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## Diligence in selecting slab-construction methods saves costs in the long run

Deciding on whether to use hollow-core slabs or rib-and-block systems to construct concrete floor slabs for residential projects cannot be taken lightly. Jaco de Bruin, CoreSlab's managing director, therefore, urges homebuilders and their professional teams to exercise diligence in selecting precast-concrete technologies for their project requirements.

"We manufacture both tried-and-tested technologies to provide the homebuilding market with a significantly quicker means of constructing concrete slabs than is possible using conventional *in-situ* building methods," De Bruin says.

"However, there are a host of factors that need to be considered when deciding on the best available solution for a project, and this transcends merely comparing the upfront price of the two very different technology types. This is a common mistake that is made by the many newer entrants to the home-building industry. For example, the outright cost of rib-and-block systems may be lower than hollow-core slabs, but there are additional costs that arise in the actual installation phases that also need to be assessed. These include labour, as well as propping and concrete."

He says that another important detail that often goes unnoticed in selecting the most suitable precast concrete system for multi-storey housing projects is the length of time it takes to install the two systems.

Rib-and-block systems, for example, require significantly longer periods to install than hollow-core slabs, and this can also have a profound negative influence on project costs.

Lighter than hollow-core slabs, rib-and-block systems are installed by hand without mechanised equipment, making it an ideal solution for those projects which already have robust management skills and capabilities in place to oversee the entire process.



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However, this may not always be the case on typical residential-type projects, which have long been the domain of smaller building contractors with fairly limited resources and who rely extensively on unskilled labour.

De Bruin says, “The sub-standard installation of rib-and-block systems can have disastrous consequences on budgets, bearing in mind wastage and significant delays due to having to reinstall the system. In extenuating circumstances, poor workmanship by unscrupulous ‘fly-by-night’ building contractors has even had a profound negative impact on the overall quality of the final structure for unsuspecting new homeowners.”

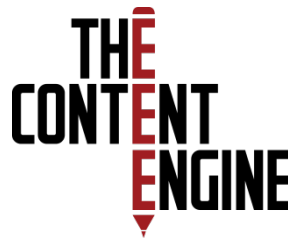
He adds that this risk has grown significantly over the years considering the dearth of skilled labour in the larger construction sector, as well as increased competition in the volatile homebuilding market.

Architects and structural engineers are, therefore, increasingly specifying the use of hollow-core slabs for these projects to mitigate risks, and De Bruin concurs that the technology has proved to be a more effective solution for the homebuilding market over the years.

His views are motivated by the company’s involvement in many successful multi-storey residential projects in Limpopo that have been completed on time and well within budget using hollow-core slabs.

Unlike rib-and-block systems, the precise installation of hollow-core slabs is undertaken by CoreSlab’s own experienced teams whose responsibility also includes the timely transportation of the precast concrete elements to site through to their levelling and grouting.

Importantly, the company also undertakes the safe lifting and placement of the precast concrete elements using its own fleet of cranes, as well as seasoned operators and riggers.



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A small and efficient team places the slabs in a matter of hours, allowing the bricklayers to commence working at that level almost immediately, while the specialist fitters are not delayed by any propping below.

Productivity and safety levels are also enhanced by cleaner and less congested construction sites, considering the significantly less labour required to install the slabs and savings achieved in storage space for construction materials and consumables.

Most of these projects are undertaken in built-up areas, and a further benefit of this approach to concrete slab construction includes mitigating the impact of building activities, such as the generation of excessive dust and noise, on the surrounding area over protracted periods.

While the company continues to manufacture quality rib-and-block systems, De Bruin has noted a growing preference for hollow-core slabs over the past few years, and expects this trend to continue especially in-and-around Polokwane.

“High demand for middle-income housing in-and-around the city has led to a vibrant homebuilding industry, also comprising many new and industrious building contractors who, like their more established counterparts, are forced to remain competitive by building quality houses quickly, efficiently and cost-effectively,” he concludes.

**Image & Caption:**

[Image\_4076]

[Caption]: The installation of hollow-core slabs are outsourced to a skilled installer to ensure that the construction of the concrete floor slab is done correctly the first time.