M8 Motorway slip road repaired and protected for the long term

SAFETRACK® Inlaid Road Repair prevents water ingress

Project

Protecting a high-traffic road

Managing agent BEAR Scotland manages the maintenance of the southeast region of the Scottish trunk road network on behalf of Transport Scotland. Their work includes the M8 running from Edinburgh to Dunblane. This route is of strategic importance and is heavily trafficked, especially around the Grangemouth refinery area. Vehicles passing over joints in the road surface have led to localized failure within the surface course, particularly in areas of high stress, such as the construction joints on slip roads and joints at the junction of slip roads and the main carriageway.

Extending the life of the asphalt surface

The fretted joints of the M8 needed repairing and sealing to prevent water ingress and further damage to the otherwise sound asphalt. The repair also needed to be strong enough to cope with high volume heavy goods vehicle traffic and the additional loads created by acceleration/declaration and transverse loading across the joint during lane changes.

A rapid repair system was required to reduce disruption to road users during the maintenance project. The client required a recessed repair where the repair system is installed into a formed recess to make it flush with the surface. Traditionally inlaid systems have been slow and consequently expensive to install, with unacceptable levels of traveller disruption.
Rapid highway repairs

The client selected the HAPAS-approved SAFETRACK® Inlaid Road Repair system, developed by Stirling Lloyd (now GCP Applied Technologies). A micro milling technique was also developed to reduce the amount of asphalt milled from the surface prior to inlaying the repair system. Based on unique ESSELAC® technology, the SAFETRACK® repair systems includes a unique resin that enables a thinner recessed repair to be achieved than would be possible with a traditional asphalt-based material. Less milling and less materials applied increases the speed of application and reduces cost and disruption.
The system’s rapid cure meant that the road could be returned to full traffic load in as little as half an hour after installation, since there was no residual heat to be lost from the system. The system enabled more than 200 linear meters of fretted joint to be repaired per hour.

By using a highly durable crack sealing system, Transport Scotland has significantly increasing the service life of the asphalt surface. Road user safety has also been improved by restoring the road surface to its original profile and reinstating its skid resistance.