

Alternative fuels: indispensable resources for sustainable production



As part of our sustainability commitments for 2030, we have defined a target for alternative fuels in cement production – we aim to raise them to **80% of the fuel mix at all our kilns by 2025**. The increase will support our 2030 goals to reduce the total carbon impact of our operations by 15% from a 2016 baseline.

Did you know?

- The finite nature of coal, oil and gas reserves and, most importantly, their damaging effect on the environment underscore the need to develop alternatives.
- The UK government has legislated to achieve net zero carbon by 2050 and is putting pressure on everyone – society, industries and consumers – to act accordingly.
- Using alternative fuels like biomass or waste materials has an immediate beneficial impact on our carbon footprint.
- The ash from the combustion of alternative fuels is incorporated into clinker, cement's key component. This is called co-processing, using waste for energy and a raw material at the same time.

What do we do?

- We are increasing the biomass rate in our fuel mix to 40% to tackle greenhouse gas emissions.
- We use various alternative fuels:
 - SRF (solid recovered fuel)
 - MBM (meat and bone meal)
 - recycled solvent waste.

Alternative Fuels and Energy Projects

Cement:

Ketton: A third of our annual power consumption at the plant is supplied by a neighbouring solar farm, reducing our reliance on fossil fuels. We have trialled the use of hydrogen, which is burned alongside SRF as a combustion enhancer.

Ribblesdale: We have successfully proved the cement kiln can be operated on a net zero fuel mix. During the trial, we used a mix of hydrogen, MBM and glycerine instead of burning fossil fuels such as coal.

Aggregates:

To reduce our reliance on diesel in the machines in our quarries, we are trialling hydrotreated vegetable oil (HVO) fuel at our Chipping Sodbury quarry. Using HVO will help us eliminate up to 90% of net CO₂ and significantly reduce nitrous oxides, particulate matter and carbon monoxide emissions.

Asphalt:

We are exploring alternative fuels to diesel, such as gas-to-liquids (GTL). GTL fuels are derived from natural gas, which has a lower CO₂ intensity. They also offer improved air quality and are non-toxic, odourless, readily biodegradable and have a low hazard rating.

Purchased Energy

We have signed an agreement with our electricity provider to only use carbon neutral electricity, enabling us to reduce our CO₂ emissions from this source by 97%.