TARMAC

Product	Ultipave warm mix asphalt
Client	National Highways
Contractor	Huyton Asphalt
Completion	August 2019

ULTIPAVE ULTILOW

Proven performance

A421, MARSH LEYS ROUNDABOUT

The challenge

The A421 is an important part of the strategic road network, linking Cambridge, Bedford, Milton Keynes and Oxford and joining up the M40, M1 and M11 motorways. On this route, just south of Bedford lies Marsh Leys Roundabout. This busy roundabout required resurfacing as the existing surface was showing signs of failure. As well as being used by traffic on the busy A421, this roundabout serves several large distribution centres for Asda, Sainsburys and Argos. To avoid disrupting operations, resurfacing work would need to be completed with minimum road closures, with a four hour working window per night shift. Hot rolled asphalt (HRA) had been specified for this scheme but there was concern about whether it would cool sufficiently to avoid deformation and loss of chippings when the road re-opened to heavy traffic. Tarmac and the surfacing contractor Huyton Asphalt decided to work collaboratively to explore an alternative approach.

Our solution

After discussions between the Huyton and Tarmac's technical team, they proposed the use of a 10mm ULTIPAVE warm mix asphalt. ULTIPAVE is a BBA HAPAS Clause 942 Thin Surface Course with a proven record of use on some of the UK's busiest motorways and major roads. Using high quality aggregates, ULTIPAVE maintains its surface texture and skid resisting properties over prolonged periods, even on heavily trafficked routes. It is available as a warm mix asphalt using Tarmac's ULTILOW binder technology, to achieve a reduction in carbon dioxide emissions. Warm mix asphalts offer improved productivity within paving windows as they are supplied at lower temperatures and need less time to cool thereby reaching trafficking temperature faster and allowing earlier reopening to traffic. In contrast, HRA cannot be supplied using Ultilow warm mix technology and would have required additional time-consuming processes and machinery.

Results and benefits

Huyton Asphalt planed out the existing surface beforehand which allowed them to lay 1,140 tonnes of 10mm ULTIPAVE warm mix asphalt over three consecutive nights. The use of echelon paving with paving machines working in tandem, further reduced paving time and meant that joints were hot matched, delivering a more durable surface capable of withstanding constant use by the HGV's that used this roundabout. Using a warm mix asphalt meant that a carbon saving was achieved on this scheme of 1.5 tonnes of CO_2e which equates to driving 12,500 km. Using a smart, collaborative approach, Huyton and Tarmac delivered a true win-win outcome for the client, National Highways and for the local businesses that used this busy road junction.

For more details visit: **tarmac.com/ultipave**

Building our future