TARMAC

CEVO

CONCRETE EVOLUTION

Engineered low carbon, concrete solutions for construction

TARMAC.COM/LOW-CARBON-CONCRETE

What is CEVO

CEVO concretes offer low carbon alternatives to traditional concretes.

Low carbon concrete (LCC) is the term given to the latest design concretes that are progressing concrete's transition towards Net Zero targets. Following years of trials and advances in concrete technology CEVO low carbon concretes deliver simple solutions to making better material choices.

CEVO is our commitment to supplying concretes that offer transparent carbon savings and easy to understand performance grading based on the amount of carbon taken out of the design using replacements, limestone fillers or an Alkali Activated solution.

Helping *you* make lower carbon concrete choices

What concrete carbon rating do you want to achieve?

We've aligned our low carbon concrete to the UK adaptation of the Global Cement and Concrete Association (GCCA) Global Ratings for Low Carbon and Near Zero Concrete. This means complete transparency in achieving carbon reductions aligned to industry standards and no offsetting.

Tell us what you want to achieve from a industry standard AA to G and what strength your application needs to achieve, and we will deliver a CEVO low concrete solution.

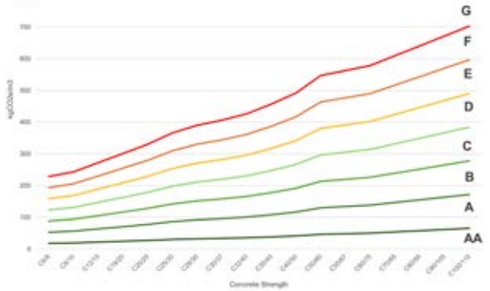
Simple.
Strength + CO_2 reduction = low carbon concrete

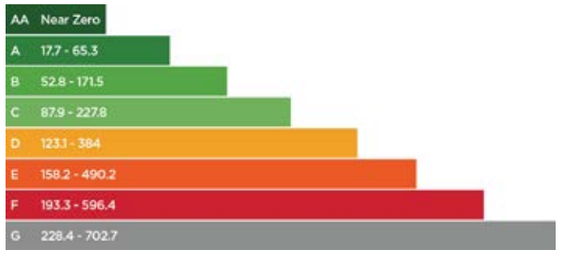
Specification made simple

Industry aligned low carbon/Net Zero concrete supply

We believe that a zero-carbon future for concrete can only be achieved from an accurate starting position. That's why we have adopted the Global Cement and Concrete Association low carbon concrete rating classification.

Concretes are graded by strength properties and then banded. Just like energy ratings the carbon performance is easy to understand and visually represented in a universally recognised benchmark.





Advancing progress in the materials science of low carbon concrete

Today we achieve low carbon concrete materials by using GGBS, Fly Ash, Fillers, Portland Limestone cements and Alkali Activated solutions.

Tomorrow is an evolution. The routemap includes CEVO digital (integrated sensors delivering data optimised concrete performance) electric vehicle delivery, calcined clays and carbon capture.

New cement standards and Limestone fillers

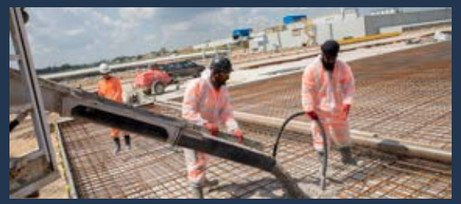
The update to the BS8500 British concrete standard allowing PLC cements to be used in combination with GGBS and fly ash has been a major focus in our concrete solutions evolution. Essentially, PLC cement allows up to 20% of the cementitious elements to be limestone filler, which replaces clinker, lowering the carbon emissions from cement.

Having run full-scale demonstration projects with key customers, Tarmac has already switched 80% of sites to CEM II. The remaining sites should be witched by Q3 2026.

Alkali Activated solutions

Tarmac has developed an alkali-activated material system (AACM) partnering with industry leader Wagners. This product has also been used in full-scale demonstrations across the UK in the past two years, including Hexham Flood Defense with BAM and the Environment Agency and National Highways on the M42. This material solutions delivers the highest carbon reductions available today, however it is not currently suitable for all applications.

As concrete engineering progresses the next step for AACMs will be for appropriate standards to be developed to allow wider use of this product.



Carbon footprint calculations at the touch of a button.

Low carbon concrete solutions

It’s specification made simple.

Join us.

Scan
to watch
the film

Some of the recent projects that have been completed

using engineered low carbon concrete solutions.

35%
CARBON SAVINGS FROM 4000M³

National Rehabilitation Centre

3000m³ of low carbon concrete mixes were supplied for construction of the foundations and ground floor slabs. A further 3500/4000m³ for all the columns and upper floors.

Tarmac's technical representatives were on hand throughout, to ensure that all of the mixes were delivered as specified and to help the contractor get the best possible result. All the carbon savings for the project were fully documented on detailed carbon footprint calculations to help the project delivery team record the total emissions for the building.

62% REDUCTION IN CO_2E PER M³ OF CONCRETE

High Speed 2

This trial demonstrated the potential to use very high ground slag (GGBS) contents in excess of 90 per cent, as an alkali activated cementitious material conforming to BS EN197, the standard for cementitious materials allowed to be used in ready mixed concrete, to significantly reduce carbon emissions, whilst still producing a quality finish and allowing normal construction and demoulding times.

ACHIEVING UP TO **70%** REDUCTION IN CO_2E

Hexham Flood Alleviation Scheme

With sustainability a primary consideration, the carbon footprint of the concrete supplied was calculated using the BSI PAS2080 specification – a method for assessing the life cycle greenhouse gas (GHG) emissions of concrete. In the UK, cement, a critical component of concrete, produces an average of 1.5 per cent of emissions, efficient plant and alternative fuel switching to waste biomass made an important contribution to help lower overall emissions. Concrete footprints were lowered further by replacing some of the cement with secondary cementitious materials such as fly ash, GGBS and now limestone fillers.

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WE STAND TOGETHER TO
REINVENT
THE WAY
OUR WORLD
IS BUILT

Tarmac. Reinvent Our World