

# Warm mix asphalt, Dorset Highways Strategic Partnership

## Project case study



### Product

Hanson's Warm mix asphalt, Dorset  
Highways Strategic Partnership ERA  
140 warm mix asphalt

### Main contractor

Hanson Contracting

### Client

Dorset Council

### Overview

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



### Project description

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 and carbon and environment.

In 2016, DHSP trialled the use of Hanson's ERA 140 warm mix asphalt to replace the existing road surface on a residential scheme on Boot Lane and Church Road, Thornford.

Warm mix asphalts can help cut the CO<sub>2</sub> emissions associated with asphalt production by up to 15 per cent as they are produced and laid at lower temperatures, using 20 per cent less energy and delivering significant carbon savings.

These asphalts also offer a range of other benefits – without compromising performance – such as reducing disruption for road users and improving health and safety for contractors.

ERA 140 was supplied from two different Hanson asphalt plants (Whatley, Somerset, and Appleford, Oxfordshire) for



the DHSP trial, to identify any differences based on the distance the material was transported.

This trial site was subjected to testing and monitored for 18 months, with routine revisits by quality control technicians who observed no deterioration or performance issues. During this monitoring period other road network operators started to begin their own trials of Hanson ERA 140, helping to increase the amount of in-service information available on the material. On completion of monitoring, the results were reported back to the DHSP operations board.

It was subsequently 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 warm mix asphalts were laid in Dorset in the 2020/21 financial year, equivalent to around 40 per cent of materials specified. This reduced associated CO<sub>2</sub> 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 at Ham Hill 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 per cent, further increasing the level of carbon reduction achieved by the partnership.

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