

ULTIGRIP

Proven performance

A623 SPARROWPIT, NEAR BUXTON

The challenge

This section of High Friction Surfacing (HFS) on the A623 at Sparrowpit near Buxton was failing and in need of replacement. The tight radius of the bend combined with the steep gradient and regular use by HGV traffic meant very high stresses for the road surface. This had resulted in frequent delamination of the HFS and damage to the underlying surface course. The client, Derbyshire County Council, was keen to explore a long-term solution. Ideally this would need to be implemented without the multiple road closures required by a conventional surface course and HFS approach.

Our solution

While discussing the available options, Tarmac suggested using ULTIGRIP, their innovative skid resisting asphalt. ULTIGRIP uses an advanced clear pigmented binder and bauxite aggregate, resulting in a tough, textured finish with a comparable skid resistance to conventional High Friction Surfacing (HFS). Since it is laid as a combined surface course and skid resisting surface, it can be laid quickly within a single road closure. It also avoids the common delamination problems associated with HFS. Using an Ultilow 'low temperature' binder course also helped to compress programme times, as the binder course would reach trafficking temperature and could be over-laid sooner.

Results and benefits

As planned, the old surface was planed out to a depth of 100mm and 60mm of AC 20 DBC was laid, followed by 40mm of ULTIGRIP. Around 110 tonnes of ULTIGRIP was used in a dark grey colour. Both layers were completed in a single night, with minimal disruption to road users. Traditional high friction surfaces typically need to be replaced every 2-3 years. Given the history of this site this would mean frequent replacement. ULTIGRIP has a proven record of performance including at the very first site on the A6 near Rowley which is now 20 years old. It has been typically shown to last up to three times longer than HFS, meaning expected savings in whole life cost and reduced future road closures.

Case Study Update

This section of road was visited again in August 2022, over four years after the work was completed. Apart from some noticeable oil stains, the road surface was in extremely good condition with no visible cracks or fretting. This is particularly impressive considering that the surface is subjected to heavy loading on the tight bends in the road. It demonstrates the lasting durability of Ultigrip.

