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ISSUE 10 JULY–AUG 2015

antarya

COVER STORY

ROOFED TO IMPRESS

INDUSTRY FEATURE

ROOF IT WITH COELHO DA SILVA

MASTER STROKES

B S MURTHY

IIID BANGALORE REGIONAL CHAPTER

INSTITUTE OF INDIAN INTERIOR DESIGNERS
Bangalore Regional Chapter

Gayathri Shetty
Chairperson IIID BRC, 2014 – 16
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CHAIRPERSON'S FOREWORD

Dear IIID Bangalore Chapter members,

Interesting events were hosted over the last couple of months with scintillating presentations by Made Wijaya on landscape design and Madhu Rani on art conservation. While Wijaya gave us an interesting insight into design perspectives from an allied field of landscape design, Rani's presentation on art restoration was an eye opener in valuing our heritage, the laborious process of restoring it. Plenty certainly requires to be done in creating awareness to ensure the art in our ancient temples and traditional buildings are not defiled. The industry has to take responsibility to own this heritage and conserve it.

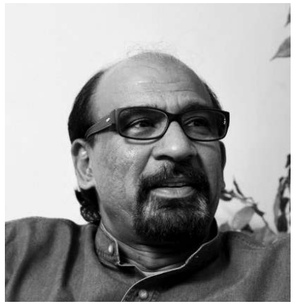
We also had an exciting presentation by Toncelli Cucine of new age kitchens finished in natural materials. We look forward to seeing you all at the forthcoming event featuring Kerry Hill's work in the month of September. A design festival is planned for the month of November by BRC which has the potential to grow into a full-fledged festival in the years to come!

Gayathri Shetty

IIID BANGALORE REGIONAL CHAPTER

IIID Bangalore Regional Chapter Emblem

The letter form B and its mirrored version together form this symbol. The idea is inspired by the forms of Rangoli. Bangalore as a city is a unique combination of the traditional and the contemporary. This coexistence of dual cultures is iconic of Bangalore as it is present in arts/architecture and the general landscape of the city and its culture. Using Rangoli (Traditional) as the basis, we have created letter form B (Modern) and reflected this form to enclose the space in between (Interiors). The colour palette is also representative of the traditional and modern.



Dinesh Verma
Managing Editor
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EDITOR'S NOTE

A roof on our head – a basic requirement for every living person, a shield that protects humanity when nature decides to turn harsh; be it from the sun, rain, the heat, cold or wild animals. It is the right of every human being to have a roof to retire to, to rest and rejuvenate.

Today roofs have become an important and integral part of design, whether it is a low or a high rise, with the forms getting more interesting. This issue dedicated to roofs, tries to get the best of the latest materials available in the segment.

The team of Antarya has striven hard to maintain the quality of written content and the graphic presentation. Our unstinted efforts have brought in tremendous applause from our fraternity. We look forward to future issues dedicated to materials like manufactured wood, natural stone and combined technology.

Do keep posting articles and suggestions. Remember, Antarya is your magazine and we need your participation to make it even better.

Dinesh Verma

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British Museum's inner courtyard is the largest covered public square in Europe. It is a two-acre space enclosed by a spectacular glass roof with the world-famous Reading Room at its centre.

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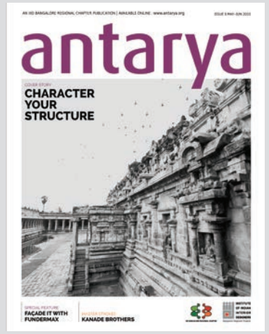

RESPONSE COLUMN: LETTER TO THE CHAIRPERSON

Dear Gayathri

Antarya Issue just arrived at my desk. What a joyous magazine your chapter has produced. Across its theme, article content, editing, layout, printing and production quality, this one is a wham!

Please convey my kudos to the entire team who worked on your magazine.

More by way of a suggestion rather than criticism, perhaps reporting more chapter activities would have brought out its "Newsletter" intent and carrying interior – specific content may have made it contextually closer to "IIID' ism" (to coin a new term)!

And your chapter Logo is just Wow. In the present turbulent times we are experiencing, Antarya re-builds one's confidence in the best of IIID!

With warm wishes
Yeshwant Ramamurthy

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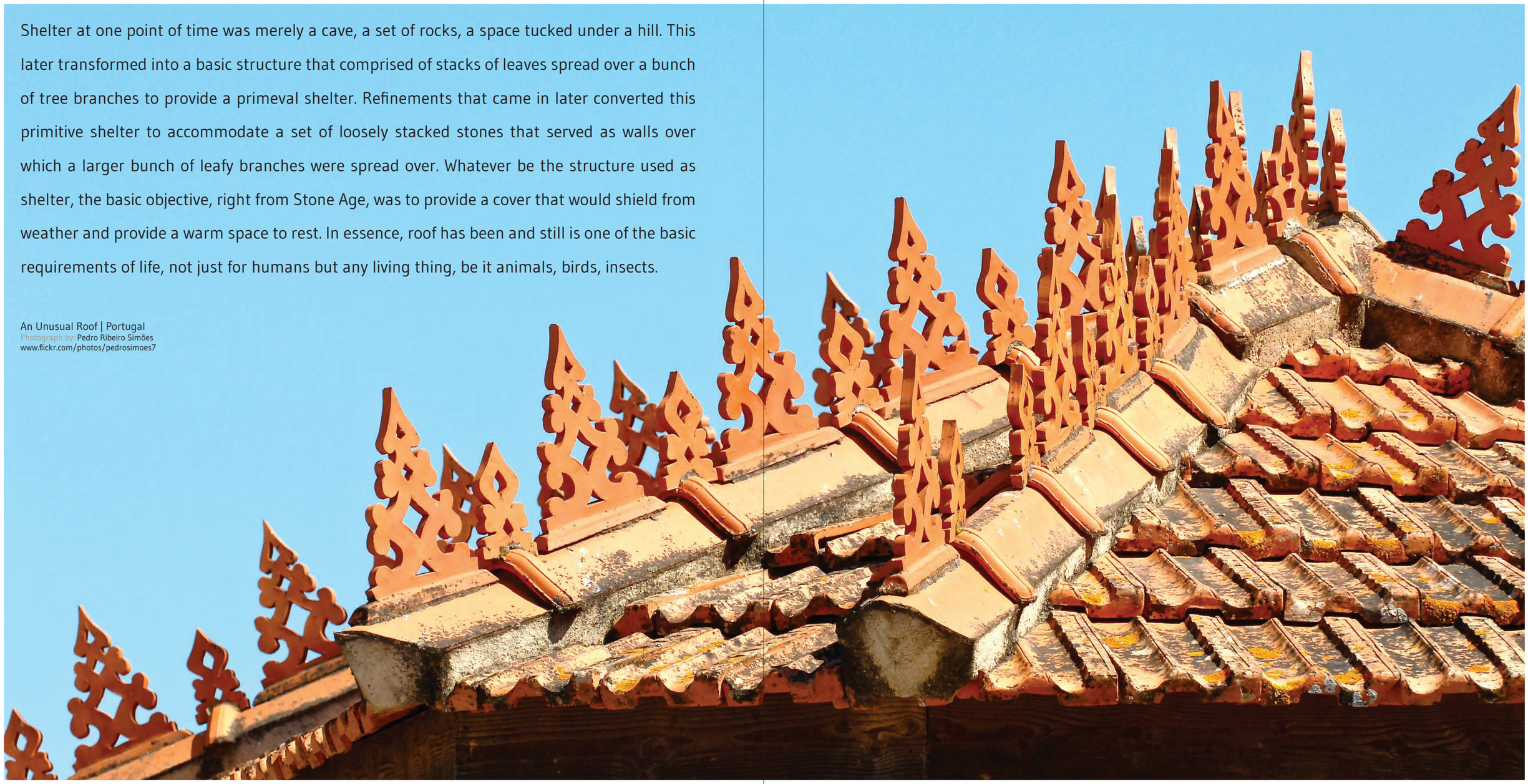
ANTARYA
COVER STORY

ROOFED TO IMPRESS

By Nandhini Sundar

Shelter at one point of time was merely a cave, a set of rocks, a space tucked under a hill. This later transformed into a basic structure that comprised of stacks of leaves spread over a bunch of tree branches to provide a primeval shelter. Refinements that came in later converted this primitive shelter to accommodate a set of loosely stacked stones that served as walls over which a larger bunch of leafy branches were spread over. Whatever be the structure used as shelter, the basic objective, right from Stone Age, was to provide a cover that would shield from weather and provide a warm space to rest. In essence, roof has been and still is one of the basic requirements of life, not just for humans but any living thing, be it animals, birds, insects.

Experimentations, innovations, improvements over the centuries have allowed man to introduce a variety of designs, materials and structures into this basic necessity of life, creating this shelter in the most unique manner, each arresting in individuality and appeal. Be it thatch, tile, concrete, stone, metal, even a green turf, the range on offer and the physical manifestation are stunning, lending new meaning to architecture in every era and culture.



An Unusual Roof | Portugal
Photograph by: Pedro Ribeiro Simões
www.flickr.com/photos/pedrosimoes7

Grass roof in Ouchijuku | Japan
Photograph by: Mr Hicks46
www.flickr.com/photos/teosaurio

Weekend Home | Corrour Bothy, UK
Photograph by: GariochT
www.flickr.com/photos/28596900@N00

SUPPORT SYSTEM

While outer layer of the roof has been varied both in material and design, giving a distinctive feel to the structure in accordance to the era as well as location, the supporting structure is invariably strong. Stone lintels were used for support in the prehistoric times but this facilitated only short span coverage. This hence gave way to stone arches during the ancient Roman period to address span of up to 140 feet. These stone arches dominated for the next 2000 years until the onset of iron beams during the industrial revolution.

Timber beams were equally popular until they were replaced by cast iron or steel by the mid-19th century. While timber is supportive of a variety of roof shapes, enhancing the aesthetics while being practical, the use of bamboo for support lent a pronounced curve to the roof, a character evident in Oriental architecture.

Steel girders soon took over in the modern era, becoming the major structural support for large roofs as well as for normal housing. The reinforced concrete beams however became intensely popular giving way to their universal application in modern day structures.

Temple Building Roof | Japan
Photograph by: Sky Carp
www.flickr.com/photos/dharma-bum

VARIETY OF MATERIALS

The outer layer of the roof or the most evident form of the roof varies steeply based on local availability of materials. Quite a significant portion of vernacular architecture opted for vegetation as roofs that manifested as thatches made from leaves, from sea grass which is long lasting, from split bamboo stems that are alternately laid and overlapped. Wood shingles, bark of particular trees were also used for roofs in some of these structures where timber was in abundance. Composition asphalt shingles came in the 20th century that can last between 20 years to a lifetime depending on its thickness and durability.

SLATE AS ROOF

Often viewed as the best type of roofing given its durability, a slate roof can last anywhere between 75 to 150 years and more. While the slate lasts for more than a lifetime, the nails holding the slate tend to corrode, allowing the slate to slip. This problem is circumvented by opting for stainless steel or copper nails though these too need to be sufficiently protected from high exposure to weather.

METALS AS ROOF

Sheets of copper have been used for roofing over hundreds of years. Though expensive, it is durable, lasting over centuries. Copper was also used around chimneys in houses where the roof tended to be made of slate. The 19th century saw the use of iron electroplated with zinc to improve resistance to rust, as a light weight waterproofing material. Given its low cost and easy use, it soon became the commercial roofing across the world. This soon led to the onset of many more types of metal roofing such as steel shingles that last up to 50 years based on their installation of moisture barriers.

Prefabricated Steel Roof
Photograph by: Elizabeth Anderson
www.flickr.com/photos/steelmastersteelbuildings

The Hôtel-Dieu | France
Photograph by: JohnPickenPhoto
www.flickr.com/photos/picken

TILE AS ROOF

Clay tiles for roof have been popular options where the density of the clay is determined by duration as well as temperature at which it is heated. These tiles can be glazed with the surface given texture treatments to offer a wide variety of profiles, styles, finishes, colours. Glazed flat tiles in colourful patterns are characteristic of traditional architecture of Burgundy. Polychrome roofs serve as status symbols, the luminous beauty covering great cathedrals in the 13th century and later the princely residences in the 14th century before the rich urban bourgeoisie adopted it in the 15th century. Glazed tiles are evident in various parts of Asia, North Africa, Europe, in the Forbidden City in Beijing.

Instead of clay, concrete tiles are also used now, these coming with an equal wide variety of profiles, styles, finishes and colours. The 20th century saw further developments in roofing materials based on rubber, bitumen that was used even in earlier centuries. A range of synthetic roofing solutions too came in the form of fibreglass, thermoplastic.

Oia | Santorini Greece
Photograph by: Geee Kay
www.flickr.com/photos/georgeka

Bebenhausen, Baden – Wurttemberg | Germany
Photograph by: Heribert Pohl
www.flickr.com/photos/poly-image

SHAPED DIFFERENTLY

Shapes of roofs vary diversely based on climate and materials used. The shapes range from being totally flat to being steeply pitched, can incorporate a dome or an arch, conical or a complex set of slopes, gables, terraces.

Sharp gabled roofs are typical characteristics of Gothic as well as Greek styles of architecture. The gable, which is the triangular portion that comes between two intersecting roof portions, incidentally is not a good design in regions prone to strong winds and hurricanes as it can peel off in the wind pressure. The final shape that the gable takes along with the detailing used is dependent on the structural system which is governed by climate, materials and aesthetics addressed.

The hipped roof is a slight variant, with the slopes occurring in two pairs of directions as compared to one pair in the case of a gabled roof. The Swedish variant Satari comes in a double hip with a short vertical wall along with small windows. This was popular from the 17th century in formal buildings.

While gabled roofs are essentially multi-pitched roofs, mono-pitched roofs come with one slope attached to a taller wall. A series of mono-pitched roofs with vertical surfaces glazed and pitched upwards offer a saw-tooth roof. Here the roof top permits natural light though it is opaque to shield from direct sunlight. The French Mansard roof has the pitch divided into a shallow slope above a steeper slope which may also be curved.

Pent roof is appended to the wall with further roofs and terraces above. It serves as a skirt roof when carried around the house. While flat roofs are found in traditional structures in places that have low precipitation, roof terraces incorporating a roof garden are now quite popular, coming as they do with balustrade or parapet walls hosting plant beds.

Overhanging eaves occurring on the edge of the roof, protecting from weather is common in medieval Indian architecture, especially Mughal, supported by ornate corbel. It is also evident in Hindu temple architecture and later adapted into Indo-Saracenic architecture. Extensive overhangs are also evident in early Buddhist architecture as seen in the

The Marble Temple | Bangkok
Photograph by: My Wave Pictures
www.flickr.com/photos/127519682@N02/

Buddhist temples. This later manifested in Tibetan as well as Chinese architecture and later in traditional Japanese architecture.

Overhangs or jetty as they were referred, were also one of the most common features of American Colonial architecture that was later adapted into Prairie School architecture, eventually making its way into modern architecture as awnings.

Viceroy Hotel | Abu Dhabi
Photograph by: Pieter van Marion
www.flickr.com/photos/stmaartenpiloot

Riverside Museum | Glasgow
Photograph by: Ronnie Macdonald
www.flickr.com/photos/ronmacphotos

CONTEMPORARY VARIATIONS

The roofing solutions offered in modern architecture can be spell binding, each fabulous in structure, design solutions and materials used. The variety seen is mind-boggling, each iconic in feature, addressing location specific requirements as well as functionality in terms of design rendered and materials chosen. The options offered could range from a simple pitched roof, a sloping roof to those that hover over a larger area to afford protection against the harsh western sun, metal sweeps that serve as both the wall as well as the roof in one flowing motion.

It could be roofs that sweep over two floors, serving as the wall over two storeys and manifesting as the roof for the upper storey. Alternately, the sweeping roof could be totally green, smoothing down to the ground, replacing the conventional wall while insulating the interior spaces that fall beneath. It could also be a roof that could simulate a bird that is about to take off, the sharp edge of its triangle nose pointing to the sky, the overhang sweeping over a wooden deck where the glass walls it covers as well as the deck afford brilliant views of the scenery.

Be it in wood or copper alloy, the roof wrapping around the building or manifesting in multiple winged shapes to make a statement, the end result is a salute to modern architecture and the design options offered by master architects. Some of the renowned structures such as the Sydney Opera House, Guggenheim Museum Bilbao, Riverside Museum in Glasgow are just an indication of the design sentiments of spectacular modern structures that mark the skyline, the roofing solutions offered leaving the viewer mesmerised.

CREATIVELY GREEN

Top Left and Right: The Beck House (left) and the Abraham House (right) have steel mainframe as support, along with wooden rafters underneath the tiled roof. While both the houses display deep overhangs, Abraham House has an extra wooden lining below the roof besides the wooden rafters.

Left: The Abraham House with the steel mainframe support and tiled roof enclosing a charming open dining space on one side and open living area on the other. The angled expanse of the tiled roof serves as a sculptural backdrop to the open courtyard in the midst.

A green ideology creatively expressed can enhance the aesthetics of the structure multiple times more, serving as a salute to nature. This is even more so when it is expressed in a roof. The roofs of **Architect Dean D'Cruz** of **Mazaic**, serve to be just that, the green intention amply clear while the rejuvenating spaces created beneath offer an enchanting visual appeal in their innovative representation

TILING IT DIFFERENT

Top: The Dakshin Chitra multiple level roof structure uses Mangalore tiles. The multiple levels of the sloped tiled roof, besides offering captivating aesthetics, enclose vents to let in natural air and light while covering different functional spaces within.

Bottom: The Kallari Chandramandapa displays the traditional tiled roof which has been raised to a height of 22 feet and extended to the ground akin to a wall. The low overhang of the roof covers a sunken space within.

The roof invariably makes a difference to the language of the structure, the material used as well as the manner of portrayal describing the design intent as well as the aesthetic sensibilities. **Architect Benny Kuriakose** of **Benny Kuriakose Architects**, uses this language of roofs effectively to speak out loud not just his green intent in structures but also his penchant for being creatively different.

GEOMETRICALLY AESTHETIC

Top Left & Right: A canopy made of a tubular steel structure overlaid with aluminium composite panels, floats above the main building in the Harika Solvents Corporate Office. The canopy, offering a sculptural element to the structure, starts at ground level and wraps around the building in a single wave.

Left: The industrial training centre is lent a unique concept by altering the traditional wall distinct from its roof to become a cohesive form where two symmetrical arches are followed by a tubular triangular truss. The truss begins at ground level and ends on the other side in a sweeping curve.

Roofs invariably display a geometry that can be stunning in portrayal, many a time the ensuing structure proving to be iconic because of their varied sculptural presence.
Architect Nischal Buddhavarapu of **PADGRO Consultants**, uses metal and geometry to offer a roofing solution that stands apart in design and aesthetics.

ANTARYA
COVER STORY **INDUSTRY FEATURE**

ROOF IT WITH **COELHO DA SILVA**

Roof, which is also synonymous with providing shelter, has the ability to change the language and character of a structure. Be it a residence or a public space, the manner in which the roof is designed defines the style as well as the functionality of the building, the environmental and cultural aspects addressed. While roofing solutions offered are many, each creative and functional, addressing locational sensitivities, tiled roofs have a charm of their own, that is earthy and hard to resist. The functional ease in addressing weather conditions makes their appeal even stronger. Europe is swamped with tiled roofs, with a significant portion of the current buildings as well as an entire generation of structures pertaining to the last century being of the tiled variety.

TILED WITH CS

The year was 1927; the year when **Jose Coelho da Silva** decided to start **CS-Coelho da Silva** to explicitly produce artisanal barrel roof tiles. The coming years, through innovation, modernization and entrepreneurship, brought about through increased technological and productive capacity, witnessed **CS** reaching a position of leadership in this segment. Professional management and resource optimization being part of CS right from the beginning, the factories came with the most modern technologies. CS market integrated solutions on ceramic roofs and facades go beyond the conventional concept of roof tile manufacturer. In short, to say that CS has captured a significant part of the tiled roof market over the last century would not be an exaggeration.

Moving on to the production of **Marseille** roof tile as early as in 1943 along with the production of curved roof tiles, CS expanded swiftly in its varied production capacities to meet emerging innovations and technologies with ease. The production of Portuguese roof tiles **F2** and **F3** commenced in 1982 and '92 respectively, marking another new phase in its production process. After receiving the coveted award of the Degree of Commander of the Order of Industrial Merit in 1994, CS enabled the production of tiles that came in 1995 with different kinds of clay and colourings. Year 2002 saw the production of a new Portuguese roof tile, **Tenco**, with the next year commencing production of Marseille Premium quality roof tile model, **Domus**. Not surprisingly this led to the internationalization of CS tiles in 2005, with the first completely flat roof tile model in the Iberian Peninsula produced with premium quality under the name, **Plasma**.

Five years later, CS came up with the sustainable option **CS Solar** and a year later, **CS Rehabilitation** that offered solutions for roof renovations in the form of a new Marseille roof tile model and barrel roof tile, mansard roof tiles and other new fittings.

SUSTAINABILITY IS KEY

For CS, sustainability goes beyond mere compliance with applicable legislation, the activities managed with the explicit intention of encouraging environmental awareness. Be it the exploration of clay pits, the manufacture of roof tiles and fittings or the development of new products and new fittings, three segments are identified and focused upon.

FOREST AND BIODIVERSITY:

Post excavation, the clay pits are filled with inert materials, a surface layer of soil, followed by reforestation hosting a variety of plant species that were evident before the place was excavated. In some cases, lakes are created to receive animal species that quickly adapt to their new home.

ENERGY AND RESOURCE EFFICIENCY:

CS is particular to minimise the usage of resources as well as the pollution that may arise from the production process. Care is taken through use of more efficient technologies to address this. Some of the areas addressed are:

- Reducing consumption of raw materials, through design of lighter roof tiles without reducing strength and tightness
- Less energy use through more efficient combustion systems, improving isolation of ovens and dryers, using processes for energy recovery and energy production by cogeneration
- Lower consumption of water through closed circuits in all cooling systems, and reusing water of operation in clay preparation
- Reduced emittance of CO2 and other gaseous pollutants by using natural gas as fuel in all ovens and dryers, installing filters on all furnaces, selecting clays with low fluoride content and managing its content of organic matter
- Reduction in emissions of dust through storage of raw materials and undertaking grinding, mixing and transport in closed areas, installing efficient deducting systems in clay preparation and engobing
- Efficient waste management through collection, selection and identification and appropriate final destination. Smithereens, be it crude or dry, and dust retained in the filter systems are reintroduced into the production process. Pieces after being fired are used in the recovery of the pits.
- Waste dumps are flattened to stabilize against erosion.
- Landfills are covered with topsoil, and vegetation is planted.
- Dumps are fenced to prevent grazing of vegetation by livestock.

NATURAL INTEGRATION:

CS clay roof tiles are easy to integrate into the landscape while keeping intact the historical value of a built heritage that is addressed, ensuring comfort and aesthetics along with sustainability and energy savings. Given the character of incombustibility, the clay tiles do not release toxic fumes, thus ensuring air quality is not impacted.

EVOLUTION OF THE TILE

On extracting the clay from the pits, a homogenous paste in the form of particle size, moisture and plasticity is created and transported into three dispensers on the basis of plastic, balanced and lean. This is transported to a mill where water is added to facilitate grinding and shift the same to the silos where they are distributed by the various factories. The material is then extruded to acquire the preform as determined by the shape of the matrix designed for the piece. This is later pressed in a mold to give the shape of the roof tile. The tile is then dried to be cooked. The relevant finishes are given before the tiles are finally stacked to be cooked in the oven. Incidentally, the finished tiles are chosen manually before they are packed in pallets that are selected based on type and finish of the tile.

A RANGE TO CHOOSE

The CS tiles are all sound insulated, the roof proving as a sound barrier, improving comfort by also reducing acoustic noise inside the buildings. Expert technical support is provided to clear any doubt during the construction period. Besides this, there is active architect support, in the form of calculation of quantities, identification of fittings as well as budgeting. Apart from the provision of general construction details for each type of roof tile, the service accorded assists and assesses the integration of the clay roof tiles into the project.

Being non-toxic given its natural origin, the CS clay roof tiles are tank water safe, allowing the rainwater runoff to be used for multiple purposes. The clay roof tiles also provide thermal insulation by providing shade to the buildings through their coverings. This coupled with ventilation, reduces heat ingress significantly. CS also offers a huge range of accessories in all ranges to suit various requirements.

The CS roof tiles come in four different categories. Marseille comprising of Domus and D3+, Portuguese comprising of F2, F3, F5 and Tecno, Plain comprising of Plasma and Canudo.

MARSEILLE:
In the Marseille variety, Domus forms the premium quality brand in the CS flat roof tiles. Domus has a stylized design that offers both the modern as well the traditional element. It is the ideal solution for traditional model specifications of projects, offering the appropriate solution to roof rehabilitation. Functionally, Domus offers characteristics of tightness and strength that is expected of a premium roof tile.

The D3+ variety forms the Plus quality brand of CS flat roof tiles. Given its 30 year warranty, D3+ is an innovative proposal for the rehabilitation market. It fairly responds to the needs of consumers who are constrained by the metric of a pre-existing slate and fail to find new roof tiles with similar modulation. Through its geometry, D3+ glides longitudinally to adapt to pre-existing slates along with a flexibility that permits a differential between 35 to 39 cm, without reduction in its tightness.

The Indian Operations are handled by Mr. Vinod K Sankaran, who has an in depth and rich experience in the building material industry. The overwhelming response received in India initiated CS Coelho Da Silva to intensify its operation across the country along with Living Concepts Designer Homes. Living Concepts has been aggressive in market penetration and has set up a strong dealer network in Bangalore, Pune, Mumbai, Kolhapur, Goa, Kerala and other parts of India.

PORTUGUESE:

Coming in four brands, the Portuguese model roof tile's premium quality is Techno, designed to offer the very best solution. It matches the most demanding requirements, be it aesthetics, functionality. It features an unbeatable tightness as compared to other Portuguese roof tile models. Techno also offers the necessary robustness and strength to make ceramic covering the right choice even in the worst weather conditions.

Offering the next generation in Portuguese roof tiles, F5 uses the most sophisticated technology and innovation in production unit Factory 5 that is specifically designed to address the production of this model. F5 also has a very competitive price in the premium segment of the CS range, coming with a 35 year warranty. The result of a thorough study of design while keeping in perspective the authenticity of a Portuguese roof tile and also addressing the concern to optimize the weights and quantities per pallet, F5 serves as an eco-sensitive choice. The weight of the F5 roof tile has been optimized, allowing for a more efficient use of resources while securing its high mechanical strength. The optimization ensures that an equal amount of roof tiles are produced while consuming less of clay and energy, thus reducing the production of waste.
With the objective of reducing global CO2 emissions in the production as well as distribution process, F5 uses less plastic and wood per piece in packaging while its transport permits more roof tiles per container.

Through technical improvements in the model of F3 and higher level of sophistication to the docking system, CS Portuguese model roof tile offers the Plus quality brand F3+. This Plus brand efficiently supports varied climates, providing the best quality to price ratio in its segment.

As the most economic option in the CS Portuguese roof tile model, F2 comes in as the Standard quality brand, having been in the market for over three decades. It is more suitable for less demanding weather conditions and recognized as a proven quality roof tile.

PLAIN:

The interlocking roof tile of CS Plain model, Plasma, is a Premium quality brand, and is the first roof tile model that is completely flat produced in the Iberian Peninsula. Given its innovative design, Plasma is an option directed clearly towards the market of contemporary architecture. The tile can be used both in roofs and facades, introducing a new paradigm on the concept of full ceramic covering. Plasma is sufficient to bring in the continuity of colour and aesthetics in the building without the need for other materials.

The Plasma Façade is of the ventilated type where the external cladding is of Plasma clay tiles. Ventilated facades are much sought after for buildings given their protection from rain, avoidance of thermal bridges, internal condensation when thermal insulation is applied on the outside surface of the walls. The ventilated facades also dissipate temperature by partially reflecting solar radiation. The thermal transmission between external cladding and the wall too is low due to air circulation between the two.

A further set of additional advantages are offered by the Plasma Façade. It is non-combustible (class MO), resists atmospheric agents, ensures complete water sealing through interlocking system between the tiles. It also provides a fixing system that is well hidden and permits horizontal adjustments and the use of direct fixing structures without the need for adjusting systems. Plasma Façade is also a more economical ventilated façade solution due to the cost of the external cladding as well as the cost of fixing structure. It serves as an excellent solution for both new buildings as well as those rehabilitated.

CANUDO:

Specifically designed for the rehabilitation market, the CS Canudo clay roof tiles aesthetically reproduce the historic barrel tiles, offering high mechanical strength and dimensional accuracy.

CLIMATILE:

Ceramic tiles too can provide a flat roof. Recognising this, CS created the innovative Climatile which incorporates within itself the supports or settlement feet that ensures the necessary stability and mechanical strength. Degradation of loads occurs when subject to overloads and when maintenance operations occur and these are actively addressed by the stability and mechanical strength imparted. It also ensures the thermal insulation layer is not harmed.

Offering simplicity, freedom, functionality, Climatile comes with significant advantages.

- Ease of application: It provides ease of application as the ceramic pieces are simply resting on the geotextile that protects the thermal insulation. This is explicitly done by positioning the plastic spacers in the corners, ensuring uniform sealing and uniform coating coverage.
- Versatility: The several feet of settlement are positioned with the purpose of allowing cutting of the work piece. This guarantees that the tiles always exude stability and resistance.

ANTARYA
COVER STORY **INDUSTRY FEATURE**

N. Rajeev

CS – Coelho da Silva portfolio of products is managed in India by the leading group **Living Concepts Designer Homes (Pvt) Ltd.** a European Consortium of companies in the field of Interior and Exterior Surface Solutions. The Group, operating pan India, Middle East and Africa, is headed by its **CMD, Mr N Rajeev** who spoke at length to Antarya on the clay tile solutions his company had to offer, the potential market in India, the sustainable sensitivities addressed and their carbon footprint.

Q. **How pertinent are clay tiles to India given its environment and climatic sensitivities. What is the magnitude of the market for roof tiles in India?**
Ever since our foray into the Indian markets we have received a consistently positive response from all our customers. I feel that the use of any natural products will soon gain momentum as the world is now more aware and sensitive to being eco-friendly. Clay being a natural raw material, it is well adapted to any climatic, environmental condition.

Terracotta tiles have had a long history across the globe. Many ancient and traditional roofing styles included more elaborate sculptural elements than the plain clay roof tiles, such as the Chinese Imperial roof decoration and the antefix of western classical architecture. In India, West Bengal hosts a specialty of terracotta temples, with the sculpted decoration from the same material serving as the main brick used in construction.

Q. **Do you see high growth potential and a significant increase in inclination towards using clay tiles in structures in India?**
Given their versatility, clay building materials can be used for a variety of applications. They can be used for walls, façades and roofs as well as for gardens, terraces and open spaces. Clay tiles and bricks can be used almost anywhere and for all architectural styles, whether for the construction of single-family houses or apartment blocks, office or public buildings.

Being weather resistant, fire and earthquake proof to a significant level, clay building materials lifespan is more than 100 years. Given their speed of construction as well as insulation properties, there is substantial saving in time, energy and money. I envisage an increased inclination in the usage of clay tiles for our present day structures and our clay tiles are highly suited to meet this burgeoning market given the standards we have set in clay tiles, in terms of strength, design and quality. Our clay tiles require virtually nil maintenance, they are fire proof, freeze and thaw resistant. The surface is smooth, non-porous and self-cleaning. This makes them resistant to moss growth. Besides, our array of vibrant colours gives a wide choice for the discerning customer. Being a natural resource, the clay tiles also have the added advantage of being resistant to the sun's UV rays. While the clay tile glazes are close to six times stronger than traditional glazes, the tiles weigh less than the standard concrete tiles.

Q. Besides the arresting aesthetic benefits, to what extent are clay tiles eco-friendly given that the clay is excavated and later burnt?

Clay tiles, be it roof tiles or cladding, are amongst the oldest building materials and still extremely popular. Not surprising as clay building materials are natural, versatile, durable and of stable value. A modern building must comply with numerous ecological and economic demands. Given our experience and know-how based on years of research and development and by carefully selecting raw materials, using state of the art production facilities, we deliver a product that is a guarantee over generations. Clay blocks, roof tiles and pavers are particularly sustainable as they consist of natural raw materials, clay and water. The bricks and tiles, being absolutely free of pollutants and allergens, are especially compatible with humans and nature. In the context of green buildings too, clay-based materials are most favourable.

Q. How do you restore the clay pits after excavation to leave minimal impact on the ecology of the place?

We are dedicated to the protection of natural resources and the global environment. This commitment, goes beyond mere compliance with applicable legislation, involves the use of best practices for its implementation in all decisions of our organization. We follow the principle of sustainable development, and adopt measures that encourage environmental awareness with our employees and our partners. We achieve this best with the re-cultivation of clay mining sites. Clay pits that are no longer used are returned to serve as a habitat for flora and fauna or create a natural recreation area for local residents. They are also restored for agricultural or forestry uses. The mine area undergoes “rehabilitation” by this process.

LETTING DESIGN SPEAK

By Nandhini Sundar

He is soft spoken, totally self-effacing; playing down the remarkable work he has done over the last three and a half decades. A man of few words, he prefers his designs to do the talking. Be it the temples, institutions, corporate houses, public buildings, his designs stand out in their creativity and ingenious handling of the façade and functional spaces within. **Architect – Planner B S Murthy** of PADGRO Consultants has a versatile range of structures to his credit, each defined by function and location, displaying a varied line of expression, his master strokes ingenious in the deft crafting of the spaces.

The Kancheepuram Library

The Kancheepuram Library

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The Kancheepuram Library

On graduating from SAP school of Architecture, Chennai, way back in 1974, Murthy worked with renowned architects B V Doshi and Ananta Raje for a brief period of two years before doing his masters in Town and Country Planning. He branched out on his own from 1977 to indulge in an unhindered drafting of lines that would leave his indelible stamp on the multiple structures he designed over the next nearly four decades.

Firmly believing that the client's requirements need to be understood clearly before commencing the design process, Murthy's focus is on ensuring the environmental factors and materials used are sensitively addressed while the designs delivered are high on functionality while being aesthetically pleasing. His master strokes invariably offer an adaptable design that not only caters to evolving requirements but also takes care of socio economic changes. "The design should exude an energy that is totally positive, as a negative experience of a space can have equivalent impact on behaviour patterns", he opines.

Given his inclination towards public buildings and corporate houses, the spaces designed are invariably large, with freedom on the choice of materials chosen as well as the plan of the spaces. His tryst with traditional architecture in the form of temples have equally brought to the fore his ingenious handling of spaces. The Murugan Temple in Malaysia and the ongoing restoration of the

KRISP IT Park

Kanchi Kamakshi temple are fine examples of his skilled handling of spaces reflecting traditional architecture.

The 2500 year old Kanchi Kamakshi temple required its four domes to be strengthened structurally, restoring the sculptural elements by using artisans from the same linage that was involved in the original architecture. “Temples traditionally have granite pathways in the exteriors which heat up faster and make walking uncomfortable. This was altered to a small extent with white paint on the granite while greenery was introduced in vantage spots in the form of plants relating to each deity”, says Murthy. Besides bringing in extensive greenery, he also converted the abundant unused spaces in the temple premises to serve as resting places for pilgrims.

When Murthy received the project of building an international library in Enathur, near Kancheepuram, he decided to base his design on the sensibilities of the Vedic period. Thus came up a structure with four wings and four corners crowned by the Maha Meru. An atrium of 45 feet in diameter and 70 feet in height reflects a Sri Yantra on the floor through the light permeating from the skylight. The artwork, featured around the walls under the skylight, again reflect Vedic sensitivities. Similar design sensibilities are seen in the information centre in Tirupathi where the main deity’s symbols of Tilak, Conch and Chakra are displayed across the top elevation of the structure.

The Velagapudi Ramakrishna Cultural Centre houses an auditorium, an art gallery along with exhibition space, a convention centre and a roof top café. Murthy managed to squeeze all this into half an acre of land in the heart of Chennai without the spaces appearing cramped. Given the high activity of the location, Murthy encapsulated this concept by infusing a dynamic flow into the structure while retaining an institutional feel befitting a multi-purpose building. He introduced stone along with concrete to imbibe a traditional flavour, with the concrete featuring as a sweeping wave enveloping the building. At night, waves of light peer through the multiple glass vents, lending a mystic aura in a dynamic field.

The Hexagon Nutrition is an old industrial building that Murthy renovated and retro fitted at Chennai, bringing in industrial materials like aluminium for cladding in the interiors and exteriors, with glass used in an organic manner to make the façade appear soft and sinuous. “The language of the material is the traditional industrial palate”, says Murthy.

A Business School in Bangalore is a granite and brick structure, the entrance to the building emerging from an amphitheatre. Given the strong as well as warm nature of the materials used, the building is imposing, effusing abundant character, yet evinces a softness in the manner of use of the materials. The brick and stone vocabulary also bring in plenty of angles and curves, removing the conventional rectangular form of the classrooms.

The 1.5 lakh Sq ft KRISP IT Park is designed as a closure of two palms and a lotus, with glass in between. Moving away from the traditional glass buildings, the entire structure is shaded in aluminium composite panel fins where the fins serve as a reinterpreted sunshade. “The fins reduce the heat ingress and energy use”, says Murthy. While the fins also lend a sculptural element to the structure, the glass used too is not flat but flowing in the façade, exuding soft dynamism.

IFFCO, a 9000 Sq ft space caters as the local fertiliser supplying office. The perfectly rectangular structure hosts an aluminium skin that serves as insulation while creating a unique flowing form. The punctured spaces on the façade emerging from the windows, lend a differential feel to the exteriors, accentuating the aesthetics of the flowing waves of the elevation.

The Guest House in Kodaikanal is a structure made totally of steel, the walls being clad in sheets of steel, serving as an effective insulation. Large expanse of glass prevails to bring the stunning valley view into the interiors. The roof made of twin sheets of steel, sandwiches in between a thin layer of concrete “to prevent the roof from flying away during inclement weather”. To instil a sense of warmth, there is a fair play of bricks in the interiors. The structure conforms to the natural terrain of the site, the spaces within offering levels that are naturally laid on the varying heights of the ground.

IFFCO

AN EARTHY INCLINATION

Shruthi Ramakrishna
& Jeremie Gaudin

For Architect **Shruthi Ramakrishna**, a student of RV College of Architecture and Urban Systems Engineer **Jeremie Gaudin**, a student of University of Technology of Compiegne, given their strong inclination towards earth construction and energy saving techniques, their firm, Made in Earth Collective, was a natural outcome.

Natural Plasters Workshop | Bangalore
Photograph by: Shruthi Ramakrishna

The passion is very evident. The earthy inclination even more so. For this young couple, rooting their designs to earth is as important as architecture. Their brief stint in Auroville Earth Institute only accentuated their penchant to keep their designs rooted to earth, the materials used being totally local, with mud blocks and rammed earth finding their way heavily into their structures.

After spending a year in Auroville, the duo went to France where they were involved in ecological construction for social housing besides doing research to develop new techniques in earth construction and training unemployed to build with these techniques.

Their social housing project involved using unusual materials such as straw bales on the outer shell of the walls along with recycled paper. Earth, wood fibres and straw were combined to create an insulated interior which cut down on the required heating. “This opportunity enabled us to demonstrate earth construction techniques and use of natural materials in public places and social housing, roping in community participation”, says Shruthi.

Moving back to India, the duo visited Kutch where Shruthi worked with local artisans who used low tools but intensive skills while Jeremie served as consultant for the urban development project focused on improving slums through community participation. They simultaneously participated in workshops in France to explore new ways of designs for social projects.

Their return to Bangalore made it abundantly clear that quenching their thirst for earth construction required starting their own firm with this ideology. Since starting it in 2014, the duo has completed over five projects with more in the pipeline.

Their Timm School project, together with Nivasa, came up in a small village where the existing classroom had to be extended by 450 Sq ft. The duo employed natural and local materials with effective local strategies to erect this structure. Adobe or sun dried bricks were used along with local fired bricks for construction. Plenty of arches found their way. “Arches remove the need for lintels and hence there is no concrete”, says Jeremie. The walls were covered with natural lime plaster.

The Hebbal residence, worked together with architect Varun Thautam, was essentially a canvas for natural plasters. Here, they also conducted a workshop for architects and students to share natural plastering recipes and techniques using earth-straw and earth-rice husk plaster for interiors and lime plaster for exteriors. “Earth plaster, like our skin, breathes. It is water proof yet allows humidity to pass through, allowing the building to breathe”, says Shruthi.

The Rabbit Project | France
Photograph by: Shruthi Ramakrishna

Castle Kiosk Project | Portugal

The couple have also experimented with Tadelakt, a 100 per cent water proof lime plaster from Morocco which is a blend of lime and fine sand and finished with natural soap made from vegetable oil. “Any natural pigments can be added to this lime to lend colour”, says Shruthi. This technique is to be used in the interiors of Hebbal residence. Their project Brick Kiln House, in collaboration with Nele Architecture, again uses natural materials, compressed earth blocks, lime and earth plaster with part of the roof being thatched and rest opting for filler slabs. The flooring used is the traditional red oxide, a rare option in modern day structures.

The 1600 Sq ft residence project Aloke House reflects similar design sentiments, with arches prevailing in plenty, reducing the number of beams. The multiple arches in this Mangalore tiled house also act as a funnel to permit unhindered movement of air. While the living area connects to a charming sunlit courtyard through one of these arches, the South and West are adequately shaded to reduce heat ingress.

The couple have also partaken in collaborative projects in the South of France and Portugal, using similar earth construction and green sensibilities. The Rabbit, a project done in South of France was one such, with architects from across the world. The space involved was a mere 25 Sq mts. The project explored and used natural materials in the most innovative ways with 80 per cent of the materials salvaged or sourced from agricultural farms. Thus, straw, rice husk, packaging wood picked from exhibition sites, rammed earth with straw were materials used in the structure. The Castle Kiosk, in Portugal, exhibited similar design sensitivities. This tourist information centre for an abandoned 11th Century castle, involved 250 Sq ft, designed as a reply to the existing ruins of the castle. Compressed stabilised earth blocks made from earth in the site, bamboo and terracotta earth bricks made with similar techniques as in the castle were some of the materials used.

KEEPING CLOSE TO NATURE

Siddhika Sarda

Recycle, refurbish, reuse is her philosophy. Inspired by designs of different cultures and architectural styles, she tries to keep her designs as close to nature as possible. A student of RV College of Architecture, architect **Siddhika Sarda** realised that starting her own firm would be the only way she could indulge her design inclinations unhindered.

Spa at Indiranagar | Bangalore

Having graduated in 2010, she worked briefly in an architecture firm while also indulging her inclinations by freelancing and collaborating with like-minded architects. The brief stint ended with her starting her own practice in 2013 when she was barely 26.

Her firm Terracottage which she partners with Shrutha Keerthi who incidentally is a fashion designer but with a keen eye for interior design, focuses on designing the structure and décor as close to nature as possible, bringing in the five elements while keeping in perspective the functionality of the space.

This is reflected from her very first project Thai Refresh Spa where she addressed the interiors. The theme here being close to nature, Siddhika brought in rustic elements in the form of natural materials such as stone, pebbles, bamboo, recycled wood, enhancing the therapeutic experience. Sandstone clad

Thai Refresh Spa | Bangalore

walls, Jaisalmar flooring, earthy colours, a covered courtyard, cosy private spaces, together bring in a relaxed ambience that befits a spa.

Abhisarika Residence is a four room renovation project in an apartment where Siddhika, in collaboration with interior designer Riddhika Sarda, brought in a combination of Victorian and traditional style with contemporary background, with accent colours blue, green and reds running through the spaces, serving as an arresting aesthetic feature. Siddhika turned existing old furniture into new with white paint, giving a "modern twist to the antique Victorian furniture". The old marble floor was retained to lend an old world charm. The predominantly white interiors reflected colour by the specks of art and cushions placed in the space.

The Boutique office done in collaboration with architect Raina De Nazareth effuses an earthy rustic feel in the interiors with materials such as recycled wood, refurbished furniture, block printed fabrics, Kalamkari work featuring in the glass partitions, Athangudi risers and Sadarahalli treads in the staircase, all working together to lend an earthy ethnic flavour to the space. With the entire building being exposed bricks, the theme has been carried into the interiors, the earthy flavours brought in through imitation Chettinad columns that serve as structural elements. Filler slabs and Mangalore tiles find their way on to the roofs while the floors reflect natural materials with Kota, Jaisalmar and Sadarhalli resting in the space.

The Artoo office, done in collaboration with architect Priyanka Rustagi, is totally contemporary and quirky in design. With the open office concept and transparent work atmosphere, a casual feel to the décor was brought in. An Indian flavour was infused with colours of red, royal blue, rustic orange along with ethnic block prints in the soft furnishings. A table tennis table transforms into the conference room table, exuding a playful culture.
Her ongoing architectural project, the Farm House, incorporates a Mediterranean theme, the 3 acre plot incorporating merely 10,000 Sq ft of built up area, with the rest being green. The structure, to be built using plenty of natural materials, will have a green wall as boundary, bringing in novelty and nature into the space. The interior spaces will seamlessly spill on to the landscape, with the low pitched differential roofs, pastel colours, stone floors, wrought iron railings, rough finished walls, wooden beams, courtyards, abundant natural light and ventilation, offering a design that is heavily nature and rustic inclined.

The Estate House, done with partner Shrutha, is a renovation of an existing structure that incorporated an estate style. Hence a European angle was brought into the space with the windows painted white, cornice details in exteriors, Colonial style accent furniture and dark beige for the exterior walls while retaining the existing stone walls. Further, stack wood barks from waste wood was used for cladding in the family area to lend a woody European look. The five elements of nature have been brought into the spaces while addressing the functionality, aesthetics and personality of the place.

Thai Refresh Spa | Bangalore

WILDLY EXOTIC

Made Wijaya

He is wild, passionately eccentric about his creations, weaving his magic across some of the most notable gardens in the world. While his creativity is mesmerising for the visitor, manifesting in an almost untouched natural form, exuding an intense romanticism, his views can be equally potent. **Made Wijaya**, Architect, Landscape architect, Principal Designer, **Wijaya Tribwana International**, in a lively interaction with **Antarya**, speaks about his gardens and gardens per se.

Bulgari Bali | 2010

Q. Your gardens are not mere manicured spaces but a rich play of managed wilderness fused with a fine blend of art. Is this because, for a garden to be naturally enchanting, it needs to reflect nature and its creativity?
My gardens are not manicured, but ordered. I would say, ordered jungle quite often, like the famous Bali Hyatt lobby gardens. A good garden is a mixture of the natural and the man made. Garden artists toy more with composition and a sense of artful natural poetic romance than landscape architects. Exotic Gardens have a sense of theatre, the romantic.

Q. Your gardens reflect an intense romanticism in their design, their interface with nature, in the presence of courtyards, the water bodies. Yet they are totally relaxing and rejuvenating, the strong flavours of the five elements offering much more than just a romantic appeal. How do you achieve this?
I dare say I have a good eye for composition and I take decoration to the edge of the gorgeous before it becomes garish; the Indian speciality, like most Bollywood films, too much is not enough! In my more natural parklands, I like to take the garden to the edge of fecundity. Large spacious grassy bits are there too. A good large garden, like the Taj West End used to be and will be again if they pull their finger out, is like a choral symphony with soloists, chorus and dramatic turns.

Q. It is customary for a fine gardener to lean towards forcing certain elements into the space in the name of design or a need to create a theme to address a particular concept. This includes not just structural elements but also the presence of plants that may not be local. Would you advocate such gardens?
There is way too much forcing of elements or gimmicks in Indian landscape design. A great garden needs to look effortless. Even if it is heavily structured. Like the Hampton Court, or the Versailles.

Q. How important in your view are the play of colours and textures as well as creation of intimate spaces to evoke a mystic aura in a garden?
Ah! The mystic pizza! Colours and textures are important, but shapes, that is massing and the sculptural quality overall are more so.

Q. Water is an important element addressed in the science of Vaastu and this has been manipulated to meet its requirements many a time. It would be interesting to hear your views on the science of Vaastu and its role in gardens.

Villa Bebek Garden | 1985
Photograph by: Tim Street-Porter

Vaastu can eat me! I am yet to meet an artistic geomancer! They are the butchers of landscape design, environmental vandals blowing up rocks!

Q. Your tropical gardens exude an intense wild streak, an unwillingness to conform, yet display a strong sense of artistic flavour. Do they reflect your personality? Do gardens, being so much a part of nature, tend to imbibe the strong personalities of the gardener?
Yes, I am a maverick, perhaps loose cannon. Some consider me arrogant. I think I am just temperamental. It is perhaps a redhead thing. I don't suffer fools or bad taste lightly. One has to be a bit of a field marshal to achieve gentle, soft, romantic gardens. It is the mincing muscle Mary architects who produce soulless, treeless, bird-less, flowerless, loveless, godless gardens!

Bali Hyatt | 1980

Q. What would your advice be for an aspiring gardener?
Just visit as many of the great gardens as possible and be influenced. In India: Shalimar, Srinagar, Lodhi Park Delhi, Humayun's Tomb, Taj West End, Taj Green Cove, all of Geoffrey and Bevis Bawa's gardens, the Prime Minister's garden in New Delhi, Taj Wellington Mews. Wish I could recommend more after 30 years of looking in India! And certainly look at nature!

Bulgari Bali | 2010

Taj Coral Reef | Maldives | 2008

Villa Keliki | 2011

Image credits: Made Wijaya

THE ART OF INTERIORS

Haresh Lakhani

Successful design is a combination of multiple elements, says **Architect Haresh Lakhani of HP Lakhani Associates**. In an enlightening chat with **Antarya**, Lakhani discusses the art of designing an interior, the nuances to be addressed, the personal preferences to be catered while ensuring the harmony, comfort and aesthetics of the space is maintained.

Anand Manthena Residence

Q. What in your opinion would be a key element to address when designing an interior?
There is no single key element to a good interior design. Successful design is always a combination of multiple elements working together in rhythmic harmony, creating a focal emphasis within the space. Functionality and purpose being the primary factor, if a design supersedes its function or purpose, then it is a failed design. Space, light, colour, texture, line and form are some of the key elements to be kept in mind while designing a space. To achieve a relationship of harmony and mood, right balance has to be maintained between these elements. Design should also be comfortable and not create inconvenience to occupants.

Q. Interiors essentially address functionality in a combination of artistic display of individual inclinations. How can art be infused without appearing imposed, loud or out of place. Does artistic depiction need necessarily be in tune with rest of décor or can it be an oddity, yet refreshing and arresting?
Artwork picked should always enhance the interiors rather than create dominating impact unless it is intentional where space is treated as canvas to enhance the artwork. While it is difficult to justify personal preferences of occupants regarding artwork, it can be recommended to suit specific spaces. Artistic depiction could be contrasting as a highlight but many times the occupant prefers to match art with the colour of the interiors. At times repeating colour of the art can increase its impact on the space. Contemporary art with bright pops of colour is currently popular where walls literally serve as canvases.

Q. Indian cultural heritage is rich and so are local crafts and skills. While there is increasing leaning towards global tunes in décor, how can Indian flavours be brought into the global leanings?
Traditionally art in India did not relate to creating art per se but was more a function or development of societies where creation and art were interwoven. Art was functional yet beautiful. Today with globalisation, art has been commodified for consumption and investment. It is now confined to the elite. If focus is placed on traditional art in schools and colleges, it can have a large influence, impacting young minds. As professionals we should make efforts to recreate traditional art forms in contemporary, modern and new ways to enhance spaces, giving a post-modern Indian touch.

Q. A good design is expected to be timeless as well as adapt to the environment. What elements need to be addressed to create this?
Simplicity, functionality, adaptability, durability, and cost effectiveness are some elements that make designs timeless. If there is an option to recycle the design, even better. Simple lines and open floor plans are pleasing to interact and create functional spaces where less-is-more becomes an elegant concept. I recall my mother keeping our small apartment in Mumbai trendy by merely changing accessories, curtains, wallpapers, colour of the walls periodically, rearranging loose furniture in different ways. This involved no major cost but struck an aesthetic balance, altering the perception of the space.

Q. Play of colours and geometry bring in a different dimension to spaces. If not used adeptly, these can prove to be harsh on the eye. How can the same be used to create an interest, make a statement without a negative impact?
Colour is important in interiors as it covers different dimensions. We are tuned to notice colour changes in our environment and hence maximum influence in interior spaces can be felt through colours, shapes and sizes. Colours also have physiological and psychological impact on mind. For instance, red is considered as colour of passion, power, dominance and speed. Blue is soothing and calm, green is energising, white addresses purity, simplicity. Colours affect human emotions and can work as mood lifters or as depressants. Contrasting colours help to highlight a focal point in a space, while analogous colours hide undesirable features in a space.

Experiments have shown that warm colours provide more comfort than cool colours. It has also been suggested theoretically that colour and form are related. Form can be two dimensional or three dimensional objects in a space and can be geometric or organic. It is one of the important design principles which establish the relationship between solids in a building and the empty space around. Form is associated with function and colours. It can be used to highlight the form to emphasise a focal point in the space. Choose neutral colours for walls and flooring which are more permanent in nature, calmer colours for furniture and dramatic colours in curtains, accessories and artwork.

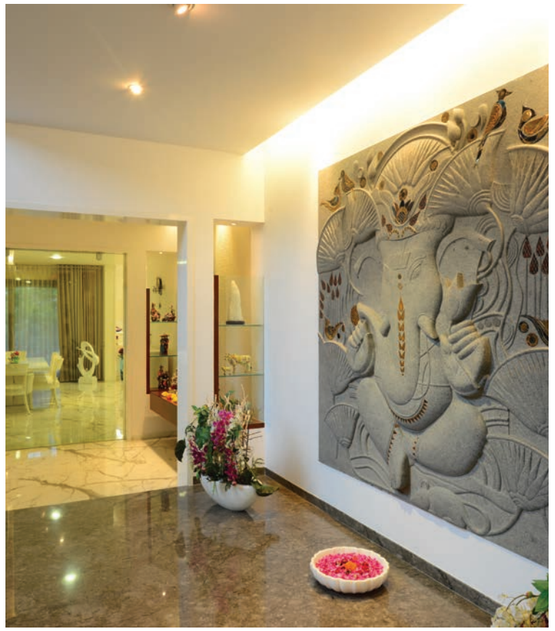
Anand Manthena Residence

Ask yourself what you want to surround yourself with, whether it is a cosy traditional environment or an eclectic mix of multicultural influences or minimalist and simply defined spaces. In interior design many decisions are reached intuitively and at times biased by past experiences, memories.

Q. While multi-cultural influences in a décor bring in an eclectic flavour, introducing a multi-dimensional flavour, a minimalist representation has its own significant place offering quiet beauty and a serene aura. How can spaces be intuitively decorated to offer this simplicity where communication is non-verbal yet strong.

When it comes to designing your house or personal space, the best interior design is a reflection of your own personal style. Ask yourself what you want to surround yourself with, whether it is a cosy traditional environment or an eclectic mix of multicultural influences or minimalist and simply defined spaces. In interior design many decisions are reached intuitively and at times biased by past experiences, memories. Even though the process of formulating solutions may be argued upon, design process is often referred to as a process of problem solving and when the purpose or intention of design is achieved, the communication established is subtle and non-verbal. Yet you can connect with it. So designing is about personalisation and customisation to suit specific requirements and aspirations.

Manish Kothari Residence



K Srinivasi Residence

Vara Prasad Reddy Residence

Q. Nature has its unmatched beauty to offer and when blended with interiors, can infuse a romanticism that is hard to match. How can nature be infused into décor in spaces that may not have open access to a picturesque landscape?

Green incites energy, life and growth. Incorporating green into interior spaces mirrors nature, creating a sense of steadiness and balance. Indoor plants, seasonal flowers can be placed where desired. Likewise dry landscaped areas using natural or artificial plants in focal zones. This can also be supported by creating the effect of artificial skylight using indirect lighting above it as the interaction of light combined with green elements is very inspiring. Vibrant colours awaken the soul and encourage movement. Wallpapers with patterns of plant, back lit digitally printed landscape images on blank walls create illusion of actual outdoor space. Artwork relating to nature and use of waterbodies create an indoor oasis. The space then transforms into one that is totally inspiring and rejuvenating.

Syam Prasad Reddy Residence

Q. Abstraction and ambiguity have their own distinct flavour, altering the language of a space. How can both be introduced to set a different tone to an interior?

Ambiguity arises not because things are unclear, but because they are understood in different contexts, each suggesting different meanings. Ambiguity is not a virtue in itself, nor should it be used as an excuse for poor design. It offers designers ability to suggest perspectives for consideration without imposing solutions. Designers develop concepts away from the site of construction using abstract ideas and drawings about materials, construction methods, expressive forms and functions. In the design process the objective is to understand the client's perspectives.

Mona Doctor-Pingel

ADDRESSING THE FIVE SENSES

By Nandhini Sundar

Her buildings use natural materials in abundance, with stone, terracotta blocks and bricks finding their way along with the exposed concrete columns and beams that blend smoothly with the copious greenery that is omnipresent in all her spaces.

She is totally carefree, simple, almost childlike in her intense passion for being close to nature, keeping her footprints low. To her, 'slow is sustainability'. She will not be hurried or harried. Her buildings reflect her persona, tuned as they are, totally to nature, with a sense of gay abandon, bringing in an energy that is hard to miss. Time comes to a standstill in the serenity exuded. A walk through her structures literally uplifts you, the rustic elements arrestingly aesthetic, the designs astounding in their simplicity yet displaying an astute crafting of the functional spaces. Be it the sight of greenery, sound of water, feel of natural stone under the feet, the smell of trees, flowers, fresh mud, her spaces pack them all effortlessly to offer a stunning piece of work that is effective yet uncomplicated.

For architect Mona Doctor-Pingel, of Studio Naqshbandi, Auroville, a building is a space that effectively addresses the five senses. Her seamless integration of the outdoors with the indoors make the demarcation of the spaces totally fluid and undefined, keeping a three dimensional angle in perspective while designing. Influenced by writer, philosopher, artist, Hugo Kuekelhaus, Mona firmly advocates studying the impact of built environment on the health of the occupant and applying this knowledge in design.

The Temple Tree Retreat guest house is a classic example of her design inclinations, the expansive spaces flowing seamlessly into the outdoors, the insulated tiled roof, cuddapah floors and exposed concrete fusing naturally with the ample greenery and water bodies To beat the heat of Auroville, the precast concrete rafter and Mangalore tile roof has been insulated with bison board, thermocol and GI sheets. This not only insulates but also keeps away pests that might invade through the tiled roof. The central courtyard along with its water body and greenery holds pebbles

and rough granite to give a natural feel to the bare feet. Given her principle that nothing should be wasted or left behind in the construction site, Mona recycled and used all the waste that usually gets transported outside the building site.

Her studio Naqshbandi is a semi-circular brick vault, the North-South oriented structure effectively cutting out the harsh sunlight while ensuring infusion of abundant natural light and ventilation. The open structure fuses in the outdoors, the interiors spilling out both visually and physically into the greenery and water bodies, making it hard to mark where the interiors end and outdoors begin. The exposed brick structure with its rough cuddapah stone flooring, ferro-cement tables and cupboards has a sense of surprise in its design as well as an openness in the interiors, bringing in abundant positive energy while keeping the temperature many notches below in the warm humid region that it is located.

Her project Cottage Restaurant in Pondicherry city speaks volumes of her inclinations, the eatery having to be designed in a tight space of 320 Sqm and create a built up area of 600 Sqm, where the spaces are totally open yet closed to accommodate functionality. Mona achieved this in a spectacular manner by merely using exposed concrete columns and beams, white plastered walls in a small part of the structure, the rough cuddapah flooring teaming charmingly with the copious intermingling of yellow bamboo trees and rocks. Though the elements featured are remarkably simple, the structure emits such

positive energy with its simple décor, openness and greenery that it is hard for the visitor to part from the spaces. When confronted with an existing neem tree that prevailed on the line of the boundary wall, Mona decided to save it by creating a courtyard around it.

Yantra, which incidentally is her first project, abundantly displays all the principles she believed in. Minimal use of concrete, exposed mud brick walls, mud brick domes, deep overhangs in verandas, solar power, retention of existing trees, intensive landscaping with plenty of water bodies, pebbles, laterite rocks and boulders, find their way into her project, setting the tone for her future designs.

Speaking about her design ideology, Mona says, "The idea is to use local materials on simple practical lines that are not garish and achieve a balance between my inclinations and the occupants' requirements. Each building is an evolution of your inner self." She firmly believes "sustainability is not just recycling but the way you consciously care for environment in terms of addressing wastage and conservation."

Mona has also been experimenting with Vaastu Shastra as she contends that it permits you to scale your structure. "It is mathematical and part of our ancient science, so it cannot be all wrong. We have to delve deeper to understand the finer details", she says.

Image credits
Mahesh Chadaga

A JUGAAD SOLUTION

By Architect Akshara Verma

Jugaad is taking the world by storm. Looking at challenging traditional spatial hierarchies and mechanistic planning principles is becoming increasingly popular internationally. Especially the architectural culture of Europe is beginning to adopt a new attitude towards the practice.

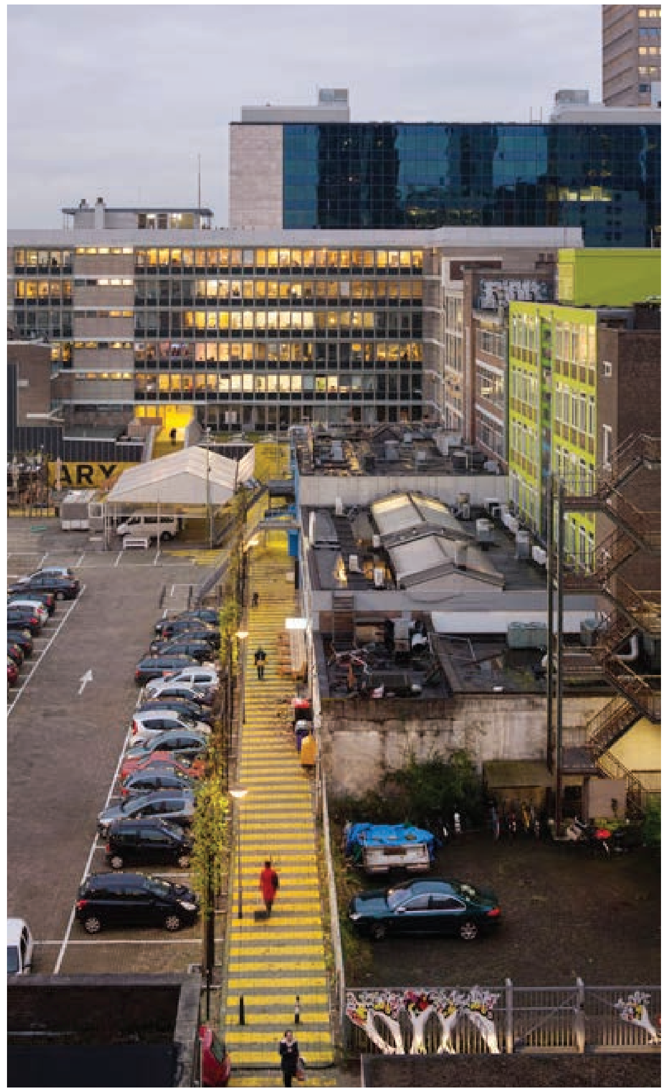


Image credits: www.agile-city.com/wp-content/uploads/2015/02/15789964347_2a5cfa487b_b.jpg

Innovation in India has been synonymous with '*jugaad*'; a Hindi term that captures the meaning of 'finding a low-cost solution to any problem in an intelligent manner', has found its way into the 9th edition of the Oxford English dictionary earlier this year. *Jugaad* promotes quick and effective thinking towards innovation and strategy. It propels frugal alternatives and instills adaptability.

Jugaad is taking the world by storm. Looking at challenging traditional spatial hierarchies and mechanistic planning principles is becoming increasingly popular internationally. Especially the architectural culture of Europe is beginning to adopt a new attitude towards the practice. In the wake of depleting resources and scarce commissions, architects are seeking intelligence to be able to 'do enough' without over-designing, to respond to unforeseen circumstances and to be resilient to uncertainty. Architects are seeking '*jugaad*' innovation.

An interesting example of frugal innovation is the Luchtsingel Project in the Dutch city of Rotterdam. Not only have independent architects, professional associations and local councils come together, but also the citizens of Rotterdam, who are active participants of this project. Impeccably executed by Zones Urbaines Sensibles (ZUS) architecten, the project was conceived as 'an experiment with tactical, small scale urban interventions developed and financed by a system of crowdfunding'.[1]

The Luchtsingel project is a 390 metre wooden bridge for pedestrians connecting the Centre to the North of Rotterdam. Painted a bright yellow, the elevated pathway runs through an underutilized car park, pierces through a vacant office

ANTARYA
INNOVATIVE IDEAS

Image credits: www.luchtsingel.org/wp-content/uploads/2013/10/210_Luchtsingel_photo_DAN_05__Design-at-news1-944x420.jpg

building, spans across a major motorway, and meanders over the main railway track. It also connects a series of public projects along the way, including a new park and a rooftop garden. Completed in mid – 2014, the bridge has already become a major catalyst, spurring economic growth in a part of the city that lay forgotten for a long time.

Built and assembled in segments, the financial model of the construction allowed individuals to contribute to the project by buying either a single plank, an element of two connected planks, or alternatively a set of planks spanning 1m of the bridges' structure. In return, the plank or part could be customized with the sponsors name or personal message to the city, or even to a loved one.

Using internet-based crowd funding, the project was able to gain enthusiasm and funds much ahead of its original schedule. More than 8,000 people supported the building of the Luchtsingel – which translates in English as the 'air canal'. The bridge today stands testament to 'by the public for the public'. This alternative method of city development has reached out far beyond the physical structure of the bridge, as also visually evident by the iconic yellow paint used on the paving that leads up to the wooden structure.

Deriving inspiration from projects like the Highline in New York, yet being driven independently by an urban principle coined by the architecture team as 'Permanent Temporality', the project has been successful in connecting three parts of the city which were previously impossible to navigate through by foot.

In a post-crisis economy, the project focuses on ways of creating quality in urban life through means of social and ecological sustainability using participation as a key driving force. The Luchtsingel project is inspirational innovation as it devises a design approach that is 'collaborative, contextual and activist.'[2]

Image credits: www.images.worldarchitecture.org/4_Luchtsingel_Over_Park__Ossip_van_D.jpg

In the wake of private initiatives for public good in India, particularly Bangalore gaining momentum, it is interesting to assess and reflect on the crucial nexus between architecture, governance and citizens. The urban in India is an exciting, demonstrative and more often than not, a contradictory space. While *jugaad* innovation is intrinsically embedded in our psyche, it remains crucial that we foster engagement with the city with architecture as an object, space or entity. Now that the first architectural experiments of the emerging practice are visible worldwide, new reactive steps should be taken to integrate innovative thinking, public participation and architectural activism.

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[1] Tom Avermaarte et. al, Architecture in the Netherlands 2014/15 (nai010, 2015), 93

[2] 'Archirectural Activism' , thebeach.nu, last accessed 14 Aug, 2015

ANTARYA
GREEN RESORTS

REJUVENATING IN ITS SIMPLICITY

By Nandhini Sundar

The location is in the heart of Auroville, the roads fairly muddy in parts, winding through the trees. We certainly had a tough time locating the site, our driver being not so familiar with the internal roads. After much questioning from my companion on my capacity to direct and locate the destination we suddenly spotted the place; elegantly tucked away amidst the trees, the lines simple yet so captivating. The **Temple Tree Resort** in Auroville is a classic example of how effective and rejuvenating the simple lines of a structure can be when infused seamlessly with water bodies and green spaces.

Designed by Architect Mona Doctor-Pingel of Studio Naqshbandi, the resort, which essentially functions more as a guest house given its limited number of rooms, is craftily planned on simple lines to keep the temperatures in this hot place several notches below while affording the therapeutic feel and view of lush green spaces intermingled with cooling water bodies. Open straight lines that flow seamlessly into the exteriors, mark the general language of the structure.

The reception of the guest house is designed as a large lounge coupled with the dining. Exposed concrete walls and roofing elements mark the space that flows seamlessly into the exterior water bodies and greenery. Completely collapsible glass shutters open the internal seating spaces to the exteriors to enable the interiors to flow freely on to the prevailing water bodies. A part of the roof is green, to keep the interior temperatures down.

The entry to the reception is certainly dramatic, boulders serving as picturesque pathways over the surrounding lily pond, the abundant aquatic life cheerfully greeting you as enter. Lounge in the comfortable seating with a drink in hand and you certainly feel all the stress draining away; the ambience and the energy of the space so peaceful, the ever-present sound of water soothing to the senses.

The interesting part is the simple lines used in this totally contemporary space, completely lacking in pretences, the expansive interiors toned down with pastel shades, with just a spot of colour to lend a charming contrast to the tasteful decor. Exposed concrete beams and columns bring in a rustic flavour, complementing the abundant presence of water and greenery. Yet the feel of positive energy in this straight lined interior is palpable.

The reception area further opens on to a dry sunlit courtyard that hosts greenery, pebbles and rough granite, giving a natural feel to the bare feet besides bringing in sunshine and ventilation while the presence of greenery acts a cooling factor. “Plenty of pebbles and natural stone find their way in as it is important to feel the nature as you walk bare feet in these sections”, says Mona who firmly believes architecture is for the five senses.

A cheerful lap pool prevails next to the reception area, again surrounded by copious greenery, inviting the visitor to dive in with gay abandon. The presence of greenery and

water bodies is ubiquitous around the individual rooms too, with each cluster hosting their own distinctive green spaces along with quaint seating. The result is plenty of natural light and ventilation sans the harsh sun besides offering a green feast for the eyes.

With Auroville being a fairly hot region, Mona decided to adopt measures to cut the heat ingress, keeping the interiors several notches below the outside temperatures. Thus the tiled roofs offer deep overhangs that shade the windows and doors, the large verandas surrounding the rooms serving as buffers, preventing the heat from pervading into the interiors. Further, the precast concrete rafter and Mangalore tile roof is insulated with bison board, thermocol and GI sheets to keep the internal temperatures down. “This also keeps pests away that may try to enter through the tiled roof”, says Mona.

The totally white interiors come with a splash of colours in the form of cushions, blinds, the colours coordinating with the theme of the space. The large contemporary interiors display a deft handling of the spaces, with the bathroom and dressing area craftily tucked behind a clever demarcation.

The entire resort is visually interconnected, the structure strategically placed, interspersed with the waterbodies, courtyards, pebbles and greenery. While the Bamboo and neem along with the temple trees exist in abundance through the acre of space in the resort, the floral plants visually find their presence into all the rooms, serving as a relaxing factor.

Image credits
Mahesh Chadaga

THE BRUTAL TRUTH

By Architect Aparna Ramesh

Robin Hood Gardens
Photograph by: Chris Guy | www.flickr.com/photos/pixelhut

Designed in the late 1960s by the influential British modernist architect couple, Alison and Peter Smithson, Robin Hood Gardens in east London was envisaged as a 'socialist dream' which would provide dignified and homely accommodation for its residents.

The recent bid by the international architecture community, led by the likes of Richard Rogers, Norman Foster and Zaha Hadid, to save the iconic British social housing project – Robin Hood Gardens, from demolition has sparked off a heated debate on the Brutalist style. Characterized by the use of rough, raw and unadorned concrete, this controversial style dominated the functional and affordable post-war civic architecture of the welfare state in Britain.

Designed in the late 1960s by the influential British modernist architect couple, Alison and Peter Smithson, Robin Hood Gardens in east London was envisaged as a 'socialist dream' which would provide dignified and homely accommodation for its residents. The project comprises of two long concrete blocks of ten and seven storeys each, running almost parallel to each other and along two of the three busy city roads that surround the site. Enclosed between the two towers is a large central green space that the Smithsons imagined as a "stress-free zone....a quiet green heart which all dwellings share and can look into".

Robin Hood Gardens
Photograph by: Steve Cadman | www.flickr.com/photos/stevecadman

The 214 one and two storey apartments, all generously sized and well lit are divided between the two towers. The quieter bedrooms, kitchens and dining areas look out onto the central green space while the noisier living rooms are placed facing the 'street in the sky' – a wide public circulation deck shared by the occupants of each floor. In an attempt to recreate traditional streets, a small alcove off the deck and at the entrance to each house was provided and hoped to encourage residents to personalize the space. At every third floor, a wide balcony leans out to overlook the central garden. These were proposed as an open space for adults to socialize and children to play.

In 1972, when the Robin Hood Gardens were finally finished, the publicly hated Pruitt-Igoe housing of St. Louis, USA was being torn down and Brutalism was fast becoming an outdated architectural style. Constructed from in-situ concrete, the robust building material was chosen not only as a means to quickly rebuild the housing stock after World War II, but also to withstand later day vandalism by future residents. However, the resulting mass was morbid and aggressive in appearance and rather dully utilitarian, provoking many residents and visitors to compare it to a prison.

Over the years, both architecture critics as well as residents have hit out harshly at the Smithsons for the poorly designed common areas within the buildings. The dimly lit and poorly ventilated passageways, staircases and lift lobbies were seen as a hotbed for crime within the estate.

Severed from the surrounding city by the towering concrete slabs, the introverted shared green space can be read as a no-man's land. Not easily accessible to even the building's own residents, it is merely meant to be gazed upon from high above. The Smithsons' 'streets in the sky' were never used as intended and were deemed as a failure of their grandiose theoretical ideas in real world social situations.

Robin Hood Gardens
Photograph by: John Levett | www.flickr.com/photos/joseph_beuys_hat/

Neglected for several decades by the local government authorities and its residents, the buildings have fallen into a state of utter disrepair. While one cannot begrudge the Smithsons for their noble intentions to build a progressive and humane utopian housing scheme, it is ultimately the society that must deal with the impact of the architects' botched attempt to translate an innovative theoretical idea into reality.

Cries to save the Robin Hood Gardens have been mainly heard from a handful of architects. It makes one wonder whether architects are the sole guardians of this radical architectural legacy of a bygone Brutalist era; a legacy that is much loved by architects for its breakthrough in conceptual design but equally hated by the public for its displeasing aesthetic.

The larger dilemma is however whether we are justified in blindly clinging to a building merely because we appreciate the idea of what it was meant to be. Wonder how we would react if for instance Le Corbusier's Chandigarh Capitol Complex faced a similar situation!

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FOCUSING TOWARDS INTELLIGENT MODELLING

By Prof K R Madhu Chand
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Asst Prof Nandini J
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Architectural education and practice place distinctive emphasis on design process that integrates “Concept, Form and Function” in the design of built-envelope, specifically referred as Architectural Design.

Technology across all sectors of diverse professions has made working more efficient, effective and ‘smart’. It has brought significant positive transformation in the working methodology and output driven approach including education system. This transformation indicates that adoption and up-gradation to newer technical advancements in practice and academics has assisted in gaining better working edge, as a process and technique or combination of both.

Educational Institutions are the root for change with young minds nurtured and new ideas developed. Every academic discipline has a set of epistemology. This is with own established knowledge, typical learning and working methodologies besides infusing professional and social output from graduating students who are now professionals of various fields. Architectural education is no exception.

Architectural education and practice

Architecture, as a building science has experienced unremitting change owing to diverse contextual, climatic and cultural factors. The influence of this is evident in architectural education and practice. Hence both need to be mutually complementing to support adoption of advancements in related interdisciplinary fields.

Architectural education and practice place distinctive emphasis on design process that integrates “Concept, Form and Function” in the design of built-envelope, specifically referred as Architectural Design. This design process has been comprehended into reality through various sets of drawings in two and three dimensional formats, generated manually as well as with aid of computational techniques.

However, market driven forces, global collaboration and integrated – interdisciplinary – collaborative approach have become decisive factors for architects to adopt advancements in computational technologies, not just as software but as an approach and methodology in professional practice. These swift technical advancements have influenced thinking process, efficiency in design and quality in building construction that affect building life cycle significantly. This aspect requires architects, both practicing and in academics to be abreast with computational technical advancements for better understanding of building design process, leading the way in defining newer set of design ideologies that eventually result in upgraded architectural pedagogy.

Thus, computational technologies have become necessary and integral part of architectural design process in education and practice. This emphasizes the need for architectural education curriculum to integrate architectural design and computational technologies across semesters to make graduating students competent to face the multifaceted challenges of architectural practice.

Current scenario

Architectural practice has been swiftly adopting advancements in computational technologies and new methodologies of “Integrated Systems” as compared to architectural education. This has led to a widening gap between academics and practice. It is inspiring to know that certain architectural schools have tried to fill this gap by upgrading their curriculum. Unfortunately, such schools are limited on a global scale. Majority of the schools still follow traditional architectural curriculum that engage less with computational technologies.

Major reasons posing obstruction in integration of computational technologies in architectural curriculum:

- Architectural design process is a creative exploration of different spaces. So, computational technologies might not support this exploration.
- Architectural curriculum is already encumbered and there might not be any scope for inclusion of computational technologies.
- Academicians and practitioners might feel incompetent to get acquainted with ever upgrading computational technologies thus affecting the key role played by an architect in building industry.

However, these reasons are more skeptical than reality. There thus exists tremendous scope for Integration of computational technologies into architectural pedagogy.

Computational Design

Computational Design is an intelligent model-process that provides framework for negotiating and influencing interrelation of internal and external building parameters. In relation to design, computation involves processing of information and interactions between elements which constitute an environment. Computational Design with BIM provides a framework for negotiating and influencing interrelation of both internal and external properties, with capacity to generate complex order, form and structure. By combining the principles of computational design, a fundamentally new method of building design is made possible.

Integration of computational technologies

This is not just mere usage of new software. However integrating technology in architectural education system requires realignment and computational technology comes with its own methodologies that need to be followed.

Technology will have impact on curricula in two areas:

- Implicit proposition on how design and project partners should collaborate.
- How information (geometric and non-geometric) can be modelled, embedded and shared during active building life cycle.

Technology cannot stop at one level of architectural education. It should complement the holistic growth of students without being a separate segment.

Indian architectural education focuses on various aspects of development during the five year undergrad program. During this period, students are made to focus on new techniques and requirements which aid better design thinking process. They take forward the learnt aspects in future projects through their new way of thinking and working with conditions.

Technologies like BIM – Building Information Modelling and Computational design using BIM help students integrate their knowledge of each aspect of design better. This is the true essence of Integrated Systems. This is where every requirement, existing conditions, techniques and ideas come together, eliminating conflicts and address issues in a holistic manner.

ART, CRAFT AND DESIGN EDUCATION

By Architect Prof Jaffer AA Khan

"Educating the mind without educating the heart is no education at all" – Aristotle

I vividly remember my drawing master at my school. A tall dark man who would sit in the corner of a large studio. He was almost invisible except his stark white teeth when he spoke. He would make the whole class sit on the floor, and in spaces designated for each of us as per the roll number. He taught us the basics in drawing and painting. Much of my drawing and painting skills are result of the hard work of this great teacher. He liked me because I drew well and at the end of my schooling I had a bunch of certificates which I still possess. Where are these drawing classes today? Is such exposure to art by students taken seriously in schools? Art widens our thinking and creative abilities, helping us develop skills that become useful in the future.

I have been in architectural education for quite a while. As a practicing architect, I used to be a visiting faculty at many schools and later became full time academic to devise my own "Foundation Programme" at the school of architecture which I founded in 2011. The quality of students we had at the School were brilliant and intelligent. There was a mix of talent amongst the students both from management and the merit quotas. Yet, there was always a ratio of 80/20. A large percentage joined because of the trend or perhaps they did not have other options. Having got very high marks in their qualifying Higher Secondary Examination, I saw that many of them struggled with the idea of design. The same case with me when I joined the course more than 35 years back. I struggled but I could progress because drawing and painting lessons at school helped me progress. As I did, I fell in love with architecture and it became a passion. I felt that "Designing was always fun".

As a professional and an academic, I always believed that there must be a stream for specialisation in Art, Craft and Design for students at Higher Secondary level. Presently, students have only streams that lead to Engineering, Medicine and Commerce. They study the traditional, Physics, Chemistry, Mathematics and Biology, referred – PCMB. Significant demand for this group every year. To join architecture one needs to compulsorily have mathematics as the core subject and hence most students having a special interest in architecture go through this stream.

In addition to this, Council of Architecture (CoA) makes it mandatory to undertake the National Aptitude Test in Architecture (NATA). But we know the test itself has become mundane and does not guarantee the quality of students that one would expect. In fact the coaching centres have become a big success, financially profitable and exploitative ventures.

It is unfortunate that students never get an option to study Art, Craft, Design and Media as an additional stream at secondary school level. If this choice was available, I am sure many interested students would be able to decide on their career much early in life. More focussed and passionate students would be available at the architecture and design schools. HRD Ministry is presently devising a new education policy and it would be worthwhile to consider and develop a framework for the design stream to be included at the Higher Secondary level. Subjects like, Art, Craft, Design and Media should be included along with History and Cultural studies as a separate stream with or without mathematics.

It is time the CoA takes up the matter with HRD Ministry and the experts who can implement this stream of education. This would help prepare better architects and designers who have the passion to practice the art of architecture and design. One hopes that the new education policy will widen the scope for a variety of opportunities where our younger generation will not just learn for the sake of learning but attach passion to whatever they do. That will be the vision for 21st century India.

THE PIVOT

By Architect Prof K Jaisim

Once upon a time, in the Space of Architecture and in my infant days of pacing it, I found a mentor. Not by accident but choice. This professor of history was boring, taking class after class, but with great depth in pattern he drummed into my brains though at that time I hardly recognised it. He was talking about classical architecture and its grammar. I just wanted to get out and breathe a bout of fresh air.

I thought I had joined architecture as a release from maths, history and grammar. But here I was being chastened by them every moment of his class. Off class he would make me listen to music and its myriad defined discipline. Why he chose me as his object of attention, little did I realise! What kept me on with him was his cycle, which fascinated me, as anything mechanical froze my attention, a multi-geared state-of-the-art and his bespectacled method of classical delivery. No anger or remorse but a smile. This somehow worked like opposite poles of a magnet which kept us pivoted. I had my own vision and in it had created a pattern. And without me knowing, he discovered it. I even tried failing his class by submitting a blank paper, hoping he would throw me out. But he smiled gave me a zero and said come home this evening. I thought it was the end, a note to my parents to dismiss me. But what transpired changed my life. Patiently, with a choice of tiffin and classical music on his Veena, he made me sit on the mat and listen. After a few days he subtly shifted the composition of music to grammar and composition of design. I got to paddle his cycle!

Farnsworth House, Plano, Illinois by Mies van der Rohe
Photograph by: Devyn Caldwell | www.flickr.com/photos/iconeon

Soon, after one of his evening sermons, Prof. K N Iyengar as we all students addressed him, drew the curtain to reveal a whole new world of built spaces. Mies Van der Rohe, the greatest living architect of those days and even now, walked into the scene. Initially I hesitated, not believing. Till date he is spiritually alive in all my works. One day, taking courage I wrote, in those days a postal mail to Mies van der Rohe, a letter of appreciation admiring his works as taught by KNS. And then forgot all about it! A month later my mother called me and indicated a parcel from America. I ignored. But when the delivery came and I tore it open with shaking fingers to pull out a book – Mies Van Der Rohe – I just sank to my knees. There was a letter attached signed by his secretary saying, Mies is pleased to send this book as mark of thanks.

But, I was disappointed! His signature was not there. So I shot a mail of thanks for the book but stated I missed him in spirit. In comes a post as fast as possible in an envelope marked from Mies van der Rohe, and inside a white paper with his autograph – Mies van der Rohe – truly a great icon both in spirit and life! This was and is a Pivot. This book adorns my shelf even after crossing fifty years and acts as my reference to a prayer to search, be bold, explore and express without fear and favour the myriad facets of an architect's journey. But, that was not the end, only the opening of a drama. From my inner depths, I searched and Ayn Rand and her Fountainhead, like Moses' Ten Commandments, descended on me. The Pivot got reinforced, other greats like Otto Koienigsberger, Buckminster Fuller, Geofrey Bawa and many other individuals from the spectrum of life held my wheel and tossed JF to the skies.

To any young architect, even today – if you want to discipline design and make the environment smile, laugh and just spirit away – turn the pages of Mies, if not walk his spaces – I even went a few thousand miles just to glimpse and touch those creations. Every step resounds with life and the senses awaken the elements to simply Pivot me like a ballet dancer and swoon to the metaphysical world. And then KNS, in his implacable manner, introduced me to the Dance of Shiva by Ananda Coomaraswamy – with a smile that set me off on another journey of philosophy, integrating the nuances of an ancient culture which even today awakens the world of the built environment with life in its million avatars.

MEETING IN A BOOKSTORE

By Architect Priti Kalra

The idea was to design a space which would be more than just a store for books; a warm and inviting space where visitors can pause the real world and disappear into the dream world of words.

Brazil Studio MK27, with their recent construction at Sao Paulo, have created the perfect boudoir to dream. Winner of the 2015 Building of the Year Awards (Category: Commercial Architecture) as well as the 2014 Inside Awards (Category: Retail) at the World Festival of Interiors, the Livraria Cultura or the Cultura Bookstore, in the words of the architect, is a bookstore with a meeting place. The idea was to design a space which would be more than just a store for books; a warm and inviting space where visitors can pause the real world and disappear into the dream world of words.

Located in Iguatemi Sao Paulo shopping centre, the bookstore was designed by Marcio Kogan, founder of Studio MK27. It was visualized as a multi-level space, four levels to be precise, which would boast of an open circulation type plan and spatial fluidity. The entrance to the store is at the first level, marked by an 8-metre wide expanse of glazing fixed on to recessed aluminium frames. Right from the entrance, the concept was to make the shop feel welcoming. On entering the space where audiovisuals are displayed, customers have the option of browsing through products, strolling to the garden cafe at the rear end or ascending to the next level via a pair of grand central escalators.

The second level is smaller, housing comics and toys. This leads to the lofty upper floor – the main space of the bookstore. A large double-height room with bleachers built across the 21-metre wide span, it is lined with bookshelves along its perimeter. The bleachers lead to the final fourth level, a high-level walkway encircling the store, aiding to reach higher shelves without any assistance. The bleachers double up as seating where customers can lounge, skim through books or merely sit back and observe. Additional display space is offered by two rows of eleven large rectangular tables set up on either side. In between are smaller circular tables surrounded by George Nelson's iconic 1955 Coconut Chairs – more seating to read or interact. There is also a small exhibition gallery, children's book area, a classroom and conference space.

The material palette used is simple yet striking. Floors and ceilings, including bleachers are covered in timber. While the display tables use wood finish, book shelves feature white laminates. White has been introduced to distinguish the planes from rest of the surfaces. Railings finished in glass enhance transparency and openness, a feel of seamlessness with no visual interference. Colour is brought in subtler ways, through books lining the shelves and upholstery in the loose furniture, with bright oranges, greens and yellows finding their way. Ample lighting exists through built-in LED fixtures within bookshelves and from wooden

drop down pendant lights. Lines of light also feature in between timber slats of the ceiling.

Interestingly, the different spaces have developed unique names. The second intermediate level with comics and toys is 'the geek space' or 'the geek mezzanine'. The main hall of the bookstore is referred as 'a cube internally clad with books'. The multi-use conference room is called the 'philosophical cafe' by frequenting customers.

The objective was to make the architectural journey start in a cozy space, then arrive at a monumental living area where products and visitors can interact, where one can take a book and read a chapter even before purchase, where one can simply rest and watch the movement. The architects sought to make the program and brief, the very essence of the store; almost as if the concept of the bookstore is, 'knowledge is all around us'. The architects have imagined a space for this dictum in both literal as well as abstract sense.

By making the bookshelf display the main feature of the store, the literal connotation is achieved and an aura created around the brightly lit space which almost brings forth in a person the inherent want to attain knowledge or simply to connect with oneself. The vast proportions of the main upper level and the attention paid by the architects to articulate the dimensions of each of the levels further augment this feeling of comfort. Invariably, the design tends to promote a kind of interaction and socialization among people which could only lead to positive discourse and healthy debate. One might think that a space such as this could go on to inform the tenets of the library typology of the future. With the key features of the design being an open plan, no barriers to visual and physical connectivity and a most minimalist palette of colours and textures, the Cultura Bookstore becomes an exemplary example of modern architecture.

A HYBRID LINK WITH THE PAST

By Architect Yamini Kumar

The idea of a street high above the city was intended to counteract the sense of isolation that high-rise residential communities usually bring. Holl intended for the public sky-loop and the base-loop to constantly function as social condensers.

Does architecture create new customs, or do old customs dictate architecture? Architect Steven Holl's Linked Hybrid is a mixed use complex in Beijing that combines "horizontality" of the urban form before the 1980s and its "verticality" after. The project attempted to re-arrange public and private configuration by applying modern architecture to age-old patterns of housing mixed with shopping, dining, education and entertainment. The complex's two marketing concepts were sustainability and being international, metropolitan community. The project won awards for sustainability and design and has been described as revolutionary. While it is an interesting project, the attempts made to change society and introduce a new way of living into Beijing have not been a success. How then, is this massive project justified?

Holl strongly advocates the project's porosity and claims that development has been opened to the surrounding area, welcoming non-residents. The diagrams, photographs and descriptions of the project effectively clarify this claim. However, on taking a closer look, the building appears closed, insular and difficult to access. The site is bordered by a highway and storm water drain, existing housing, an access controlled road and is spatially cut off from other residences. Its monumentality gives it the appearance of an unwelcoming fort.

Furthermore, after completion of the building, a Chinese-style wall was built around the estate on insistence of the residents, completely counteracting the intended openness! Each entrance now has tight security and is manned by gun-toting guards, exuding hostility. A series of multifunctional sky bridges connect the eight towers, which are also supposed to be open to the public.

The idea of a street high above the city was intended to counteract the sense of isolation that high-rise residential communities usually bring. Holl intended for the public sky-loop and the base-loop to constantly function as social condensers. However, the public activities are all high end and unaffordable to the average man. When the complex was walled, the question of operating the bridges and making them economically viable came in, because of which some commercial spaces were turned into private spaces. The complex is now a private community, no longer welcoming the public.

The Linked Hybrid is highly efficient in terms of its sustainability. It has one of the largest heating and cooling geothermal systems in the world. A Ground Source Heat Pump system, one of the largest in residential construction, provides most of the heating and cooling loads. Grey water from all apartments are recycled and reused for irrigation, toilet flushing and pond water rebalancing. Minimized energy consumption and maximized comfort for apartment units is achieved by use of radiant cooling and heating, displacement ventilation and exterior window shade. It has given China one of the largest green residential projects in the world.

Holl also gave some thought to the project's cultural assimilation. There are dedicated spaces for Tai Chi. Certain principles of Feng Shui were also adopted. The number eight, considered lucky in Chinese culture, was integrated in the number of residential towers and colour scheme of the façade, formed of eight colours inspired by China's old temples. Nevertheless, these gestures of integrating Chinese culture into the project remain unapparent on first glance.

The buildings form an incredible space and structure; Chunky, yet elegant and broken by large voids in between. The brightly coloured inset window frames form a comely composition with the flat silver façade, characteristic of Holl's language. The twisting glass corridors provide a visual connection between the eight towers. Much attention has been given to landscaping of the central plaza that was meant for public use.

On the whole, the Linked Hybrid is a bold move, significantly different from other high-rise housing in the city. The towers may be almost monumental, yet they strike a balance between Beijing's conservative Cold-War throwbacks and its growing array of showy statements. The project has achieved many goals, except its goal of community living. To achieve such goals in a country as complex as China, architects will have to work harder, beyond addressing the built form. However, true to its description of being a "city within a city", the Linked Hybrid forms marvellous spaces within it, integrating culture, sustainability and aesthetically appealing architectural elements.

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GREENING IT YET AGAIN

By Architect Priti Kalra

The restored pegmatite rock trench leads to the country's biggest outcrop
Photograph By: Pau Ardèvol

Ordinarily, architectural restoration and conservation involves carefully planned interventions through which the material, historical and design integrity of a built heritage are prolonged. Unlike other restoration projects, the Cap de Creus project is more of landscape restoration.

On the eastern tip of the Iberian Peninsula, along the coast of Catalonia, Tudela-Culip was constructed in 1960 as a private holiday village with around 450 rooms. The resort, also known as Club Med, found its site at Cap de Creus in Cadaques and would receive close to 900 visitors during summer. The resort promoted an ideology of cutting off from bustle of the city and developing a relationship with nature, hosting visitors who enjoyed a more pristine way of life.

In 1998, with the rise of democracy and ecological conservation gaining tremendous ground on the political front, Cap de Creus was declared a National Park. The cape and the Club Med surroundings boasted of an outstanding geological and botanical value, and were given the highest level of land protection. The resort was closed completely in 2003 and the Spanish Ministry of Environment acquired the 200 hectare property in 2005. Thus began one of the largest restoration endeavours undertaken along the Mediterranean coast. The team commissioned for the project comprised a landscape design firm EMF (Estudi Marti Franch) and an architectural firm Ardevol.

Tudela culip restoration project | Cap de Creus | Spain
Photograph By: Pau Ardèvol

Ordinarily, architectural restoration and conservation involves carefully planned interventions through which the material, historical and design integrity of a built heritage are prolonged. Unlike other restoration projects, the Cap de Creus project is more of landscape restoration. The brief demanded the design team to 'deconstruct' existing built environment and restore the essence of the landscape through architectural intervention.

In 2009–10, Tudela-Culip was demolished and the team initiated the process of reviving the ecological dynamics of the site, working alongside over 50 specialist consultants. The idea was to create an environment to experience the rich landscape in its most primitive form. The work involved in-depth site reconnaissance and precise on-site cartography making. The five year journey took the designers on a 200 km walk across the site, wherein over 15,000 images were photographed and studied in an attempt to

'rothko cubes' that frame and distill the landscape into sea, land and sky
Photograph By: Marti Franch

optimize the deconstruction process and employ reclamation methods to benefit the natural terrain. The site finds its value in diverse geological formations, stunning naked rock outcrops and specialized native vegetation. Being one of the windiest corners of the nation, the magnificence of the sea and the wind also plays a big role in adding to the natural value of the land.

Five main actions had to be carried out in the development. First two involved removal of 45,000 cubic metres of architectural residue from the site and recycling 100 per cent of the construction waste. All invasive exotic flora (IEF), in particular the infamous 'ice plant' had to be taken out to facilitate the fourth action, the revival of the natural geomorphology, drainage system, erosion and sediment transport dynamics between land and sea. Finally came the design intervention.

A network of pathways was introduced, recycling existing paths and promoting circular routes. Pathways were divided into hierarchy of three tiers. Main access road was laid in asphalt. The architects decided to reuse existing main road but reduce its section by half, from 7.4 m to 3.5 m. 250 m of roadway was laid along the beach to permit its experience in entirety. Earlier, this view had been segmented by the road. Secondary pathways were laid in concrete, leading to major viewpoints of the site. Tertiary pathways or informal routes to secondary viewpoints were defined by ankle-height metal railings. The viewpoints were positioned craftily to allow best panoramas.

Most prominent built addition to the site was the Cubes Viewpoint, consisting of a pair of Corten steel cubes sitting on stone slabs, looking out to the sea. Attention was also drawn to interesting landscape features in subtle ways. Traditionally, fishermen and their children had identified rock formations resembling animals. These were considered important landmarks and marked with small Corten steel panels scattered around the site.

Some form of sculptural intervention in stone was also to be created around important points, which could be used for seating. The movement of visitors through the site along meandering pathways to the various viewpoints and landmarks were beautifully choreographed allowing each visitor to engage in an enchanting narrative with nature.

The architects followed a rather minimalist approach in terms of construction materials, chiefly confining themselves to on-site recycled materials and Corten steel. Corten steel integrated very well with the landscape and was resistant to sea exposure. A call was taken to restrict to fewer consistent construction details which were repeated through the site.

It is interesting that what could have easily disintegrated into a habitat reclamation project was developed into harmonized reframing of the site's distinctive attributes. The architects took a simple demolition order and converted it into a creative landscape restoration venture. Deconstruction was looked at as a combination of destruction and construction to celebrate the natural and cultural uniqueness of the site, which ultimately poses a valid question to the world of architecture – one of empty vs. full, of void vs. occupied, whether removing or un-building can create just as much an impact as adding or building.

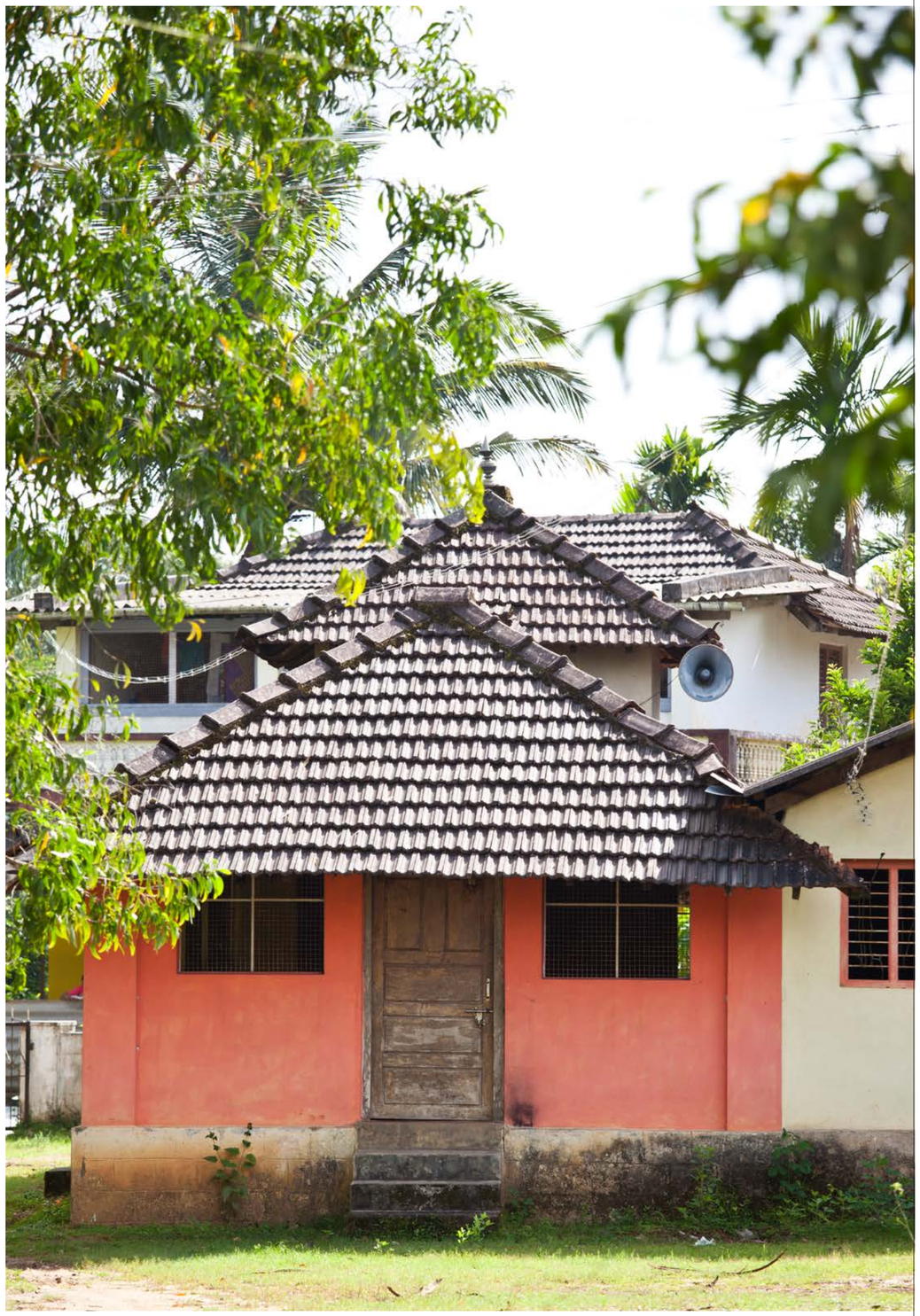
Image credits
www.designboom.com/architecture/estudi-marti-franch-tudela-culip-restoration-project-cap-de-creus-spain/

DIFFERENTIALLY ROOFED

Mahesh Chadaga

The roofs of temples are typically grand with sculptural elements marking the Gopura. **Interior Designer Mahesh Chadaga** captures the images of differentially roofed temples where tiles and sloped roofs replace the exotic Gopuras.

Exuding an intense of aura of peace, inviting one to soak in the ambience and slip into a world of meditation is the Keladi temple in the district of Shimoga. Constructed during the Nayaka Dynasty, the temple displays Dravidian style of architecture, a perfect blend of Kadamba, Hoysala and Vijayanagara. Built by Chowdappa Nayaka, the structure is erected with granite, the roof and pillars using carved wood. While the Rameshwara temple at Keladi serves as the best example of Nayaka's art, the stone sculpture of Ganda Berunda on the ceiling of Veerabhadra temple is exquisite. It depicts a two headed Garuda holding lions with its beak and elephants with its claws. The main sanctum sanctorum is said to have been erected during the reign of Keladi Chennamma. The temple also hosts a museum where ancient artefacts are preserved and displayed.



The Western Ghats is famous for its copious rains and the buildings in the region reflect tiled roofs to accommodate the climatic conditions. The rice mill displays the typical Mangalore tiled roof opted in the region to permit the easy run off of rainwater.

HAPPENINGS IN BRC: MAY TO JULY 2015

SOUND OF MUSIC AND CLASSY KITCHENS

There is certainly a part of the residence that is much sought after the minute hunger pangs choose to make their gnawing presence. Having a charming space that breathes all the comforts and ease of work in this arena is certainly a welcome proposition. Unveiling such exotic kitchen options and enticing the prospective customer was Toncelli Cucine and Meridian, hosting IIID BRC event where renowned chef Manu Chandra enthralled the audience with his gourmet journey into Italian cuisine.

Enchanting strains of music amplified by the perfect music system can certainly take the listener to the elusive paradise, never mind if it be merely in spirit. Meridian offered this ethereal experience to the captivated gathering, with its state of the art audio and home theatre options.

ARCHITECT PRESENTATION: AN ORDERED WILDERNESS

Architect and Landscape designer Made Wijaya is literally synonymous with exotic landscapes, his green spaces a fusion of art and ordered wilderness. The stunningly crafted open areas fuse so seamlessly with the structural interventions, the waterbodies and sculptural art blending to reflect not just the wild streak in this genius but also display a sense of creativity amidst a seemingly undisturbed nature. The large gathering in the IIID BRC event was treated to an astounding walk through of his work during his spellbinding presentation. The event was hosted by Hunter Douglas.

CONSERVING ART AND HERITAGE

Restoration and conservation of art is invaluable work, a fact acknowledged without a question. Dedicating to such restoration and conservation of priceless art and heritage is INTACH through its conservation and restoration wing. Presenting the restoration and conservation work of paintings in Tyagarajaswami temple in Thiruvarur and multiple other heritage places besides ancient manuscripts and individual art pieces was its Director Madhu Rani. This IIID BRC event was hosted by Hunter Douglas.

NEW GUARD IN PLACE

The month of June saw the election of Mr Pratap Jadhav as President IIID at the National level. He took over the reins from the outgoing President Mr Nitin Saolapurkar. Mr Jadhav was felicitated by the National Executive Committee in Pune in a grand function. Outgoing President Mr Saolapurkar, who is from the Bangalore Regional Chapter, was given a warm farewell in Bangalore, the Chapter recalling and acknowledging the wonderful work he had carried out during his tenure.

Mr Rajeev, who was former Vice Chairman of IIID BRC, was elected to the Executive Committee of IIID. Mr Rajeev is the CMD of Living Concepts Designer Homes (Pvt) Ltd. a European Consortium of companies in the field of Interior and Exterior Surface Solutions. He is also the Managing Director of ESPA Spain, a Rotarian and Member of the Indian Plumbing Council.

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