

A wide-angle photograph of a multi-lane highway bridge. The central section of the bridge deck is covered in a bright red mastic asphalt, indicating a refurbishment project. Concrete guardrails line both sides of the road. In the background, a white van and a yellow construction vehicle are visible on the bridge, and a blue sign is mounted on a structure above the road. The sky is blue with scattered white clouds.

CASE STUDY

M9-01 50 ALMOND NORTHBOUND BRIDGE DECK REFURBISHMENT, EDINBURGH

SCOPE

IKO supplied 114 tonnes of **Permatrack Bridge Surfacing** mastic asphalt to address critical issues with the existing bridge deck surfacing. The previous surface had been deteriorating, with surface failures caused by trapped moisture and freeze-thaw cycles. Traditional macadam repairs proved ineffective, breaking down after a short time and leading to frequent, disruptive and costly maintenance.

SITE LOCATION

Bridge over the river Almond north of junction 1 on the M9 outside Edinburgh.

SUPPORTING PARTNERS

Client	Bear Scotland
Main Contractor	Diack & Macaulay Ltd
Asphalt Contractor	Falcon Asphalt Ltd
Asphalt Supplier	IKO Ltd

EXISTING SURFACING ISSUES

Existing surfacing breaking down and potholing.
Traditional macadam repairs failing after a short period of time.
Continual repairs causing disruption to road users.

POSSIBLE CAUSES

Trapped moisture in the existing surfacing resulting in water pressure build up when trafficked subsequently breaking down the surfacing.
Freeze / thaw cycling of trapped moisture breaking down the surface.
Inadequate thickness of surfacing.

MASTIC ASPHALT INSTALLATION

The surfacing refurbishment focused on the hard shoulder and Lane 1 Northbound, where IKO supplied 'ready-to-lay' mastic asphalt via hot charge transporters. IKO's Permatrack mastic asphalt, manufactured to BS EN 13108-6 standards and CE/UKCA marking requirements, is specially designed for bridge surfacing and is rut resistant and impervious to water. Applied over a prepared, waterproofed concrete deck, the two-layer system - a levelling course and a wearing course - achieved a combined average thickness of 80mm. Completed in just four days, the project met requirements for where the overall surface thickness including any protective layer was less than 120mm, providing a durable and lasting solution for heavy traffic demands.

May/June 2024

To install Permatrack Bridge Surfacing mastic asphalt onto prepared concrete deck waterproofed with PMMA system and tack coat.

Hard shoulder and Lane 1 Northbound approx. 575m²

2 layer application consisting of levelling course and wearing course.

Thickness variation from approx. 60mm – 100mm.

Average overall thickness approx. 80mm.

Two layers average thickness approx. 40mm each.

Pre coat chipping finish.

IKO MATERIAL SUPPLY

Overall supply of 114 TONNES of PERMATRACK BRIDGE SURFACING mastic asphalt.

5 No 18 TONNE deliveries.

2 No 12 TONNE deliveries.



“ 4 Days hand laid installation.

IKO's Permatrack mastic asphalt was instrumental in resolving the persistent challenges of surface deterioration and potholing on the Almond Northbound Bridge. Its exceptional durability and performance provides a reliable, long-term solution where traditional macadam repairs had consistently fallen short. With IKO's premium materials, prompt delivery and exceptional technical support, the project was completed in an efficient manner, significantly reducing future maintenance and ensuring a smooth, high-quality surface that meets the most rigorous industry standards. ”

Mr Jim Diack, Diack & Macaulay Ltd

IKO PERMATRACK / ACCREDITATIONS

Permatrack Bridge Surfacing mastic asphalt manufactured to BS EN 13108-6.
CE Marked / UK CA Marked.
BES 6001 Responsible Sourcing.
ISO 9001 Quality Management System.
ISO 14001 Environmental Management System.
ISO 45001 Safety Management System.

IKO PERMATRACK PRODUCT TECHNICAL DATA

Product – Permatrack Bridge Surfacing (40) (MA10/20)
Declaration of Performance certificate – Aggregate grading,
Binder content, Indentation. – 3 essential characteristics for CE / UKCA Marking

TYPICAL PROPERTIES

Indirect Tensile Stiffness Modulus - >5900MPa
Wheel Track @ 45oC – WTSAIR < 0.1 - RDAIR < 2.7

