



Highway Improvements M4 Chiswick Flyover

 **VolkerLaser**



Project information

VolkerLaser carried out major maintenance work on the elevated section of the M4, replacing over 400 existing asphaltic plug joints.

Client

Birse Civils Ltd on behalf of
The Highways Agency

Consultant

Mouchel Parkman

Value

£ 800,000.00

Services included

- High Modulus Joints

VolkerLaser carried out major maintenance work on the elevated section of the M4, replacing over 400 existing asphaltic plug joints. The project was completed during 5 months of weekday and weekend overnight closures between Junctions 1 and 3 from Chiswick to Heston. Existing joints had failed to perform, breaking up and allowing water to seep through the joint. Rainwater collecting on the road surface was leaking through the unsealed joints and eroding the flyover supports.

This essential repair work was required to extend the life of the road and reduce future maintenance.

Working in partnership with our supplier, VolkerLaser installed a joint system that halved the number of joints. This resulted in significant savings in programme and associated reduction in road closures, together with a smoother, more comfortable road surface for drivers. Joints of up to 2.5m wide have been used to replace the existing 440 conventional 500mm wide asphaltic plug joints, two at a time. VolkerLaser laid in excess of 400 tonnes of Permanite's Permatrack H, a high modulus mastic asphalt expansion joint system. The majority of this material was delivered 'hot charged' in tankers carrying up to 18 tonnes of material direct to site. This increases safety for the teams handling the material as they do not have to prepare it on site and allows greater speed of application.

The jointing system incorporates a highly modified asphalt product consisting of comparatively new polymers and the well proven natural Trinidad Lake Asphalt, known as Epure. It delivers high performance and versatility, is quick to apply and has the ability to take standing traffic within 90 minutes after installation (subject to weather conditions). It was these properties together with effective management and operations that made this project a resounding success, delivering an excellent finished product with completion ahead of schedule.

1 The material was delivered to site ready to apply; reducing the process time and increasing safety for our operatives.

2 The jointing system used was quick to apply and could sustain standing traffic in under two hours.