SIKA AT WORK
HOPE HOSPITAL
SALFORD, UNITED KINGDOM
SIKA CONSTRUCTION CONCRETE
PROJECT DESCRIPTION
The £200 million redevelopment scheme of the Salford Royal Hospital site, which was undertaken by Salford Royal Hospital NHS Trust, involved the replacement of outdated Victorian wards and replacing them with modern, bright areas and buildings to provide up to date facilities and services.
The five-year development was completed in phases, and the design of the link from the recently opened Mayo building and the main clinical building, which was in the early stages of construction, incorporated continuous flight auger (CFA) cast piles for the foundations.

PROJECT REQUIREMENTS
This method was chosen as it caused minimal disturbance and thus reduced the risk of any damage to the adjacent buildings. A major problem for Salford Foundations, the groundwork contractors, was that the ground was very dry, literally sucking water from the concrete mix as it was being placed. This made the placing of the reinforcing cages extremely difficult, with a high risk of damage to the cages. In the case of a cage being damaged or failing to insert, the only solution was to remove the cage and concrete and re-drill the piles.

SIKA SOLUTIONS
To overcome this problem, Sika® PilePack was successfully used on the project. A unique concrete from Heidelberg Cement – Hanson Concrete that has been formulated jointly with Sika, incorporating the admixture system Sika® PilePack. It has been specially formulated for CFA piling concrete to improve cage placement in dry and dense ground conditions. It gives improved cohesion properties and pumpability as well as reducing water loss, segregation and bleeding from the concrete.

Nigel Brockman, CFA Operations Manager UK at Stent Foundations, said: “The ground conditions at the site were glacial till overlying typical weathered Sherwood sandstone. By using Sika® PilePack on the project we found the cage installation time was cut in half and the need for mechanical assistance was significantly reduced. In some instances it was not required at all. Clearly this has benefits not only to the efficiency of the process but also in reducing the health and safety risk of excavator assisted cage installation. Consequently, it was more efficient and effective with Sika® PilePack than with the traditional mixes we have used. With no cage failures we not only minimised wastage but also ensured our production schedule remained on time.”

PROJECT PARTICIPANTS
Owner: Salford Royal Hospital NHS Trust
Contractor: Stent Foundations
Concrete Supplier: Heidelberg Cement – Hanson Concrete