

# Bedford Square

## The right mix for Bedford Square

Bedford Square Phase 3 was one of the largest and most challenging construction projects in progress in Johannesburg at the time. The project was the final phase of the R800 million mixed-use development adjacent to the old Bedford Centre shopping complex, in the heart of Bedfordview. Fully mixed-use urban projects were still a relatively new concept in South Africa and, faced with the complex fast-track Bedford Square contract, main contractor Murray & Roberts Construction needed a user-friendly concrete that enhanced productivity and finishing. A cementitious mix incorporating a good quality classified fly ash gave the required all-round performance.

Phase 3 introduced 38 000m<sup>2</sup> of upmarket retail outlets; an additional 50 000m<sup>2</sup> of residential apartments; entertainment components that included six cinemas; offices; a gymnasium and related lifestyle facilities; a 160-room hotel; a wide range of restaurants and an all-weather central piazza with a retractable roof. A 54 000m<sup>2</sup> multi-level parkade was designed to accommodate 2 400 cars.

The construction challenges of a mixed-use development are from the structural complications of mounting a multitude of differently sized and shaped structures on top of a parkade with a standard

symmetrical grid layout. Bedford Square involved engineering massive transfer slabs that were difficult and time-consuming to build. Another factor was limited general accessibility to the site. The solution was to design a good pumpable mix based on 75/25 OPC/ DuraPozz<sup>®</sup> fly ash to cast all the slabs. Typically the mix was pumped successfully over distances in excess of 200m and at times as far as 400m.

DuraPozz<sup>®</sup> classified fly ash was supplied from Ash Resources' Matla Plant and used in virtually all the 62 000m<sup>3</sup> of concrete required to complete the contract. The decision to go with a concrete mix containing a quality fly ash was definitely the right one: pumping went well without any problems.

Another significant advantage of DuraPozz<sup>®</sup> was the enhanced workability of the mixes, which proved to be as important as the pumping benefit. The excellent workability gained a few hours after batching enabling the contractor to powerfloat. The choice of DuraPozz<sup>®</sup> contributed to significant productivity benefits and added to aesthetically-pleasing concrete finishes.

DuraPozz<sup>®</sup> was used in the concrete mix for the construction of Bedford Square Phase 3



**AshResources**  
Fly ash products

A SUBSIDIARY OF AFRIMAT

**AFRIMAT**<sup>®</sup>

Sharecall: **0860 FLYASH (359274)**

Tyger Valley Office Park Building 2, Cr Old Oak Road & Willie Van Schoor Ave  
Bellville, Cape Town, 7530, Tel: 021 917 8840, [www.afrimat.co.za](http://www.afrimat.co.za)  
[www.ashresources.co.za](http://www.ashresources.co.za)