THE CHALLENGE
In early spring 2004 Tarmac was asked to provide a concrete to construct a waste transfer station floor area. 75% of the floor area was designated for high wear use (tipping halls and storage bays) which would be subject to high impact and abrasion damage from large front end loading machines. A maximum wear rate of 0.05mm (AR0.5) - assessed in accordance with BS8204-2:2003 was needed, using no surface treatments or curing compounds.

OUR SOLUTION
Toproc has impressive early strength qualities with typical 24-hour strength gain of 25 to 30N/mm², but also provides a high overall 28 day compressive strength (60N/mm²) with excellent abrasion resistance qualities against potential damage from heavy front-loading machines. Having a proven history of long-term wear resistance in waste transfer station applications, Toproc concrete with added steel fibres was put forward as the optimal solution for Alton Waste Transfer station to achieve the abrasion resistance levels needed.

RESULTS AND BENEFITS
Tests were carried out on the in-situ concrete for abrasion resistance on March 24th 2004, four to five weeks after the mix was poured. Six areas (representing each day of supply) were tested in accordance with BS8204-2:2003 and a wear rate of less than 0.05mm - AR0.5 (Special) was achieved. Impressive compressive strength results for Toproc were also gained.