



# Proven performance

## SELF-COMPACTING CONCRETE FOR BESPOKE RESIDENTIAL DEVELOPMENT

### The challenge

This large private residence in Altrincham, SW Manchester was built to a bespoke design and a very high specification. The design included an underground car park and large volumes of concrete were required for the roof/floor section and the internal columns. A high-quality finish was specified on the internal columns, as they are permanently exposed and on display in the completed building. A flat smooth SR2 equivalent finish was needed on the roof/floor slabs. There were initial concerns from the original concrete supplier whether they could achieve this level of finish. As a result, the main contractor Beresford and Curbishley approached Tarmac for a solution. After discussions on their requirements, TOPFLOW self-compacting concrete was recommended in two specialist mixes.

### Our solution

TOPFLOW Concrete has a free flowing, self-compacting formulation that allows it to be pumped into place, enabling fast installation without the labour-intensive finishing processes of conventional concrete. It is available in a number of different mixes with specific performance characteristics to meet the challenges of each project. One of these mix variants, TOPFLOW Horizontal concrete, allows rapid construction of floor slabs and delivers an excellent surface without the need for power floating, to a tolerance of BS 8204-1 SR2. Another, TOPFLOW Architectural concrete, provides exceptional quality of finish on vertical pours, including columns. In this case, the solution was to offer a bespoke TOPFLOW Architectural 60N mix to comply with the specification on the columns and a bespoke 45N TOPFLOW Horizontal mix for the slabs.

### Results and benefits

In line with the build programme, concrete was supplied at various stages in a series of pours over several months, including 43m<sup>3</sup> of TOPFLOW Architectural in six pours for the columns and 219m<sup>3</sup> of TOPFLOW Horizontal including two large pours of over 100m<sup>3</sup> for the roof/floor slab. Since the TOPFLOW concrete supplied to this project delivered faster strength gains than conventional mixes, the formwork was removed ahead of schedule. This allowed other trades to follow on more quickly resulting in a faster overall build programme. Beresford and Curbishley, the main contractor, were impressed with both the speed of progress and the quality of finish achieved and planned to use Tarmac's TOPFLOW concretes again on other projects.