

CASE STUDY

A50, UK



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Connect Roads is one of the UK's largest private sector road operators, managing a 57km section of the A50 as part of a 30 year DBFO contract. The A50 is a strategic east to west connection between the M1 and M6, with average traffic levels of over 48,000 per day, including 7,000 commercial vehicles.

ASSET MANAGEMENT

Connect Roads is one of the UK's largest private sector road operators, responsible for the development and maintenance of a wide range of motorways, major trunk roads and major street lighting projects. Its services include design, construction management and life-cycle planning through to operations and maintenance.

EXTENDED PAVEMENT LIFE

ASI's RHINOPHALT® was applied to a section of the A50 in August 2008.

The SMA surface course was installed in 1998 and was 10 years old at the point of treatment. A site inspection assessed the surface course to be approaching the end of its serviceable life with signs of the onset of ravelling apparent.

Following some harsh winters, a site survey was conducted in 2011 and concluded that whilst the surface had continued to deteriorate, the RHINOPHALT® treated surface had deteriorated far more slowly than the untreated sections. Generally, the visual assessments were favourable towards treated areas and further RHINOPHALT® treatments were planned.

Second treatment applications took place between 2012 and 2014, followed by a third application in 2018. To date a total area of 314,903m2 on the A50 has been treated with RHINOPHALT® preservative. The SMA surfacing is now in its 21st operational year.

Connect has used RHINOPHALT® on its road concessions since 2008 and found it to be a cost-effective method of extending the life of its bituminous surfacing materials. During this period Connect have experienced a 65% improvement on interventions on treated versus un-treated areas. Because of this Connect expects to continue to utilise surface preservatives where appropriate for the remainder of its concession's lifespans.

Dave Groves
Regional Operations Manager, Connect Roads

ASPHALT PRESERVATION

RHINOPHALT® preservation is a preventative maintenance system designed to hold the condition of road surfaces that are in suitable condition i.e. 1-2 years prior to reactive maintenance being required. It can be applied on any asphalt surface and where surface dressing and/or micro surfacing is not a preferred option.

It provides a tough durable seal, preventing water ingress and locking in the lighter oils and fractions which are essential to retain both the flexibility and cohesiveness of the existing asphalt mortar. RHINOPHALT® reduces the rate of binder oxidisation caused by weathering and UV degradation and significantly improves resistance to abrasion and aggregate loss.

Hydraulic Conductivity Testing on recent SMA sites show no water permeability on treated surfaces.

WATER OUTFLOW (SECONDS)

	M4	A1(M)
Untreated	214.8	211.3
Treated	>600*	>600*

*Test stopped after 10 mins as no leakage was found.

LIFE CYCLE PLANNING

Preventative maintenance is a planned strategy of cost-effective treatments to an existing road surface to reduce the rate of future deterioration resulting in an increased service life.