

Energy sector capability

Materials to build our future

heidelbergmaterials.co.uk



Who we are

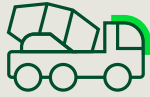
Heidelberg Materials is one of the world's largest integrated manufacturers of building materials. In the UK, the company is split into five business lines – aggregates, cement including GGBS, concrete, asphalt and recycling – and employs more than 4,000 people at over 300 manufacturing and distribution sites.

We are committed to decarbonisation and the circular economy with an ambition to reach net-zero by 2050. As a group, we are heavily investing in global carbon capture projects to capture and store the CO₂ produced at our cement plants. We are leading the way globally to produce net-zero carbon captured cement, evoZero, which will reduce our carbon footprint and help reach our net-zero goals. Starting with our Brevik cement plant in Norway in 2025, then moving to our Padeswood cement plant in the UK, aiming to manufacture net-zero carbon captured cement by 2029.

We are an inclusive employer and recognise the importance of social value and supporting the communities where we operate. As a global company, Heidelberg Materials employs around 51,000 people and is represented in over 50 countries.



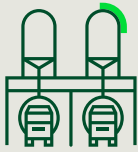
Our operations



2,000+ Heidelberg
Materials-livered vehicles



8 packed product sites



150+ ready-mixed
concrete plants



4 marine dredgers



50+ sand, gravel
and rock quarries



3 cement plants



35+ asphalt plants



3 grinding plants making
evoBuild Low Carbon
GGBS (ground granulated
blastfurnace slag)



25+ rail depots and
wharves supplied by
road, rail and sea



1 joint venture rail
company, Mendip Rail



6 landfill sites



10+ waste
transfer stations



13 recycling centres



3 hazardous waste
treatment sites

Expertise in the energy sector

We are proud to be at the forefront of providing sustainable solutions for the energy sector, supplying construction materials to build energy infrastructure that can support our future. Our experience of successfully supplying the biggest energy projects across the globe is a proven demonstration of our expertise.

Why choose Heidelberg Materials?



Extensive track record of project delivery within the energy sector



Leaders in carbon capture and storage



Full assistance throughout the tendering process



Producers of the world's first net-zero carbon captured cement, evoZero



A bespoke solution will be created to meet your project



Sustainable transport via road, rail and marine



Nationwide network of technical experts available to support, from product development to delivery

Leading the way with BS EN 19443 certification

Heidelberg Materials proudly stands as the first company in the UK construction industry to achieve BS EN 19443 certification. This esteemed quality management standard fosters a robust nuclear safety culture, ensuring that suppliers of products and services to the nuclear sector adhere to the highest standards of quality and best practices. By integrating these principles, Heidelberg Materials sets a benchmark for excellence and reliability in the construction sector.

Set up to succeed

Heidelberg Materials works closely with our partners to provide an extended product portfolio, logistics network and geographic reach. We aim to work with local people and resources where possible to help generate opportunities in the surrounding area.

We lead project teams together with the supply chain to develop and deliver sustainable construction solutions that align with the project requirements.

Our partners include:

Stema

Our aggregates partners, Stema, provide high-quality aggregates from their three Norwegian quarries and European sand pits. With a supply capability of over 20 million tonnes per year, this provides a reliable source across the East of England and further.

From these super quarries, the aggregate travels to the UK in a fleet of modern self-discharging vessels. This ensures rapid distribution of building materials to our UK sites. The aggregates then travel via ship to Great Yarmouth, Ipswich, and Tilbury docks and are then transported by road and rail to either our production sites or direct to your project destination, throughout the East coast of England and Scotland.

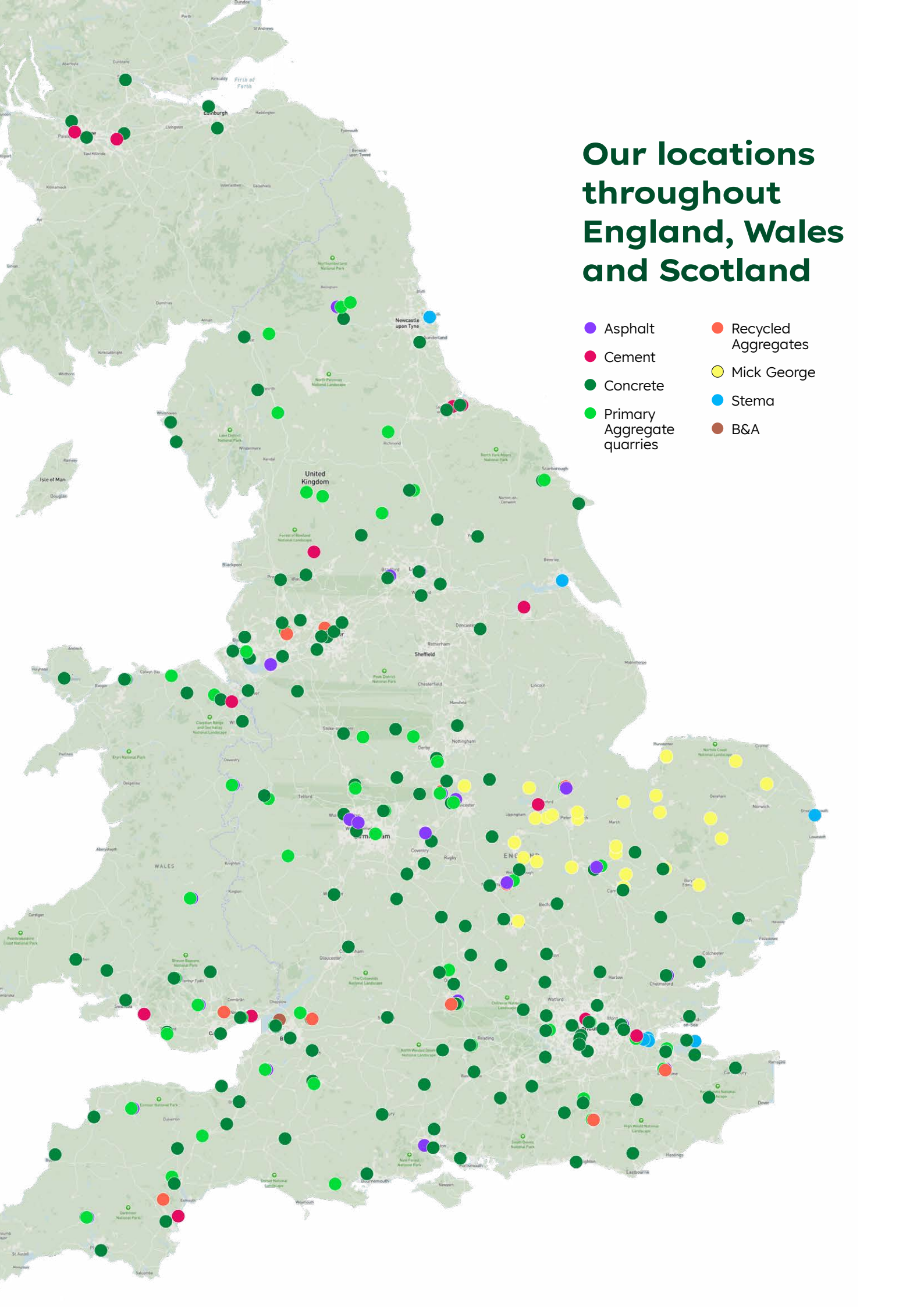
Mick George Group

Acquired by Heidelberg Materials in 2024, the Mick George Group is well established as one of the leading suppliers to the construction industry in the Anglia and East Midlands region. Specialising in bulk excavation and earthmoving services, demolition and environmental removal, skip hire and waste management, aggregates and concrete supply. With landfill sites, waste transfer stations and quarries spread throughout the region, the Mick George Group are able to offer a range of construction solutions to commercial, trade and residential customers.



Our locations throughout England, Wales and Scotland

- Asphalt
- Cement
- Concrete
- Primary Aggregate quarries
- Recycled Aggregates
- Mick George
- Stema
- B&A



Solutions to the energy sector

Nuclear

Nuclear power is a long-established part of the UK's energy mix, and it will continue to play a major role in reliably generating affordable low-carbon energy.

We are the supplier of choice to the client and contractors for the supply of concrete, cement and aggregates to the Hinkley Point C plant in Somerset, the first of a new generation of nuclear sites.

Concrete is a practical material for a permanent shield against the dangers of radiation. It's also inexpensive, easy to use, structurally self-supporting, virtually indestructible, and without maintenance costs. Making it the ideal choice for challenging nuclear applications.

The use of evoBuild Low Carbon GGBS, a specially developed ground granulated blast furnace slag (GGBS) product, is used to safeguard radioactive waste during the decommissioning of old power plants. Its particle size distribution enables excellent flow properties with good water retention.

Image © EDF 2018



Biomass and waste to energy

Renewable energy from biomass fuels can make significant greenhouse gas emissions savings compared to fossil fuels. Energy can also be recovered from waste by various technologies, which helps the UK reduce its dependency on energy imports, contributes towards reducing carbon emissions and meeting renewable energy targets.

Today's waste-to-energy plants are highly efficient and use municipal solid waste as their fuel rather than coal, oil or natural gas. We have significant experience contributing towards large projects that take advantage of these new methods of energy creation focusing on preserving a sustainable planet for future generations.

Wind farms

With some of the best conditions in Europe and high average wind speeds, the UK is well placed to develop wind power. Both onshore and offshore wind farms are an important part of the UK's renewable energy mix and will play an increasingly larger role in the future.

We have been involved in the construction and management of onshore wind farms since 2000 and our offshore capability is built on experience from many major projects, we have been involved in both the UK and Europe.

Supported the Hywind Tampen project, supplying the world's first renewable power for offshore oil and gas.

Gas

Gas currently forms an integral part of the UK's generation mix and is a reliable, flexible source of electricity. It is expected that gas will continue to play a major role alongside low carbon technologies. It is the cleanest fossil fuel, and much of the new gas capacity needed would effectively be replacing ageing coal-fired generators.

Our involvement in this sector includes supplying concrete to the £450 million Severn Power Station, near Newport, Gwent, and the construction of the Liquefied Natural Gas (LNG) import terminals in South Hooks, West Wales. We also provided two onsite mobile plants for continuous pours of nearly 10,000m³ of high-quality concrete at Isle of Grain, the largest LNG terminal in Europe.



Heidelberg Materials energy solutions in action

Hinkley Point C (HPC) is the first nuclear power station to be built in the UK for a generation, and is designed to provide low-carbon electricity for around six million homes.

Since 2016, Heidelberg Materials have partnered with EDF Energy and project contractors to supply aggregates, cementitious materials, concrete, asphalt and paving services to HPC by road, rail and sea.

As Europe's largest construction project, HPC has required Heidelberg Materials to develop new standards and management systems to deliver the outstanding performance required by a Nuclear Sector Project.

We now have a total of 17 different site contractors, all overseen by an up to 85-strong Heidelberg Materials Nuclear Project team, supported by colleagues from across the country covering every department in the business and the project is only 50% complete.

Key achievements



>10 million tonnes of aggregates, asphalt, cement, GGBS and concrete supplied



99.6% of concrete within nuclear grade specifications



>1.5 million m³ of concrete produced and placed



99% of deliveries made within delivery window

UK's largest structural concrete pour

In June 2019 Heidelberg Materials supplied the UK's largest structurally reinforced concrete pour from HPC's onsite plants; the last in a series of pours to create the base for reactor one. 9,000m³ of nuclear concrete was placed over 79 continuous hours, a feat Heidelberg Materials were able to achieve without a single rejected load and all within a slump flow test range of +/- 20mm.

This consistent quality is conformation of Heidelberg Materials' competence in quality management and success in adopting Nuclear Safety Culture (NSC), allowing Heidelberg Materials to deliver the relentless repeatability that is necessary for a nuclear project. The feat was repeated for HPC's second reactor base in June 2020, with both bases being delivered on or ahead of the schedule set in 2016, and the latter being delivered despite the impact of the COVID-19 crisis.

Achieving these milestones at HPC is further proof of Heidelberg Materials' ability as a nuclear heavy building material supplier, and will be key considerations for EDF when making supply arrangements for the upcoming Sizewell C project.

The logistics of an HPC pour

Undertaking concrete pours at HPC, such as the reactor base pours, is a complex logistical challenge. To meet the need to continuously supply concrete for several days, Heidelberg Materials operated a fleet of 12 concrete mixer trucks on continuous rotation.

The largest pours at HPC have consisted of almost 1,000 delivered concrete loads, all of which have been planned to the minute by the on-site logistics team. In addition to concrete, the delivery of all construction materials to site must be meticulously planned to ensure that stocks are plentiful for the duration of the pour.

The successful operation of Heidelberg Materials' logistic model at HPC has been crucial to minimising the project delays which have occurred on the construction of similar nuclear reactors in Europe.

Image © EDF 2018



Quality management and nuclear safety culture

Working on a nuclear project such as HPC is a unique challenge. Ensuring the safety of the nuclear powerplant over its lifetime is the overriding priority, and the entire construction process is shaped around this.

To meet the standards required by the nuclear sector Heidelberg Materials has implemented a bespoke Quality Management System (QMS) for HPC, going beyond the requirements of the ISO 9001-based QMS which is used by Heidelberg Materials elsewhere. The new system brings greater scrutiny on all elements of the Heidelberg Materials business involved in supply to HPC, including more demanding material specifications to produce relentless predictability in Heidelberg Materials' products, independent analysis of Heidelberg Materials' nuclear competency and most importantly the assessment of Heidelberg Materials' adherence to Nuclear Science Committee (NSC). This is defined as the attitude, behaviours and values an organisation adopts when dealing with any component of a nuclear project.

In practise, this means greater commitment from Heidelberg Materials staff, requiring significant attention to detail, a questioning attitude, diligence, and most crucially transparency and honesty around errors and mistakes – a key principle of NSC. This creates a positive environment in which errors can be learnt from and processes can be changed for the benefit of the HPC project. Thus by adhering to NSC, Heidelberg Materials can ensure that nuclear safety is not comprised, making the project safe both now and for generations to come.

This success in quality management and the adoption of NSC at HPC makes Heidelberg Materials the clear UK market leader in nuclear heavy building materials supply, and Heidelberg Materials is currently working to achieve ISO 19443 accreditation (the international quality management standard for the nuclear energy sector supply chain), which upon award would be a UK first in the construction materials industry.

Image © EDF 2018



Energy solutions by product

Product name	Description	Benefits
PowerSand CBS (Cement Bound Sand)	PowerSand is a specialised backfill material for power cable installations. The certified cable sand, which is ENA TS 97-1 compliant, is suitable for installation and backfilling of underground high voltage cables.	• Primarily used in rail, energy, and utilities projects, meeting all thermal property specifications. • Easily compacts around power cables to effectively conduct heat away from the source and prevent electrical resistance.
PowerSand CBS Extra	Heidelberg Materials PowerSand CBS Extra is a non-traditional stabilised backfill as defined in ENA TS 97-1, with optimised performance.	• Lower thermal resistivity to traditional CBS • Reduced carbon footprint
Powercrete®	Powercrete® is a robust, higher performing option compared to PowerSand. It is a heat-conducting concrete, used as a bedding and infill material for underground high voltage and ultra-high voltage cabling. The special material properties of Powercrete® result in low heat transmission resistance.	• Improved heat dissipation for HV and UHV cables • High heat conduction after drying • Reduction in magnetic field strength for alternating current • Increased power capacity • Reduction of conductor cross-section • Switch to aluminium conductors possible • Mitigation of “hot-spots” • Powercrete® has a thermal resistivity measured at 0.4Km/W
CableCem	CableCem is a heat-conducting grout developed as an infill material for jacket tube systems. It has excellent free-flowing properties and is well-suited for infilling the residual annular space between the cable and the jacket tube.	• Excellent free-flowing properties • Improved heat dissipation for HV and UHV cables • Reduction in magnetic field strength for alternating current • Increased power capacity • Reduction of conductor cross-section • Switch to aluminium conductors possible • Mitigation of “hot-spots”

evozero

The world's first carbon captured net-zero cement

We're taking the lead in the decarbonisation of our sector and pioneering carbon capture and storage (CCS) in our industry at scale. Our new evoZero range makes us the first company in the world to offer carbon captured net-zero cement through the application of CCS technology – without using offsetting with credits generated outside our value chain. Our first CCS plant in Brevik, Norway will capture up to 400,000 tonnes of CO₂ annually.

In the UK, Heidelberg Materials intends to construct an industry leading carbon capture facility at our Padeswood cement works in north Wales, that will capture up to 800,000 tonnes of CO₂ annually. This would be the first carbon capture enabled cement works in the UK, representing a ground-breaking project for the global cement industry.

This means the same Heidelberg Materials cement product, but without the associated carbon footprint.

CO ₂ footprint in kg CO ₂ /t cement		Clinker share	Strength Class	Reduction
Regular CEM-I	870	95%	52.5R	Conventional product
Lowest carbon CEM-II B	480	60%	42.5N	~ 45% reduction via alternative fuels & lower clinker ratio
CEM-III	200	30%	32.5N	~ 80% reduction via alternative fuels & lower clinker ratio
evoZero carbon captured (net-zero)		any	any	~ 100% reduction via CCS • No compromise • High performance



evoBUILD

A global approach to product sustainability

With the launch of evoBuild, our new global brand for low carbon and circular products, we're setting new standards for sustainable building materials and leading the construction industry towards net zero and the circular economy. evoBuild products are either low carbon, circular or feature a combination of both attributes.

evoBuild low carbon concrete

Low carbon concretes offer a CO₂ reduction of at least 30% compared to a fixed Global Cement and Concrete Association (GCCA) reference value.* Circular products must either contain at least 30% recycled content or use at least 30% less material. The evoBuild standards apply to products in cement, ready-mixed concrete, aggregates, and asphalt.

There are three levels in the current range:

evoBuild low carbon concrete 30	Available from C20/25 grade strength and reduces CO ₂ by 30% compared to the reference.
evoBuild low carbon concrete 40	Available from C25/30 grade strength and reduces CO ₂ by 40% compared to the reference.
evoBuild low carbon concrete 50	Available from C32/40 grade strength and reduces CO ₂ by 50% compared to the reference

* The evoBuild reference value is at least 30% CO₂ reduction vs. the global reference values from the Global Cement and Concrete Association (GCCA) for CEM I from 2020, which translates to ≤552 kg CO₂/t cementitious material and ≤ 5.5 kg CO₂/m³/MPa for ready-mixed concrete.

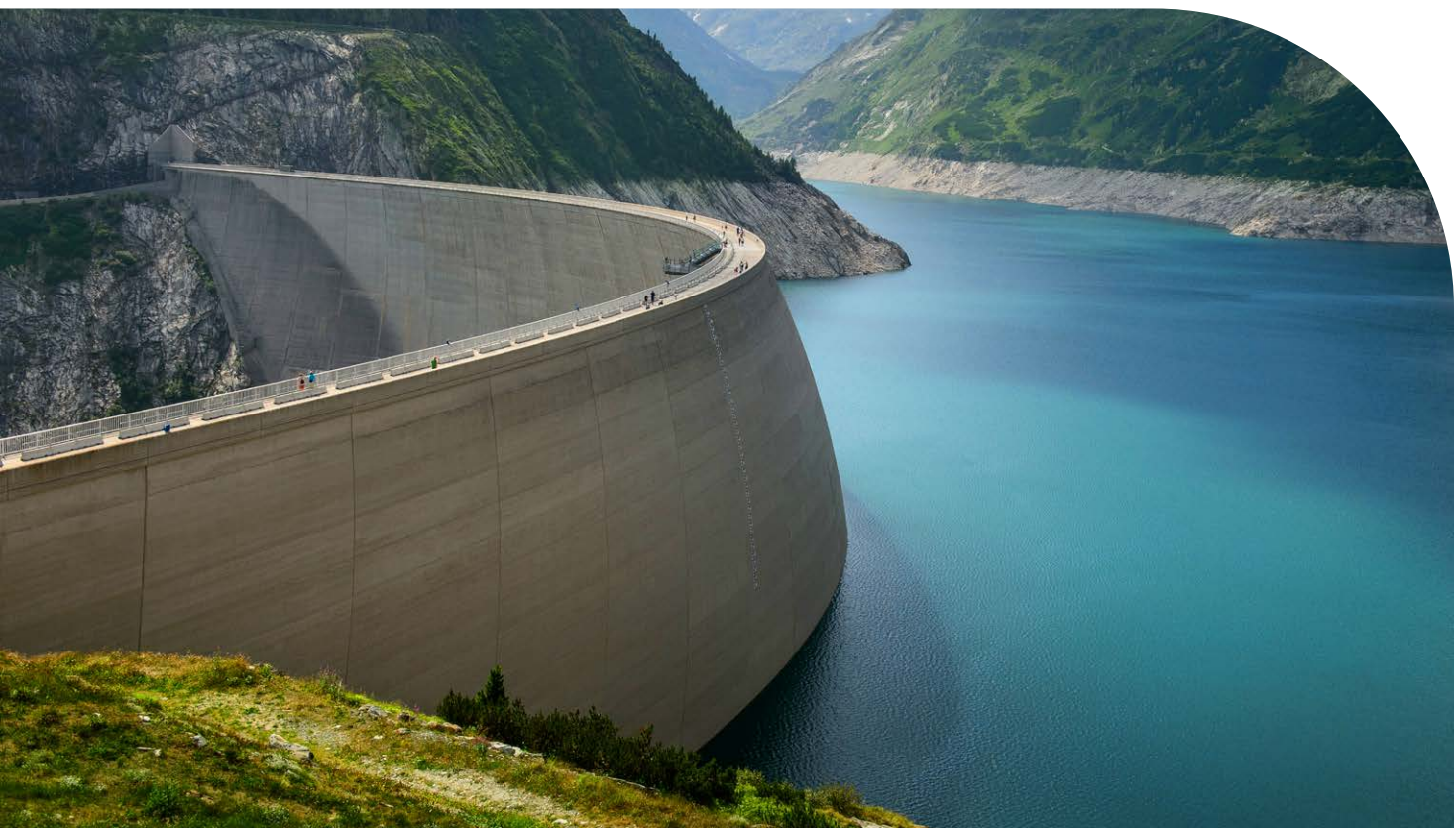
evoBUILD

Low Carbon GGBS

evoBuild Low Carbon GGBS, previously known as Regen GGBS, remains the tried and tested option for delivering low carbon concrete. Its low carbon footprint will significantly reduce the environmental impact of a project, while maintaining the strength and durability of a high-quality concrete.

Using one tonne of evoBuild low carbon GGBS in concrete reduces the embodied CO₂ by around 650kg compared to using one tonne of Portland Cement.

Improved durability	Concrete made with GGBS is more resistant to sulphate, chloride and acid attacks, reducing the risk of corrosion and extending the lifespan of structures.
Enhanced workability	GGBS improves the workability of concrete, making it easier to handle and place.
Reduced heat of hydration	The use of GGBS lowers the heat generated during the curing process, minimising the risk of thermal cracking in large concrete pours.
Sustainability	By utilising a by-product of the steel industry, ground granulated blastfurnace slag (GGBS) helps reduce waste and promotes the recycling of materials.



Expert contracting services

At Heidelberg Materials, we provide expert contracting services for road surfacing and infrastructure projects across the UK. Our comprehensive services include early contractor involvement, material design and production, as well as mobile batching plant capability to support large scale projects.

We bring extensive experience in delivering high-quality results in road construction and maintenance projects. Plus, our national network of plants ensures consistent, quality asphalt supply throughout the project duration.

As part of our drive to reduce our impact on the environment and offer more sustainable solutions, we look to recycle 100% of worn-out road surfaces into new materials, driving a circular economy in our nation's road network.

We embrace new innovations to offer low carbon products including biogenic binders and cold recycled bound materials such as our evoBuild foamed asphalt product that contains up to 95% recycled materials and can reduce carbon emissions by around 40%.

Heidelberg Materials Contracting credentials:

- National Highway Sector Scheme 16
- ISO 9001:2015 Quality Management System
- ISO 14001:2015 Environmental Management System
- OHSAS 45001:2018 Occupational Health and Safety
- ISO 44001 Collaborative Working
- BES 6001 Responsible sourcing of materials
- ISO 50001 Energy Management

On-site batching plants

Heidelberg Materials offers extensive expertise in the provision and management of on-site batching plants, ensuring the efficient, reliable, and cost-effective supply of high-quality concrete.

These reliable and agile on-site plants have successfully supplied projects across the UK, from small, temporary setups to long-term installations on major infrastructure projects.

On-site batching offers several advantages for large-scale construction projects, including surety and continuity of supply, immediate concrete call-off, and a significant reduction in HGV traffic on local roads. Our modern plants provide highly accurate mixing for consistent, quality-assured concrete.



**For more information
about our energy sector
capabilities, please contact:**

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