOLUNTEER
HOURS BY 2025.



CASE STUDY

ENVIRONMENTAL INTELLIGENCE FOR PROACTIVE COMMUNITY ENGAGEMENT

Our Cauldon cement plant is located between the villages of Cauldon and Waterhouses, on the edge of the Peak District in Staffordshire. We recognise that our plant operations can have unwanted impacts on local communities and we want to eliminate these as far as possible. We have already undertaken a wide range of actions to help minimise the impact of the plant on our neighbours, including additional monitoring, changes to the plant infrastructure, the replacement of assets and increased data transparency, but we want to do even more.

This year, we have introduced EVS Omnis, a cloud-based environmental management software that provides data on the impact our plant is having on the local community, which allows us to take a much more proactive approach. We can now monitor in real-time for dust, odours and noise, reducing the time it takes to identify the source of air quality or noise concerns. Moreover, we can anticipate potential issues and improve operational planning, using daily forecasts that predict the impact of our operations based on meteorological modelling.

It means we now have easily accessible, accurate data which we can share with our local stakeholders and use to address their concerns in an open and transparent way.



CASE STUDY

PUTTING CHILDRENS' EDUCATION ON THE RIGHT PATH

Keyham Lodge School in Leicester caters for 11-16 year olds with social, emotional and mental health needs. Faced with a rising number of student applications, the school installed new education 'pods' 90 metres away from the main school building, on an area of soft grass which often proved difficult to access during bad weather. With no budget available, the school had put plans to improve access on hold - until members of our Surfacing Solutions Division came to their aid.

After a successful application for funding under our social value programme, the team provided materials and labour to design and construct a hardwearing new asphalt footpath from the main building to the new pods, spending three days on site and shifting 45 tonnes of soil and turf in the process. Their efforts have made a major contribution to the school's capacity to work with some of the City's most vulnerable children.





IN 2023 WE WILL

- 1 DELIVER 1,400 VOLUNTEERING HOURS**
- 2 DELIVER THREE NEW VOLUNTEERING CAMPAIGNS SO THAT OUR ACTIONS ARE TARGETED TO MAXIMISE OUR IMPACT IN AREAS OF NEED**
- 3 REVIEW AND IMPROVE THE WAY WE ENGAGE WITH COMMUNITIES BY RE-DEVELOPING COMMUNITY ENGAGEMENT PLANS FOR OUR SITES SO THAT THEY ARE WORLD-CLASS**
- 4 WE WILL DEVELOP AN ONLINE COMMUNITY REPORTING SYSTEM FOR LOCAL STAKEHOLDERS TO CONTACT US QUICKLY REGARDING ACTIVITY AT OUR SITES**



SUSTAINABLE SOLUTIONS

In 2022, the percentage of our total revenue which was derived from sustainable products was 31.4%. This represents an increase of almost 36% over the same metric for 2021. 2022 was also notable for the launch of new and innovative products which have expanded our range of sustainable and low carbon solutions.

ECOPact PrimeAS offers a 50% carbon reduction and has been developed through extensive product research to provide an active development of strength, making it the UK's first concrete to offer high levels of carbon reduction without compromising on performance.

AGGNEO is a natural secondary aggregate which offers the same strength and durability as virgin aggregate, but is sourced from waste. AGGNEO will help drive the circular economy within the construction industry, where what was previously wasted can now be repurposed to build new homes and roads, rather than becoming landfill.

Our innovative and lowest carbon asphalt, **FOAMIX**, does not require its source materials to be processed with heat, generating less CO₂ compared to standard asphalt products. It promotes a circular economy approach, being manufactured where construction is taking place with locally sourced planings from the existing road, which are re-processed to enable Foamix to be placed, compacted and put into immediate use. This also minimises vehicle movements, construction times and

user disruption to deliver a significantly lower carbon footprint for the overall scheme.




We have worked with Shell Bitumen to bring the first commercially available biogenic asphalt to the UK market. **SuperLow-Carbon** is manufactured at lower temperatures than standard asphalt, which means it requires less energy to produce than its hot mix equivalent. The use of alternative energy sources further lowers its embodied carbon footprint, while its unique formula includes a biogenic material that effectively locks CO₂ within the asphalt rather than releasing it back into the atmosphere – even when recycled.

Bringing all of this together, this year we created **Your Carbon Report**, the first carbon reporting tool of its kind, to help our customers to make their own robust commitment to sustainability. Each bespoke report provides accurate carbon data from across our product ranges, detailing the carbon embodied in our products. The data we provide is robust and detailed, giving customers the flexibility to interrogate carbon data from 'cradle to site'. The data is calculated inline with the principles of the European EN15804 standard and is verified by respected environmental consultants Circular Ecology.





SUSTAINABLE SOLUTIONS

KEY PERFORMANCE INDICATORS	2020	2021	2022
 # Carbon calculations provided to customers	N/A	N/A	Launched November
 # Of new products and solutions	29	41	66
 % Turnover from sustainable products.	22.9%	23.0%	31.4%

CASE STUDY

FIRST COMMERCIAL APPLICATION OF ECOPACT PRIME AS

When we were appointed to be part of the project to develop Palmerston Court, a mixed-use development in Battersea, our ECOPact AS product was the ideal solution.

Sustainability is at the heart of the development, which includes student accommodation, featuring apartments with high levels of insulation, high performance windows, an airtight building fabric and high efficiency heat recovery, so a low carbon solution was specified. In addition, the mass laying of concrete sections and the construction of crane bases at the start of the project were essential to what was planned as a very fast build programme, requiring accelerated early strength development from the concrete. ECOPact AS was the ideal product to meet both of these requirements.

This was the first time the product had been used commercially and we were able to supply the site on time and in line with our customers expectations in co-ordinated deliveries from our nearby London Concrete plant in Battersea. Since then it has been named Product Innovation of the Year at the 16th edie awards, the world's largest sustainable business awards scheme. Given its environmental impact, it is unusual for a concrete product to be awarded such an accolade. Indeed, it is unique in our industry and strengthens our commitment to embed sustainability in the future of construction.

edie awards



2023 WINNER

Product innovation of the year
ECOPact Prime AS



CASE STUDY

SUPERLOW-CARBON IN ACTION

National Highways £9.5 million A590 Cross-A-Moor project, to reduce congestion and improve safety in Ulverston, Cumbria, was the very first project to use our new SuperLow-Carbon biogenic asphalt.

SuperLow is the UK's first commercially available biogenic asphalt and has been developed in partnership with Shell Bitumen as a pioneering product for more sustainable surfacing projects. It is manufactured at lower temperatures than standard asphalt, which means it requires less energy to produce than its hot mix equivalent. The use of alternative energy sources further lowers its embodied carbon footprint, while its unique formula includes a biogenic material that effectively locks CO2 within the asphalt rather than releasing it back into the atmosphere – even when recycled.

The use of SuperLow enabled National Highways to demonstrate their sustainability credentials and make progress towards their plan to achieve net zero by 2030 and there was further recognition for the product when it was chosen as Product of the Year at the Highways Awards 2022.

SUPERLOW-CARBON



2022 WINNER

Product of the year
Highways Awards



CASE STUDY

BRINGING LOW CARBON PRODUCTS TO THE DOMESTIC MARKET

Historically, 85% of the carbon footprint of concrete paving products derives from their cement content. Through the use of alternative and recycled materials and our investment in non-fossil fuels we can have a big impact in reducing that footprint. Our domestic hard landscaping brand Bradstone now offers ECO and ECO evolve, a complete range of low carbon products for patios and driveways with a reduction in carbon footprint of between 20 and 35% compared to the previous versions of the products. In some instances we have also made the product lighter, reducing overall weight, meaning they are not only easier to handle and lay, but that larger quantities can be transported at the same time, helping to further reduce CO₂ emissions.

**UP TO 35%
CARBON
FOOTPRINT
REDUCTION**





IN 2023 WE WILL

- 1 EXPAND OUR PORTFOLIO OF SUSTAINABLE PRODUCTS AND SOLUTIONS BY A FURTHER 5 OPTIONS**

- 2 CONTINUE DEVELOPMENT OF OUR CARBON REPORTING TOOL TO ENABLE CUSTOMERS TO MAKE INFORMED PRODUCT CHOICES FOR THEIR PROJECTS**

- 3 DEVELOP TOOLS TO ENCOURAGE OUR CUSTOMERS TO USE THE MOST SUSTAINABLE PRODUCTS FOR THEIR PROJECTS BY COMPARING SOLUTIONS AND MAKING RECOMMENDATIONS IN A DYNAMIC WAY**

- 4 CONTINUE TO COLLABORATE WITH OUR CUSTOMERS TO ENSURE WE DELIVER THE MOST APPROPRIATE SUSTAINABLE PRODUCTS FOR THEIR PROJECTS.**

ALL 2022 PERFORMANCE DATA

CLIMATE

	2020	2021	2022
Carbon emissions per tonne of product – Scope 1 and 2 (KgCO ₂ /Tonne)	27.41	25.10	17.90
Specific Net CO ₂ Emissions (KgCO ₂ /Tonne) cementitious	611.7	591	557.7
Transport Carbon Intensity (KgCO ₂ /Tonne)	3.61	3.59	3.45
Zero emissions electricity (% of total supplied)	33%	100%	100%

NATURE & ENVIRONMENT

	2018 (baseline)	2020	2021	2022
Freshwater Withdrawal Intensity Cement (litres / t)	16.8	15.36	11.64	14.27
Freshwater Withdrawal Intensity Aggregates (litres / t)	89.02	78	82.44	33.60
Freshwater Withdrawal Intensity Ready Mix (litres / m ³)	153.6	156.11	155.02	148.03
% Compliant with water quality standards	100	100	100	100
% of Quarry with Biodiversity Management Plan (BMP)	N/A	N/A	N/A	100
% of cement and aggregates sites with BIRS baseline roadmap in place	N/A	N/A	N/A	59
# sites with a place for nature	N/A	N/A	N/A	5

CIRCULAR ECONOMY

	2020	2021	2022
Volume of materials reclaimed or recycled (tonnes)	835,581	976,257	1,160,192
% Waste to landfill	87.2	90.2	93.6
# Circularity initiatives and opportunities	N/A	N/A	10



ALL 2022 PERFORMANCE DATA

PEOPLE & COMMUNITIES

	2020	2021	2022
Health & Safety Culture Maturity Level	Proactive	Proactive	Proactive
Lost Time Injury Frequency Rate (LTIFR)	0.38	0.52	0.54
# Of apprenticeships	3	0	38
% Female Leaders	21	22	24
% Female Representation	18	19	20
% Of suppliers assessed	100	100	100
# Of people benefiting from AI UK activity	N/A	N/A	26,747
# Of volunteering hours	249	36	1,070
£ Raised through fundraising activities	TBD	TBD	TBD
% of sites with community engagement plans	-	-	100

SUSTAINABLE SOLUTIONS

	2020	2021	2022
# Carbon calculations provided to customers	N/A	N/A	Launched November
% Turnover from sustainable productions	22.9%	23.0%	31.4%
# Of new products and solutions	29	41	66

*TBD = to be developed

VERIFICATION STATEMENT

Over the years, Responsible Sourcing has become an ever increasing part of the way that Construction Products Manufacturers have to operate. This has resulted in large numbers of manufacturers, involved in supplying the construction industry, opting for independent certification to the internationally recognised responsible sourcing certificate, BES 6001.

We can confirm that AIUK maintained its BES6001 accreditation.

STATEMENT OF THE INDEPENDENCE OF THE VERIFIERS

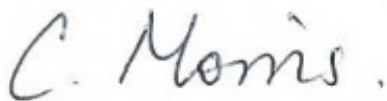
CM Environmental has been providing support to a large number of clients involved in the manufacture of concrete building products since 2016. CM Environmental has many years experience in supporting companies in a range of services, including Environmental Management Systems (ISO 14001), Responsible Sourcing (BES 6001) and also a range of Quality Management issues (ISO 9001) and Health and Safety Management (ISO 45001).

CM Environmental is completely independent from Aggregate Industries and has no bias or conflict of interest.

The verification exercise was carried out by Christine Morris, who has experience of Responsible Sourcing in the concrete and quarrying industry, and is approved by the Building Research Establishment (BRE) as an independent KPI data verifier.

CONCLUSION

Based on the procedures followed by CM Environmental during this independent verification exercise, there has been no evidence that the data supplied to the Aggregate Industries Sustainability Report, for the period 1st January to 31st December 2022, has not been obtained on a reliable basis, that the information is not adequately presented, or that significant deviations or omissions exist.



11th May, 2023
Environmental Consultant
CM Environmental

CONTACT US

This is an evolving strategy and is monitored and reviewed by our Executive Committee, whose members take collective responsibility for driving the process of fully integrating its principles into the way we do business.

We will continue to collaborate with our stakeholders and keep them updated on how we're progressing. We will publicly report on our performance, against a range of measures, on an annual basis.

We welcome any feedback which can be submitted by emailing us at:

sustainability@aggregate.com

SUSTAINABILITY STRATEGY

[Available online here.](#)

EXTERNAL STANDARDS & ACCREDITATIONS

ISO 14001 (Environmental Management standard)

ISO 50001 (Energy Management standard)

ISO 9001 (Quality Management)

BES 6001 (Responsible Sourcing)

ISO 44001 (Collaborative working)

PAS 2080 (Carbon Management in Infrastructure)

ISO 45001 (Health & Safety)

SUPPORTING POLICIES & PLANS

For full policy documents [click here](#)