

Fast-Track Repurposing Of Bmw Facility Completed By Concor Buildings

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FAST-TRACK REPURPOSING OF BMW GROUP FACILITY COMPLETED BY CONCOR BUILDINGS

Concor Buildings has completed the fast-tracked repurposing of BMW GROUP South Africa's disused parts distribution warehouse on their Midrand Campus, Gauteng, delivering a new Dealer training centre, welcome/brand centre, and the information technology (IT) competence hub for the luxury motoring Group.

According to Concor Buildings' site agent Blaine van Rensburg, the whole project was to be built within existing structures, with extensive demolition and bulk earthworks required. The main scope of the contract included a new Dealer training centre for technicians from BMW Group's dealer network, office space for the IT staff, a 'green lung' multi-purpose area, and repurposing of the old training centre on site to house a gym, restaurant and welcome centre and other ancillary facilities.

Work began in May 2018 and construction was completed March 2019. The team moved off site at the end of May 2019. The training centre, says van Rensburg, has been constructed to include both technical and non-technical training facilities.

"The technical training areas are double-volume workshops, each constructed to meet the specific requirements of a particular trade or apprentice level," he says. "This area also includes three plant rooms for air conditioning facilities, a server room and ablution facilities."

A key aspect of the primary construction project related to inserting office space within the disused warehouse, generally referred to by BMW GROUP as the "IT Competence Hub", further improving the digital linkages between BMW's South African operations and other countries in the worldwide Group.

"The demanding specifications for this area included acoustic-rated drywall, glass and aluminium partitioning for office spaces and meeting rooms and ceilings which are rated for both fire and

acoustic performance, as well as similar specifications for the 4,500 m² over-sheet roofing system,” he says. “These specialised ceiling and roofing systems contribute to the energy efficiency of the building.”

Two smoke extraction shafts were installed, as well as two server rooms and five HVAC plant rooms.

He notes that constant and uninterrupted digital connectivity on the BMW campus was non-negotiable during the construction process, as the site housed not just the national head office but also BMW Financial Services and the BMW On-Call service’s fibre reticulation, which is the backbone of their network functionality and linked to the global network. All excavations therefore had to be particularly careful of existing underground services.

“Brownfield projects like these tend to pose particular challenges, as there is not always complete certainty about existing site conditions and building services,” he says. “There are several measures that we adopt, however, to help gain a better understanding of these factors which ensures the project schedule is not disrupted or delayed, and potentially eliminates the risk of damage to the property.”

For instance, pilot trenches were excavated where possible to expose existing underground services and avoid damaging them. Land surveillance of the existing benchmarks or control points was conducted to double-check the survey information provided; the older the building, the less certainty can be assumed, he notes.

“Where building services were exposed during excavation of the pilot trenches, these were surveyed and plotted onto a drawing by our registered land surveyor,” says van Rensburg. “This helped both the construction team and the client to improve our knowledge of the services in place.”

The green lung area – which will be used for recreational and social purposes – benefited from an innovative adjustment in terms of how to deal with a large retaining wall.

For a start, an existing concrete block retaining wall of about 950 m² in size – as well as 1,800 m³ of hard rock and 3429 m³ excavated soil – were removed. Instead of replacing this with a reinforced concrete wall, the project design team agreed to the construction of a permanent lateral-support

gunite wall. This significantly reduced construction time and complemented the industrial look-and-feel that the design team envisioned at inception.

Culverts and channels for underground services were installed adjacent to the base of the wall. Planters, staircases and seating areas were then constructed to beautify the area in front of the wall and increase its functionality.

The old training centre building was also refurbished in line with BMW Group sustainability targets and now houses a state of the art welcome centre, restaurant and production kitchen and a staff gym and yoga deck. Relooking the overall circulation routes on site now sees this building being the primary visitor entrance and playing an important role as the brand centre/welcome centre for all visitors to BMW Group South Africa. This multi-purpose area has a layout that can be altered to suit the company's marketing requirements at any stage, including the display of vehicles, motorcycles and museum pieces inside the building.

The project included the conversion of a truck delivery area on the eastern side of what was previously the warehouse into an open-air parking area for staff and associates. The visitors' parking was also reconfigured and expanded to accommodate double the number of visitor vehicles. On the western end of the site, an energy centre has been created housing the main plant related to the new building services, including a modern and efficient HVAC system. In this area is also waste management and storage space, as well as offices and ablutions for facilities management staff. Adjacent to the energy centre is another open-air parking area which will be used by the apprentices and lecturers.

"A further time saving innovation – introduced in consultation with the design team – was in relation to the offices and training centre on the first floor," he says. "We managed to save on the application of over 4,000 m² of plastering and paint on what would be brick walls, opting instead to construct acoustic drywalls. This reduced the scaffolding and wet works required, ultimately saving considerable time on constructing the area."

Van Rensburg highlights that, due to the timeframes and complexity of each area of the project, it was necessary for construction work to take place on all faces almost simultaneously.

“For us to ensure that each area was getting the attention it deserved, we approached each section of the building as a mini-project on its own,” he says. “Concor Buildings and our subcontractors then assigned dedicated resources to each area, ensuring that the momentum was maintained and that the same teams who started an area would also finish it.”

Another challenge that was creatively resolved was the space limitation in certain areas, where it was not possible to gain access with moving plant or machinery that would typically have been used. This was facilitated by Concor Buildings’ purchase of industrial-grade steel trolleys, which were large and strong enough to move general materials around. They were used to stack items like full-size plywood boards, glass, aluminium, bricks, plaster material, structural steel beams, and ceiling and drywall material.

“This process meant that less manpower and less physical exertion was required for material handling and we believe this contributed to a lower fatigue rate, which in turn helped us maintain the outstanding safety record that we achieved on this project,” says van Rensburg.

Captions

BMW CAMPUS PIC 01 : The entrance atrium to the new offices at BMW Campus.

BMW CAMPUS PIC 02 : Construction nearing completion on the fitness track outside the linear building, with the permanent lateral support gunite wall on the left.

BMW CAMPUS PIC 03 : Restyled interior workspace with acoustic-rated partitioning for meeting rooms.

BMW CAMPUS PIC 04 : Concor Buildings site agent Blaine van Rensburg inside the new office area created by repurposing BMW’s distribution warehouse in Midrand.

BMW CAMPUS PIC 05 : Concor Buildings site agent Blaine van Rensburg inside the new office area created by repurposing BMW’s distribution warehouse in Midrand.

BMW CAMPUS PIC 06 : The centralised HVAC facility, in the new energy centre at BMW’s Midrand campus, which will service the new building.

BMW CAMPUS PIC 07 : Concor Buildings site agent Blaine van Rensburg in the BMW campus parking area; as part of the project, changes were made to expand the visitors' parking considerably.

BMW CAMPUS PIC 08 : One of the HVAC plants serving the new office space and training centre in BMW's repurposed distribution warehouse.

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