

# UK Highways Limited M40 - UK

The maintenance strategy for the M40 DBFO Project Road had historically involved large areas of Surface Course replacement. In 2007 the decision was taken to trial the preservation product Rhinophalt®.

Following successful results it was decided to revise the maintenance strategy, to include Rhinophalt® application, in an attempt to minimise the amount of Surface Course replacement necessary until the completion of the concession.



## ➔ Proven technology of 20+ years

### The Challenge

From 2003-08, the M40 was part of a traffic impact assessment for a road preservative product trial. Following this trial, which also incorporated extensive additional testing by independent consultants Jacobs Babbie, ASI Solutions Ltd were awarded a HAPAS (Highway Authority Product Approval Scheme) certificate for their Rhinophalt® preservation process.

In 2007 the existing surfacing of the M40 was a mixture of HRA Surface Course up to 16 years old and a more recent Surface Course (TSCS) replacement.

### The Solution

The Rhinophalt® application, in conjunction with crack and joint sealing, commenced in July 2008 and was applied as part of a five year plan covering the whole of the motorway from Junction 1 to junction 15. In 2008 in the first phase alone, over 800,000m<sup>2</sup> was preserved with Rhinophalt®. Phase 2 commenced in 2013.

In the original 5 year contract, a total of 2.5million square metres were preserved with Rhinophalt®.

## ➔ Offers the client value engineering

John Gardner, General Manager and Gareth Morris, Consulting Engineer from UK Highways Limited, lead the innovative preservation team with the first application contract term being fulfilled with bespoke Rhinophalt® delivery vehicles.

## ➔ Extended pavement life of 3-5 years

### Preservation

Significant in the performance of this preservation contract is that, within all areas treated with Rhinophalt® over the 5 year programme, the anticipated interventions for potholing, ravelling and other defects have been at almost zero. Having undertaken an associated joint sealing operation at the same time as applying Rhinophalt®, it has also been recorded that there has been almost zero occurrences of joints opening and subsequent repair.

## ➔ Fast process minimises disruption

These results signify the postponement and possibly the elimination of previously anticipated resurfacing programmes.

In addition to the financial advantages, there have been notable benefits to motorway users who have experienced significantly less disruption than would have been originally forecast, with much of the application being carried out much more efficiently overnight.

Performance and technical analysis has demonstrated significant success and UK Highways are now looking to repeat Rhinophalt® treatments to all areas from 2013 onwards.





➔ **94% reduction in CO<sub>2</sub> compared to conventional resurfacing**

**Rhinophalt® sustainability advantage**

The Rhinophalt® preservation process offered UK Highways an excellent solution to the problems experienced on the M40 motorway.

The Rhinophalt® preservation process is able to offer massive savings in energy and CO<sub>2</sub> in comparison with traditional resurfacing methods. This is because the use of virgin aggregate is eliminated, waste is eliminated, associated disruption to road users is greatly reduced with fast and night-time application ability and vehicle movements are also eliminated.

➔ **Recent Rhinophalt application on M40, July 2014**

Following the success of previous years Rhinophalt has been re-applied recently on M40 between J11 and J15, keeping the asphalt surface pothole-free for the next 5 years.

➔ **Can be re-applied every 3-5 years**



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John Gardner  
General Manager of UK Highways Group  
commenting on the M40 preservation