

ULTILAYER SAMI

Proven performance

Crack resisting concrete overlay system

The Challenge

This main Worcester Road into Malvern was suffering from severe reflective cracking caused by movement in the underlying concrete base layers.

Traditionally, HRA 55/14 surfacing would be laid directly on to the concrete, but would result in the reflective cracking appearing again over time, meaning additional cost for the local authority and more disruption for local people.

Other alternatives had been ruled out. Full reconstruction would have involved high costs and lengthy road closures. Using a thicker binder course and surface course would have caused problems when joining adjacent streets.

The Solution

Following discussions with Worcestershire CC and their term maintenance contractor, Ringway Infrastructure Services, ULTILAYER SAMI was recommended. ULTILAYER SAMI uses the latest Polymer Modified Binder (PMB) technology and is a highly flexible stress absorbing membrane interlayer that offers proven long term crack resistance.

This was then overlaid with ULTILAYER surface course which was specifically developed to combat reflective cracking and road surface deformation.

Tarmac ULTILAYER combines a high performance PMB and selected aggregates, for a highly flexible, very strong and extremely durable surfacing solution.

Results and Benefits

The scheme was completed over two days by Eurovia Surfacing on behalf of Ringway Infrastructure Services.

Each carriageway was treated on a separate day. The existing HRA 55/14 was planed away to expose the concrete base layer.

The concrete was then overlaid with 25mm ULTILAYER SAMI followed by 40mm of ULTILAYER 10mm surface course.

Using ULTILAYER SAMI in conjunction with an ULTILAYER surface course, provided a lasting solution to the persistent problem of cracking.

As a result, the long term condition and performance of this road, as an asset, was improved and future maintenance requirements were minimised, reducing expenditure and disruption for local people.

Performance update

Nine years after it was originally installed, the site was visited by Tarmac's regional Technical product Support Manager.

The crack resisting SAMI and ULTILAYER surface course is still performing well on this challenging section of road and is still crack free, despite frequent HGV and bus traffic and visible cracking on the adjoining hot rolled asphalt (HRA) surface.

Extending pavement life and resurfacing intervals is increasingly being recognised by local authorities as a way of delivering long term value and reducing net carbon emissions over the life of the road.



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