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INTERIORS
The Upcycled House, KNS Architects

ARCHITECTURE
Girls hostel at the St. Andrews Institute of Technology and Management, ZED Lab
BookWorm Pavilion, Nudes
Gadi House, PMA Madhushala
Stonex India's Administrative and Industrial Complex, Urbanscape Architects

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Hindware Launches the Second Leg of its Iconic Campaign, 'Thoughtful Is Beautiful'

Renowned Bathware brand Hindware, today launched the second leg of its successful marketing campaign - 'Thoughtful is Beautiful.' The campaign features Hindware's newly launched touch free products including sensor based faucets and water closets that have been designed to enable better safety and hygiene in households across India amidst the ongoing pandemic.

TVC: https://youtu.be/--gHIvBcEbA

Featuring touchfree products, the new TVC focus on showcasing innovative performance-led product solutions that offer convenience to consumers. The film builds further on the premise of the earlier campaign bringing together design and functionality, to offer uber chic technological solutions that are designed to ease the consumer's life.

Sudhanshu Pokhriyal, Chief Executive Officer, Bath Business, Brilloca, said, "Hindware is known for its innovative approach, functionality and visual appeal. But as the times change and the world around us rapidly evolves, we are also seeing an accelerated demand for touchless and contactless products, to enable better safety across homes. In the past the adoption of such products has been more from commercial ventures or businesses, but as safety concerns rise, and consumers become more aware, we anticipate a shift in the demand for such solutions to be more from households in the coming future."

Charu Malhotra Bhatia, Vice-President, Marketing, Brilloca Limited said, "Hindware is an iconic brand that resonates with every type of consumer. With this new campaign, we want to re-define the way people perceive bathware and move beyond design and aesthetics to make way for a new thought process built on innovation and technology." ■

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Grundfos launches SCALA1 to redefine domestic water boosting in India

Grundfos India, a global leader in advanced pump solutions and a trendsetter in water technologies, announced the launch of SCALA1 today. The SCALA1 is an all-in-one pressure booster with high-efficiency motor and hydraulics with low noise operation. It is easy to install and serves as an energy efficient solution to address pressure boosting challenges at home.

SCALA1 also enables homeowners to monitor, troubleshoot and control their pumps through their smart devices, at the touch of a button. In a push towards digitization, SCALA1 has a built-in two-way communication system that connects to the intuitive Grundfos GO REMOTE app, a Bluetooth-enabled application for remote product control.

"Today, in residential properties, pressure boosting has become an integral part for equitable distribution of water. SCALA1 will take the users' boosting experience up a notch, by providing optimal pressure boosting solutions which is ready to install and operate. Building on its predecessor SCALA2's success, this new version of SCALA1 pump has user-friendly features like Bluetooth connectivity, that enables customers to seamlessly communicate with the pump and vice versa," said **Venkataramanan Vishwanathan, Area Sales Director - Domestic Building Services, INDO Region, Grundfos**. ■

For further details, please contact:

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divya.thiagarajan@grundfos.com

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Cover: © ZED Lab

WoodenStreet Tier II Expansion Continues: Announces First Store in Chandigarh, Plans to Invest ₹2-3 Cr

WoodenStreet announced its first store in sector 17, the shopping hub of Chandigarh under its Tier-II cities expansion drive. Recently, they inaugurated their first store in Lucknow, and with the next one opening so soon, they have made clear that they are in aggressive expansion mode. The brand aims to invest ₹2-3 Cr in the experience store, as they set their eyes on creating the most influential omnichannel network.

WoodenStreet started its journey in the Tier-II and Tier III cities with a vision to explore the potential of the markets, and so far, the results have been remarkable. All the 20+ cities they have covered till now, including Jaipur, Lucknow, Ahmedabad, Indore, etc. are enjoying the luxurious and cutting edge range of furniture, and the same is anticipated from the Chandigarh store.

The CEO Mr. Lokendra Singh Ranawat said, "WoodenStreet has always thrived to bring quality goods to the reach of a common man, and with this aggressive expansion, we will surely reach homes of all those who look for smooth finishes and elegance in their furniture. Looking at the high demand in online orders, we have extended our products to the city at offline level, and I am sure that this experience store will strengthen the brand value to its core in the region". Located in the renowned sector-17, the Chandigarh store will also serve as a hub for people from nearby cities like Panchkula, Mohali, Patiala, Ambala, and more.■

Shyam Steel ropes in Lovlina Borgohain and Manpreet Singh as Brand Ambassadors

Shyam Steel, one of leading producers and manufacturers of TMT Bars has appointed Olympic medallists Lovlina Borgohain and Manpreet Singh as their brand ambassadors. Aligned with the mission of "Maksad Toh India Ko Banana Hai", these appointments highlight Shyam Steel's philosophy to support the development of overall sports culture and infrastructure, which resonates with the company's larger goal of building India. As a part of the association, Lovlina and Manpreet will be included in Shyam Steel's print and digital campaigns pan India.

Commenting on the association, Mr Lalit Beriwala, Director, Shyam Steel said "We are proud to welcome Lovlina and Manpreet into our Shyam Steel family. Their journeys are epitomes of perseverance, strength and determination, which are also affiliated with our core brand philosophy. We at Shyam Steel are optimistic that their personas will surely create a positive impact on the brand 'Shyam Steel, reinforcing the values that the brand stands for."

Lovlina and Manpreet has enthralled the 1.3 billion Indians through their performance in Tokyo Olympics 2020. Lovlina won the bronze medal in boxing welterweight division, becoming only the third Indian boxer to win a

medal in the Olympics. Manpreet led the Indian Men's Hockey team to a historic bronze medal at the Tokyo Olympics 2020. His exemplified leadership and performance was one of the key reasons India finished in the podium after a long wait of 40 years.

On associating with Shyam Steel, Lovlina Borgohain said "I am happy to join hands with Shyam Steel. This association is a special one and I look forward to a long and fulfilling partnership."

On associating with Shyam Steel, Manpreet Singh said "Thank you Shyam Steel for onboarding me to be part of your family. Through this association I look forward to strengthening the brand values, those the brand represents."

The Company is now on a steady expansion mode braving the disruptions caused by COVID-19 pandemic. The Company, an integral partner of building new India, is committed to meaningfully contribute to the realization of the target of 300 million tonnes steel production by 2030-31. This is in keeping with the National Steel Policy announced by the Government of India towards transforming India into a self-reliant $ 5-trillion economy. ■

Out with the new, in with the recycled

The Upcycled House in Aamby Valley is a proud second home that boasts of an 86% reduction in carbon emissions in comparison to other benchmark homes. This house was finished in a muted colour palette to support the many textures and patterns that arose from employing a heterogeneous material palette that was generated by repurposing leftover materials from other sites.

Text: Sailee Bhandarkar-Correa
Images: Isha Shah
Drawings: KNS Architects

Thin Upcycled House has been finished in a muted colour palette using recycled and upcycled materials.

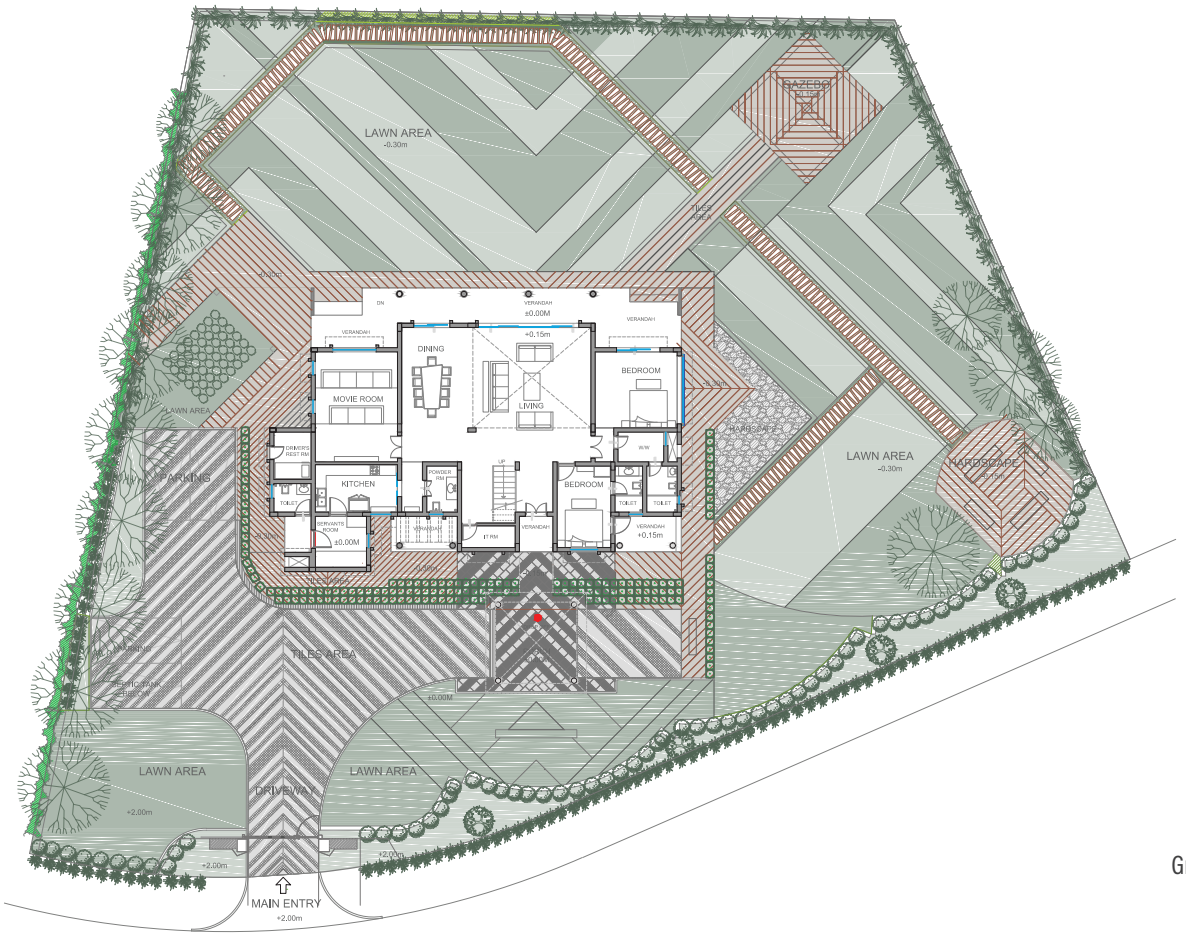
The living room.

Located in the monsoon wonderland of Lonavala, the Upcycled House by KNS Architects is Kanhai Gandhi's ode to the hill station's lush and transcendental environment. The house lies nestled amidst the many estates of Aamby Valley and was rescued from its state of dilapidation by a mindful makeover with a contemporary twist. Renovated as a reputed builder's second home, the owners were keen on repurposing the leftover materials from their other sites and employing the same to furnish this home. At the intersection of these visions, a brief took shape.

The renovation of the Upcycled House was driven by the endeavour of reducing carbon emissions through the use of recycled and upcycled building materials. This ground + 1 structure occupies a quarter of the large plot it stands on while the remaining area has been left open to make room for sprawling green lawns. The ample open space surrounding the house allows for natural light to flood the interior spaces and frames verdant vistas against the muted elevations of the home, from the inside and outside. "We worked constantly on ways

The dining area.

The gazebo.

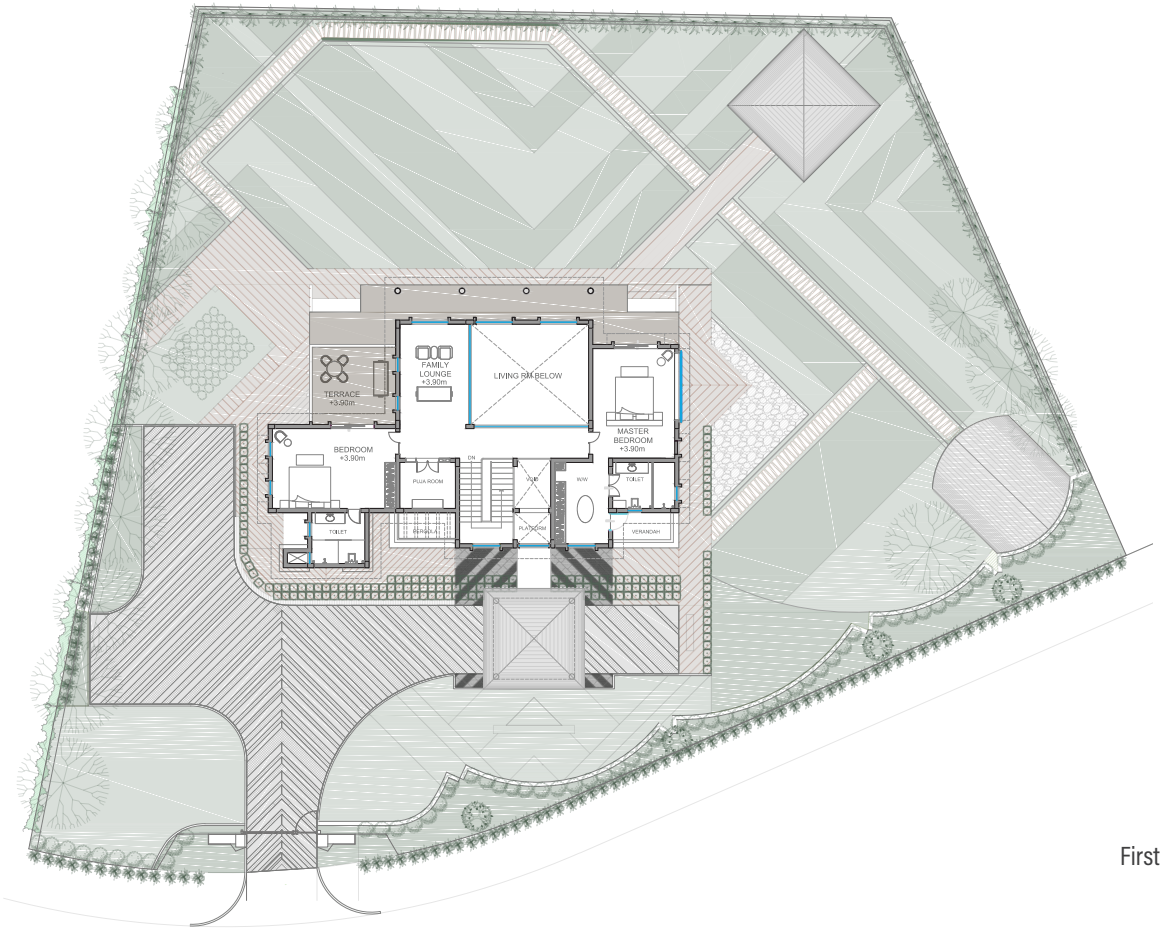


Ground floor plan.

to make the home feel more expansive and create spaces that encourage flow between different zones organically. We were largely able to do that by forging a strong connection between the indoors and outdoors" said Gandhi.

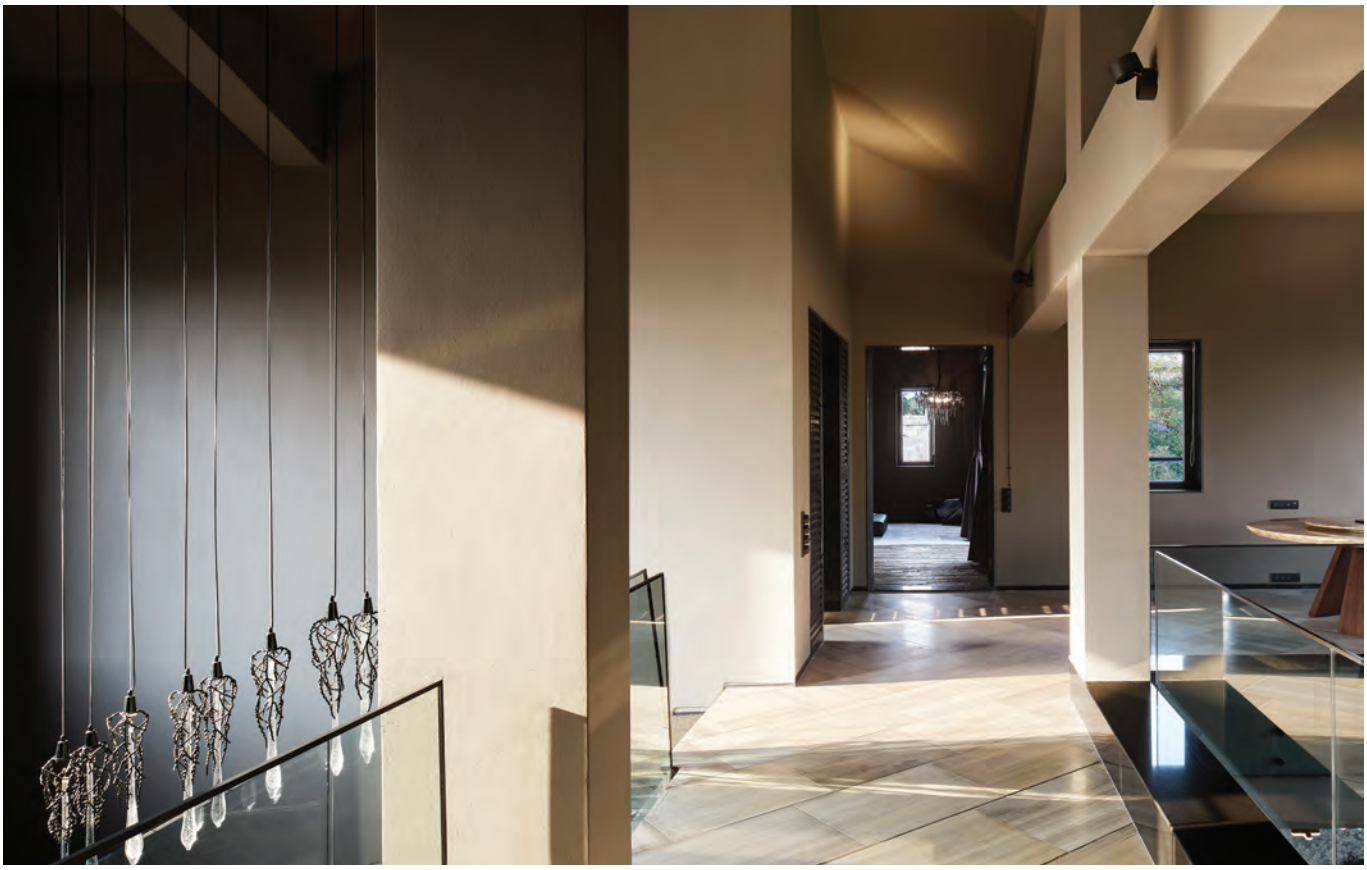
An earthy palette was complemented by pops of colour that were introduced through the upholstery. The entire structure was finished in mushroom grey with a dark black porch to mark the entrance of the house. The concept took birth during Kanhai's first visit to the site. "It was the monsoon season and Aamby is seen with only lush green lawns and trees. The fog accentuated the look, while the clouds moved within the house. That struck an idea to blend the house with the greens. A coalescing house with nature to fuse it well with its surrounding. The greens outside and the earthy tones within created a perfect amalgamation of inside and outside."

The builder had tons of material available from different sites and the challenge was to optimize these efficiently for the house. Every corner of the house is well thought out and designed meticulously.



First floor plan.

Natural light floods the bedroom.



The staircase landing and corridor on the first floor.

Ambient lighting illuminates the staircase.

Sprawling green lawns carpet the site.

In line with the home's rustic and earthy charm, exposed diagonal conduits power minimalistic ambient lighting fixtures across the house. Task lighting has been avoided and the space has been punctuated with chandeliers and faceted ceilings. The lighting for the staircase has been designed to compliment the facets of the house. The chairs and sofas were brought in from the owner's ancestral home and reupholstered with a slight tint of blue and orange to blend in with the overall look. The kitchen counter has been finished in white paver blocks and the residual marble was utilised in the powder room. Finished in flamed granite and recycled grey blocks, the chevron patterned driveway navigates circulation towards the home and further extends towards the parking areas on site.

Modest luxury, clean lines and the use of exquisite materials and artefacts are the key factors that shaped the design of this home. The owners wanted a sense of simplicity and warmth with a touch of elegance and luxury. The Upcycled House is a manifestation of these sentiments without compromising on sustainability and comfort. ■

FACT FILE

Project name	:	The Upcycled House
Project location	:	Aamby Valley, Maharashtra, India
Architect's Firm	:	KNS Architects
Principal Architect	:	Kanhai Gandhi
Project Team	:	Kanhai Gandhi
Total Site Area	:	20,000 Sq. Ft
Total Built-up Area	:	5,000 Sq. Ft.
Year of Completion	:	2019

Parametric proficiencies

The girls' hostel block at the St. Andrews Institute of Technology and Management, Gurugram by Delhi-based ZED Lab, explores the intersection of education and sustainability through the lens of the vernacular. The hostel's design is a stellar example of zero energy design and offers students an atypical and vibrant environment.

Text: Sailee Bhandarkar-Correa
Images: Noughts and Crosses | Andre J. Fanthome
Drawings: ZED Lab

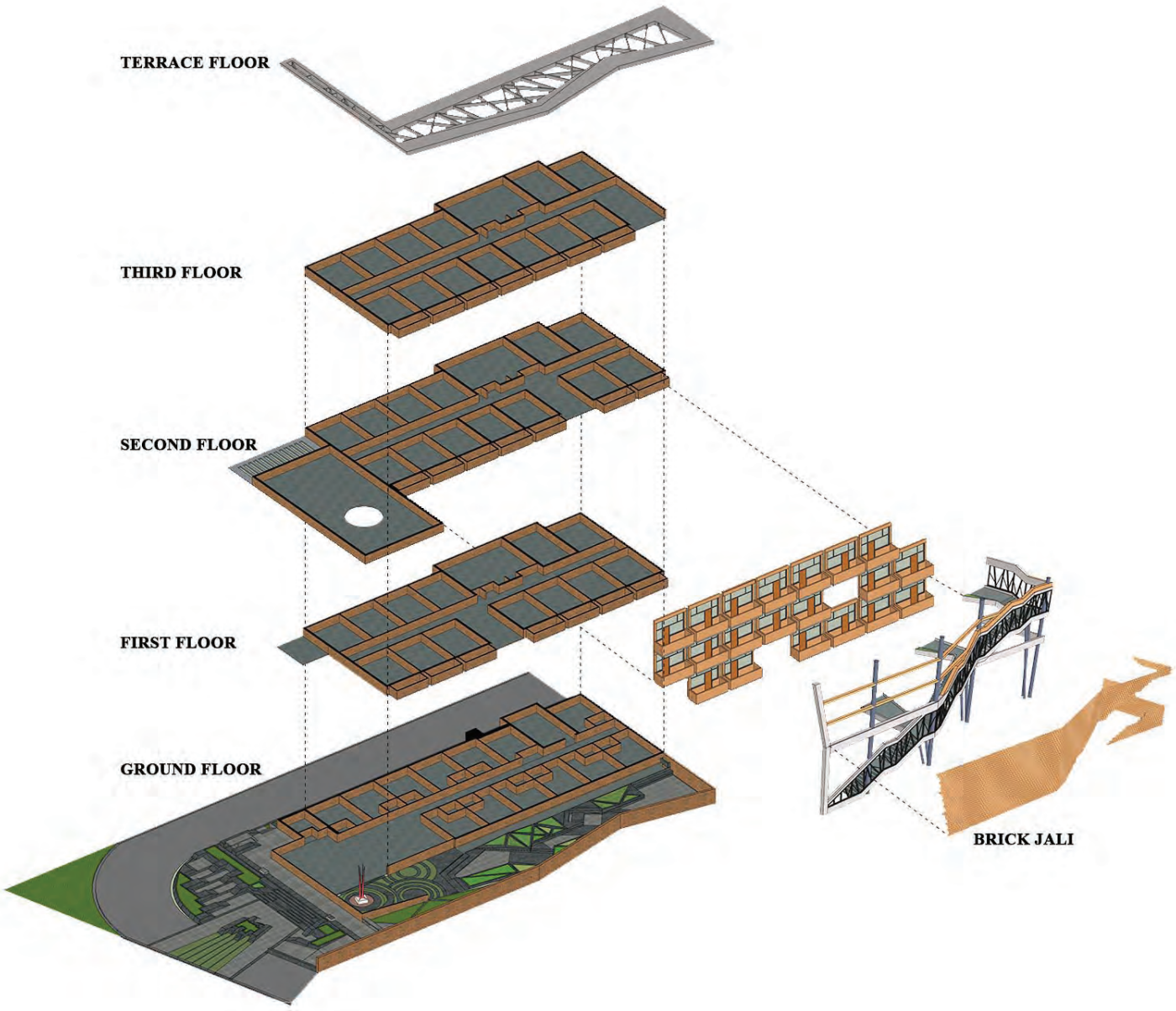
The southern façade as seen from the St. Andrews boys hostel.

The main entrance to the hostel along the western façade.

The girls' hostel block at the St. Andrews Institute of Technology and Management, Gurugram offers an efficient and effervescent solution for a student housing block that exemplifies sustainable living. The hostel is home to over 130 students and has dormitory style rooms spread across four levels. The facility also houses a pantry, several types of recreational areas as well as social spaces. The ground floor comprises twelve double-occupancy rooms along with a double-height reception, the pantry and an indoor activity lounge where students can organize gatherings and social events.

The primary design challenge was to create a secure hub for the girls — a campus within a campus that fits into the urban master plan where the indoors seamlessly connected with the outdoors. The layout has been designed to ensure uninterrupted physical and visual connectivity across different levels of the building that helps to establish a

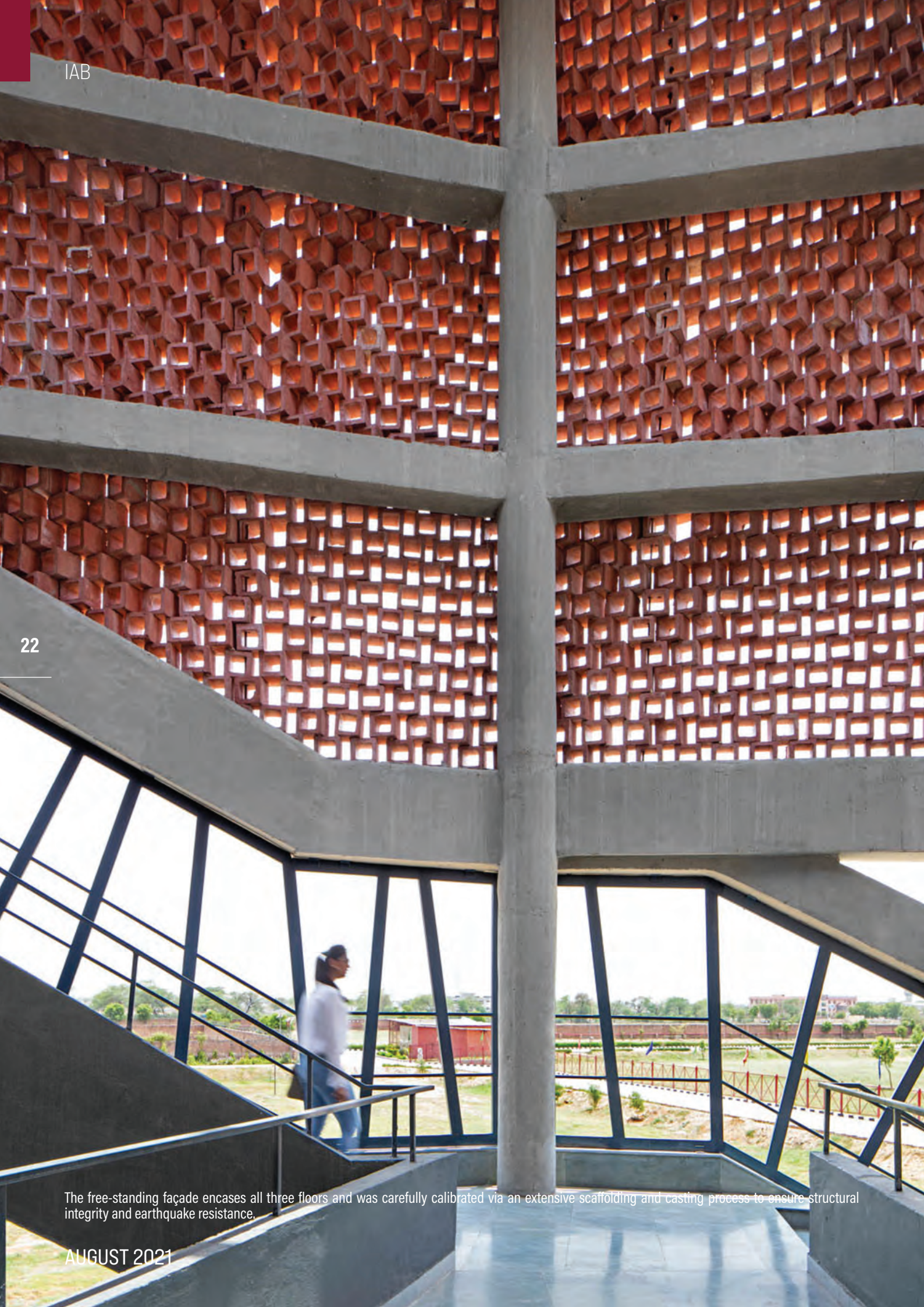
The façade and the staircase are connected to the rest of the building via bridges that overlook the atrium.



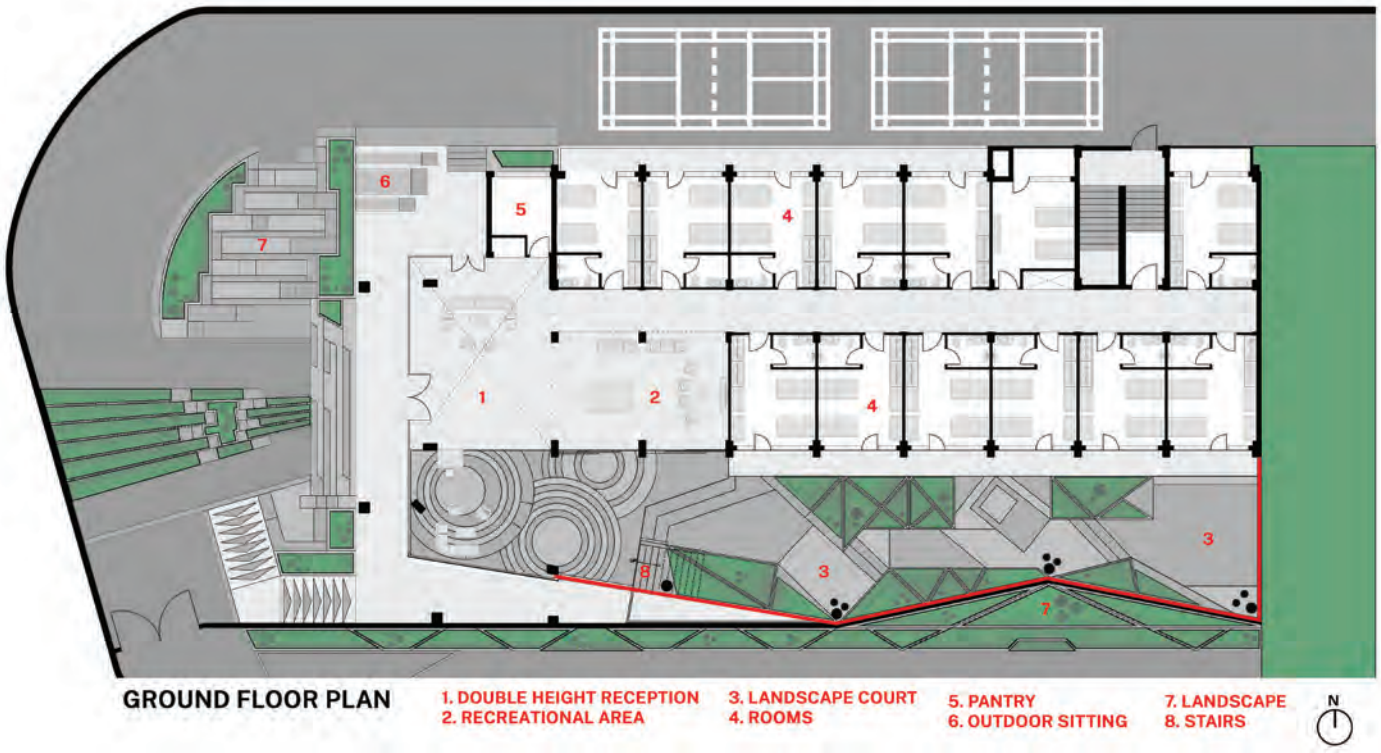
The activity lounge on the ground floor is placed next to the landscaped court and the adjacent internal landscaped court features dense plantation to reduce heat gain through evaporative cooling.

safe environment and facilitate unrestricted social interactions and activities. Moreover, the west-facing entrance foyer and lobby are designed as landscaped outdoor spill-outs of the pantry to encourage students to enjoy their evenings outside.

In line with all of ZED Lab's projects, the design for this hostel too was driven by the zest to craft an economically viable building system that had been optimized for energy savings. The design seeks to reinterpret conventional standards of human comfort through introducing the idea of adaptive comfort — the principle that people experience differently and adapt, up to a certain extent, to a variety of indoor conditions, depending on their clothing, their activity and general physical condition.



The free-standing façade encases all three floors and was carefully calibrated via an extensive scaffolding and casting process to ensure structural integrity and earthquake resistance.



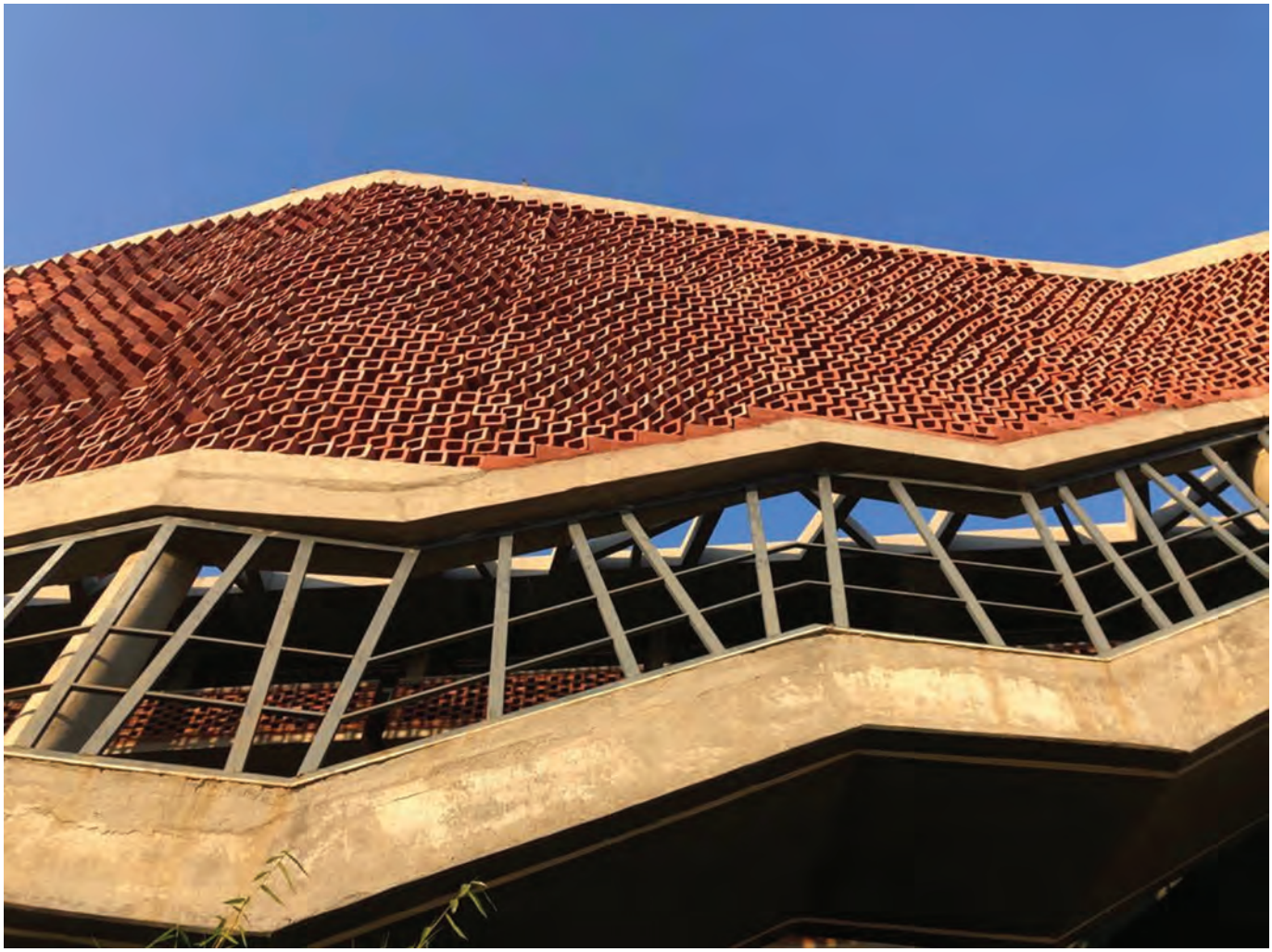
Each space is conceptualized as an intimate environment that prioritizes both, functionality and human comfort.

The second-floor terrace along the building's west façade serves as an all-day space to congregate during winters.

The southern façade welcomes natural light and ventilation.

The building unfolds as a series of multidimensional spaces, arranged in a hierarchical order through the method of layering. As students move from the interiors of the building into the open, they experience distinct transitions in varying thermal environments.

The subsequent transitional zone at the heart of the building is a staircase that has been aesthetically carved into the southern façade of the hostel. It burgeons into the social nucleus that is home to all activities and is flanked by bridge-like circulation spaces that open up into lounges and pause points. The eye-catching elevation of the hostel has been designed as a semi-permeable façade and shading device that helps to regulate temperatures between the exterior and interior environments via a controlled airflow. The parametric screen takes cues from the previously developed façade that spanned the adjacent boys' hostel within the institute. The building's materialization in concrete and brickwork



The parametric brick jaali.

binds the different floors together. The columns are round in shape to enhance visual appearance as well as physicality. Moreover, instead of employing singular columns, the sheer mass is broken down into three columns, in a tripod-like configuration, to provide better structural stability as opposed to a vertical support. The pergola on the roof is designed using cement board and steel beams to achieve lightweight construction and optimum design quality.

The elevation of the boys' hostel was constructed using custom-manufactured bricks laid at an angle to minimise heat gain and solar radiation through the façade while ensuring sufficient ventilation. However, for the girls' hostel, the façade screens have been constructed using 8" thick, brick-red coloured, hollow pigmented concrete blocks that yield better results due to their increased depth. Not only do they provide adequate thermal mass to absorb the heat, but also significantly reduce solar glare in

The staircase cuts across the southern façade of the hostel.

The girls' hostel (left) takes cues from the adjacent boys' hostel (right) and is articulated in brick and fair-faced concrete, with exposed structural members abutting the structure along all sides.

The northern façade.

the internal areas. Between the parametric external façade and the internal skin of the spaces, the building houses key areas of the hostel experience that include shaded balconies, open courts, terraces and other breakout spaces.

Landscape design elements enrich these semi-open spaces by introducing greenery through planters that have been built with seating along their profiles. Shaded courtyards host a diverse planting palette that requires less exposure to the sun whereas the peripheral areas have been lined with bamboo screens. Clear lands surrounding the hostel have been finished in pervious materials to facilitate ground water percolation and have also been planted with champa trees in the hope of nurturing large green canopies in the near future. Blackwater generated on site is directed to the sewage treatment plant and is reused for horticulture purposes.

The daytime indoor environment along the northern façade.

The girls' hostel building is a masterful example of sustainability through its energy efficient design. The double-skin facade acts as thermal mass reducing the incident direct and diffused radiations by 70% on the principal façade and also minimizing heat gain within the habitable spaces behind the block wall. This also further reduced the mechanical cooling loads by 35%, a marked increment from the ECBC (Energy Conservation Building Code) base case for public buildings. ■

FACT FILE

Typology	:	Commercial design / Housing – Hostel
Project Name	:	St. Andrews Institute of Technology and Management – Girls Hostel Block
Project Location	:	Gurugram, Haryana
Architect's Firm	:	Zero Energy Design Lab / ZED Lab
Principal Architect	:	Sachin and Payal Rastogi
Project Team	:	Rohan Mishra, Naveen Pahal, Shivangi Banerjee
Built-up Area	:	25,000 Sq. Ft.
Year of Completion	:	2020

Inching towards literacy

The BookWorm Pavilion in the gardens of the Chhatrapati Shivaji Maharaj Vastu Sangrahalaya (CSMVS) Museum, Mumbai is studio Nudes' response to the United Nations' Sustainable Development Goal that advocates completely free, equitable and quality primary and secondary education for all youth by 2030. This meandering structure was built using several permutations of a ladder constructed in recycled plywood and presents an enjoyable and offbeat invitation to all.

Text: Sailee Bhandarkar-Correa
Images: Sameer Chawda
Drawings: Nudes

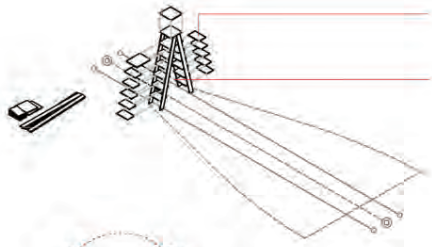
The BookWorm Pavilion by Nudes holds over 12,000 books.

3,600 modular pre-fabricated components were used to construct the 'worms.'

The BookWorm Pavilion by the parametric architecture maverick Nuru Karim, and his firm Nudes, is a deployable formation that meanders its way across the gardens of the CSMVS Museum, Mumbai. The structures measure over 35 metres in length and have been constructed using approximately 3,600 modular, pre-fabricated components that collectively house over 12,000 books and numerous seating spaces for readers.

The pavilion boasts of a low carbon footprint and promotes sustainable building technologies that can be channelized towards creating stimulating and non-invasive public spaces that are accessible to all.

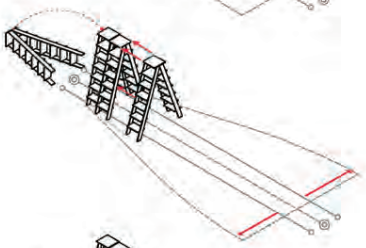
The pavilion has been designed with the ladder as its base element that has been repeated in various configurations to



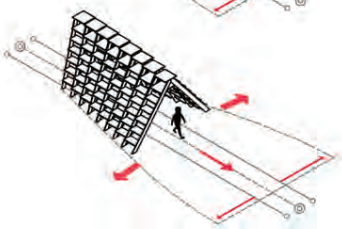
The steps of the acts like shelves where books can be kept.

The ladder opens up to create the entrance to the interior usable space.

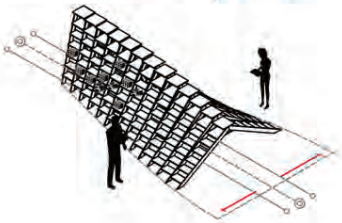
The skin itself forms the framework for construction.



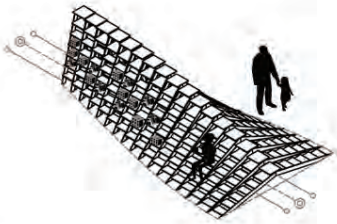
Assembly process



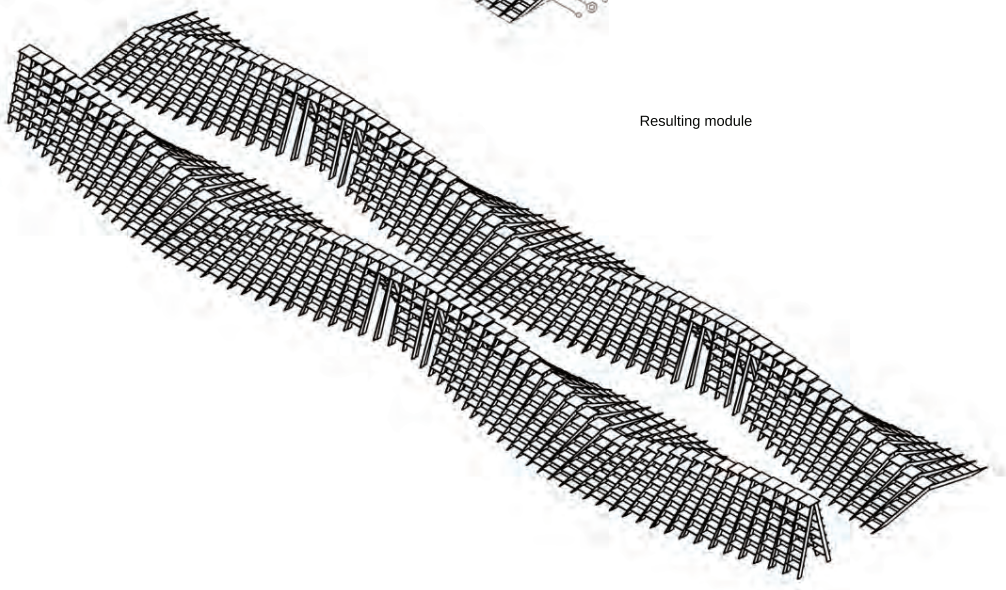
Array and component assembly



Usable space inside and outside

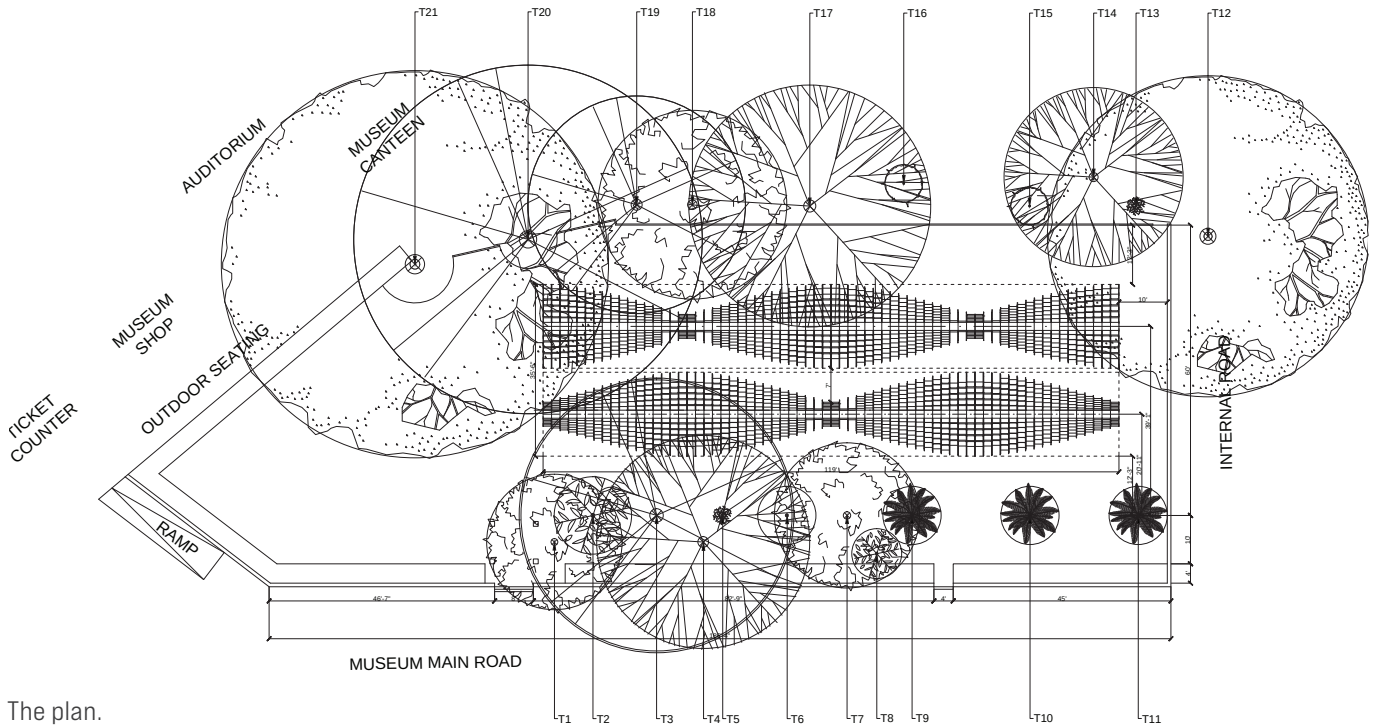


The tread provide space to keep the books as well as it provides space to sit.

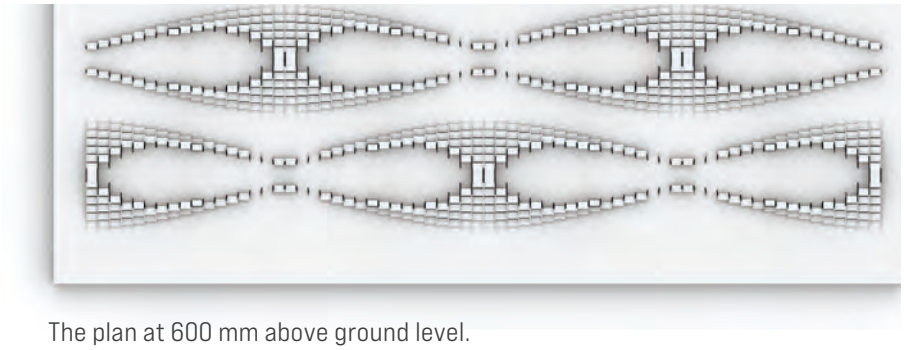


Resulting module

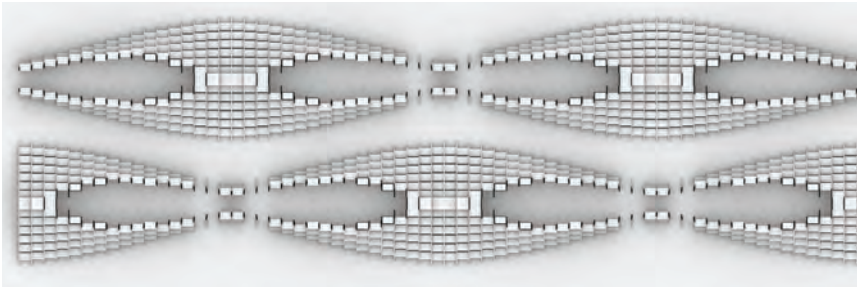
The design articulation.



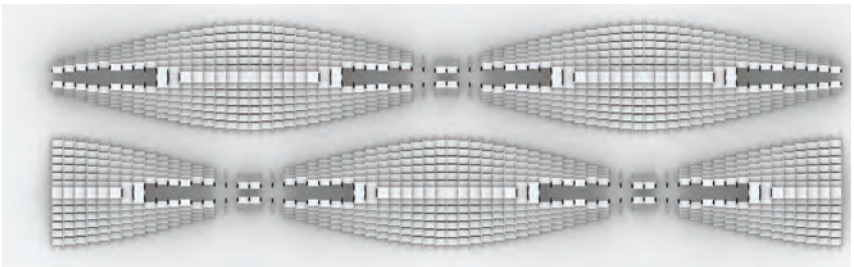
The plan.



The plan at 600 mm above ground level.



The plan at 900 mm above ground level.



The plan at 1700 mm above ground level.

The pavilion offers a mix of informal and interactive spaces for all to claim.

achieve this form. Given the nature of the base element, this structure creates a range of spaces that offer varying experiences inside, outside and along its profile. The pavilion comprises of two such 'worms' that have been crafted in this manner and were installed on-site within a week.

The Sustainable Development Goals call for 'all youth, and a substantial proportion of adults, both men and women, to achieve literacy and numeracy by 2030. According to the United Nations, approximately 750 million people over the age of 15 still lack basic reading and writing skills, two-thirds of these are women, with female literacy improving by just 1% since 2000. Of these, sub-Saharan Africa and South Asian have the lowest literacy rates and the most marginalized communities that are least likely to be able to read and do solve basic maths.

In this scenario, the BookWorm Pavilion aims to foster a sense of learning through the creation of an informal and interactive learning space. Most libraries and institutional insitutional spaces are often intimidating for children and the aim here was to create a book landscape of sorts

The trees in the garden offer shaded spots for seating.

which invites children and interested individuals of all age groups to explore and learn simultaneously. As expressed by the Studio, "We wanted to make reading a fun activity and encourage children to pick up books and read, irrespective of the language. The pavilion worms through the landscape to offer a unique browsing experience along a meandering pathway. We are hoping that the 'BookWorm' travels across the country in both rural and urban areas, spreading the message of empowerment through education." ■

FACT FILE

Typology	:	Pavilion
Project name	:	BookWorm Pavilion
Project location	:	Chhatrapati Shivaji Maharaj Vastu Sangrahalaya (CSMVS), Mumbai, India
Architect's Firm	:	Nudes
Principal Architect	:	Nuru Karim
Project Team	:	Nuru Karim, Dhruval Shah, Aditya Jain, Salai V, A Aravind, Supriya Dubey
Total Built-up Area	:	4,800 Sq. Ft.
Year of Completion	:	2019

A fortress reimagined

The Gadi House by PMA Madhushala is a modern-day fortress that presents an ingenious amalgamation of traditional designing and construction techniques brought to fruition by local craftsmanship. This crown like structure, with its undulating composite façade, is not only able to withstand extreme climatic conditions but also helps to maximise natural light and ventilation and resist seismic forces.

Text: Sailee Bhandarkar-Correa
Images: Hemant Patil
Drawings: PMA Madhushala

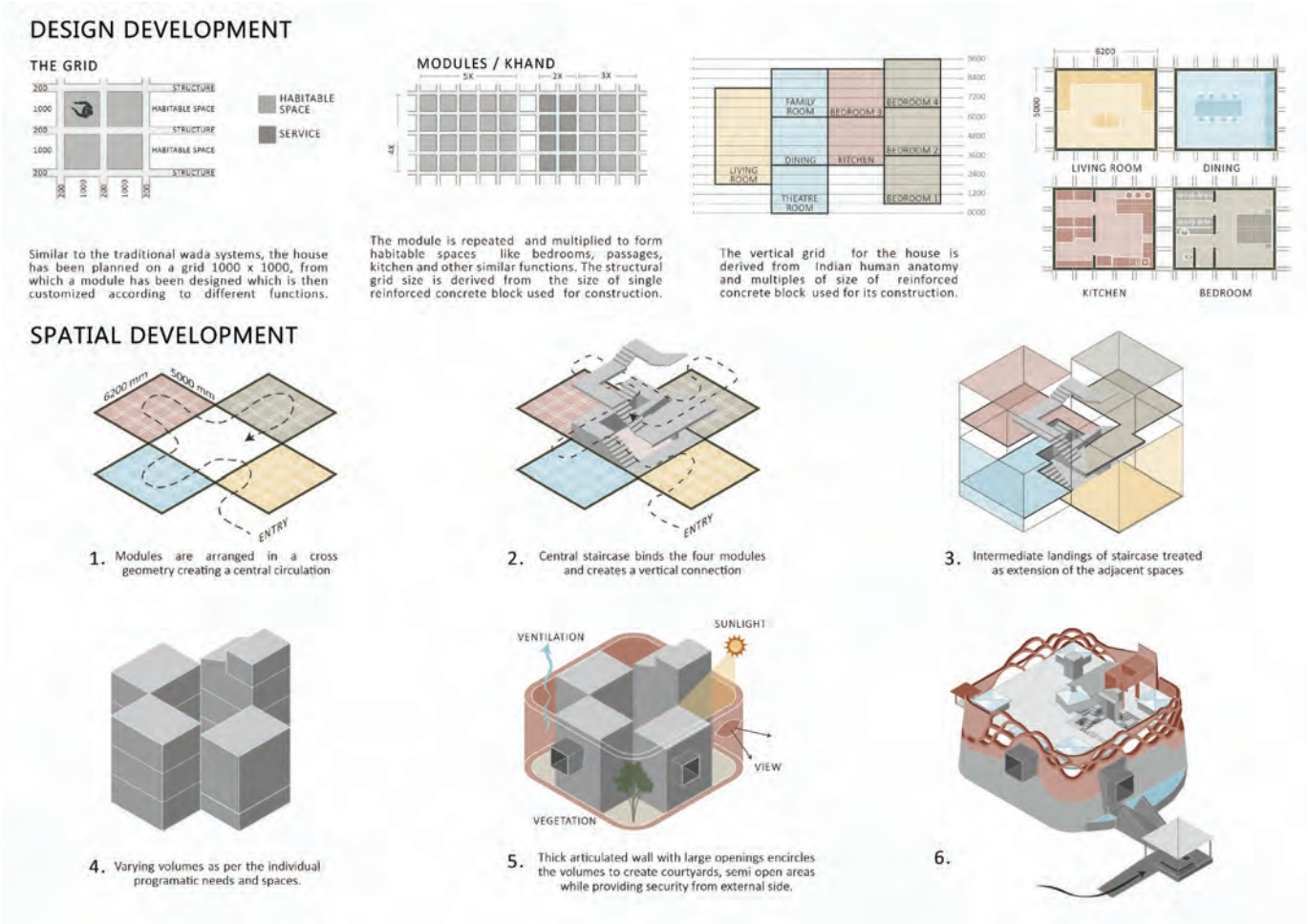
The Gadi House stands on an ancestral plot of land in Talegaon, Maharashtra.

A large fenestration stands out like a jewel in the crown-like structure.

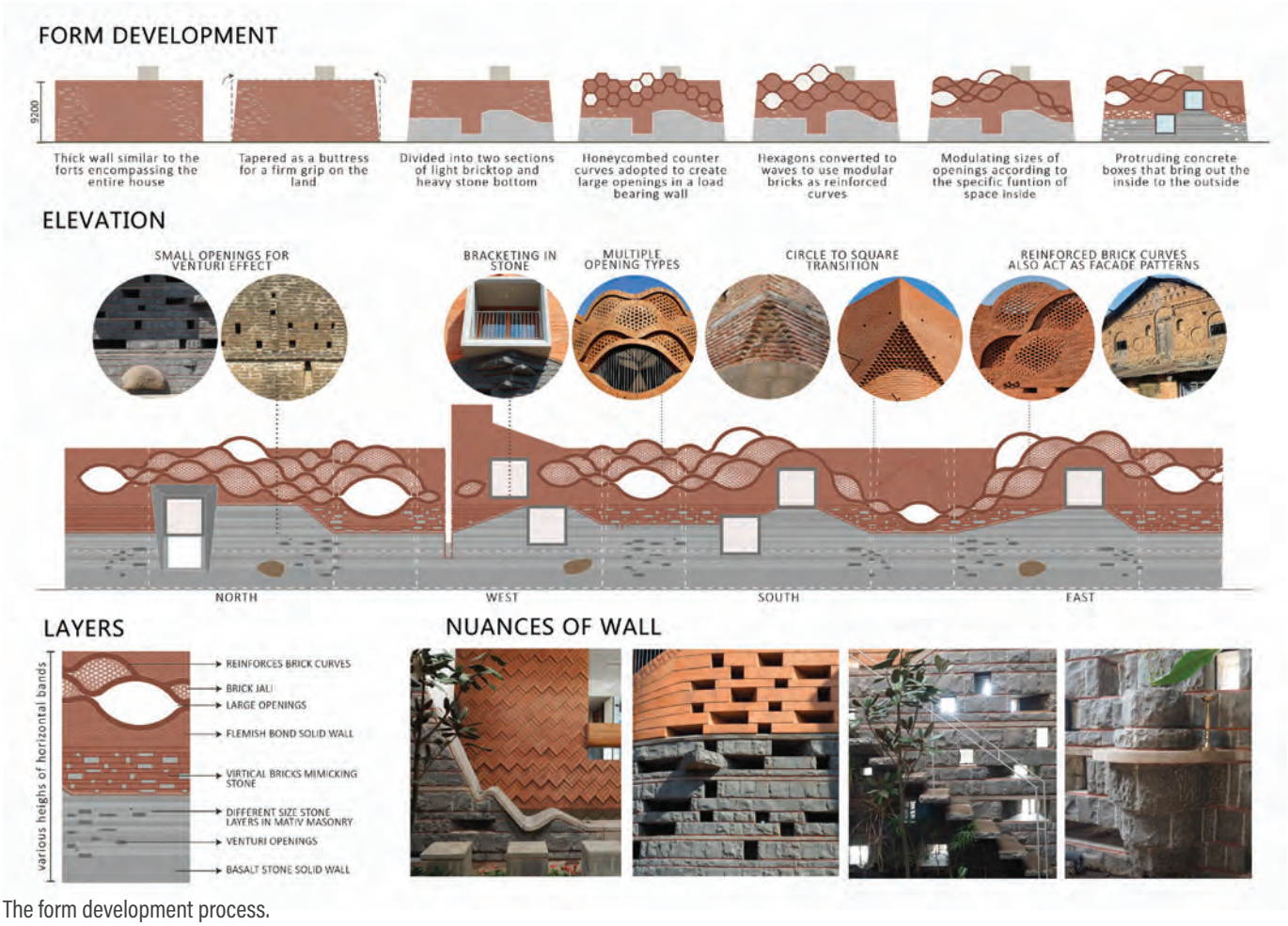
Built as a regal abode for a family of Maratha sardars, the Gadi House in Talegaon, Maharahstra, is a new age *wada* that draws influences from contemporary lifestyles and traditional architecture. This composite structure comprises thick walls built using stone and brick, internal courts, balconies and common areas that create an interesting hierarchy of open, semi open and enclosed spaces. The home stands near the entrance of its 1.2-acre ancestral plot and envelops the peripheral courts that binds them into the spatial experience of the residence as a whole.

While the external load-bearing wall offers structural stability, the internal frame has been built using reinforced concrete blocks to avoid offsets from slabs and walls thus creating a homogenous and clean interior. While the external load-bearing wall offers structural stability, the internal frame has been built using reinforced concrete blocks to avoid offsets from slabs and walls thus

The undulating façade partially encloses 4 types of courtyards around the periphery of the house.



The design development process.

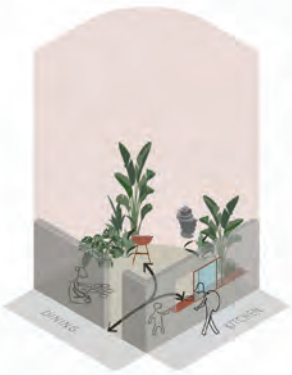


The form development process.

The site plan.

OSARI COURT

This court is the outermost part of the house. It acts like a greeting area for outsiders and the main public zone of the residence. The entrance has stone steps leading to a macchan which overlooks to the main entry gate accompanied by a small sitting platform for fun,leisure activities. It also houses a small water body along a stone wall draped down as a seating.



TULSI COURT

Essentially designed, between kitchen, dining & puja room, having a tulsi plant, for typical household chores like drying of chips, pickles,etc. The kitchen opens to the court and connects to the dining creating a flow of activities. It also consists of an outdoor chulha for eating out in the sun in winters.

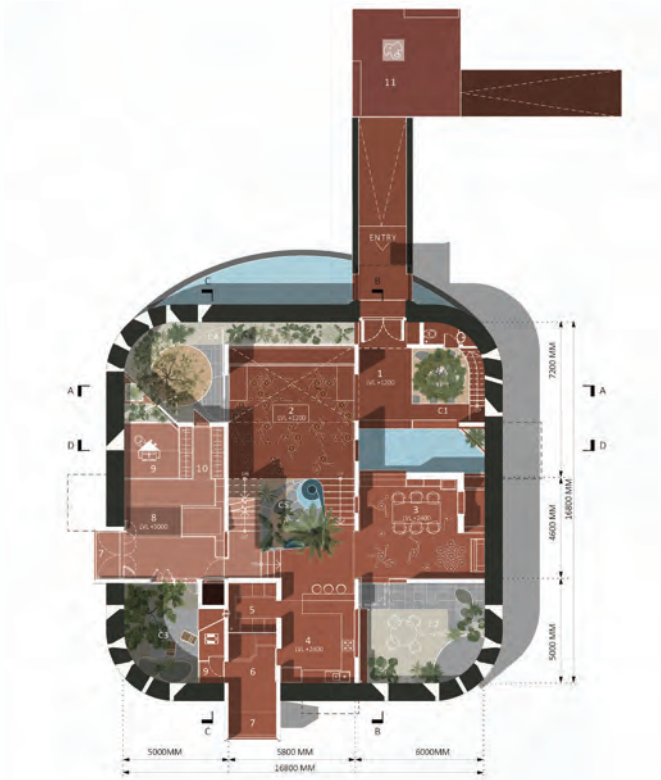
WIND COURT 1

The court provides light and ventilation for the bedroom toilets. It also acts as an open extension to the living room. The toilet windows are angular to obstruct internal view while providing privacy.

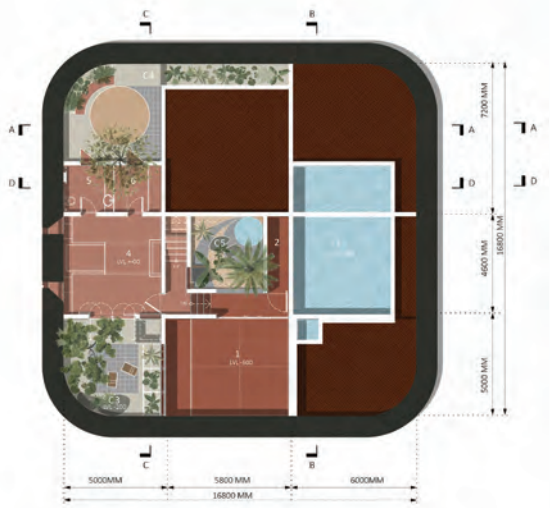
WIND COURT 2

The Court is physically connected to Parent's bedroom as a spillover area for daily activities. The court is an enclosure and protects the bedroom's exterior from harsh weather and provides security. It is visually open through other bedrooms which develops chance interactions.

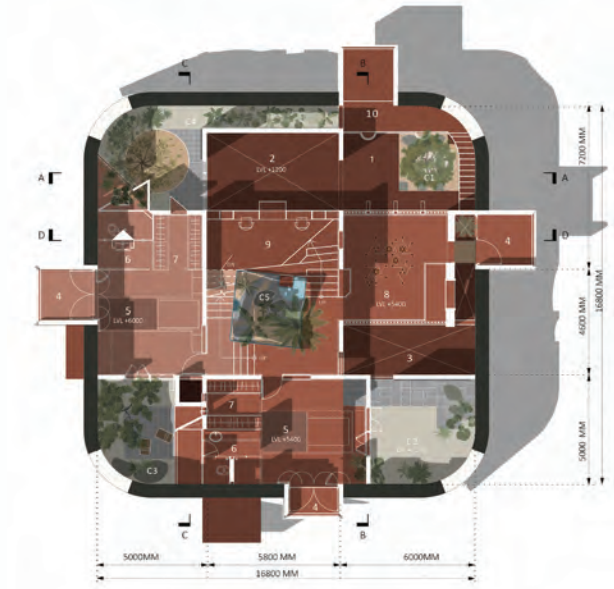
The 4 courts on 4 corners of the house.



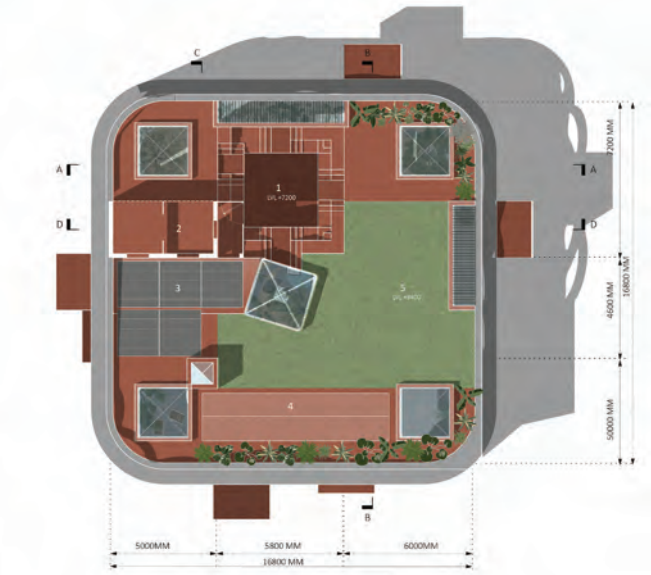
The ground floor plan.



The basement plan.



The first floor plan.



The terrace floor plan.

A section across the Osari and wind courts.

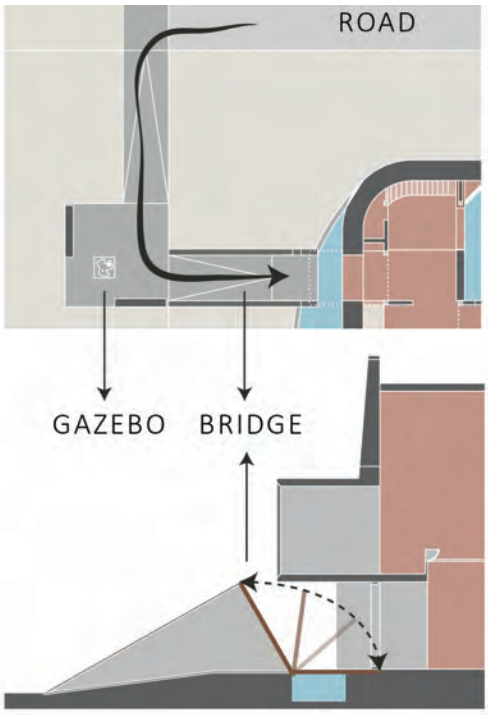
A section across the Osari and Tulsi court.

The Osari Court.

View from the Osari Court looking into the living room.

The living room.

The Family Room.

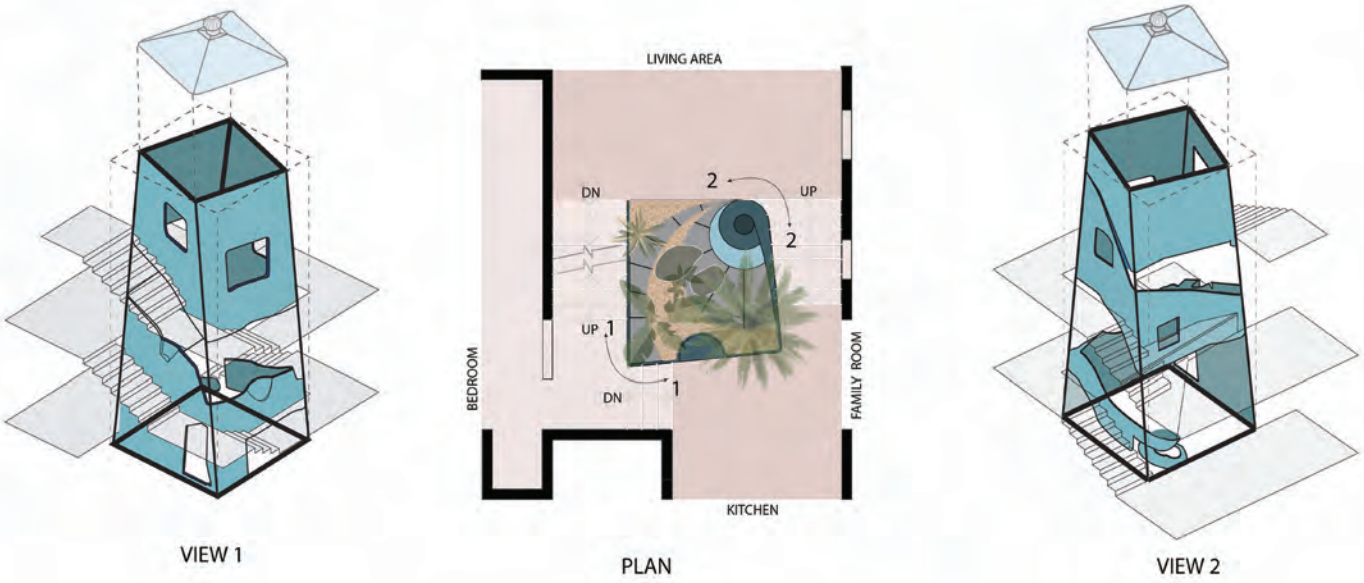


The entrance to the house is via a bridge above a moat.

ENTRANCE

The entrance has been interpreted as one in the forts. After moving along the thick external wall of the house when one reaches the end, they are taken from a ramp to a gate which is separated by a water body to safegaurd the house in the far lands. This gate folds from the vertical edge and drops down to create a passage bridge over the water body.

A suspended ramp acts as the main entrance to the house.



The Brahma Court.

The Brahma Court as seen from the living room (left) and the kitchen (right).

Stone carved seating at the Osari Court.

creating a homogenous and clean interior. Intermediate steps and staircases have been designed using the 'Ferrogami' method that helps to reduce the overall weight of these elements on the main structure. The internal partitions have been constructed using lightweight wood and stone and all internal walls have been finished with traditional lime stucco that generates visual seamlessness across spaces and amplifies these distinctive volumes. A wind tower at the heart of the plan allows for natural ventilation and acts as a light well illuminating the core of the home.

The name and form of the house originates from the idea of a *'gadi'* (meaning throne or seat of an eminent person in Marathi) that typically comprises a thick wall made from stone and brick that securely encompasses all the spaces that together form the entire house. In the search of timelessness, the

The Kund on the terrace.

house is equipped with passive systems that maintain suitable living conditions inside the house while minimizing energy usage. The building runs on energy derived from sloping photovoltaic solar panels located in the parking shed and on the roof along with a rainwater harvesting system, a sewage treatment and an ample kitchen garden that caters to the daily victuals of the family. ■

FACT FILE

Typology	:	Private Residence
Project name	:	Gadi House
Project location	:	Talegaon Dhabade, Maharashtra, India
Architect's Firm	:	PMA Madhushala
Principal Architect	:	Prasanna Morey
Project Team	:	Naresh Shivakoti, Darshan, Divya Jyoti, Prasanna Morey
Structural Designer	:	Subduction Zone Consultants
Total Site Area	:	48, 440 Sq. Ft.
Total Built-up Area	:	7,000 Sq. Ft.
Year of Completion	:	2020

Shedding the energy load

Stonex India's Administrative and Industrial Complex in Kishangarh, Rajasthan marks a monumental shift in the prevalent factory and industrial shed landscape in India. Contrary to most premises of this nature and purpose, the Stonex factory has been designed as a native production house, geared for excellence and innovation with careful attention to the work environment of teams across all verticals.

Text: Urbanscape Architects
Edited by: Sailee Bhandarkar-Correa
Images: Noughts And Crosses
Drawings: Urbanscape Architects

Stonex India's Administrative and Industrial Complex.

The roof of the office building extends as a green overhang across the driveway.

With craftsmen and employee wellness at the heart of its design philosophy, Stonex India's Industrial and Administrative Complex by Urbanscape Architects draws inspirations from the region's Sompura temples and adorns a well balanced mix of clean façades and stone buttresses. The elevations manifest a geometric union of rustic materials and prefabricated elements that have been employed to create a well-oiled machine which utilises minimum resources and replenishes the ground it stands on. The entire complex has been designed to ensure optimum utilization of built-up areas, ease of operations, a vibrant work environment and ease of maintenance. Apart from fostering an environment of high-productivity, Stonex India offers a dynamic workplace environment and gives back responsibly to the surroundings via its sustainable and green practices.

The façade of the industrial shed is a geometric union between prefabricated corrugated white metal flutters and regional stone buttresses.

The screen across the façade pro

ovides shading against strong solar glare.

The site has been planned to leverage natural ventilation along the east-west axis and to welcome the northern light that feeds the solar panels along the entire roof of the factory building. Vehicular access on premises has been limited to one side of the site perimeter to curtail the pollution on site and retain efficient circulation within the premises.

A puff panel sandwiched between two laminan panels makes for the skin of the office building that further insulates the interior spaces of the built form. Stone waste generated from the factory and a neighbouring quarry has been fashioned into a complementary façade that encases the building on all sides. This screen not only offers a playful twist to the elevations but also provides shading from solar glare.

Special attention was paid to the existing natural environment around the office building. The linear form was developed with careful considerations of the existing trees in that area and irregularly shaped courtyards were carved out to preserve roots of these trees below ground level. The clear ground surrounding the building had been strategically punctured to create sunken courtyards and an amphitheatre within the earth-cooled lower floor. The roof of the office building extended across the pathway to create a green canopy that that merged into the landscape on the opposite side and helped to keep the building cool.

The geometric facade of the office building.

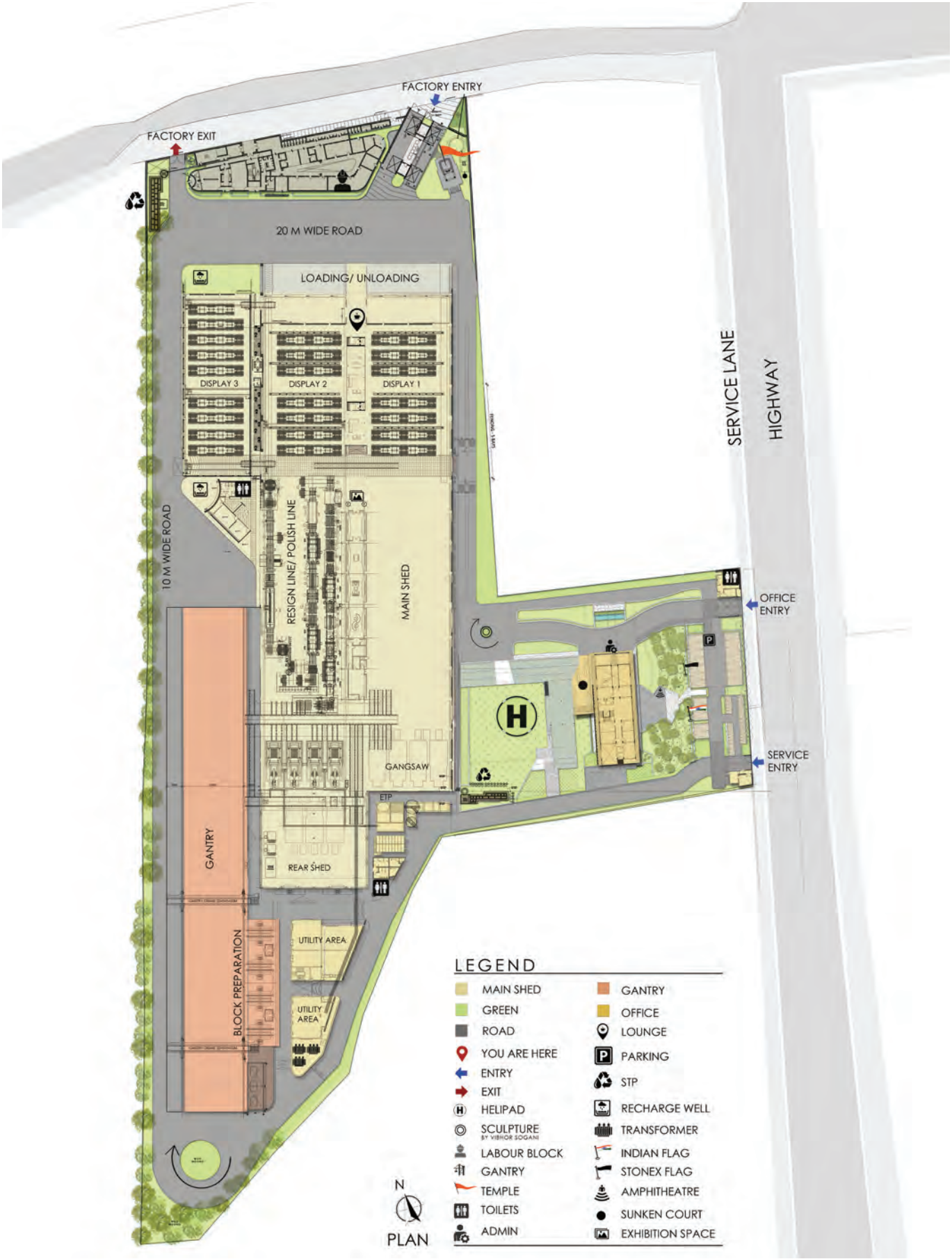
The parking area near the office building.

The processing plant and display areas have been insulated using local rubble walls of 550mm thickness along the east facade and insulated Galvalume sheets in the triangular flutters with a blank facade towards the west. Glazing and louvers at the lower level help the viewer connect visually with the landscaped surroundings while the louvers and glazing along the north develop a wind draft to release hot air inside and bring north light inside. While the local rubble masonry facilitates the passive design in order to optimize the climatic conditions, there is also an intent to involve the local masons, and empower the craft and the craftsmen.

Adhering to exigencies of site and logistically sound planning, the

manufacturing block demands uniform lighting throughout the day, with no exposure to direct sunlight. With this in mind, the orientation is strategically exploited, along the east-west corridor, by incorporating complementary systems. North light trusses are introduced to penetrate the complete volume, sloping at a suitable angle of 23 degrees towards the south, providing for ample surface for photovoltaic panels and the resulting solar roof of almost 1MW (sufficient enough to fulfil the power requirements of the factory). Long concrete gutters have been planned to avoid water leakage and facilitate maintenance instead.

Functionality drives the design; the linear production process is used as a design



The master site plan.

An aerial view of the complex.

determinant to avoid the workers being forced to do manual lifting, prone to accidents, which is otherwise a common process. Two people can therefore, bring in a 25-tonne block from one end, process it, display it, and dispatch it on their own. Architecture has opted to campaign human life; by forcing better working conditions, physical and emotional well-being, creating comfort and thereby ensuring better communities and a richer built environment.

When looked at from afar, the prefabricated white metal flutters give the entire structure a buoyant profile while the stone buttresses make the building appear grounded at a more proximal viewing. The sides facing east and west are mostly blank, barring the small windows that connect the occupants with the surroundings. The windows also create a wind draft across the height of the shed expelled through the ventilators along the north light trusses therefore avoiding hot pockets at the top and effectively cooling the building by about 10-12 degrees. The building is designed such that the spaces are used judiciously, allowing the softscape to thrive. Other sustainable measures include the use of bio-STPs that recycle waste water and use it for landscaping and flushing toilets, 100% rainwater harvesting that keeps the groundwater table recharged and softscaping inside that aids the creation of shaded areas to create a microclimate and keep overall temperatures of the facility low.

The interior space of the shed.

The composite façade of the shed.

The interior space of the shed.

The orientation and design of the building facilitates climate responsiveness. The hot and dry climate of Rajasthan is combated by the partly sunk mass, staying cool during summers and warm during winters. This is achieved by the natural phenomena of earth berming and earth coupling. The temperatures indoors are regulated with the help of radiant cooling, allowing for a 60% efficiency in the running cost of the building. Also, this has led to HVAC load cutting by almost 40%. The floor slabs are additionally radiant cooled to regulate temperatures.

The design in entirety stands as a testament to the ethos of Stonex – strength and perfection, through their state-of-the-art products and technology while adhering to the brand's humble and rooted approach towards its processes, conceived as an unassuming and environmentally perceptive complex. ■

FACT FILE

Project name	:	Stonex India
Project location	:	Kishangarh, Rajasthan, India
Architect's Firm	:	Urbanscape Architects
Principal Architect	:	Dinesh Panwar, Ajay Bhardwaj
Project Team	:	Prasanjeet, Anuj, Gunjan, Prachi
Structural Consultant	:	P. Arora & Associates Pvt. Ltd.
Total Site Area	:	10 Acres
Total Built-up Area	:	2,15,280 Sq. Ft.
Year of Completion	:	2019

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