



# LOWER CARBON CONCRETE PRODUCTS AND SOLUTIONS



# VERTUA<sup>®</sup> MORE SUSTAINABLE BY DESIGN

**Cemex** has developed a portfolio of products and solutions that address the pressing need to build a future that is carbon neutral, sustainable, and circular.

The **Vertua** brand has evolved from lower carbon concrete solutions to incorporate other key sustainable attributes of readymix concrete:

- Lower Carbon
- Energy Efficiency
- Water Conservation
- Recycled Materials
- Design Optimisation

The products and solutions covered by these 5 sustainable attributes collectively contribute to our vision of **'Building a Better Future'**.



LOWER  
CARBON



ENERGY  
EFFICIENCY



WATER  
CONSERVATION



RECYCLED  
MATERIALS



DESIGN  
OPTIMIZATION



# VERTUA®

A COMPREHENSIVE APPROACH  
BUILT AROUND FIVE  
SUSTAINABLE ATTRIBUTES



## LOWER CARBON

Products and solutions that have been optimised to have a lower CO<sub>2</sub> footprint when compared to a standard CEM I concrete,



## WATER CONSERVATION

Products and solutions for surface and storm water management.



## ENERGY EFFICIENCY

Products and solutions that have improved thermal efficiency resulting in reduced CO<sub>2</sub> emissions in operations of buildings.



## RECYCLED MATERIALS

Products and solutions that incorporate recycled aggregates.



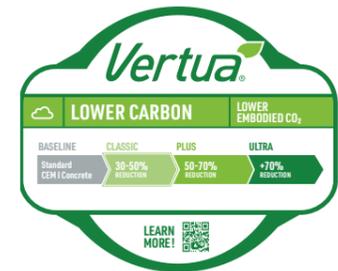
## DESIGN OPTIMIZATION

Products and solutions that enable CO<sub>2</sub> reduction through optimisation of structural design



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

The range can also provide additional benefits including increased durability, reduced heat of hydration and aesthetic finishes.



## CLASSIC RANGE

A lower carbon concrete that has a **c.30-50% CO<sub>2</sub> reduction** versus a standard concrete (CEM I).

## PLUS RANGE

A lower carbon concrete that has a **50%-70% CO<sub>2</sub> reduction** versus a standard concrete (CEM I).

## ULTRA RANGE

A lower carbon concrete with a CO<sub>2</sub> value below 100Kg/m<sup>3</sup> CO<sub>2</sub> eq. (**Over 70% CO<sub>2</sub> reduction** versus a standard concrete (CEM I)).

Vertua is a Cemex Group trademark that highlights specific characteristics of Cemex Group products regarding environmental impact, as described in the corresponding Fact Label. Vertua's label is not intended as a certification. For more information on this product's attributes.

### ADDITIONAL BENEFITS OF LOWER CARBON CONCRETES

#### HEAT OF HYDRATION

The use of lower carbon concrete reduces the heat of hydration (the hydration of cement is an exothermic reaction).

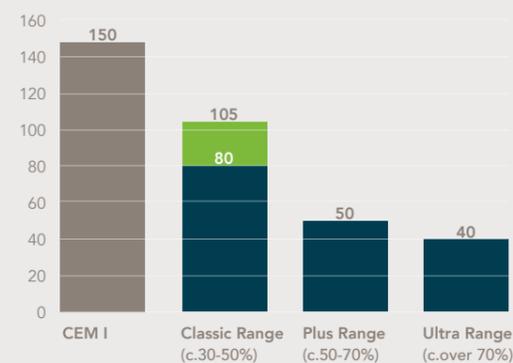
High temperatures in concrete can generate stresses that could result in early-age thermal cracking. The use of lower carbon concrete is recognised as an effective solution to this problem.

#### SETTING TIMES

Lower carbon concrete 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.

### VERTUA COMPARED TO STANDARD (CEM I) CONCRETE CO<sub>2</sub> PER TONNE



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

# CLASSIC RANGE

A lower carbon concrete range that has a **c.30-50% CO<sub>2</sub> reduction** versus a standard concrete (CEM I).

### 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



### Go CarbonNeutral®



CarbonNeutral.com

Also available, Vertua Zero to offset the residual CO<sub>2</sub> through a carbon offset and accredited carbon neutrality specialist.

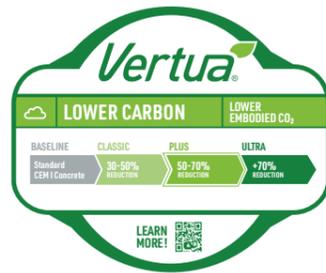


FOR MORE SPECIFIC **TECHNICAL SUPPORT** PLEASE CONTACT ONE OF OUR TEAM ON **0800 667 827**.

### CARBON CALCULATOR SERVICE

Cemex calculates the embodied carbon in concrete using an independently verified Carbon Footprint Calculator (CO<sub>2</sub> Tool) that follows the principles of BS EN 15804.





# PLUS RANGE

A lower carbon concrete range that has a 50%-70% CO<sub>2</sub> reduction versus a standard concrete (CEM I).

## 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

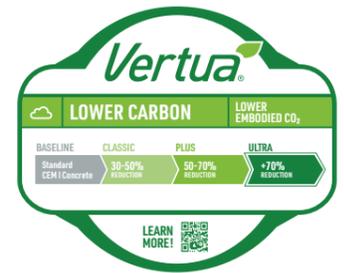
**DID YOU KNOW** *Supaflo*

Our self-levelling screeds are also lower in carbon and design optimised versus traditional sand:cement screeds.

## Go CarbonNeutral®

Also available, Vertua Zero to offset the residual CO<sub>2</sub> through a carbon offset and accredited carbon neutrality specialist.

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



# ULTRA RANGE

A lower carbon concrete range with a CO<sub>2</sub> value below 100Kg/m<sup>3</sup> CO<sub>2</sub> eq. (Over 70% CO<sub>2</sub> reduction versus a standard concrete (CEM I).

Available upon request for bespoke applications.

## GO CARBONNEUTRAL®

Also available, Vertua Zero to offset the residual CO<sub>2</sub> through a carbon offset and accredited carbon neutrality specialist.



For any 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.'*

**DID YOU KNOW** *Permaflo*

Our permeable concretes allow water to drain back to the natural soil.



# CARBONNEUTRAL<sup>®</sup> PRODUCTS



## About Climate Impact Partners

Climate Impact Partners is a leader in developing and delivering high-quality, high-impact carbon market solutions for climate action.

For more than 20 years, the company, which is committed to delivering 1 billion tonnes of CO<sub>2</sub> reductions by 2030, has worked with climate-leading businesses to support more than 600 carbon removal and reduction projects in 56 countries.

With a focus on helping to transform the global economy, improve health and livelihoods and restore a thriving planet, Climate Impact Partners develops and delivers the highest quality carbon-financed projects. It creates and manages carbon credit and energy attribute certificate portfolios that enable its clients to offset emissions they can't yet reduce, put a price on carbon to incentivise change, and meet ambitious climate goals.

Climate Impact Partners builds on the expertise, integrity, and innovation of two companies that have led the voluntary carbon market – Natural Capital Partners and ClimateCare.

Find out more at: [climateimpact.com](https://climateimpact.com)

## About CarbonNeutral<sup>®</sup> certification

CarbonNeutral<sup>®</sup> certification was created and is managed by Climate Impact Partners.



It was the first clear set of guidelines for businesses to achieve carbon neutrality back in 2002, and every year since then Climate Impact Partners has continued its commitment to providing a robust framework for clear, transparent and high-quality carbon neutral action.

The CarbonNeutral Protocol is a publicly available document that sets out the requirements for companies to achieve CarbonNeutral<sup>®</sup> certification. It is updated annually with input from an Advisory Council of external experts to ensure it reflects the latest industry and scientific best practice.

Find out more at: [carbonneutral.com](https://carbonneutral.com)



*We work with leading organisations to deliver action on climate change and create a more sustainable world. Our joined-up approach helps organisations address their environmental impacts through high-quality carbon market solutions that also deliver positive impact for nature and local communities.*

**Climate Impact Partners**

## What is carbon offsetting?

Offsetting is the mechanism through which organisations can compensate for carbon emissions generated by their business activities that are difficult or impossible to avoid, and fund activities throughout the world which are essential to meet a global goal to keep down temperature rise.

**Our Vertua Zero concretes are certified as CarbonNeutral<sup>®</sup> products in accordance with The CarbonNeutral Protocol, the leading global framework for carbon neutrality.**

This means we make sure that for every tonne of CO<sub>2</sub> emitted by our Vertua Zero concrete range there is one tonne removed from the atmosphere elsewhere. We do this by supporting projects which physically remove CO<sub>2</sub> 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 CO<sub>2</sub>e 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.



Community members visit one of the project tree nurseries



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



Community training to verify carbon emissions sequestered by their trees

Images courtesy of Climate Impact Partners

# 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. This is a concept called **additionality**.



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.

# DEDICATED SPECIFICATION SUPPORT AND CPD



Tackle the key barriers to achieving sustainability goals while continuing to specify safely and effectively.

The CPD covers the current industry conversation, initiatives to tackle climate change, and the technologies available within construction materials designed to achieve these goals.



### Further CPD courses:

- Situations suitable for Fibre Reinforced Concrete
- Asphalt - Focus on Sustainability CPD
- Specifying Concrete for Waterproof Structures

### Here to help.

For more details contact: **0800 667 827**

Or scan the QR code to the right to register interest.



# 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 CO<sub>2</sub> 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 CO<sub>2</sub> 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.

**FUTURE  
IN  
ACTION**

# OUR ULTIMATE GLOBAL AMBITION:

**To become a net-zero CO<sub>2</sub> company by 2050**

Our purpose is to build a better future, and to do that we must address climate change. As one of the world's largest building solutions providers, this has been a priority for Cemex for many years.

**TO DO THIS, THE PROGRAM CONCENTRATES ON SIX PILLARS:**



**SUSTAINABLE  
PRODUCTS AND  
SOLUTIONS**



**DECARBONISING  
OUR OPERATIONS**



**INNOVATION &  
PARTNERSHIPS**



**PROMOTING  
A GREEN  
ECONOMY**



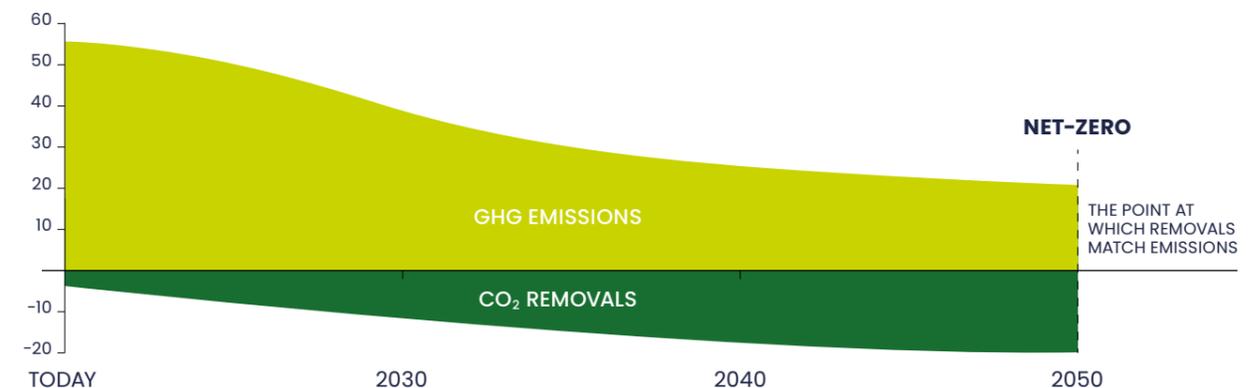
**CIRCULAR  
ECONOMY**



**WATER &  
BIODIVERSITY**

## WHAT IS NET-ZERO?

To limit global warming to 1.5°C we must reach net-zero carbon emissions no later than 2050.



## AND OUR INTERIM 2030 TARGETS TO BE ON THE RIGHT TRACK...

- To be below 430kg of CO<sub>2</sub> per ton of cementitious material, equivalent to a **47% reduction\***
  - To reduce the carbon content per cubic meter of concrete to c.150kg, equivalent to a **41% reduction\***
  - To reach **65%** in clean energy consumption
- \*According to our 1990 Baseline

## ALIGNMENT AND VALIDATION

- Our 2030 goals have been validated by the **Science Based Targets Initiative (SBTi)** according to the 1.5°C Scenario
- We are members of the **Race to Zero** campaign from the United Nations
- And we are a founder member of **The First Movers Coalition**





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**[Cemex.co.uk/vertua](https://Cemex.co.uk/vertua)**



**Scan the QR code  
to learn more**

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