

“Using waste from other industries as fuel for our cement kilns is an excellent way both of contributing to the circular economy and of reducing CO₂ emissions.”

Graham Cooper, sustainability director at Tarmac

Planet

NET ZERO

Circular Economy

Waste-derived fuels

Using other people’s waste conserves natural resources and reduces the amount of waste sent to landfill, but it also allows us to replace fossil fuels with lower carbon alternatives.

Cement manufacture is energy intensive and has traditionally relied on coal and petroleum coke as a fuel source. The cement manufacturing process offers the unique benefit of ‘co-processing’ waste derived fuels – where the energy from the waste drives the chemical reaction that makes cement while the minerals in the material are simultaneously incorporated into the cement product. Unlike other energy recovery options, co-processing is highly efficient, and no residue is produced, ensuring that all the mineral content is recycled into a new and durable construction material.

In 2022, we made use of over 100,000 tonnes of waste-derived fuel, representing 34.5 percent of the entire thermal input required in our cement business. Some waste-derived fuels, such as waste wood chips and processed sewage pellets are 100 per cent biomass and are regarded as carbon neutral. Others, such as tyres and solid recovered fuel, made from materials such as paper and cardboard, contain a proportion of biomass. This means while they are not carbon neutral, they generate much lower carbon emissions than fossil fuels.

Around 14.5 per cent of the thermal input into our cement operations in 2022 was from waste biomass. We have our own experts who are supporting our move to waste-derived fuels for use within cement plants by identifying and assessing sources of wastes suitable to be used as fuels.

