



Low Carbon Concretes



Quote: “Tarmac has a wide range of low carbon concretes. Our mission is to inform everyone that specifies concrete of the options and help them to select the lowest carbon concrete for their application.”

Dr Martyn Kenny, sustainability director

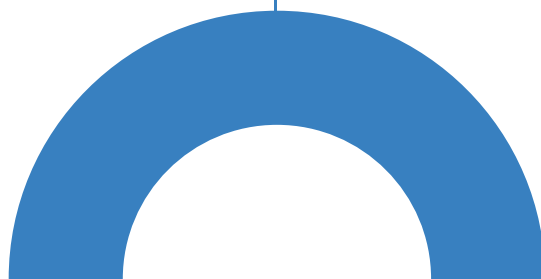
Addressing climate change is a cornerstone of our approach to sustainability.

Tarmac has fully committed to supporting the UK’s ambition of net-zero carbon emissions by 2050 and are making progress right across our business and supply chain, using a whole life-cycle approach to design carbon out of our products and services.

With the demand for cleaner construction rising, Tarmac is responding to support designers and specifiers to select the lowest carbon concrete for their project by providing a range of low carbon concrete supported by information how to best design and specify including, solutions guides, carbon footprint information and Environmental Product Declarations.

We have developed and supplied concretes with lower embodied carbon for many years and this is now standard practice on many projects. These products all comply with BS 8500 Concrete and the relevant EN standards and the design is specified in accordance with the specific application and ground conditions at the site.

The concrete designs incorporate secondary cementitious materials to replace a proportion of the CEM I cement. Cement replacements include ground granulated blast furnace slag (GGBS), a by-product of steel making, fly ash, from coal fired power stations, limestone and others. Use of these replacements reduces the carbon footprint of the concrete and makes a strong contribution to the circular economy.





Low carbon concrete

...up to **80%**
carbon reduction as
standard **coming soon**

GGBS concrete products are the most widely available and typically replacements of 50% of CEM I cement are suitable for most concrete applications. This gives a carbon reduction of circa 45% for a typical strength concrete (C32/40). Higher percentage replacements upwards of 75% have also been achieved depending on the application and specification which can reduce carbon by up to circa 58%.

When selecting the most appropriate concrete for an application it is important that the assessment is made at the full scale of the building or infrastructure and considers the whole life cycle, so that the full performance attributes required can be fully assessed. In addition to carbon, the designer or engineer must consider attributes like safety, resilience, economics and the full range of other sustainability criteria. A useful guide is available, link below.

Tarmac is also innovating new concrete formulations with up to 80% carbon reduction as standard which will be available soon.

