

HANSON ERA[®] 140

A low carbon warm
mix asphalt solution

ERA[®]
WARM MIX ASPHALT

A warm mix asphalt (WMA) solution designed to reduce carbon emissions, improve efficiencies, reduce disruption and improve contractor health and safety.

Hanson ERA 140 WMA incorporates a specialist bitumen that allows asphalt to be produced at a reduced temperature (up to 40 degrees lower) than conventional hot mix asphalt. This uses less energy, helping to cut the CO₂ emissions associated with asphalt production by up to 15 per cent.

Using ERA 140 saves time as the reduced temperature of the asphalt allows multiple layers to be laid during the same shift. This also allows roads to reopen to traffic quicker without the risk of deformation, minimising disruption for road users.

In addition, the lower temperature means less fumes and steam, providing a safer working environment for contractors.

The sustainability benefits of ERA 140 can be enhanced even further with the incorporation of recycled material within the mix, supporting the circular economy.



ERA 140 can also be combined with REA, our reduced emissions asphalt, to create a complete sustainable solution. REA is designed to reduce the specific gases and particulates emitted during asphalt production and laying by up to 40 per cent, minimising the impact on air quality.

ERA 140 technology can be applied to the majority of our asphalt products, including our range of clause 942 thin surface course materials. The use of WMAs is encouraged as standard by National Highways.

Benefits

- Carbon reduction: typically up to 15 per cent reduction in asphalt production emissions, resulting in an average 2.4kg CO₂e saving per tonne of asphalt, compared with standard hot mix asphalt.
- Faster completion of resurfacing work, increasing efficiency and resulting in less disruption for road users.
- Improved workability.
- Reduction in thermal ageing process.
- Enhances durability due to reduced oxidisation during manufacture.
- Allows recycled content.
- Improves health and safety for work force: less fumes and steam are created, improving air quality and visibility; risk of burns lessened.
- Can be used to produce the majority of Hanson's asphalt products.
- 100% recyclable.
- Laid using conventional asphalt paving equipment.
- Available from Hanson asphalt plants across the country.
- Technical advice and support service available.

Applications

- Motorways and major roads
- Local authority roads
- Car parks
- Footways
- Runways



22,000 tonnes
of ERA WMA have been
supplied to eight schemes



CASE STUDY

National Highways Areas 6 & 8

ERA warm mix asphalt was used across Areas 6 & 8 in the East of England to meet National Highways' objectives and efficiencies while reducing carbon emissions.

Hanson is a key pavement framework provider in National Highways East region (Areas 6 & 8), delivering maintenance schemes as part of Asset Community East (ACE), an ISO44001 community partnership. The ethos of ACE is to engage with all parties to deliver improved customer and safety focused outcomes. This has included development and implementation of 'raising the bar' safety practices and identification of value engineering solutions.

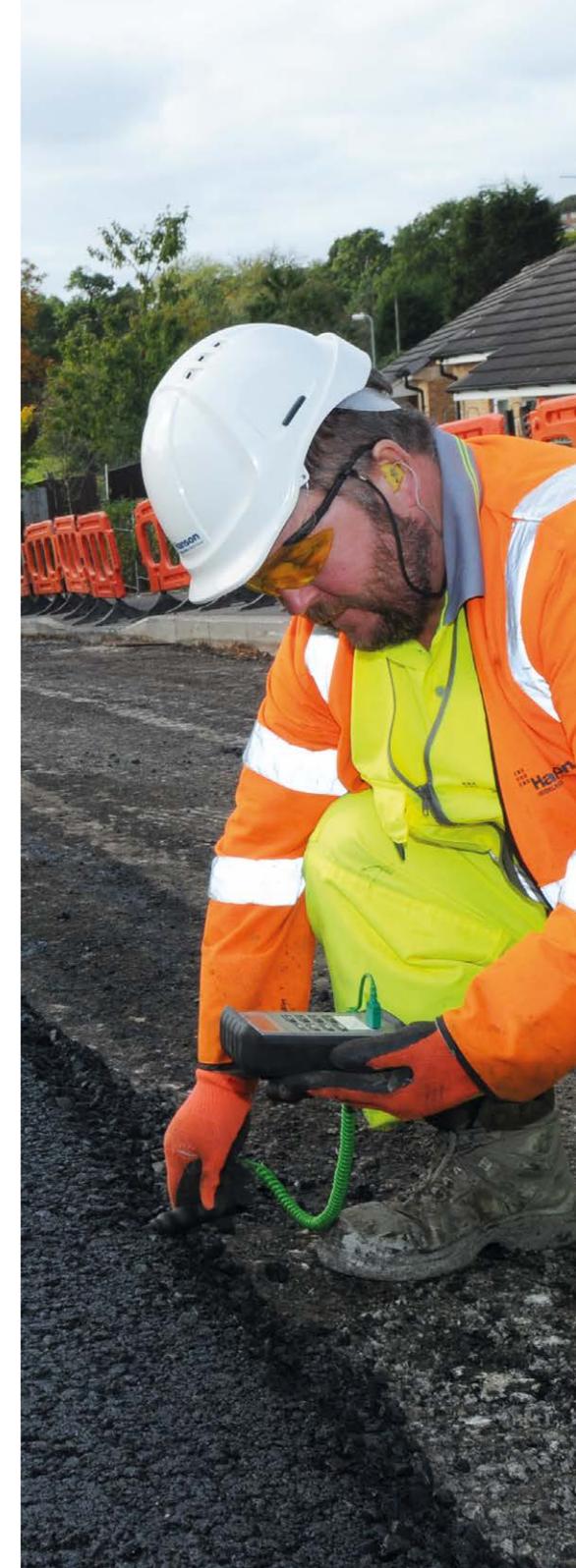
As part of this agreement, Hanson has supplied 22,000 tonnes of its ERA WMA on eight schemes, which represents 70 per cent of the total amount of base and binder course laid on the framework.

Using WMAs has reduced carbon emissions by 2kg per tonne of asphalt supplied, saving 40,000 tonnes of CO₂, the equivalent of removing more than 20,000 vehicles from the road each year. Its use was also commended in the environmental initiative of the year category in the 2020/21 ACE (Areas 6 & 8) Better Together Awards.

Rob Barron, supplier relationship manager for operations east at National Highways, said:

"The team at Hanson has continually demonstrated its commitment to supporting both National Highways' carbon reduction strategy and net zero targets through the promotion and use wherever possible of warm mix asphalt.

Hanson's continued commitment to best practice is greatly appreciated and will assist hugely in helping to shape the type of materials utilised on future projects with not only environmental benefits, but also enhancing health and safety, as well as improving longevity of network life."





Reduced by around
52 tonnes

CASE STUDY

Dorset Highways Strategic Partnership

Successful trials have led to the widespread use of Hanson's ERA 140 warm mix asphalt on Dorset's highways.

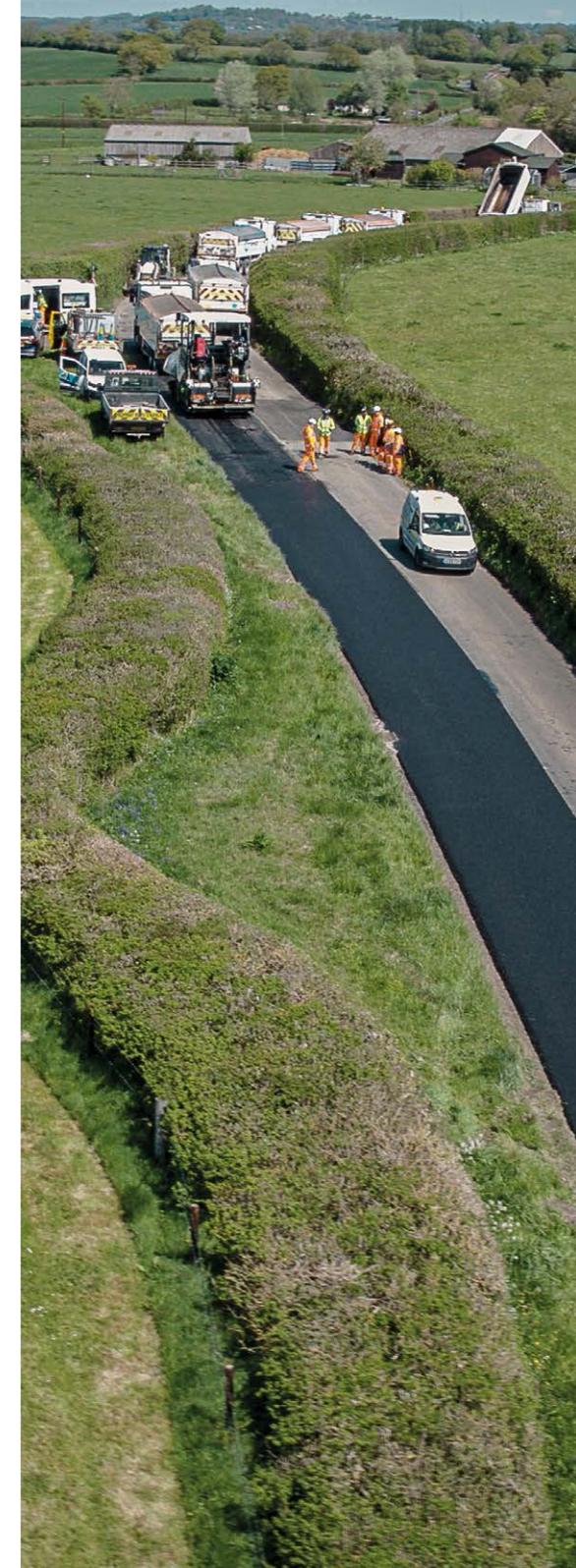
The Dorset Highways Strategic Partnership (DHSP) is a longstanding public/private sector collaboration between Dorset Council and Hanson UK, established in 2002 to deliver cost effective highway improvements in the county. Each term of the partnership is measured through a number of key performance indicators, including quality, safety, carbon and environment.

DHSP trialed the use of Hanson's ERA 140 to replace the existing road surface on a residential scheme. The site was then subjected to testing and monitored for 18 months, with routine revisits by quality control technicians who observed no deterioration or performance issues.

As a result, it was agreed to default to ERA 140 versions of base and binder course asphalts, which have been supplied into schemes since April 2020. From November 2020, ERA 140 surface course asphalt has also been supplied for AC10 and AC14 mixes. As a result, 21,639 tonnes of ERA 140 WMAs were laid in Dorset in the 2020/21 financial year, equivalent to around 40 per cent of materials specified, reducing associated CO₂ emissions by around 52 tonnes.

In May 2021, an ERA 140 version of Hanson's Tufflex asphalt containing polymer modified binder was laid on the A35 and, subject to the continuation of successful performance, a default to ERA 140 versions of surface course asphalts has been agreed from Spring 2022.

As surface course material forms a large part of the work carried out, it is expected that specification of ERA 140 will increase to more than 80%, further increasing the level of carbon reduction achieved by DHSP.



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