# COP26: How bricks could prove central in the drive to net zero

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A Heriot-Watt University professor and co-founder of clean tech company Kenoteq, Professor Gabriela Medero, is calling for an overhaul of the construction industry during COP26, recommending an urgent

shift to a circular economy approach to avoid any further damaging drain on the world's finite natural resources.

The construction industry faces a tremendous challenge when meeting decarbonisation goals. At present, 45% of the UK's carbon emissions come from the built environment while more than a third of landfill waste comes from construction and demolition. In Scotland, up to 85% of bricks are being imported from England and Europe. The industry sends over 800 million tons of waste to landfill in Europe every year.

Professor Gabriela Medero is a professor of geotechnical and geoenvironmental engineering at Heriot-Watt University. Together with Dr. Sam Chapman, they developed the K-Briq after more than a decade of research and development into creating innovative, low-carbon products from recycled construction waste.

The unique, multi award-winning K-Briq is made from over 90% recycled demolition and construction waste materials. It produces a tenth of the $CO_2$ emissions of a traditional fired brick and requires less than a tenth of the energy in its manufacture.

Completing the circular economy pathway, Kenoteq is manufactured onsite at a waste handling company in Scotland to reduce transport miles and limit any additional $CO_2$ involved in its production. Several million K-Briqs will be going into production in 2022 following significant funding from Zero Waste Scotland.

Professor Gabriela Medero, co-founder of Kenoteq and professor of geotechnical and geoenvironmental engineering at Heriot-Watt University: "We want to support the construction industry as it strives to decarbonise. The K-Briq presents a real and immediate opportunity for the construction sector to reduce landfill, limit reliance on finite resources and take advantage of waste materials to create a more

sustainable built environment.

"Due to its manufacturing process, the K-Briq slashes energy use of existing bricks and blocks. It can be made in a range of colors providing flexibility to architects and designers.

"In 2022, we will be scaling production from our existing pilot plant to industrial-scale manufacture onsite at a waste handling facility in Scotland. This circular economy approach can be replicated at waste handling facilities nationwide, removing the need for imported building products and making a significant contribution towards the UK and Scotland's net zero goals."

Iain Gulland, chief executive at Zero Waste Scotland: "As nations around the world commit to building a greener future, the K-Briq presents an achievable solution for one of the construction industry's greatest challenges. Kenoteq is an excellent example of the abundant pioneering innovation in Scotland which can help to place us at the forefront of the global circular economy frontier."

Provided by Heriot-Watt University

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