



SIKA AT WORK LEEDS STATION WEST YORKSHIRE

CONCRETE: Sika® PilePak and Sika® UCS Pak

BUILDING TRUST



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SIKA ADMIXTURES KEY TO UNDERWATER FOUNDATIONS AT NEW STATION ENTRANCE.

Forming part of the inspiring new £20 million Leeds Station Southern Entrance scheme built across the River Aire, the specification of Sika admixtures solutions in the Hanson concrete mix has ensured that the underwater concrete foundations offer very high resistance to washout and will stand the test of time.

Built by Carillion Rail for clients West Yorkshire Combined Authority and Network Rail, the new Leeds Station Southern Entrance (LSSE) will enable greater access to one of the busiest stations in the UK and will comprise a concourse deck over the River Aire within a visually eye catching enclosed building. The addition of open link span bridges will provide direct access from this concourse to the east and west banks of the river.

To form the concrete foundations of the structure, specialist contractor Martello Piling sunk steel tubes into the river bed in front of the bridge bases with 360m³ of Hanson concrete containing Sika® PilePak placed into these tubes. Ideal for difficult piling conditions, the Sika® PilePak was used to ensure consistency and workability of the concrete over a prolonged period of time, to avoid any concrete problems at any one pile position.

Stephen Armfield, Product Development Manager, Sika commented: "The environmental extremes of having to place concrete into a river were a particular challenge on this project. Requiring high quality concrete and specialist kit including special pumps as well as commercial divers ensured the critical path of these foundations was a success."

Pre-cast sections of concrete were then used to form the sides and 'nose' of the structure protecting the brick bases. 152m³ of Hanson concrete containing Sika® UCS Pak, a specialist underwater admixture, was then placed in the middle of the structure. This was free from the flow of water but still placed underwater. The structure was filled up with fresh concrete between the pre-cast segments, which forced any remaining water out.

Used for the production of underwater concrete and meeting the requirements of BS 8443, Sika® UCS Pak prevents the wash out of the cement paste and increases the cohesion of the concrete. Sika® UCS Pak is packaged in water soluble bags to enable ease of addition on site. The use of Sika Admixtures in the underwater concrete foundations ensured the success of one of the most critical elements of the infrastructure project, and enabled the LSSE to open on schedule in January 2016.

For further information call 0800 292 2572.



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EMS 45308



OHS 585274

SIKA LIMITED

Head Office
Watchmead
Welwyn Garden City
Hertfordshire, AL7 1BQ
United Kingdom

Contact

Phone +44 1 707 394444
Fax +44 1 707 329129
Email enquiries@uk.sika.com
www.sika.co.uk
@SikaLimited

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