

PLASTIC ROADS MADE IN UNITED KINGDOM RECYCLING WASTE

The Scottish start-up [Company MacRebur](#) created by the Engineer Toby McCartney, has developed a new product recycling plastic waste that can replace the bitumen used in the asphalt mix. The new material is called MR6.

Traditional asphalt mix consists of limestone, rocks, and sand that are bound together with the help of bitumen, a component extracted from crude oil. Worldwide, at the same time, there is the great environmental problem of plastic waste disposal, increasing every year.

The new product created by MacRebur helps to solve three world challenges: uses up millions of tons of waste plastic that sit in our landfill sites, reduces the millions spent on new roads, maintenance, and pothole repair and make the roads stronger and longer lasting.

The MR6 is made with 100% recycled materials and can reduce the amount of plastic waste that ends up in landfills. Not only is it considered a greener alternative, but it's also 60 percent stronger and last 10 times longer than standard asphalt. It's more resistant to cracks and potholes and is cheaper than traditional solutions.

The product created by the MacRebur Company provides an opportunity to reduce both the carbon footprint of road construction and the life costs of roads. This is achieved by significantly reducing the amount of bitumen needed in the asphalt mix, and also in the reduction of ongoing maintenance work due to the enhanced performance of the road.

The Company takes waste plastic that is destined for landfill sites and uses a special formula to clean it off. MR6 comes in pellet form so is very simple to administer and mix into asphalt. It is mixed into the plant at the same time as the aggregate and bitumen so there are no modifications to asphalt plants required. It comes in easy-to-use single-dose bags or loose bulk loads to allow easy distribution throughout the asphalt plant via manual systems or automated silos.



The MacRebur webpage presents the following greener benefits of using MR6: made with 100% recycled materials; reduces fossil fuel usage; can be used in the production of warm asphalts; reduces carbon footprint; uses unwanted plastics destined for landfill and helps foster a circular economy.

MR6 is also a more cost effective way to increase strength, durability and lifespan of the asphalt. The Company website underlines the following leaner benefits of using MR6: reduces maintenance costs; cheaper alternative to polymer modified bitumen; no additional infrastructure costs for asphalt plants and reduces landfill tax costs.

The MacRebur Company is persuading road authorities to use local waste plastic to build roads in order to enhance the pavement capabilities effectively, environmentally and efficiently. This solution in fact brings benefits to all actors involved. Companies that sell the waste plastic to McCartney save money by not being taxed for sending material to landfill. Local governments save money because they get a longer-lasting road which needs less maintenance. Drivers save money because they're driving on better roads.

Two local governments have already started using the MR6 product to build their roads. Cumbria is the first UK County to trial a new product used to create *plastic roads* in view of its use on a wider scale.

The Virgin Media Business Voom 2016 competition recognized the great contribution of MacRebur in the category of start-up companies.

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