



Application Opportunity

The A630 Rotherway Roundabout is a major arterial route linking to the M1 Junction 33 in South Yorkshire. The roundabout was showing signs of fatigue, structural failure and severe loss of skid resistance resulting in high incident frequency reporting. The existing surface had prematurely failed caused by loss of skid resistance from the natural high PSV aggregate used. SteelPhalt were approached by the local authority to offer an alternative long-lasting and high-performing solution.

Recommended Product

14mm SteelSurf was recommended for this application due to its ability to perform under extreme stresses, resist deformation whilst providing a high skid resistance over a long period of time as discovered in the Transport Research Laboratory (TRL) report PPR737.

Results and Benefits

520 tonnes of asphalt were installed on Rotherway Roundabout in 2020, which delivered the high skid resistance requirements of the local authority. The SCRIM data table demonstrates the significant improvement in performance of 14mm SteelSurf compared to the previous under-performing asphalt. In addition to the high performance gained by selecting SteelSurf, the local authority reduced their carbon impact by 20.6 Kg CO₂e per tonne of asphalt, due to each tonne utilising 95% recycled steel slag aggregate.

Carbon Data

Product	Carbon Footprint Kg CO ₂ e/tonne*	Average Surface Course Kg CO ₂ e/tonne*	Carbon Benefit Kg CO ₂ e/tonne	Carbon Benefit %
SteelSurf	38	58.6	20.6	35.2%

*Value based on SteelPhalt verified EPD tool

SCRIM Data

