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39 COMMERCE CRESCENT

The building is the 4th building to be completed by Alchemy on the street. All the buildings draw from the same pallet of materials – off-shutter concrete, black brick, and glass. This building uses the same pallet but its form breaks away from the rectilinear lines of its neighbours. The façade is made up of angled forms that cantilever 1,2 m off the existing structure.

The building is a conversion of an existing three storey commercial building into a storey showroom. The conventional industrial facades were transformed by sloping off-shutter concrete and black brick facades that are cantilevered off the existing structure to form the futuristic exterior. The façade forms are punctuated with reflective glass panels.

Internally a new atrium was created to bring light into the centre of the deep floor plate. The internal atrium formed a secondary function of future-proofing the building. It allows all the floors to be accessed from a central common area which allows the building to be let to multiple tenants.

The building is let to a single tenant who wanted to maximise the usable area of the building. Early on in the project, it was decided to convert the roof space into an open-air showroom which has an incredible view out towards Sandton.

The existing structure was retained and strengthened where required. To add an additional floor to the building the foundations needed to be stiffened and their size increased to accommodate the additional loads to the building.

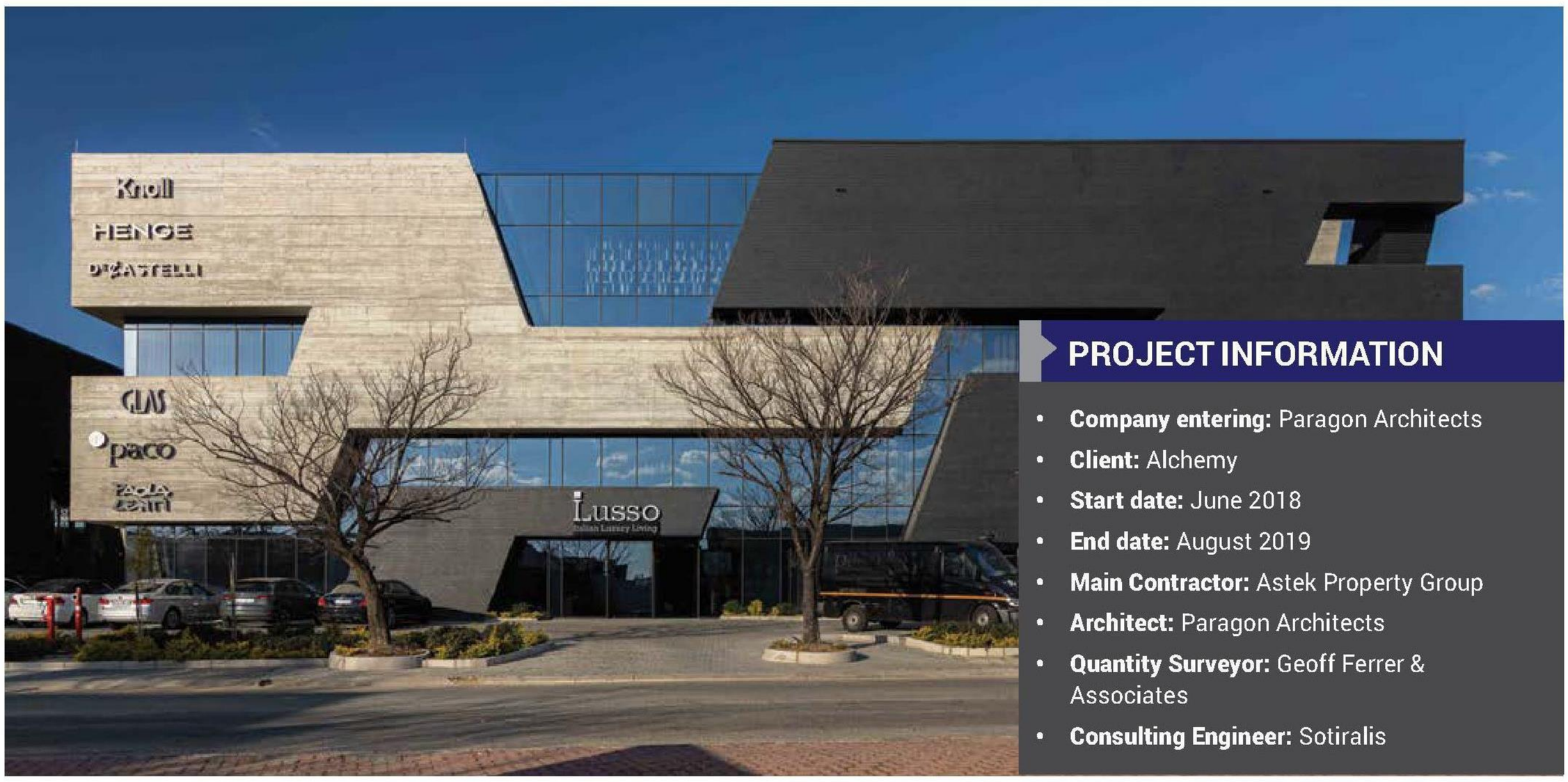
Large openings needed to be created in the existing floor slabs for new fire escape stairs, and service ducts as well the atrium opening in the centre of the building. Carbon-fiber strips and steel i-beams were installed on the underside of the existing slabs to strengthen them, reducing the need for additional columns to be built. This allowed for the floor plate to remain as open as possible which is ideal for its showroom function.

To improve the quality of the space the existing floor slabs were demolished to create an atrium in the centre of the building.
A skylight was installed on the new roof level and allows light to flood into the centre of the floor plate. A central staircase was installed in the atrium void to connect the 4 levels. The staircase is cantilevered off the floor slabs and spirals up through the space.

The sculptural stair was designed in Rhino and the 3D form was flattened to form panels which were laser cut to create the formwork that would be cast in place to form the stair. This formwork allowed us to create a complex form that would not have been possible with conventional formwork. The staircase was finished with a light grey polished plaster.

Traditionally brick façades are rectilinear due to the nature of the bricks that they are constructed from. At 39 Commerce Crescent bricks were set out at 70-degree angles to create the sloping forms that wrap around the building. To create the sloping walls Paragon had to alter the pattern that conventional face bricks are laid in. Each course is offset from the one below. Detailed drawings of the brick facades were created to determine what would happen to the pattern when it needed to change direction around a 90-degree corner.
Cut bricks were inserted into the pattern to ensure that the pattern could be continued around corners without the visual impact of the staggered pattern being broken. The rough off-shutter concrete facades mimic the slope of the angled brickwork. Reflective glass was used to punctuate the junctions between these two materials.

The existing structure of the building was retained. This reduced the overall environmental impact of the build by reducing the amount of concrete and steelwork required on the project. The development also improved the energy efficiency of the building. Performance glazing was used throughout, along with an insulated roof, cavity walls, and insulated spandrel panels that all contribute to a more stable internal environment that requires less energy to maintain a comfortable internal temperature. Energy-efficient HVAC systems were installed throughout and energy-efficient lighting was used. The atrium and large windows allow natural light into the space from all sides. ■



PROJECT INFORMATION

- **Company entering:** Paragon Architects
- **Client:** Alchemy
- **Start date:** June 2018
- **End date:** August 2019
- **Main Contractor:** Astek Property Group
- **Architect:** Paragon Architects
- **Quantity Surveyor:** Geoff Ferrer & Associates
- **Consulting Engineer:** Sotiralis