

Vertua[®]
Low carbon by design

**NET ZERO
CONCRETE.
THE FUTURE.
NOW.**

Go CarbonNeutral[®]



CarbonNeutral.com


Our **Vertua zero** concretes are CarbonNeutral products in accordance with the CarbonNeutral Protocol, the leading global framework for carbon neutrality. To find out more call **0800 667 827** or email **gb-enquiries@cemex.com**

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GREATER THAN
70%
EMBODIED
CARBON
REDUCTION

We're proud to launch the UK's first ready mixed concrete that is a CarbonNeutral® product.

Our **Vertua**® low carbon concrete range includes the option to offset residual CO₂ to provide a CarbonNeutral product, in accordance with The CarbonNeutral Protocol.

Our purpose is to build a better future, and unsurprisingly we think concrete is an essential part of construction. It is the second most consumed material on the planet (second only to water) in part because it is cost-effective, versatile and typically made from local materials.

Access to low cost construction materials is linked to regional economic development and as a foundation of our society is vital for the infrastructure that helps provide the UK with clean water, sanitation and energy, as well as durable homes, schools, hospitals, roads, railways and much more.

However, we recognise future construction needs to be balanced with the effect it is having on the environment. At CEMEX, we know that we can best meet these challenges by working in partnership with our clients and stakeholders to innovate and develop low carbon solutions together.

We want to help our clients to specify lower carbon concretes. In 2010 we were the first major concrete company to offer a third party verified Carbon Calculator. The current launch of **Vertua** aims to make it even easier for clients to choose concretes with a lower embodied carbon, offset residual emissions and help drive vital change.

Our offsets are verified by the Gold Standard or Verified Carbon Standard (VCS) and will include projects focusing on the planting of trees, biodiversity and protection against deforestation where available.

We know that carbon offsetting is only an interim measure while we further develop technology that is still in its early stages, and as the market shifts to low carbon concretes. At present we believe it is a good way to sequester the remaining CO₂ from our lower carbon solutions to take important climate action now. We are sure this will prove a relevant solution as the construction sector looks to take rapid action to improve the sustainability and climate impacts of the built environment.

The **Vertua** range features a variety of bespoke concrete mix designs which can be used in a wide range of applications and includes the **Vertua ultra zero** option which is a CarbonNeutral product. This product achieves a 70% reduction in embodied carbon emissions, with the remaining unavoidable emissions offset through working with Natural Capital Partners, a carbon offset and carbon neutrality specialist.

The **Vertua** range is an important step to support the Company's recently announced climate strategy, which includes an ambition of delivering net zero concrete globally by 2050.

Vertua is our new range of low carbon concretes, with bespoke designs enabling embodied carbon reductions GREATER THAN 70% versus standard concretes (CEM I).

The range can also provide additional benefits including increased durability and aesthetic finishes.

Vertua[®] | classic
Low carbon by design

c.30-50% CO₂ reduction versus a standard concrete

Vertua[®] | plus
Low carbon by design

c.60% CO₂ reduction versus a standard concrete

Vertua[®] | ultra zero
Low carbon by design

c.70% CO₂ reduction versus a standard concrete

All of our products in the Vertua range* conform to BS 8500 and BS EN 206 standards
*Excludes Vertua ultra zero

Heat of hydration

The use of **Vertua** concrete reduces the heat of hydration (the hydration of cement is an exothermic reaction). High temperatures in concrete can generate stresses that could result in early-age thermal cracking. The use of **Vertua** is recognised as an effective solution to this problem.

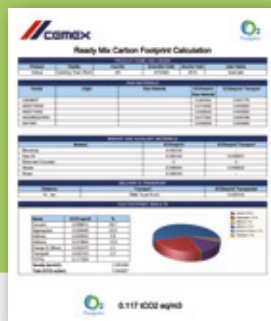
Setting times

Vertua benefits from lower heat generation and takes slightly longer to set, which is particularly useful in warm weather conditions. This is influenced by many factors, including temperature and water/cement ratio. However, an extended setting time means that the concrete will remain workable for longer and this needs to be considered when using these products.

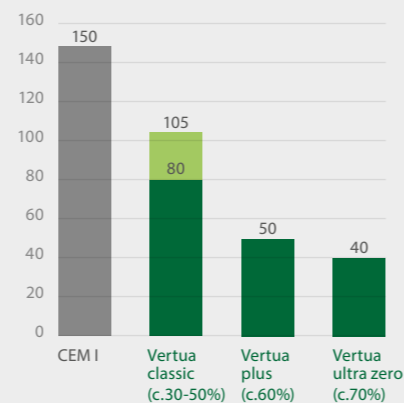
For more specific technical support please contact one of our team on 0800 667 827.

Carbon Calculator Service

CEMEX calculates the embodied carbon in the **Vertua** range using a Carbon Footprint Calculator (CO₂ Tool) that follows the principles of PAS2050, and clients can be provided with a copy on request.



Vertua compared to CEM I concrete - CO₂ per tonne



Calculated using the Carbon Calculator below.
Note: figures may vary - but based on typical CEMEX ready-mixed concrete plant.

Vertua[®] | classic
Low carbon by design

A low carbon concrete that has a c.30-50% CO₂ reduction versus a standard concrete (CEM I) mix.

Available in a range of compressive strengths from C16/20 to C40/50 and meets the requirement of DC-2.

Applications

- Foundations, including piling
- Suspended slabs
- Structural elements
- House and garage ground floor slabs
- External concrete for pavements and hard standing
- Driveways
- Industrial floors

Features

- Easy to use and place
- Suitable for pumping
- Complies with Design Chemical Class DC-2 to BRE Special Digest 1

Vertua[®] | classic zero
Low carbon by design



Go CarbonNeutral[®]

Also available, **Vertua classic zero** to offset the remaining carbon percentage (c.50-70%) through a carbon offset and accredited carbon neutrality specialist.

Vertua® | plus

Low carbon by design

A lower carbon concrete that has a c.60% CO₂ reduction versus a standard concrete (CEM I).

Available in a range of compressive strengths from C16/20 to C32/40 and meets the requirement of DC-4.

Applications

- Groundworks
- Mass foundations
- Piling
- Geo-technical
- House foundations
- Other applications where high early strengths are not required

Features

- Easy to use and place
- Suitable for pumping
- Ideal for use in aggressive ground conditions
- Complies with Design Chemical Class DC-4 to BRE Special Digest 1

Note: Minimising heat of hydration to reduce thermal cracking is of critical importance in mass concrete pours. Where Vertua plus concretes are used, it is recommended for compressive strength conformity to be at 56 days.

Vertua® | plus zero

Low carbon by design



Go CarbonNeutral®

Also available, Vertua plus zero to offset the remaining carbon percentage (c.40%) through a carbon offset and accredited carbon neutrality specialist.

Vertua® | ultra zero

Low carbon by design

A geopolymmer clinker-free concrete that has over 70% CO₂ reduction versus a standard concrete (CEM I), available on request for bespoke applications.

This product achieves a 70% reduction in embodied carbon emissions, with the remaining unavoidable emissions offset through a partnership with Natural Capital Partners, a carbon offset and carbon neutrality specialist.

In order to achieve the 70% reduction, CEMEX is introducing a new innovative geopolymmer cement solution, which was developed at its Global Research & Development Centre in Switzerland. This new geopolymmer product can be used as an alternative to more commonly used 'clinker based' cement solutions in certain applications.

Contact us to discuss your specific project so we can ensure Vertua ultra zero is suitable for your application.



Go CarbonNeutral®

Vertua ultra zero includes the offset of the remaining carbon percentage (c.30%) through a carbon offset and accredited carbon neutrality specialist.

Vertua zero Range Certification

For any of your projects where these products are used you will receive this certificate to verify the offset.

'The stated subject has been made CarbonNeutral through the use of high quality environmental instruments that meet the requirements of The CarbonNeutral Protocol.'



CarbonNeutral.com

Certification CarbonNeutral® product	Certificate date / /
Name of organisation CEMEX	Quantity of credits retired (tonnes CO ₂ e)
Subject	
Project information Community Reforestation, East Africa, VCS. This project involves thousands of farmers planting trees along with sharing agricultural best practice, adding new crops, and implementing conservation farming methods. This enables subsistence farmers to improve their access to food and create additional income.	



CarbonNeutral® Product

for

This certificate verifies that:

The stated subject has been made carbon neutral through the use of high quality environmental instruments that meet the requirements of The CarbonNeutral Protocol.

Stephen J. Kileen

CEO, Natural Capital Partners

tonnes CO₂e



Certificate number: 0000000000
The CarbonNeutral® certificate conforms to the requirements of The CarbonNeutral Protocol. For the current version, please visit carbonneutral.com

WHAT IS **CARBON OFFSETTING?**

Carbon offsetting is the purchasing of carbon credits from projects that deliver immediate emission reductions through sustainable development and renewable energy projects to compensate for emissions made elsewhere.

Our Vertua zero concretes are certified as CarbonNeutral® products in accordance with The CarbonNeutral Protocol, the leading global framework for carbon neutrality.

This means we make sure that for every tonne of CO₂ emitted by our Vertua zero concrete range there is one tonne less in the atmosphere. We do this by investing in projects which physically remove CO₂ from the air such as planting more trees through an independently audited and verified project. Carbon can be offset in this way because one tonne of CO₂ has the same climate impact wherever it is emitted.

What this means for you

The fact that we're offsetting the carbon emissions from a range of products means that when you choose to build with these concretes, it may contribute to your company's net zero targets and carbon obligations, as well as help you meet your client's increasing sustainability requirements.

Accreditation

Our Vertua zero range includes the offset and we undertook a rigorous process in selecting a carbon offset programme. Projects are independently monitored and verified by independent third parties to ensure they are delivering emission reductions. We will only purchase carbon credits accredited under the Gold Standard or Verified Carbon Standard (VCS) – these standards are globally recognised and respected for their levels of high environmental integrity.

How are we carbon offsetting?

We are providing carbon finance for projects that have to prove that without carbon finance they would not be viable.

To do this we are working with Natural Capital Partners (naturalcapitalpartners.com).

Natural Capital Partners is an award-winning offset company that works with clients to combine business success with positive impact on the environment and society. Through collaboration with global project partners, the development of innovative solutions, and understanding the specific goals of its clients, the company delivers programmes for renewable energy,

reducing carbon emissions, enabling water stewardship and protecting biodiversity. The company was founded 20 years ago and has more than 300 clients in 34 countries.

The CarbonNeutral Protocol was created and is managed by Natural Capital Partners. It was the first clear set of guidelines for businesses to achieve carbon neutrality back in 2002, and every year since then Natural Capital Partners has continued its commitment to providing a robust framework for credible carbon neutral action. It is reviewed annually with input from the Advisory Council to ensure it reflects the latest developments in emissions measurement and reductions.



UN Sustainable Development Goals

Through our CarbonNeutral® programme we are focussing on tree planting projects throughout the world to deliver climate benefits but also other benefits aligned with the UN Sustainable Development Goals, such as increasing biodiversity and reducing poverty.

Why doesn't CEMEX offset the emissions from all cement and concrete products

We only offset emissions from our low carbon Vertua range in order to make it easy for our clients to purchase lower carbon concretes. The principle behind the Vertua range is firstly to maximise any reduction in CO₂ and then secondly offset the residual CO₂. Offsetting more carbon intensive cement and concrete products, would not provide any reduction in embodied carbon and therefore would not meet this principle.

Top: Project staff from the community are trained to verify the carbon emissions sequestered by the trees

Middle: Community members visit one of the project tree nurseries

Bottom: Project staff run tree nurseries to ensure farmers have trees to plant

Images courtesy of Natural Capital Partners



RESPONSIBLY SOURCED READYMIX CONCRETE

CEMEX UK operates in a highly regulated sector and recognises its Sustainability and Environmental obligations.

We continually invest and innovate to become an environmentally friendly, sustainable leader – enabling a low-carbon and resource-efficient circular economy.



All CEMEX products have achieved BES6001 Responsible Sourcing accreditation.

BES6001 accreditation means that all our readymix concrete products are responsibly sourced, to an independently verified standard that addresses the social, economic and environmental impacts across the entire supply chain.

CEMEX's commitment to sustainable development and ethical and responsible sourcing has been formally recognised through this official accreditation.

By using CEMEX UK readymix products with the BES6001 certification our customers can score more credits under BREEAM, the most widely used environmental assessment method for business.

The BES6001 certification complements a range of other ongoing initiatives at CEMEX UK to reduce waste, water, energy use and CO₂ emissions, while increasing the use of alternative fuels and by-products in the manufacturing of building materials.

As a global company, ecologically responsible construction is a priority for CEMEX and it is fully committed to the United Nations Sustainable Development Goals, of which five are directly related to our company's business. Furthermore, the United Nations' established

2030 global goals have been embedded into our business model and inform the decisions we make and the work we do every day.

We understand and agree with the need for production of cement and concrete to be as sustainable as possible and are committed to contributing to a net zero carbon society. It is important to remember that while global cement production (of which over half takes place in China) is responsible for 7% of global CO₂ emissions, UK cement emissions are amongst the lowest in the world at less than 1.5% of all UK emissions; testament to the dedication of the industry to decreasing its impact on the environment.

Climate change has been a priority for CEMEX for many years. The company's efforts have brought significant progress to date, but there is a need to do more and faster. This is why CEMEX has also recently announced a more ambitious global target for CO₂ emissions by 2030: a reduction of 35% to ensure alignment with the Paris Agreement commitments. This is in addition to the ambition of delivering net zero concrete globally by 2050.

However, in the UK, we have already achieved the following:

38% reduction in our CO₂ emissions since 1990

Replaced around 60% of traditional fuels such as coal with alternative fuels in our processes of which importantly, on average, 65% are from zero emission waste-derived biomass

88 times more waste consumed than we produce in our operations

Implemented Energy Reduction Programmes in all our operations with the most energy-intensive being certified to ISO50001

A- rated for climate transparency and strategy by the Carbon Disclosure Project (CPD) in 2019

All our operations are certified to the ISO14001 standard for Environmental Management Systems

30% Amount of energy-intensive clinker substituted in our cement products with by-products. 90% of our concrete contains by-products and admixtures which reduce embodied CO₂

Over 1000 hectares of priority biodiversity habitat created and maintained

Supplied our operations with **100%** renewable electricity

Established partnerships with organisations such as the RSPB to ensure we maximise all opportunities for better and more sustainable working

