AUTOMOBILE DESIGN STUDIO

LOCAL INSPIRATION

The client wanted to create a cutting-edge design studio where the designers would style their latest vehicles, and which needs to have an emotive quality that could energise and inspire thoughts; while modern, it should also maintain a sense of its origins.

Nestled amongst similar contiguous sheds with lush greenery amidst a concrete jungle, the site for the studio is within Mahindra and Mahindra's (M&M) 64-acre vehicle factory in Kandivali, which consists of five existing low-lying sheds. The place is reminiscent of Mumbai's bygone decades and is perhaps the last of industrial campuses that occupied land on the highway of what was previously the outskirts of a fast-growing city.

The site is characterised as distinctly industrial with surrounding buildings that are rather older versions of prefabricated steel types—made with handheld tools using standard rolled steel sections that were fabricated, welded and bolted at site. The old buildings were identical for most parts but with the irregularities and imperfections that arise out of being handmade.

The team assimilated the influences of the site, context and brand identity to conceptualise a rugged, raw space that uses natural light, celebrates its industrial and metallic context, and complements it with a neutral concrete backdrop. Neutrality was important since the cars and their styling are the main elements of the space. The use of metal sheets for doors, screens, etc., was inspired by the extensive use of the material in the automobile industry and further impelled by Mumbai's rich tradition of metal works.

Mumbai, which grew into a centre of trade and commerce, had small and big metal dealers, suppliers and fabricators springing up to support the backbone of the building and the city's industrial needs. The suppliers and fabricators from Kumbharwada, the heart of the ferrous and non-ferrous market of Mumbai, provided for the materials in crafting metal for the design studio.

1 South façade of the shop

Photos by Rajesh Vora

2 Spiral staircase **3** Display area at ground floor
4 Elevation **5** Section **6** Site plan

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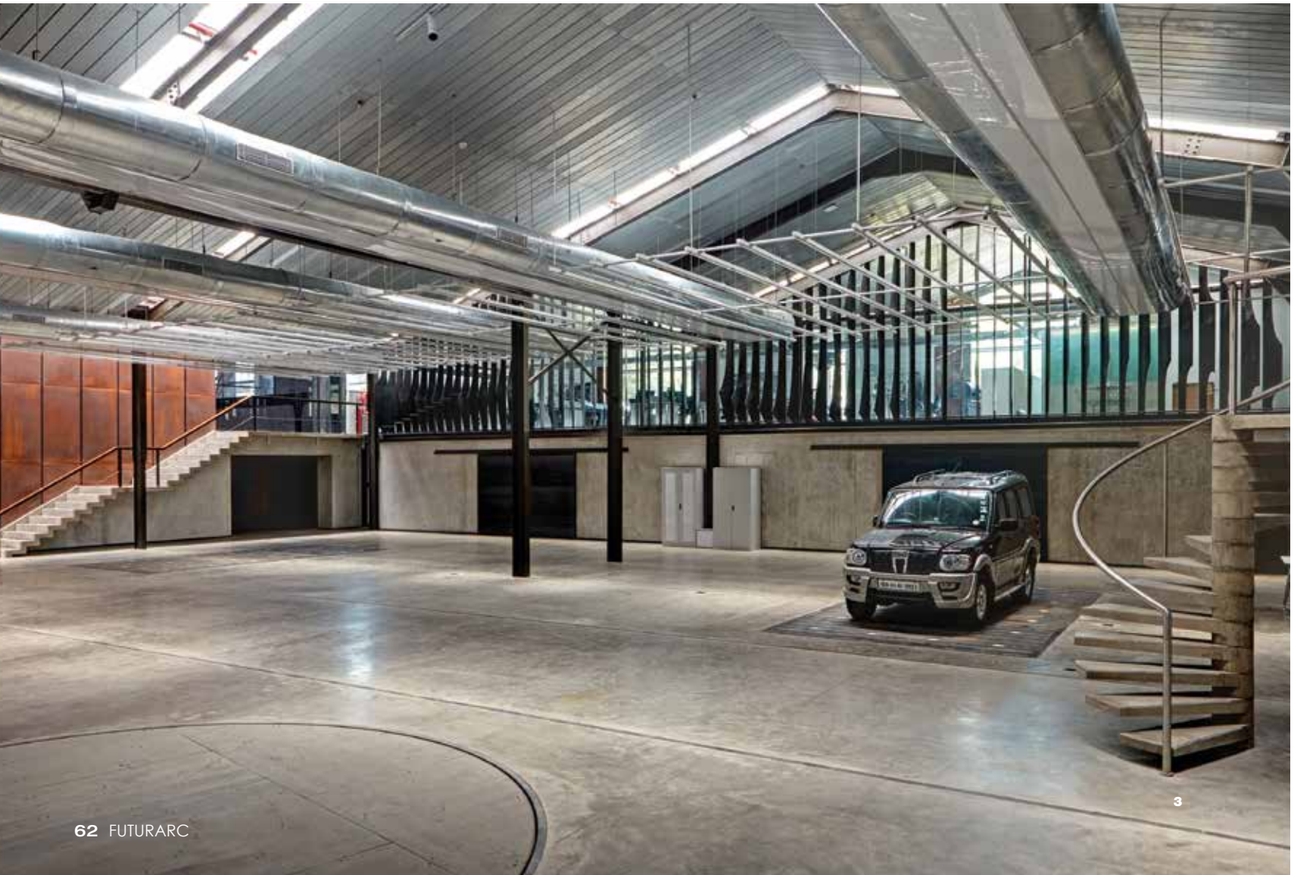

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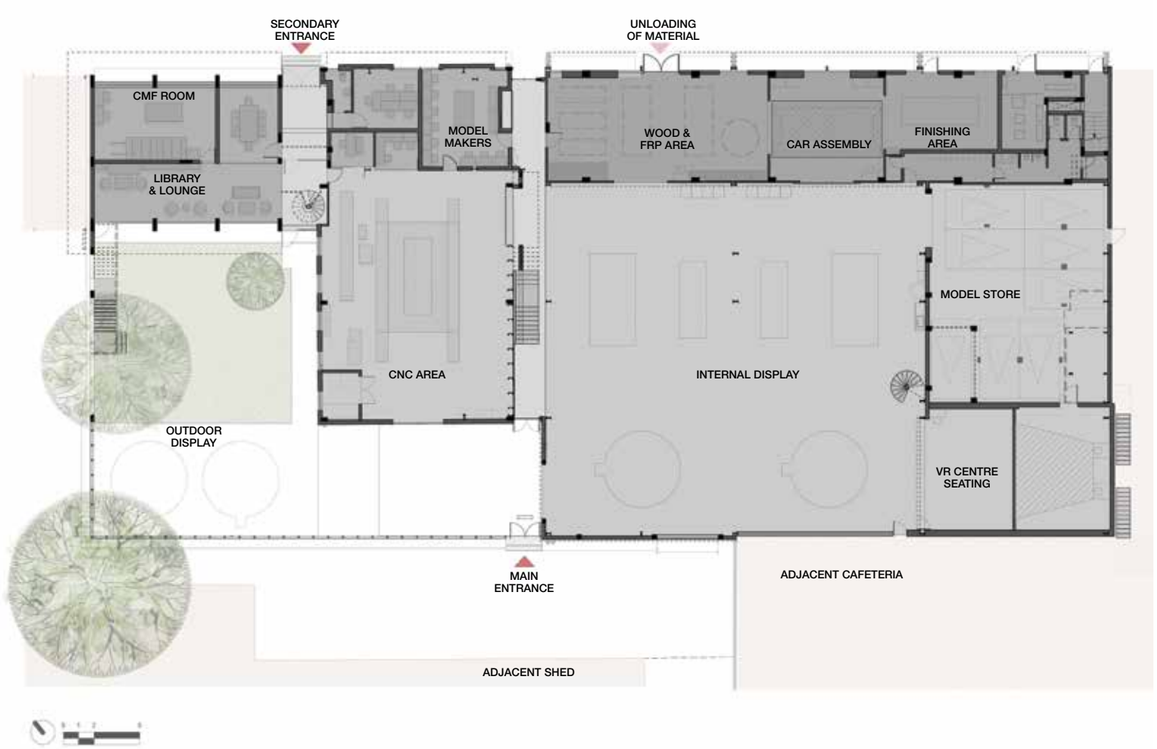

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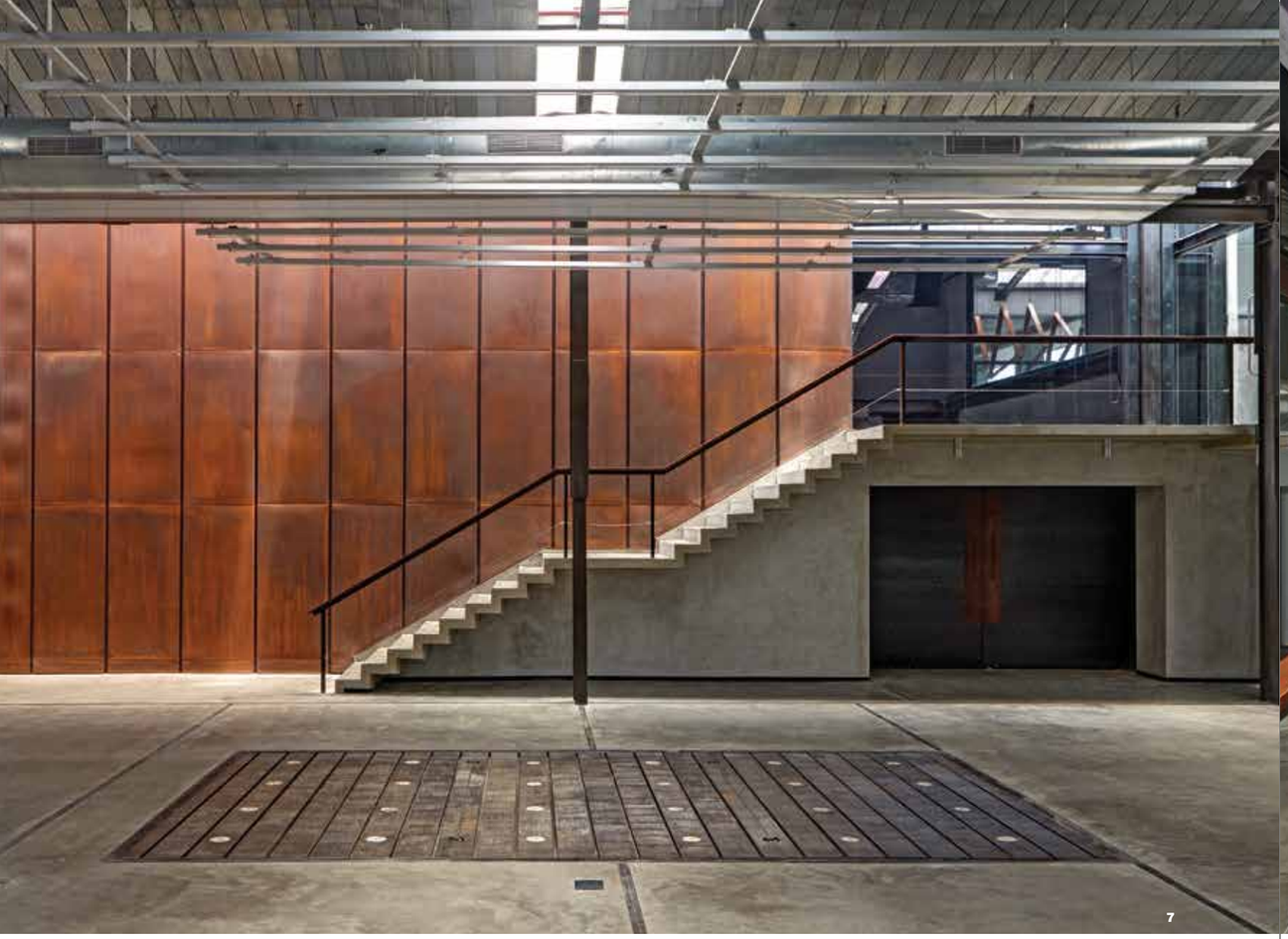

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ADAPTIVE REUSE

When the clients first approached the architectural team, they had the choice of demolishing all the existing buildings to put up the design studio. However, they chose a more challenging path by retaining the sheds and their structural systems, and only strengthening the parts that were worn out or to accommodate something new. Reusing the existing buildings not only saved immense amounts of steel but also preserved a part of Mumbai's industrial history while developing the structure to be modern, comfortable and meaningful.

At the start of the site work, the buildings have been stripped down to the bare structural systems, which were retained with all their flaws and then reinforced. As new walls and other elements were added, the main framework was left visible, ensuring that the new design adapts to it.

The structure had a 'rhythm' but there were some variations. These were transformed into the main accesses, each with an entrance from the outside, a grand staircase leading to the mezzanine level, and a character of its own. These thoroughfares are used for connectivity and were conceptualised to function as vernacular courtyards designed to bring daylight into the building, and a space that encourages breaks for social interaction.

The sun path played a prominent role in shaping this project. While planning the studio, amongst several considerations was to ensure that much of the office space—the designers' workstations and meeting rooms—are placed on the north, drawing in natural light through large north-facing windows. The double-height model making and display areas were provided with skylights proportioned to carefully balance lux levels, air-conditioning loads and costs. The skylights flood the spaces with comfortable, soft daylight, saving energy throughout the day.

One of the sheds was deemed unworthy of being retained and was thus replaced with a new, contemporary building. It was designed to be in exposed concrete, allowing it to blend with the raw and industrial palate of the new studio. Overlooking from the library and 'free-thinking' space of this new block is a small, lush green garden, which was introduced by the team.

A new concrete mezzanine was introduced to accommodate the company designer's studio. The mezzanine cuts across all the north walls of all four sheds and the new building, connecting the entire project, and overlooking the model making space underneath. The mezzanine communicates with the display space below through a metallic screen that balances the need for the designer's privacy as well as the need for connectivity to the space below.

MATERIALS AND DETAILS

As the team stitched together the old and new, the need for the studio to evolve and keep its origins influenced the treatment of materials and details of the project. There was an attempt to use all new materials, concrete, plaster for walls and 'raw' metals in an exposed format. This proved to be challenging, with each step having the need to be planned and tested—for every scratch, dent or unsightly weld would be visible for all to see.

Weathered mild steel forms an entire 9-metre high wall as one enters the studio. While the sheets have been imported from Europe or North America, the finishing, fabrication, bending and cutting was locally done in Gujarat, based on exact site dimensions.

The screen at the edge of the mezzanine is made up of fins in raw, mild steel with its factory-coated 'HR' film intact, hung from an I beam at roof level with careful and neat arc welding done at site, and finally coated with a clear lacquer to prevent rusting. The inspiration for the screen, a constant repetition of a single element, came from a typical automobile factory line.

The spiral and straight staircases, cast in concrete, are reminiscent of the metal shuttering that created them but the metallic railings remain. The steel railings of the two spiral staircases twirl upwards in a single delicate sweep. The railings were made of a hollow stainless steel pipe of 50 millimetres in diameter, bent to conform to the geometry of the staircase and fitted carefully to it.

All doors introduced in the project have a significant design. Slim and tall wooden doors frame the large glass façade on the north side of the mezzanine, giving warmth, softness and a degree of sophistication to the external façade as well as the studio within. These wooden doors are fitted with handles fabricated out of a 25-millimetre diameter raw MS pipes bent to shape. Only old recycled Burma teak wood have been used for the wooden doors and furniture, finished with natural linseed oil polish instead of high-VOC polishes and solvents.

A complete contrast to the wooden doors is mild steel ones, used for the shop floor and display area at ground level. These doors are in various formats: multiple folding shutters, single operable shutters and large sliding ones like industrial barn doors similar to the ones seen within the M&M factory.

7 Steel wall and RCC staircase **8** The staircase is well-lit by sunlight passing through the large windows **9** Compound wall

PROJECT DATA

Project Name
Automobile Design Studio
Location
Kandivali, Mumbai
Completion Date
January 2015
Site Area
29,500 square feet
Gross Floor Area
25,000 square feet
Building Height
10.72 metres (maximum height)
Client/Owner
Mahindra & Mahindra Ltd.
Architecture Firm
SJK Architects
Principal Architect
Shimul Javeri Kadri
Main Contractor
Capital Constructions Pvt. Ltd.
Lighting Consultants
Lighting Ergonomics
Civil & Structural Consultant
Shilp Consulting Engineers
Images/Photos
Rajesh Vora; SJK Architects