

The logo for asi, featuring the lowercase letters 'asi' in a bold, white, sans-serif font. A green leaf-like shape is positioned above the 'i'.

developing surface technology

The word 'RHINOPHALT' in white, uppercase, bold, sans-serif font, centered within a blue rectangular box.

# THE SOLUTION TO ROAD SURFACE DEGRADATION

**94% Reduction in CO<sub>2</sub> Emissions**

**Dramatically Reduce Disruption**

**Unparalleled Cost Benefits**



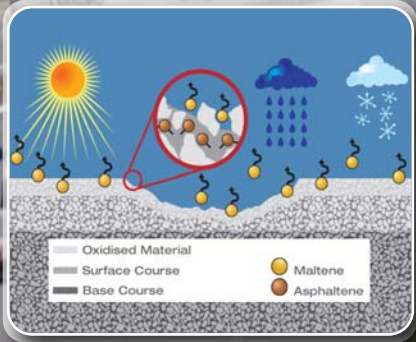
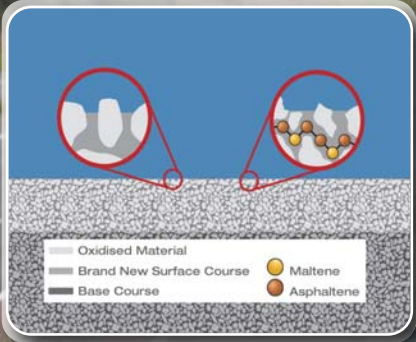
**RHINOPHALT**

SUSTAINABLE ASSET MANAGEMENT



## THE PROBLEM

Asphalt material is comprised of around 94% sand and stone, which have a life expectancy of millions of years. It is only the bituminous binder—the 'glue'—which begins to degrade within five years, causing the sand and stone to loosen and gradually become dispersed.



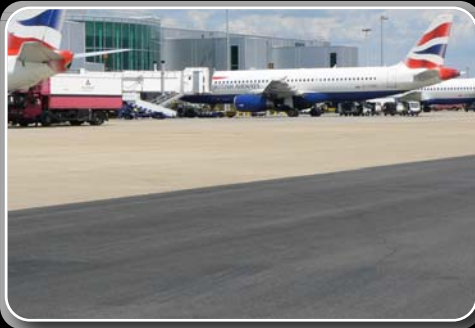
**THE BITUMINOUS BINDER BEGINS TO DEGRADE WITHIN FIVE YEARS. THIS CAUSES THE SAND AND STONE AGGREGATE MATERIALS TO LOOSEN AND BECOME DISPERSED, WHICH IF LEFT UNTREATED, CAN LEAD TO CRAZING, RUTTING AND POTHOLING.**



## THE SOLUTION

Rhinophalt® is a revolutionary, new, innovative and cost effective solution to the problem of asphalt and macadam deterioration. This unique preservation treatment immediately arrests the ageing process of any bituminous bound surface. Essential oils and resins are sealed into the treated surface which is now preserved against the ingress of water, saline solutions, weathering and oxidation.

This HAPAS-approved surface preservation treatment process produces no waste material and results in 94% less carbon emissions than conventional resurfacing techniques. Repeat treatments can be applied every 5 years to perpetually preserve the surface.



**RHINOPHALT**

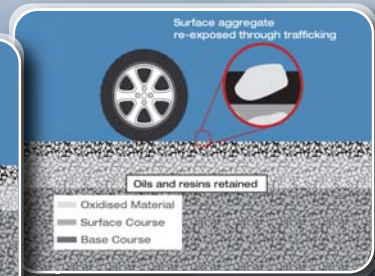
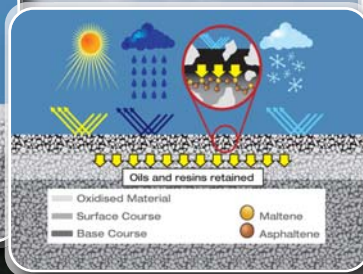
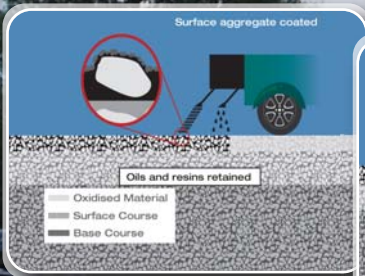
“There is a case to highlight accidents caused by motorbikes hitting potholes”

**ALARM REPORT 2008 LOCAL  
HIGHWAY ENGINEERS QUOTE.**

## THE PROCESS

Rhinophalt is cold spray applied after pre-sweeping the surface and masking off manholes, gullies etc. Within the first 30 minutes of application, the carrier agent in the Rhinophalt solution softens the surface course, allowing the gilsonite-rich preservative to penetrate into the surface and restore the chemical balance of the bitumen binder.

A selected fine grade aggregate is applied simultaneously providing enhanced initial skid resistance. Within 1-3 hours of application the carrier agent has completely evaporated, leaving the surface ready for traffic.



**THE GILSONITE-RICH PRESERVATIVE IS FOLLOWED IMMEDIATELY BY THE APPLICATION OF A THIN LAYER OF FINE GRADE AGGREGATE**

**A PURPOSE-BUILT, COMPUTER MANAGED VEHICLE APPLIES 12,000m<sup>2</sup> OF RHINOPHALT IN JUST 45 MINUTES**

**AFTER THE ONE PASS PRESERVATION PROCESS IS CARRIED OUT, THE ROAD IS READY FOR USE WITHIN 1-3 HOURS**



**"We're managing a declining asset and don't have enough money to look after it!"**

**ALARM REPORT 2008 LOCAL HIGHWAY ENGINEERS QUOTE.**

## RHINOPHALT FEATURES AND BENEFITS

- Effective on all bituminous surfaces
- Significantly extends surface life
- Unparalleled cost benefits
- Ultimate asset management tool
- Rapid application – quick cure
- Night or day application
- Minimises road disruption
- Saves up to 94% CO<sub>2</sub> emissions
- Approved for high speed roads
- HAPAS accredited



# The Rhinophalt Process

[www.asiplc.com](http://www.asiplc.com)



"I am convinced that it is a very effective way of increasing the life of a road surface beyond current expectations." **ALEC HEYWOOD, SENIOR PROJECT MANAGER, HERTFORDSHIRE COUNTY COUNCIL**



**RHINOPHALT**

## PRESERVING ROADS

The Rhinophalt process is being delivered by ASI Solutions plc and various international partners. These partnerships offer an integrated solution to restore and preserve highways using unique surface treatments, such as Rhinophalt, to deliver significant whole-of-life and sustainability benefits to our clients.

ASI promotes the added value of restoring and preserving asphalt. Motorways, urban roads, car parks, airport taxiways, runways and similar surfaces can all be treated using this unique process.

SAVE MONEY & TIME, REPAIR AND PRESERVE YOUR CONCRETE & ASPHALT



**RHINOWORKS**

Rhinoworks is a comprehensive product portfolio for asphalt preservation. Incorporating:



**RHINOPATCH**



**RHINOPHALT**



**RHINOSEAL**



**PAVIX CCC100**

Chem-Crete Pavix CCC100 is a complementary product for the preservation and protection of concrete.

"We're struggling to keep pace with deterioration"

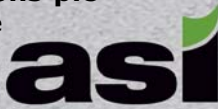
**ALARM REPORT 2008 LOCAL HIGHWAY ENGINEERS QUOTE**

"We're currently only papering over the cracks with resurfacing"

**ALARM REPORT 2008 LOCAL HIGHWAY ENGINEERS QUOTE.**

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