



## Precast concrete accelerates residential estate construction in Western Cape

*Written by David Beer on behalf of the Concrete Manufacturers Association*

***Precast concrete slabs, beams and stairs supplied by Concrete Manufacturers Association (CMA) member, Cape Concrete Works, are being used for the construction of Glenwood Estate, a secure residential estate situated in Brackenfell, Western Cape.***

**G**lenwood Estate is being developed by MMR Property Developers and constructed by MNK Projects and consists of 200 two-bedroom apartments in 60 and 70m<sup>2</sup> units housed in 10 three-storey and two two-storey blocks. Phased Construction commenced in March 2022 and is due for completion in June 2024.

Situated in Vredeloof Heights, Glenwood is MMR's third secure estate development in the area. Two adjacent estates, Eastglen (94 units) and Glencrest (240 units) were also constructed with Cape Concrete's precast elements, and were completed in June 2019 and June 2022 respectively.

MNK contracts manager, Marcel Filmlter, said that the use of precast concrete saved approximately one month per block in construction time.

"There were other benefits as well such as quality consistency and a more economical use of material and resources. Precast concrete gave us better control of programme planning and a more sustainable construction solution.

"Cape Concrete played an integral role in the success of the project right from the planning stages and their practical engineering solutions made a huge difference. They presented a precast concrete solution which entailed a mix of precast



*An apartment block under construction showing a precast concrete staircase and the first-floor hollow-core slab flooring.*

concrete hollow and solid slabs including precast beam and staircase configurations, a solution which could not be offered by our other preferred supplier at the time," said Filmalter.

A range of hollow-core slabs, with various thicknesses and lengths, were used for the first and second floor flooring, and solid slabs were installed to create interconnecting walkways between buildings.

"Cape Concrete incorporated the building level changes in their design which assisted with the construction works. It simplified the construction process, saved time and reduced complications with integration. Cape Concrete's staircase solution, which incorporates cast-in steel angles, are of a very high standard and simplified the installation."



*A 75mm layer of reinforced concrete is laid over a section of hollow-core slab flooring as per KLS Engineers design.*

"The delivery of precast stairs on time, followed up immediately after with the hollow-core slab flooring installation, further reduced construction time and provided a further saving on the cost of temporary access stairs. It not only simplified the construction process but provided better health and safety for all the personnel on site.

"Ninety percent of the installations were done with 60 tonne mobile cranes with the exception of some larger cranes which were required on some of the blocks due to phasing access.

"With a project of this nature and size, minor snags are inevitable, but these were always resolved promptly by Cape Concrete. What's more, we have not had any problems with the precast concrete used in all three estates since construction began four years ago," concluded Filmalter. ■



*Solid-slab walkways link two of the apartment blocks.*



*A tiled precast concrete staircase in one of the completed blocks.*