

SHOPPING CENTRES & OFFICE DEVELOPMENTS

TOP-DRAWER STANDARDS, innovation for Cameroon mall

Douala Grand Mall, Cameroon's first modern shopping mall and reported to be the largest in central Africa when complete, is set to showcase not just the highest standards of construction quality but also leading green building features.

Begun in January this year, the €45-million Raubex project, conceived and driven by a UK-based investment fund and its local Cameroonian partner, was designed by London-based award-winning architects. The mall, which includes cinemas and a convention centre, comprises Phase 1 of an ambitious plan that will see a five-star hotel, offices and residential apartments added to the development in coming years.

Scope

Currently under construction by Raubex Renovo – a turnkey specialist in large hospitality and retail developments within the Raubex Group – the Douala Grand Mall will be completed in November 2019. The mall will have a built floor area of 25 600 m² including 18 732 m² of lettable retail on its two levels and is situated in the immediate vicinity of the international airport with a primary catchment of 1,5 million people.

Basement dimensions measure 12 450 m² for parking underground, while the ground floor comprises 14 160 m² and the first floor will cover an area of 11 520 m². The mall will offer a broad range of retail, entertainment and dining amenities including a cinema multiplex, a world class food court and state-of-the-art supermarket with free parking for 640 cars of which 425 are in the basement.

The significance of Phase 1 extends beyond the growing buying power of this market; the new convention centre is also an indication of Cameroon's commitment to boosting the inflow of business and tourist visitors.

Construction of a retaining wall during phase 1.



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The Raubex Group is listed on the Johannesburg Stock Exchange and is active in specialist infrastructure development across Southern Africa, as well as several West African countries. With almost 10 000 employees, the Group's turnover exceeds R9-billion and boasts a large current order book.

Raubex Renovo, a subsidiary of the Raubex Group, is a South Africa-based turnkey specialist in the hospitality and retail sector undertaking both new build and refurbishment projects. Focused on delivering functional and aesthetic structures cost efficiently, on time and within budget, the company offers access to in-house architectural and design teams, and has strong development, renovation and construction capabilities.

Energy saving

The mall is important for its bold innovation in design, construction materials and energy saving strategies. When completed it will comply with the EDGE green building certification system developed by the International Finance Corporation (IFC).

The system facilitates excellence in design for greater efficiencies and demands minimum savings of 20% in terms of energy, water and embodied energy in materials.

The building will be climate-controlled, which will be a first for Cameroon. To ensure energy efficiency, double glazing will be used on the impressive curtain wall as well as high quality insulated cladded panels throughout. Extensive use of skylights – also double

The ground floor slab during phase 1.





An artist's impression of the Douala Grand Mall and Douala Business Park in Cameroon.

glazed – will allow for the best use of natural light. Mature trees and lush native greenery will be carefully preserved to retain the natural African heritage of the area.

Internal walls will be mainly gypsum panels and insulated panels, making for a lighter overall structure, a more attractive finish and greater flexibility when adapting internal spaces for tenants. Offering contemporary clean-cut architecture, the retail units will range from 25 m² to 600 m².

Raubex Renovo is exploring the option of on-site power generation using low-pressure liquid gas, a low-cost resource being piped into Douala. This will further reduce the project's energy footprint and potentially halve the client's electricity costs once the mall is operational.

Roof cladding, like the walls, is heavily insulated and designed to deliver high R-values in the central African climate. Manufactured to demanding European building standards, the cladding is guaranteed to withstand heavy rain for 20 years. The wall cladding comes in various profiles and colours which allows plenty of choice to achieve the desired aesthetics.

A rammed earth wall – a style common in the local construction methods of that region – has also been incorporated into the mall design to ensure close alignment with cultural preference.

Logistics

While over 400 containers of materials and equipment will be arriving from all over the world to serve this project, Raubex Renovo has prioritised local content, skills sharing and the need to leave a legacy. The company is investing heavily in training local staff and supporting local contractors. Only 5% of management and supervisors are expatriates with the company employing mainly locals, whose skills and experience are impressive.

Behind the planning and implementation efficiency of Raubex Renovo and on this project is Building Information Modelling (BIM). Focused on the development, use and transfer of digital information to model a building project use of BIM facilitates optimum accuracy, improving design, construction and operations.

The major advantage as a BIM-compliant project is that all stakeholders and contractors can share access to the same up-to-date information about the project's progress at any time.

In addition, specialised software employed by Raubex Renovo allows its technical team to overlay all the mechanical, electrical, plumbing and other elements of the work and render plans in three-dimensional visualisations.

The value of this innovative approach is immeasurable as it quickly identifies any clashes in aspects such as routing of services, so that these can be addressed during the design stage rather than on site.

All planning is first signed off by Raubex Renovo's in-house architects and then passed on to the BIM manager, who conducts the final stages of overlaying all the design data into one model. This allows structures to be designed in fine detail, so that all pre-manufactured components are ready for installation on site with minimal finishing or rework.

The steel framework at the heart of the mall design, for instance, can be cost effectively manufactured in South Africa before components are shipped in containers to Cameroon. All items are carefully prepared and marked to fit seamlessly according to the detailed BIM documentation, which also gives the construction team on site exact instructions on how the assembly must proceed.

Safety forms an integral part of all Raubex's operations, and the group's emphasis on achieving zero harm is underpinned through the implementation of solid safety procedures on this project. ■

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