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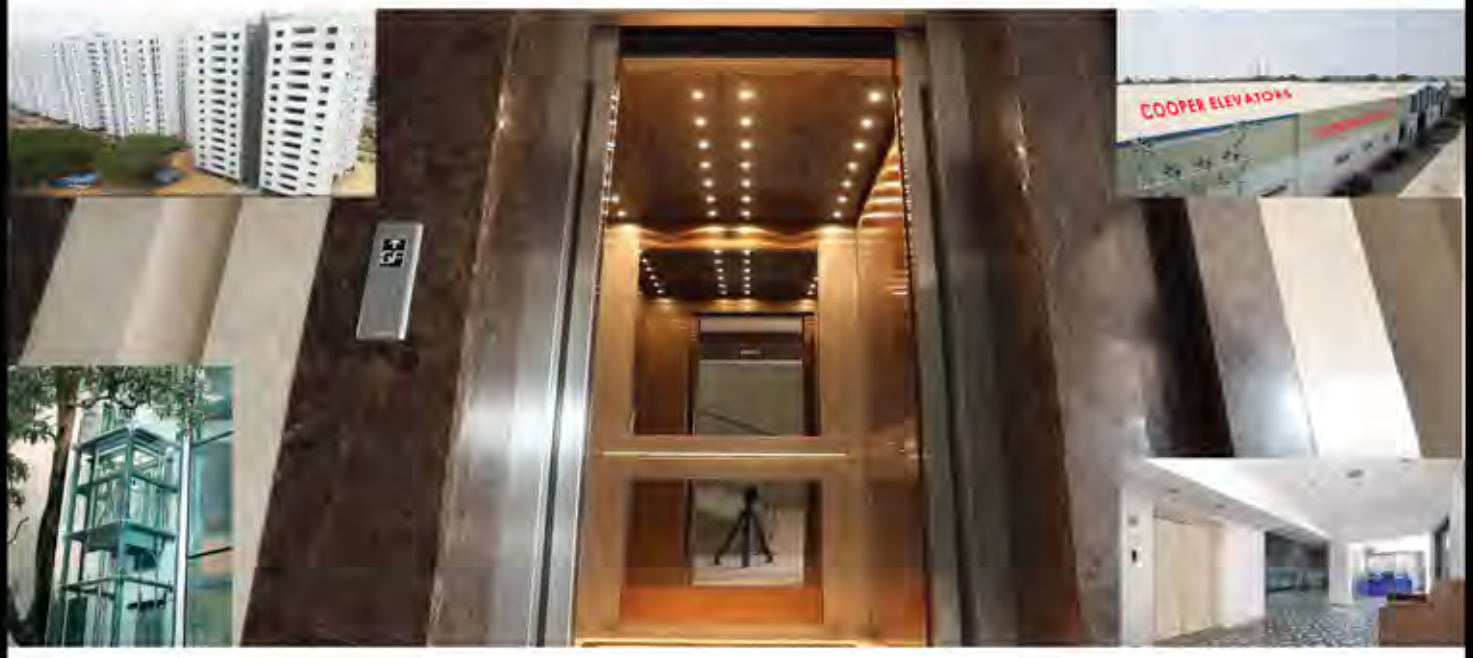

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EDITOR'S NOTE

As we move on with the 13th issue, we proudly present our last 12 issues.

The focus area of this issue of the Journal is Education.

The educational institution should be designed as a place to encourage inspiration and curiosity. The design shall be sustainable, durable and eco-friendly. So, designing educational institution can be more of a challenge than we expect.

Dr. Shilpa Sharma elaborates on the theme 'Education'.

Ar. Gita Balakrishnan is in Dialogue with Ar. George Ferguson.

The cover design has been given a new mode in graphics, since the first 12 issues based on the letters of the word 'ARCHITECTURE', is now complete.

Ar. Rani Vedamuthu writes on the National Aptitude Test for Architecture (NATA) conducted by COA.

Team JIIA appreciates the wonderful gesture by IIA Rajastan Chapter for the contribution of ₹ 5,00,000/- to the Journal.

We continue with our regular features, as well. Enjoy reading and keep contributing.

Ar. Lalichan Zacharias
Editor

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PRESIDENT'S MESSAGE

Dear Members,

Greetings!

With the onset of spring a new energy and synergy is evident all around, leaving the uncertain psyche of the past behind.

Let us appreciate the constant and coordinated effort of the Editorial team, under the able leadership of the Chairman, Publication Board, in bringing out 12 issues of JIIA on the dot. It has received appreciation from members all across India. We have to strive to strengthen its finances. Rajasthan Chapter's contribution of Rupees Five Lakhs to JIIA is much appreciated.

Recently I had the opportunity, on behalf of IIA, to felicitate Ar. B.V. Doshi at an event organized by IIA Ahmedabad Centre. His acclaimed awards, recognitions and life time experiences were related with nostalgia.

The buoyancy amongst the leaders of the various Chapters is a healthy sign of the revival of national programmes to follow: the IIA Awards, IIA NATCON, IIAPL and Chapter programmes: MahaCon, Rajasthan Architecture Festival, regional programmes; Central regional conference, Northern regional conference, and others, apart from other programmes of Chapter and Centres.

The curtain-raiser of IIA Natcon at Hyderabad, held by IIA Telangana Chapter, was an event to behold full of zest, enthusiasm and energy as a precursor of what to expect.

We need to raise and save funds for the development of our Institution and its objectives. When we conduct programmes, contributing a part of surplus funds to IIA HO is very essential and shall be highly appreciated.

Women empowerment is at its best at Odisha Chapter with the leadership of Ar. Rajkunwar Naik, Chairperson, Ar. Swapna Mohanty, Vice Chairperson, Ar. Keerthi, Jt. Hon. Secretary organizing events like Utkal Diwas and many more to come.

I plan to visit Chapters that have not been visited so far, to interact and understand their ideas for developing the reach of our Institute and addressing issues of concern.

The Students e-Newsletter has been released for the benefit and contribution of students of our Affiliated Institutions. We appreciate the diligent effort of its editor, Dr. Rama Subramanian and Dr. Ranee Vedamuthu, Chairman, Institution and Students Affairs Committee.

The Chapters and Centres are requested to maintain a working relationship with the Institutions in their area so that a synergy between academics and practice can be beneficial for the students to make them sensitive of the evolving practices.

Looking forward to meeting all of you at the forthcoming events.

Let us spread the goodwill.

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THEME

REALIGNING WITH THE OBJECTIVES OF EDUCATION

If education is identical with information, then libraries are the greatest sages in the world and encyclopaedias are rishis.
Swami Vivekanand

It is obvious that questions are vital tools for learning. Yet our systems of education largely concentrate on teaching students the solutions, rather than focusing on how to ask the right questions. Could this be making us complacent by assuming we know all that there is to know? And cling to our beliefs and assumptions? Possibly to end up irrelevant, outdated and eventually phased out and replaced?

The objective of pedagogy needs to be constantly examined and questioned in order for it to remain pertinent: How well does our current education prepare a student for reality? What should the objective of the curriculums be? How do we impart to our students an approach to dealing with the discordant reality of imagined solutions?

The overarching aim could well be to encourage would-be citizens to realize their capacity to conceive, plan and achieve fruition through building the nation within the context of actual circumstances.

As disciplines, all education derives from the arts, humanities, technology, culture and the environment- social and financial. Hence education resulting in formal qualifications and a license to work or practice professionally needs to make certain of the inhered balance between emotion, intuition and reason.

Just as important are the spaces within which education is imparted – whether it is the traditional imagery of a guru teaching under a tree or the little village brick school or ultra-large educational complexes. All of them need to have one thing in common: imbuing the concept of exploration. Whether it is the tangible environment, or the intangible one, both need to complement each other in the nurturing of a questioning mind. There are many contemporary attempts at creating built surroundings that provoke the natural sense of curiosity of enquiring minds and ecosystems for experimentation and innovation. In fact, places like Shanti Niketan and Bauhaus have been vanguards of pedagogy, not only with their systems of teaching and learning but also through their built forms which enhance the former.

We may not be able to teach a student to be original and innovative at all times, but surely we can imbibe that it is not necessary to be different merely to be noticed. Being sensitive and responsive to the context and circumstances would probably go further in making a healthy contribution to society and provide a conducive environment for educating the generations to come.

It is better to know some of the questions than all of the answers.
James Thurber

According to Hindu mythology, Apasmara is an immortal dwarf who represents ignorance, unawareness and ego. Nataraj subdues him by crushing him underfoot as he dances away the illusory world of maya transforming it into power and enlightenment.
(Source: Adapted from https://www.tumgir.com/tag/shiva%20nataraja)

Dr. Shilpa Sharma

RESEARCH

Integrated Planning Approach to Overcome Issues Caused by Multiplicity of Urban Authorities : A Case of Aurangabad

Ar. Nikita P. Pawar

●

Natesha : The Manifester

Ar. Riddhima Khedkar

INTEGRATED PLANNING APPROACH TO OVERCOME ISSUES CAUSED BY MULTIPLICITY OF URBAN AUTHORITIES : A CASE OF AURANGABAD

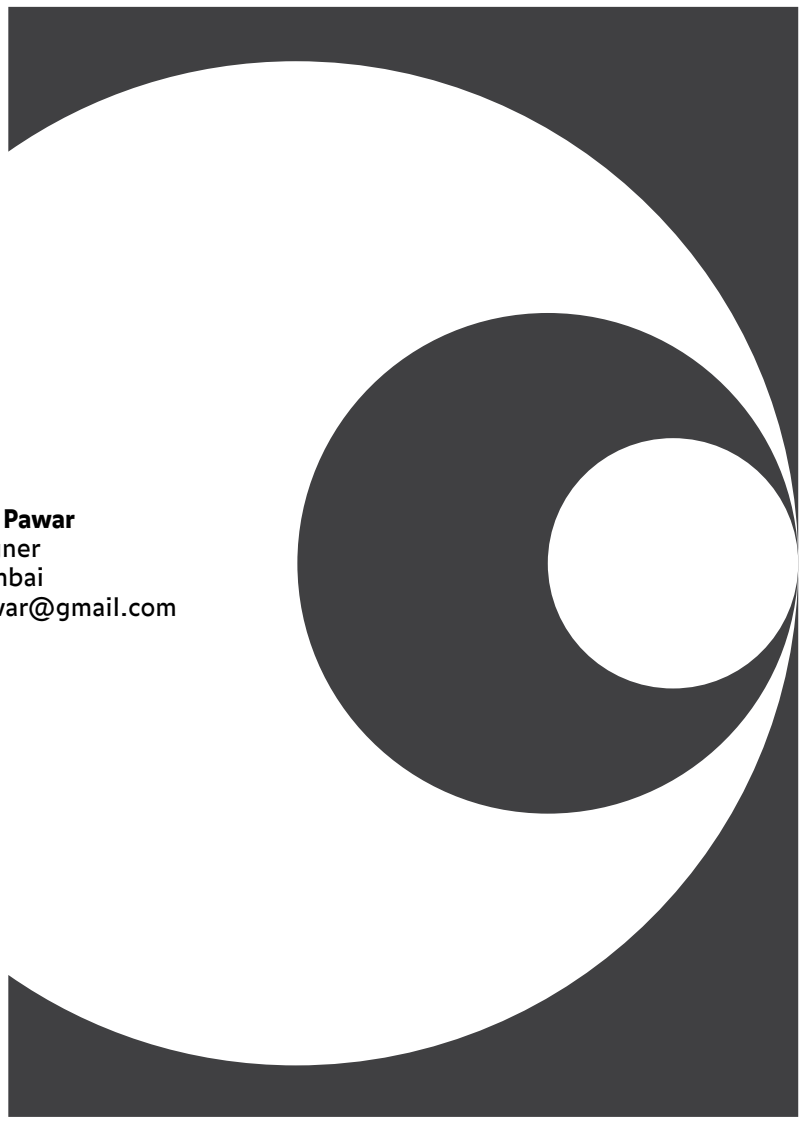

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Figure 1: Urban Planning Structure in India
(Source: Author)

ABSTRACT

A city is an area where a large population resides and is governed by a mayor and councillors. The population of a city is generally determined by the vibrancy of its economic activity and increases in proportion to the same. The growing population causes a strain on the civic amenities of the city. If the city's planning and governance are dealt with by a single authority, citizens' demands may be easily met. However, looking over today's situation, great pressure owing to population growth and industrialization may be seen. Thus, several special planning agencies are carrying out their mandates in silos, resulting in discord. This indirectly impacts the city's urban form. This research intends to develop a single framework that can assimilate and integrate the roles and mandates of numerous planning bodies synergistically. For conducting empirical research, high-potential Aurangabad city has been identified as a site. However, the site's potential is wasted due to a lack of integration between these multiple agencies. This paper aims to utilize this potential by connecting physical, social, environmental, and economic aspects in conflict zones.

Keywords: *Integrated Planning, Planning authorities, Governing Authority, Urbanization*

1. INTRODUCTION

A special planning approach is required for each vision to transform into reality, and strategies must be developed for it. This is an extensive and deliberate process that incorporates tactics, methods and cutting-edge technologies for fulfilling competing needs of government planning and citizen aspirations. To design these plans, a professional planning structure is required that is prepared to handle upcoming challenges and is sensitive towards the city's shaping. In the Indian context, these urban planning structures comprise planning authorities work at different levels, that is, from national, state, regional, district and local levels (see Fig. 1). The working scale of planning authorities depends on the city's scale and vice versa. Thus the establishment of these planning structures is critical, as the city's growth and structure are intertwined (MUD, 2014). There are governing authorities who consider city development to go with planning authorities. The governing and planning authorities can be either one or different depending on the scale of the city. In small cities, it is manageable by a single or maximum of two authorities who will plan and govern the city. However, in other cases with a large city scale, managing with only one planning and controlling entity can be challenging. So, there is the participation of multiple authorities including special planning authorities and quasi authorities who play their individual roles in the planning of areas. Likewise, multiple governing authorities govern these specific areas. When these authorities collide, a slew of complications arise due to different norms and regulations. Hence, if suitable actions are not taken, the city's urban form and development will be affected. Along with the planning structure, the authority's planning strategy should be scrutinized. In the top-down approach, the citizen's view is barely taken into account by the authority, while planning an area (see Fig. 2).

As a response, people object to these powers. The disparity within the two approaches is reflected in situations like - lack of connectivity, uneven land use and ignorance towards natural features, untreated edges and unplanned zones. In such scenarios, the overlaps and resulting conflicts between multiple authorities become evident. With growing urbanisation, migrants began to settle in the area, leading to the

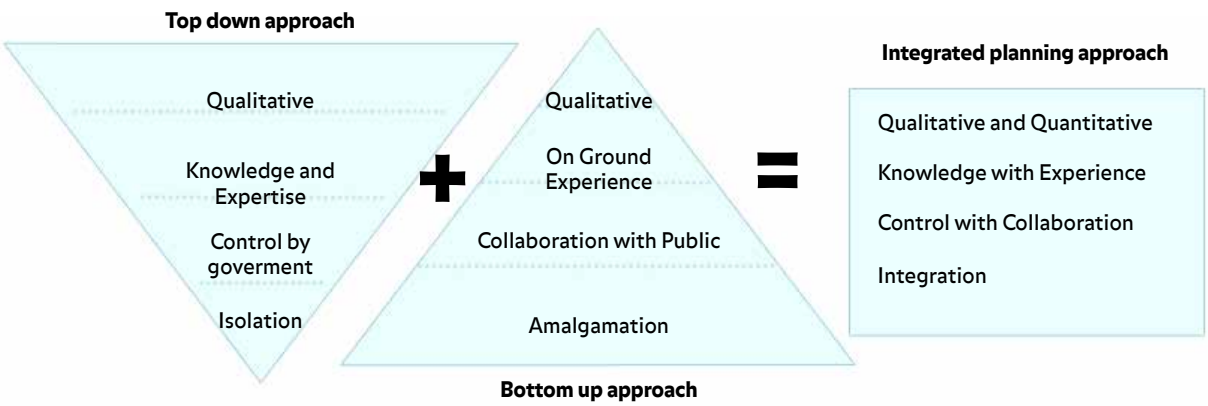

Figure 2: Planning approaches
(Source: Author)

increasing density of the area and putting strain on planning authorities. A special planning authority, CIDCO, was appointed which planned Navi Mumbai to decongest Mumbai and generate economy. Due to isolated planning, it failed to connect Navi Mumbai with Mumbai the way it was imagined. At the same time, in Hubli, with proper integration of land-use zoning and transportation systems in place, underutilised areas were properly utilised (EMBARQ, 2014). The problem of lack of integration among municipal authorities is becoming more prevalent in many Indian cities which reflects discontinuity in the city's growth. This discontinuity can occasionally stifle the city's progress. As a result, it's critical to maintain a balance between these two approaches and plan accordingly.

2. City Expansion, Multiplicity of Planning Authorities and Engendered Issue

Urbanisation leads to city expansion, new satellite towns emerge to accommodate the rising population and relieve pressure on the parent city. It becomes impossible for a single authority to oversee this expansion, thus new public and parasternal bodies are added to help the existing institutions. These authorities are relatively ineffective in conceptualizing a bigger vision and instead attempt to develop the area that has been assigned to them in a more effective manner. Thus, there is a loss of consistency in planning, which leads to conditions such as fragmentation, urban sprawl, a shortage of affordable housing, and constant changes in land use, among others. Ananya Roy (2009). properly outlined why Indian towns remain unplanned in her paper Why India Cannot Plan Its Cities. She explained that since development is occurring at a quicker pace, city planning authorities are unable to keep up with it and are attempting to incorporate quasi-government and parasternal groups, resulting in issues such as infrastructure shortages and growth management. For example, the city's massive IT sector is being pushed to the outskirts, with no essential services available. Due to insufficient site and services, direct employees face numerous challenges, including the need to stay where houses are available, to purchase water and to commute to work by cab or other modes on a daily basis. This creates new job opportunities for those who provide these services.

Meanwhile, for satisfying these demands of direct employees, a large mall, various real estate projects, hotels and other businesses are springing up along the corridor and a new satellite town is formed. Developers use publicity to generate revenue while hiding the unfavourable aspects of their project to sell it. The same applies for the Dholera smart city where huge tracts agricultural land are being forcefully acquired and transformed into non-agricultural land under the Central Land Acquisition Act or the Gujarat Town Planning and Urban Development Act 1976. Due to this, the livelihoods of the people living there have been affected as majority of the population are unskilled labourers who cannot work in the newly-formed industries. Rather than focussing only on economic development, it is critical to incorporate economic and social development in urban development.

3. Integrated Planning Approach

Integrated planning refers to people assembling together from various institutes with a common goal in mind and participating through planning processes to attain that goal. All policies, programmes, and proposals are evaluated in connection with others during this planning process. The economic, environmental, physical and social parameters of the city or a part of the city are the key parameters on which the approach is focused. It's a well-balanced approach between top-down and bottom-up. It also assists local governments in developing guidelines for implementing projects and programmes that are consistent with the national and provincial government's goals (Manyanga, n.d.). The planning process operate on a variety of scales, including region, state, city, neighbourhood, etc. This entails realigning the proposed initiatives and comparing them to the development vision. It is most effective when used comprehensively across the major challenges confronting a region, taking into account the interconnections and interrelationships that occur, as well as the efficiencies realized through coordination. Citizens' opinions are sought at each level, along with institutions, in order to know about the issues that have arisen as a result of the development vision. Hence, it fosters people-centred development because development is about people (Mzimela, 2013).

Case Study

1. Integrated planning approach for Wellington: Within New Zealand, Wellington is unique in that its metropolitan urban area is governed by five territorial local councils and one regional council. Local Government Commission for council collaboration identified five important areas in consultation with the region's councils as key to Wellington's future prosperity. They included transport, economic development and spatial planning. These priority areas had all come up frequently in the debate over the proposed region-wide unitary council. A report on spatial planning was released in late 2015 with benefits such as drawing together a single common destiny for the region and providing for scenarios across the region through complementary and diversified building types (BML, 2017). The research technique was as follows: (1) conducting preliminary research (2) identifying stakeholders (3) Comparing other cities' issues and integration processes they have implemented (4) preparing a report.

The process of integration in Wellington takes place in three-levels :

1. Partial integration allows to develop and share knowledge of how each territorial authority expects to respond to a set of issues/ circumstances and also their identification.
2. Moderate integration works best when the requirements of individual territorial authorities are similar and are anticipated to evolve in the same way over time. This makes defining a uniform service standard and objectives much easier.
3. Full integration will take time to accomplish the reliance on the introduction of an overall coordinative approach to planning in the area, but it is important to strategize to achieve integration (BML, 2017).

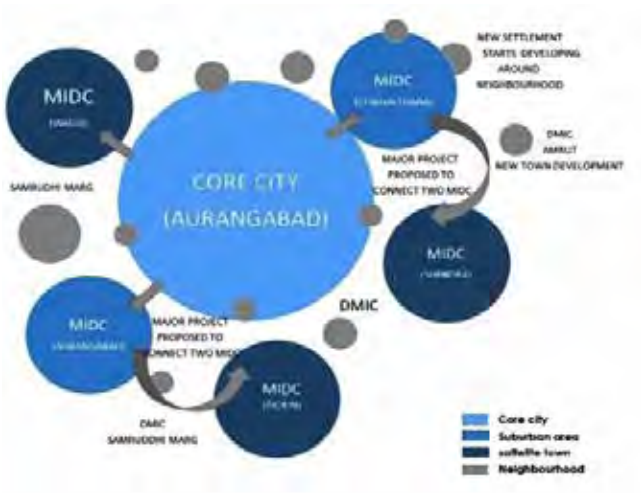

Figure 3: Growing pattern of city Aurangabad
(Source: Author)

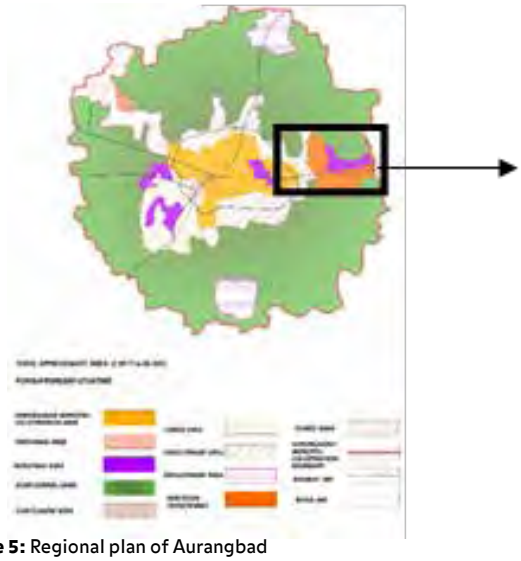

Figure 5: Regional plan of Aurangbad
(Source: https://dtp.maharashtra.gov.in/en/aurangabad)

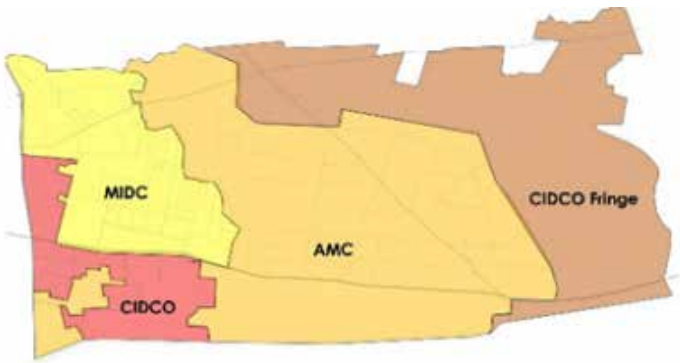

Figure 4: Authority Map
(Source: Adapted by Author from http://rts.aurangabadmahapalika)

4. Aurangabad City and Urban Institutions

Aurangabad is Maharashtra's historic and tourist capital. Due to the existence of five MIDCs, it is gaining a second identity as an industrial town. It is also known as Asia's fastest growing metropolis. Many important projects such as DMIC, Samruddhi Marg and the Smart City project have been planned due to its good location, low land cost, low labour cost, and great connectivity with other cities. Following the new proposal of MIDC, three satellite towns began to emerge around Aurangabad and various other projects were suggested along the town's course (see Fig. 3). Few of these projects were planned, while others were unplanned; there were legal and illegal projects, formal and informal services, and ample and insufficient services. These projects and neighbourhoods were handled by special planning authorities. Each of these had their own rules and regulations to steer the city's development. As an output, integration between the areas is missing in the updated DP (2010-2030). Citizens and government officials are constantly changing or transforming land usage based on their convictions (see Figs. 4 & 5). Uneven urban form studies from the site were selected based on three conditions. (1) number of authorities involved (2) maximum issues present (3) location of site.

Depending on conditions, three sites were selected. These sites were majorly the satellite towns which were located around Aurangabad and had different projects proposed around them. But after comparison of three sites, a single site with the most potential was selected for further focus. The area which was selected for study in detail is Chikhalthana, which area is being transformed due to many projects being proposed along its periphery, which have diverse scenarios, resulting in a discordant situation at the intersection of two project zones.

5. Current Scenario of the Selected Site

5.1. The neighbourhood site planned by CIDCO, New Aurangabad, is developed in a residential plotted system form for the wealthy, as a gated community. It has a tiny portion set aside for service businesses. CIDCO planned the area and handed it over to AMC in 2006 for maintenance. The area includes all amenities and services. Except for the safety concerns caused by single land use, there are no serious issues in this area.

5.2. The industrial area planned by MIDC in 1978 comprises all three categories of industries. MIDC plans and maintains all of the anticipated services and amenities within the area. There is little provision for workers' housing or affordable housing, resulting in the formation of slums in some parts. Many industries are closing down as the area falls under the jurisdiction of the city. According to the byelaws, pollution-producing industries in cities should be shut down. Closed industries are being converted into residential land and a large township with high rates is being proposed on the site.

5.3. The livelihood of agricultural people are being harmed as the rural Chiklathana village is getting converted into an urban new town by AMC. People are transforming agricultural land into non-agricultural land and townships as the pace of land conversion rises. Lack of amenities and services in this area are the result of uncontrolled construction or byelaw violations. There are possibilities to reserve some part of the land for affordable housing. People in this area mostly belong to the working-class or daily wages labour.

5.4. Fringe areas which bridge the rural and urban worlds are being developed by CIDCO. This area was planned in 2016 and recently the draft plan is being approved for this area. Majority of the land is slated for residential usage, with the remaining acres being used for industrial and green belt purposes. The land value, density and income level are all far too low. There are chances of suggesting alterations in the DP and byelaws.

6. Site Finding and Analysis

The site consists of four planning authorities who have planned four different areas. Two sites are fully constructed, while the other two are in the stage of planning. Due to the integrated planning in the area, the site is facing different issues and challenges, which are categorised under three factors. A site analysis based on the issue is conducted:

1) Issues based on physical factors

i) Lack of affordable housing for the tertiary growing sector: Due to proposals of five MIDCs, large numbers of migrants come to the city in search of jobs. Various initiatives are suggested. However, none of them consider affordable housing. Thus many people from the tertiary sector encroach the area and slums are formed.

ii) Lack of road connectivity: When a single authority was planning the whole area, there were provisions made for continuous roads. But when the territory became splintered with various authorities, this was no longer the case. These authorities started planning roads according to their convictions. Thus only one road is present at the moment that connects all the authorities. The pressure on this single road increases and the problems like congestion, pollution, parking etc. increase proportionately.

iii) Lack of public transport: Lack of accessibility, less road width, single activity, less density creates obstacles for public transport to be proposed. In the present condition only rickshaws act as public transport which is unaffordable for many.

iv) Land use concerns: There are numerous issues in concern with land use, such as planning of different areas which were planned at different times. Also, prior to the planning of a few locations, there were some operations that had gone unnoticed:

a) Changing Land use: Proposed new developments on the outskirts lead to agricultural land transformation into non-agricultural land. Residential land is being converted from industrial land. Land in gaothans are being transformed to industrial uses, among other things. Due to this, facilities planned get affected.
b) Unseemly distribution of land use: In many localities, residential areas are placed adjacent to industrial areas. Those adjacent to different economic groups have diverse typologies and create obstructions for light, ventilation and other factors.
c) Uneven distribution of amenities: Certain areas have less amenities than others. While using the amenities of other locations, conflicts arise between the people of adjacent areas.

v) Sudden variation in typologies : The overall site had low-rise structures. The farmers, whose land is being acquired for conversion into non-agriculture land, were given a TDR. The farmers in turn sold the TDR to developers resulting in construction of high-rise towers.

2) Issues base on environment factor

i) Poor condition of water resources

Aurangabad has two major rivers, one of which meets the Godavari River at one end. The River Sukhna flows from the site. Aurangabad has a water shortage. As a result, it is designated as a drought-prone area. Though there are problems, these natural elements are overlooked during planning, causing the river to be damaged in different ways, including :

a) Encroachment on the river edge
b) Industrial waste being directly thrown in river
c) In many locations, drainage is opening up in the tributary, converting it to a nala
d) Agricultural garbage, dwelling waste, and crematorium waste are all dumped in the nala.

ii) Underutilization and inconsistency between open spaces

There are numerous open spaces suggested in the area. But the value of these open spaces is low due to a lack of consistency between them. Hence, the areas remain untreated. Also, open or green places on the edge of two differently planned areas are treated like no man's land. Dumping of waste, construction material of neighbourhood sites decreases the site's value.

3) Issues based on socio-economic factors.

i. Safety issue:

Areas facing the issue of safety are :

a) Neighbourhood with a single type of land use
b) Gated community neighbourhoods
c) Lack of active areas in certain industrial areas that are closed; open spaces that are unused, and roads where no public activity is taking place. All these conditions make the area inactive.

ii. Conflicts between the neighbourhoods of different income class.

The area surrounding MIDC 3 is planned for accommodating a variety of users and income levels. People who own industries, for example, reside in one neighbourhood, while people who work in industries live in another. Thus, there is conflict at the intersection of these two neighbourhoods.

The site consists of four planning authorities who have planned four different areas. Two of the sites are fully constructed, while the other two are in the planning stages. Because of the area's integrated planning, the site has to deal with a variety of challenges, which are

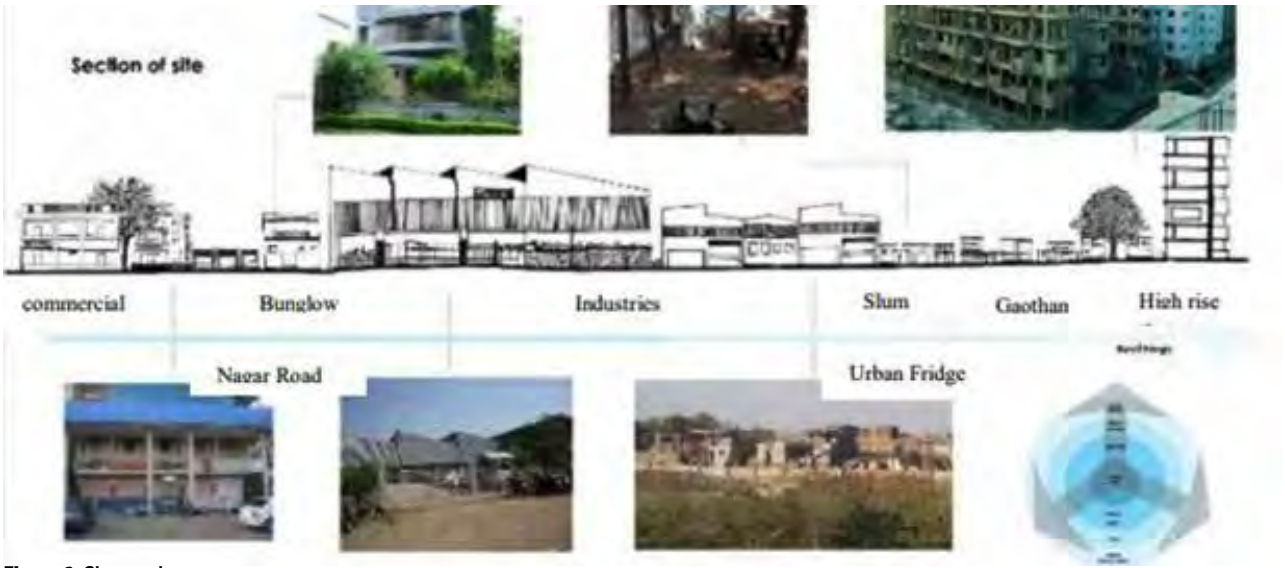

Figure 6: Site section
(Source: Author)

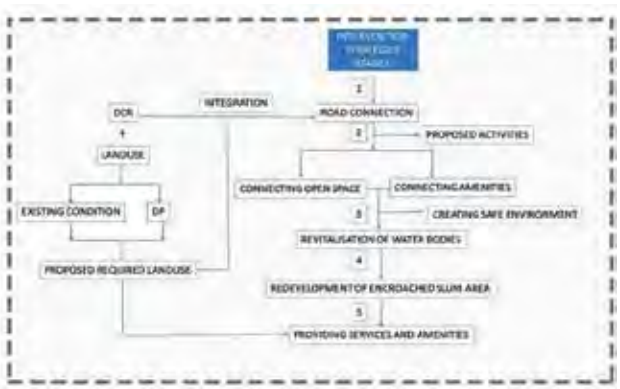

Figure 7: Strategies for intervention
(Source: Author)

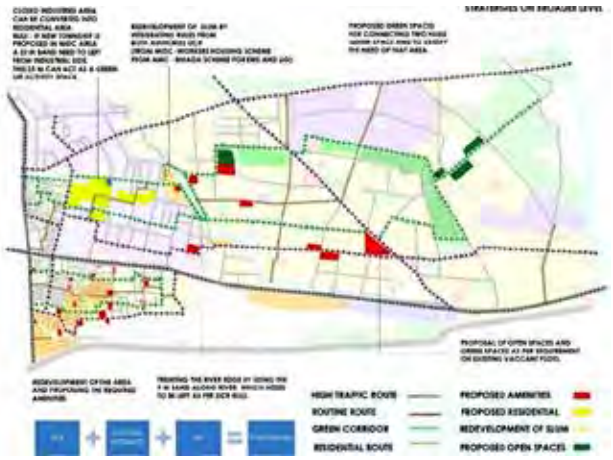

Figure 8: Macro level planning
(Source: Author)

classified into three categories, and a site analysis is conducted accordingly (see Fig. 6).

7. Intervention

The overall land can be divided into four sites, each containing two parts that were neighbouring but under distinct authorities. These four locations were investigated and attempts were made to integrate them on two levels: macro and medium. While one of them, which had substantial challenges and conflicts, was investigated at a micro-level. Land use, amenities, services, and connectivity between the two areas were all prioritised at the macro level. The edge condition where two areas belonging to two distinct authorities met was researched at the medium level. One of the important levels since at the edge, numerous authorities had a big effect. The micro-level was a neighbourhood level, where two distinct authorities' neighbourhoods were placed beside each other was studied (see Fig. 7).

7.1 Macro scale intervention

Macro-level interventions are done by identifying and proposing activities along roads according to their respective potential. The land use of some plots was changed depending on the needs of the location and surroundings. Integration of DCR is also done at this level (see Fig. 8).

7.2 Medium Level Intervention

Site 1.

1. Redevelopment of AMC area.
2. Proposal of recreational and commercial activities on the outskirts, for increasing public flow and engagement.
3. In the AMC area, open spaces and new amenities are planned.
4. Proposing roadside actions in the CIDCO which will be continued in the AMC area, reducing safety concerns (see Fig. 9).

Site 2.

1. Planning mixed-use along the edge.
2. Proposing roadside activities (shops, parking, recreational activities etc.) in the CIDCO area which will continue in the MIDC area and reduce issues related to safety.

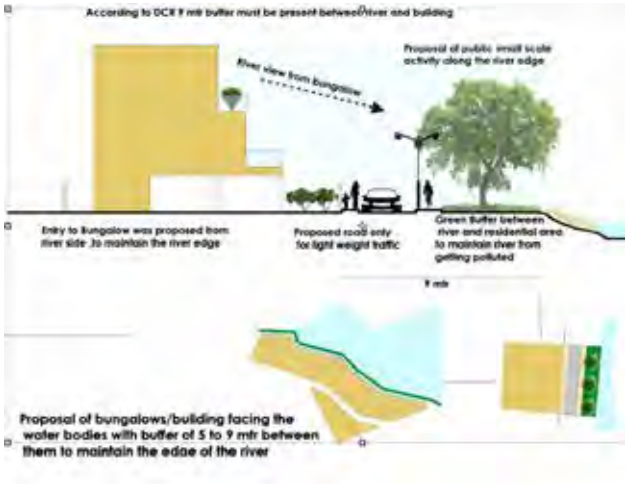

Figure 9: Micro level planning near the riverfront
(Source: Author)

Figure 10: Medium level planning
(Source: Author)

Site 3.
1. Use of buffer zones as a parking lot, a play area, various types of the gathering area.
2. The green belt should be converted into a park, garden, etc.

Site 4.
1. The buffer zone between residential and industrial zones can be utilised for small-scale farming, nurseries, etc.
2. Redeveloping slums under industrial workers and MHADA schemes
3. Removing encroachment and proposing small scale recreational activities along the edge of river

7.3 Micro level intervention
1. Construction of bungalows, apartments etc. facing the riverside.
2. Proposing commercial and institutional space at the ground floor of the redeveloped buildings and proposing separate access roads for different income groups adjacent to one other. This will facilitate indirect interaction and lessen friction over time.
3. Increasing setbacks, reducing compound wall heights, etc. (see Fig. 10).

8. Conclusion

As urban planning and management work together with authorities and inhabitants, they bring value to the city's development. Since the DP, DCR, and current situation of the site are all linked, this cooperation between the authorities was accomplished by merging them. This was done on three levels : macro, medium, and micro. To some extent, it worked because the intervention included all steps for avoiding complication generated by various authorities. To conclude, the main benefits from integrated planning are :
1. The ability to coordinate and manage more major urban planning and infrastructure
2. More effective use of resources (financial, human, built, and natural).
3. Greater sensitivity to regional issues
4. Providing a unified vision and advocating for regional interests.

However, based on the level or scale of the issue, many additional techniques can be utilised as an experiment to solve the multiple authority problem. Thus, researchers can additionally explore such techniques for continuing to grow the city while avoiding problems that arise throughout development.

Acknowledgement

I am thankful to KRVIA for providing the opportunity to write this paper during my Masters. I am also thankful to Ar. Ritu Mohanty, Ar. Seema Fatima, my thesis guides and all other professors at KRVIA who have helped me for my post-graduate thesis, which has been the genesis for this paper.

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Table 1: **Planning approval authority in India**
(Source: Author)

State Government	State Government/ Regional Development Authority	Municipal Co-operation/development authority/Metropolitan planning committee	JNNURM
Perspective Plan	Regional Plan	1.Development Plan 2. Annual Plan 3.Zonal Plan 4.Urban Revitalisation Plan 5.Schemes/Projects	1.City Development plan 2.City Mobilisation Plan 3.City sanitation Plan

Table 2: **Area Comparison**
(Source: Author)

Area	Number of Authorities involved	Location of site	Maximum issues
Chikhalthana	Six nos. MIDC, DMIC, CIDCO, AMC, Town Planning, Airport	• On the silk route with all three modes of transport are accessible at walking distance. • On the way to DMIC corridor	1. Lack of service 2. Major Safety issue 3. Uneven land use pattern 4. Major slum formation (encroachment)
Waluj	Four nos. CIDCO, MIDC, AMC, Urban planning Authority	On the way to Samruddhi Marg	1. Lack of service 2. Uneven land use pattern 3. Lesser slum formation (encroachment)
Bidkin	Four nos. MIDC+DMIC, CIDCO, Urban planning authority, AMC	Along the bypass and DMIC Corridor	1. Lack of service 2. Minor Safety issue 3. uneven land use pattern 4. Lesser slum formation (encroachment)

Table 3: **Findings**
(Source: Author)

Interview Person Authority	Finding
1. Pollution Control Board	• Shift of dump yard from gaothan • Needs more plantation • All industries have their own treatment plant.
2. Architect and experts	The inner core city is underutilised but still instead of developing those, new projects are proposed at the peripheral area. As a result, a lot of green land gets converted into brown land. In many places only land use is marked while roads are not proposed, which will later on affect the development of that area.
3. Historian	It's our responsibility to conserve our natural system, historical monuments and city identity which is getting lost amongst high-rises and new proposals.
4. Farmer	In the motive of earning profit, farmers sell the land. As a result haphazard development takes place
5. Policy comparison of the authority	There are four varying DCRs which are applied in the site. Due to their variations, there is lack of development or encroachment occurs where the land-use is changing
6. Policies related to river edge	There should be buffer zones left at the river edge from about 5-15m so that recreational activities plantation, boating etc. can be proposed.
7. UDPFI	It was used as a standard to compare density, percentage of open spaces, amenities, residential etc. with the four DCRs
8. Smart city report	It helped in knowing the existing condition of the city
9. Poll vote	1. Good transportation system 2. Better rail, air, road connectivity 3. Smart, safe and clean Aurangabad 4. Better water and drainage facilities 5. Solar power and tree plantation (Nikhil 2018)

NATESHA : THE MANIFESTER

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ABSTRACT

The cave temple at Mandapeshwar is a part of the Pashupata (Shaiva) group of caves in Mumbai. Scholarly evidence suggests that the caves witnessed Buddhist and Brahminical activity when they were functional. Although small and unique in character, the caves must have had a particular usage attributed to them. The Natesha or the dancing Shiva sculptural panel is speculated as an important manifest form of Shiva. This paper aims to explore the manifest form of Shiva through the dancing Shiva sculptural panel and explore the importance of this cave temple within the Mumbai region. The methodology used is the arbitrary method which involves analytical research through scholarly writing supported by inductive reasoning.

Keywords: *Manifestation, Guru, Devotee, Form, Association, Significance*

INTRODUCTION

।। आगिकम् भुवनम् यस्य
वाचिकं सर्व वाङ्मयम्
आहार्यं चन्द्र ताराधि
तं नमः सात्विकं शिवम् ।।

We bow down to the purest form of the Universe (whole)
Lord Shiva - adorned with the moon and the stars,
Who is represented through His bodily movements and speech (as a part).
The Dhyaan Shlok

Shiva is perceived as the God of Destruction (*samhara*). His believers imbue Him with other vital roles as well: that of creation (*srishti*), preservation (*sthiti*), grace (*anugraha*) and obscuration (*tirobhava*). He is also a great yogi, teacher, and dancer (Sethi, 2021). Lakulisha, the 24th incarnation of Shiva, is believed to be the founder of the Pashupata sect, the preacher and the most outstanding teacher (*guru*) in Pashupata Shaivism. The emphasis of this study is to study the Natesha (dancing Shiva) sculptural panel at Mandapeshwar cave temple. Considering Mandapeshwar's proximity to the Buddhist monasteries at Kanheri and Magathane, one can infer that Mandapeshwar located in Borivali-West in the Mumbai Metropolitan Region (MMR) was one of the main Pashupata centres in the bygone times (see Figure 1) (Pandit, 2020). Scholars also assume that the cave temple was used by both Buddhist and Hindu monks and ascetics. The excavations of the Elephanta and the Mandapeshwar caves were undertaken only after the excavations at Jogeshwari [i], in the second half of the sixth century CE (Pandit & Narayanan, 2013).

This paper aims to explore the manifest form of Lord Shiva through the Natesha (dancing Shiva) sculptural panel at Mandapeshwar cave temple. Further, the paper looks at the eminence of the cave temple in the Mumbai region. The objective of this paper is to traverse the anthropomorphic aspect of Shiva through the following questions : Can this form of Shiva be considered the 'guru'? Is this sculptural form of crucial importance in the cave temple? Can we assume that this form must have been used to draw power from those who used the cave? Although smaller in size, why is this cave temple given so much importance? The methodology used is to explore the tangible and intangible facets associated with the manifest form of Shiva and the Mandapeshwar cave temple. These aspects would be supported by inductive reasoning to arrive at a hypothesis for the questions posed and draw a conclusion.

Figure 1: Mumbai Metropolitan Region map showing Buddhist and Brahminical caves along Western Express Highway
(Source: Adapted from (Salvi, n.d.))

Literature Review

Dr Suraj Pandit's books – *Mumbai Beyond Bombay* (2020) and *Stories in Stone* (2013) have been used to deduce facts and assumptions for this paper. Pandit claims that the spaces within this cave temple, which served as sanctuaries for Buddhist and Hindu monks and ascetics, may have been used for social and cultural activities. The Mandapeshwar cave temple being near the Western Express Highway (which originally functioned as a trade route connecting the north and the north-east regions then) and the neighbouring Buddhist caves, Pandit speculates that the cave temple could have been used as a religious centre by both Buddhist and Hindu monks and ascetics as meditation and living spaces. This helps in looking at the cave temple as an important site. Although Pandit's writing suggests that the Natesha form is the pedagogue of all devotees, his interpretation indicates that the form seems to be paramount and essentially powerful.

Further, Wendy O'Flaherty Doniger's chapter "The Myths Depicted at Elephanta" from the book, *Elephanta: The Cave of Shiva* (1983) has aided in drawing parallels for the sculptural panel. The myths she interpreted in the article are specifically for the Elephanta cave sculptures. A myth associated with the dancing Shiva sculptural panel at Elephanta can apply to the dancing Shiva sculptural panel at Mandapeshwar. Both the panels are claimed to be similar in nature by many scholars. Through this paper, the myth regards Shiva's dance as a manifestation of the act of cosmic re-creation.

Natesha, the Dancing Shiva

Shiva is considered the Lord and teacher of all arts and is thus called Natesha (Pandit & Narayanan, 2013). On close observation of the dancing Shiva panel at Mandapeshwar, it is apparent that it can be fruitfully compared with the dancing Shiva panel at Elephanta (see Figures 2 & 3).

Similarities can be observed in the posture of Natesha and the surrounding figures in these panels at the two caves. Unlike other Brahmanical caves, the dancing Shiva and the Lakulisha panels are the only two iconic forms of Shiva within Mandapeshwar because the cave temple was left incomplete (see Figure 4).

Both the forms advocate that a guru must initiate the devotee to reach a certain level in his practice, as described by Suraj Pandit in his talk at Sarmaya Arts Foundation (2018). According to this, Lakulisha and Natesha represent the Spiritual *Guru* and the Teacher of all Devotees, respectively. There is no physical evidence of a *guru-shishya* relationship seen within the cave temple. This interpretation can be supported only by speculation. Though their function is primarily didactic illustration, the panels also serve a secondary purpose as devotional icons (Michell, 1983).

The dancing Shiva panel at Mandapeshwar shows Shiva in a dancing posture flanked by celestial figures and His attendants. The composition is symmetrical because Shiva takes centre stage and is carved larger than the other divine figures. Stylistically and architecturally, the crowded composition portrays the figures' gestures and postures, creating a mythical scene representing a cosmic drama within the proscenium (Michell, 1983). In the panel, the lower portion of Natesha, along with His hands and facial features, are somewhat damaged (see Figure 2 & 5).

Natesha is depicted with eight arms (four arms on each side) and a *jatamukuta* [ii] as hair-dress. Three female figurines are carved at the lower left side of Natesha, the central one being Parvati, while the remaining two are assumed to be her attendants. A small figure playing a pair of drums, presumably a male attendant, is observed near the right side of Natesha. A male figure identified as *Bhringi* [iii] is near Natasha's right foot. On His central right side, we see Ganesha with a *gana* [iv] while Vishnu with Garuda [v] and Brahma are located on the upper corners of the panel along with *gandharvas* [vi]. Shiva's form (imagining Him with the arms intact) encompasses the diagonal or oblique diameters, which are essentially kinetic and symbolises movement and the embodiment of the time factor in the composition (Poddar, 2021).

In the complete form of Figure 6, the upper and lower parts were more likely inclined towards the vertical, and the form of Shiva could be in a transition from the calm (*shanta*) towards the violent (*raudra*). One can further associate this movement with an ancient myth narrating the world's re-creation. Although the form can be imagined as a *tribhanga* [vii] (see the

Figure 2: Dancing Shiva panel at Mandapeshwar
(Source: https://architexturez.net/pst/az-cf-191315-1554021116)

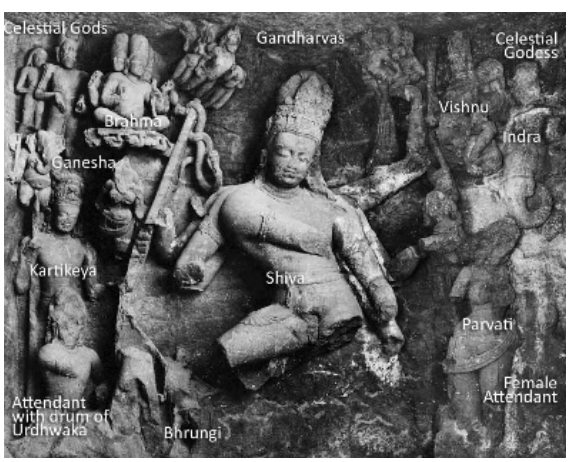

Figure 3: Dancing Shiva panel at Elephanta caves
(Source: College S., 2016, p.528)

Figure 4: Figures from the Dancing Shiva panel at Mandapeshwar
(Source: College S., 2016, p.654)

Figure 5: Locating the Dancing Shiva and Lakulisha panels at Mandapeshwar
(Source: College S., 2016, p.658)

line marked in blue in Fig. 6), the panel remains a mystery to the observer due to damage. Since the facial expressions of all the figures, the hand gestures and leg positions, mainly of Natesha, the *bhava, mudras,* and the variations in the standing position (*sthanasana*) associated with them are not discernible due to damage, the panel cannot be adequately examined for accurate interpretations. However, suppose it is considered that the panel is similar to the one at Elephanta. In that case, some fruitful deductions can be made: the facial expression of Natesha suggests that He is expressing the *shanta bhava* (tranquillity) (see Figure 7). In contrast, the other figures seem to be in awe (*vismaya bhava*) of Natesha (see Figure 2 & 3), acknowledging Him as the Supreme Authority of the cosmos.

Mythical Associations

Two myths can be associated with Shiva that is pertinent to this essay. One is related to the dancing Shiva panel, while the other is connected to the Mandapeshwar cave temple. Shiva's dance takes two forms: *lasya,* the gentle erotic dance correlated with the creation of the world, and *tandava,* the violent, dangerous dance related to the destruction of the world (Doniger, 1983). Although this myth's North and South Indian variants are significantly different (Doniger, 1983), the North Indian variant is relevant to this essay. As per the legend, Shiva tried to demonstrate to the sages residing in a forest that they had not yet overcome their lust and anger by posing as a handsome naked beggar with an erect phallus, dancing with and exciting the sages' wives (Doniger, 1983). This angered the sages, and as an act of retribution, they castrated Him and cursed the universe into darkness. When the sages realised who He was, they begged for forgiveness and for the universe to be restored from the darkness. They were forgiven on the condition that they worship His phallus (*linga*). This myth regards Shiva's erotic dance as an act of cosmic re-creation (Doniger, 1983). Here Natesha is seen as the manifestation of the cosmic dance in an eternal life-death rhythm. Hence, we can deduce that the dancing Shiva panel at Mandapeshwar seems like a mythical scene representing a cosmic drama within the proscenium, as rightly put by George Michell for a similar panel at Elephanta caves.

From the various Indian festivals, *Tripuri Pournima* [viii] is celebrated with great pomp at the Mandapeshwar cave temple each year. This celebration began on an uncertain date. As per a popular legend, the demon *Tripurasura* had received immense powers from his penance to please Brahma and even created three cities in space. He became arrogant and dictated his supremacy over the three worlds, causing a nuisance. Because of this, the gods appealed to Shiva, asking Him for relief from the demon's actions. Shiva fought with the demon with His divine powers, destroyed all his cities with a single arrow, and finally vanquished Tripurasura on *Kartik* [ix] *Pournima* (Gajendragadkar, 2013). The gods were overjoyed with the slaying of the demon, and hence the day is celebrated as *Deva-Diwali* [x]. In my opinion, the festival could be a symbolic celebration of victory over the demon and the restoration of the cosmic balance.

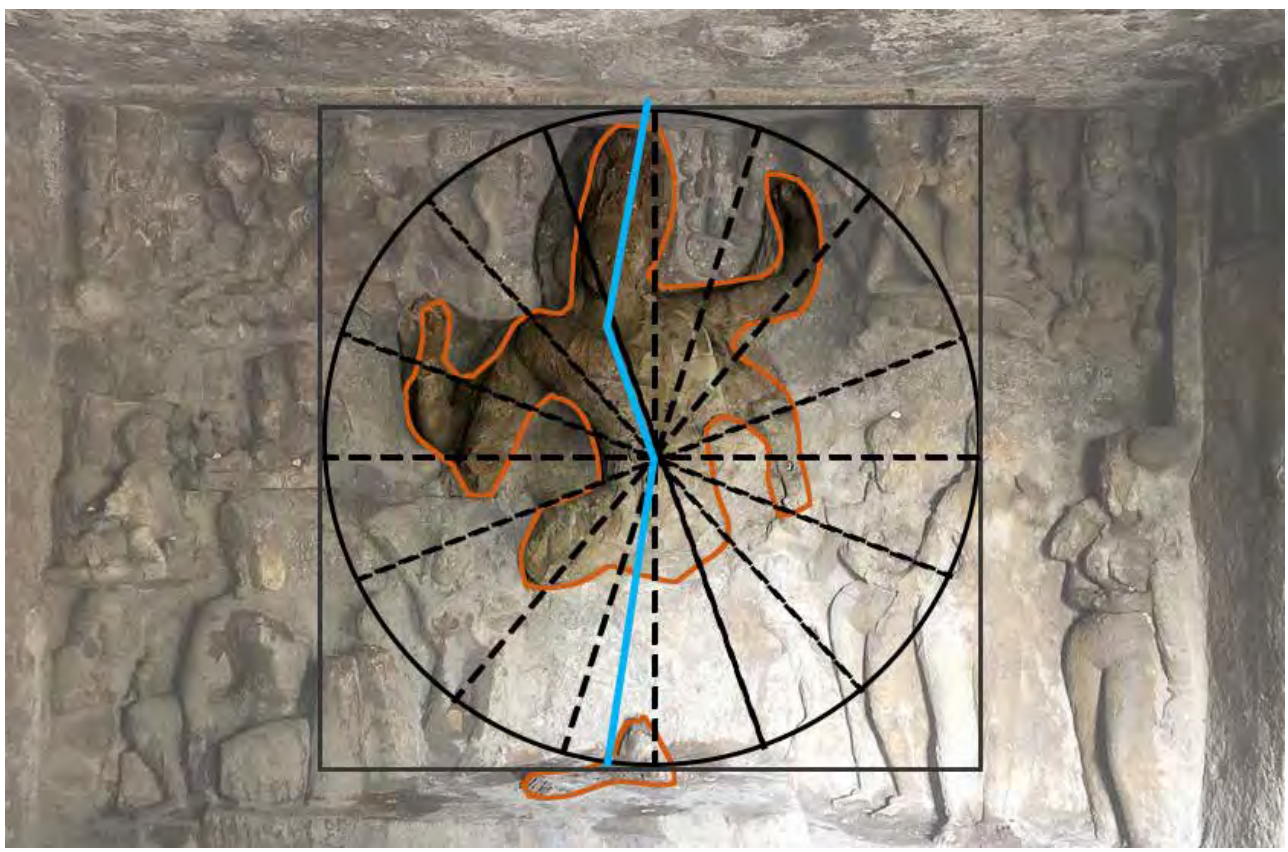

Figure 6: Dancing Shiva sculptural panel showcasing the *'tribhanga'* pose with probable geometry of the position
(Source: https://architexturez.net/pst/az-cf-191315-1554021116)

Figure 7: Comparing the facial features from the Dancing Shiva panels at Elephanta (A) and Mandapeshwar (B)
(A. Source: Documentation of Caves by MMR, pg. 528, B. Source: https://architexturez.net/pst/az-cf-191315-1554021116)

This could be one of the reasons why the dancing Shiva panel is of prime importance. Since the panel is easily accessible at Mandapeshwar, the celebrations today take place with great opulence and fervour.

Conclusion

From scholarly evidence and the myths, one can concur that undeniably Natesha is one of the essential manifestations of Shiva. Relating the first myth with the form, the form is essentially kinetic and symbolises movement and the embodiment of the epoch in the composition; one can possibly assume the form to be dynamic and energetic. The movement and the embodiment of the time factor can be revered as depicting the restoration of the cosmic balance making the dancing Shiva panel at Mandapeshwar of prime importance. It would still be questionable whether this form can be viewed as the iconic guru since no myths or scholarly evidence directly points to it. Although Pandit's writing implies that the Natesha form is the teacher of all devotees, one cannot explicitly label the form as assuming the role of the '*guru*'. Pandit's interpretation indicates that the form must have been paramount and essentially powerful to allure all kinds of devotees. Still, it would remain a question whether devotees used the form within the cave temple as a source or guru from which to draw power and inspiration.

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Architecture, Urban Design, and research have been her key areas of interest. She is particularly interested in analyzing the symbiotic and asymbiotic relationship between cities and people and the built versus the unbuilt. Ar. Riddhima Khedkar is an Assistant Professor at IES College of Architecture, Mumbai.

Endnotes

[i] Jogeshwari caves- These are the earliest known Pashupata Shaiva caves in Mumbai.
[ii] *Jatamukut* – A crown made of hair (*jata* – hair, *mukut* – crown). Scholarly evidence says that the jatamukut is one of the iconographic representations of an ascetic.
[iii] *Bhringi* - A great devotee of Shiva and an ancient sage.
[iv] *Gana* – Attendant of Shiva.
[v] *Garuda* - Vehicle of Vishnu.
[vi] *Gandharvas* – Performing artists (musicians) to the Gods.
[vii] *Tribhanga* – A standing body posture in Indian classical dance or traditional Indian art where the body bends in three directions – at the knee, at the hips and at the shoulder and neck.
[viii] *Pournima* – Full moon night.
[ix] *Kartik* – One of the months from the Hindu calendar.
[x] *Dev-Diwali* – Diwali of Gods.

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STUDENT WORK

UNRAVELLING HYPERDENISTY: RE-IMAGINING HABITATION OF PAP IN MUMBAI

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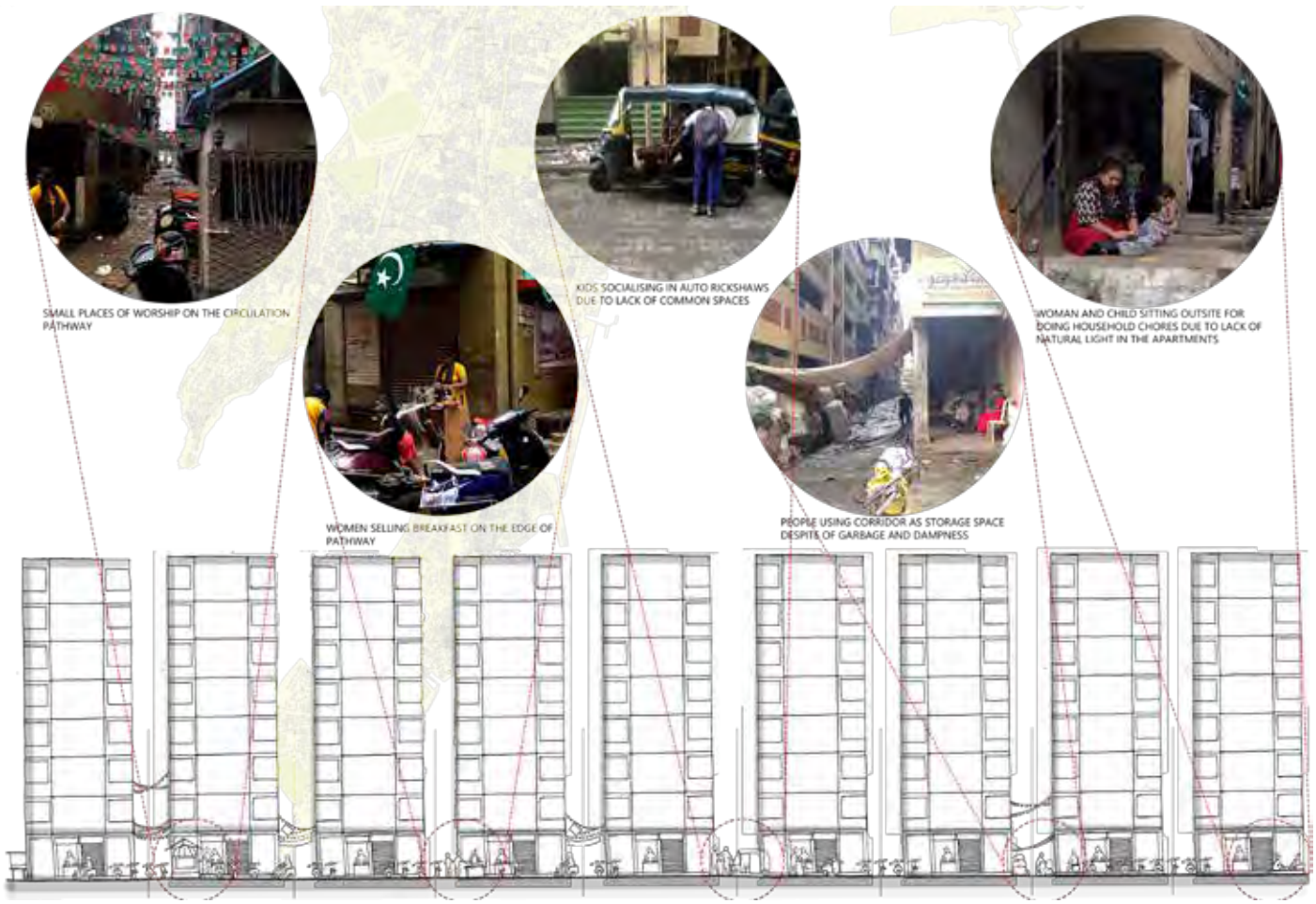

Fig. 1: Street section explaining the character of activities in the existing Natwar Parekh Colony and the lack of spaces for them

Urbanization and development are a continuous process and often leave adverse effects on certain classes of society. Development projects often see the displacement of a large number of people in different parts of the world. Affordable housing is one of the most important issues for Mumbai, making it a very complex and challenging problem for the city. The expansion and development of urban areas requires acquisition of land, which often requires physical relocation of people who occupy that land. In Mumbai, the financial capital of India, there are multiple examples of people living in informal settlements who get affected by a large number of infrastructure projects. These displaced people are shifted to resettlement colonies which are designed under a separate section of slum rehabilitation schemes by the government.

Various studies have revealed that the quality of life provided by these resettlement colonies is not suitable for living as per the standards prescribed by the National Building Code (NBC) 2016 and requires urgent attention. These resettlement colonies are inhabited by a very large number of population in Mumbai and represents the social reality of the city at large. The people residing in these colonies generally work as industrial workers, migrant labour, construction labour, domestic servants, rag pickers and a whole range of petty trades like vegetable and fruit sellers which play a vital role in running the city's economy.

Forced evictions, displacement of individuals and communities from their houses and lands, lack of appropriate and inclusive resettlement have increased the housing and land crisis in the city. The processes of development and resettlement have neglected a large group of people contributing to the city in many ways. Hence, it is important to shape our resettlement colonies in a way that is more inclusive towards the needs of these people and leads to healthy housing for them. The present study results in an effort towards improving the living conditions of project affected people (PAP) by redesigning their dwellings appropriate enough to live in.

Fig. 2: Site plan showing the re-designed Natwar Parekh Colony on the north of the road as compared to the existing planning to the south

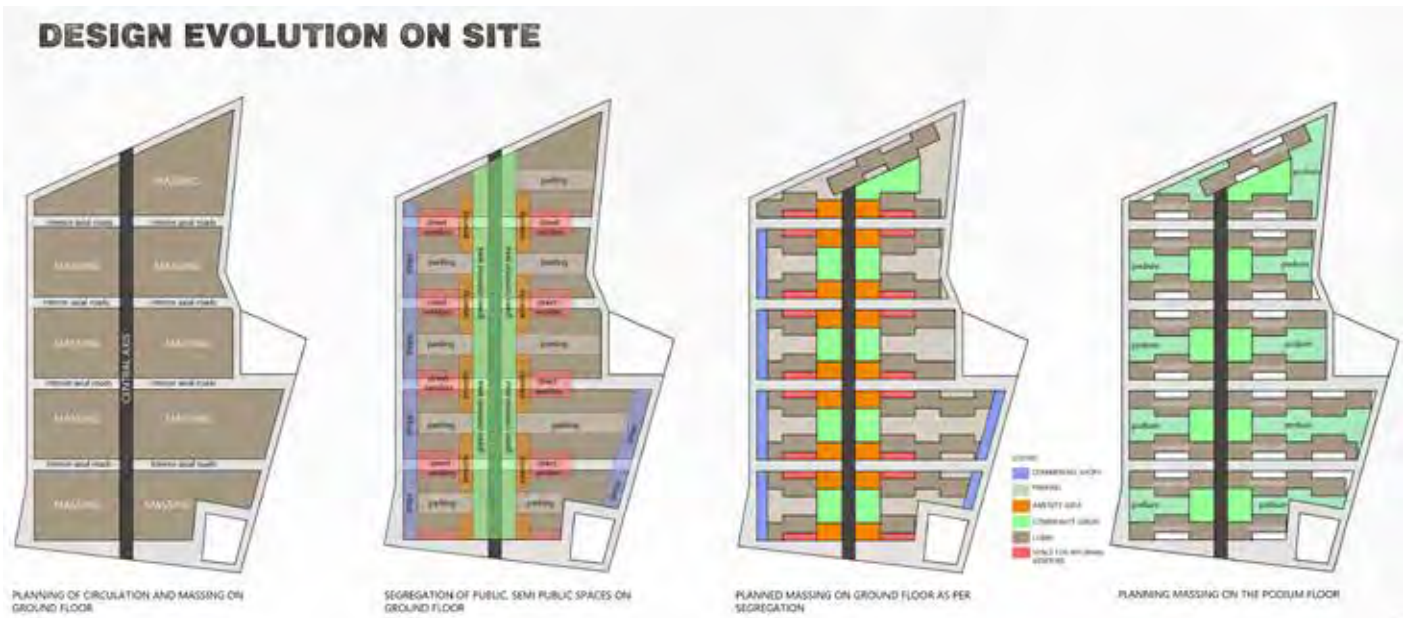

Fig. 3: Design evolution with respect to the site outline

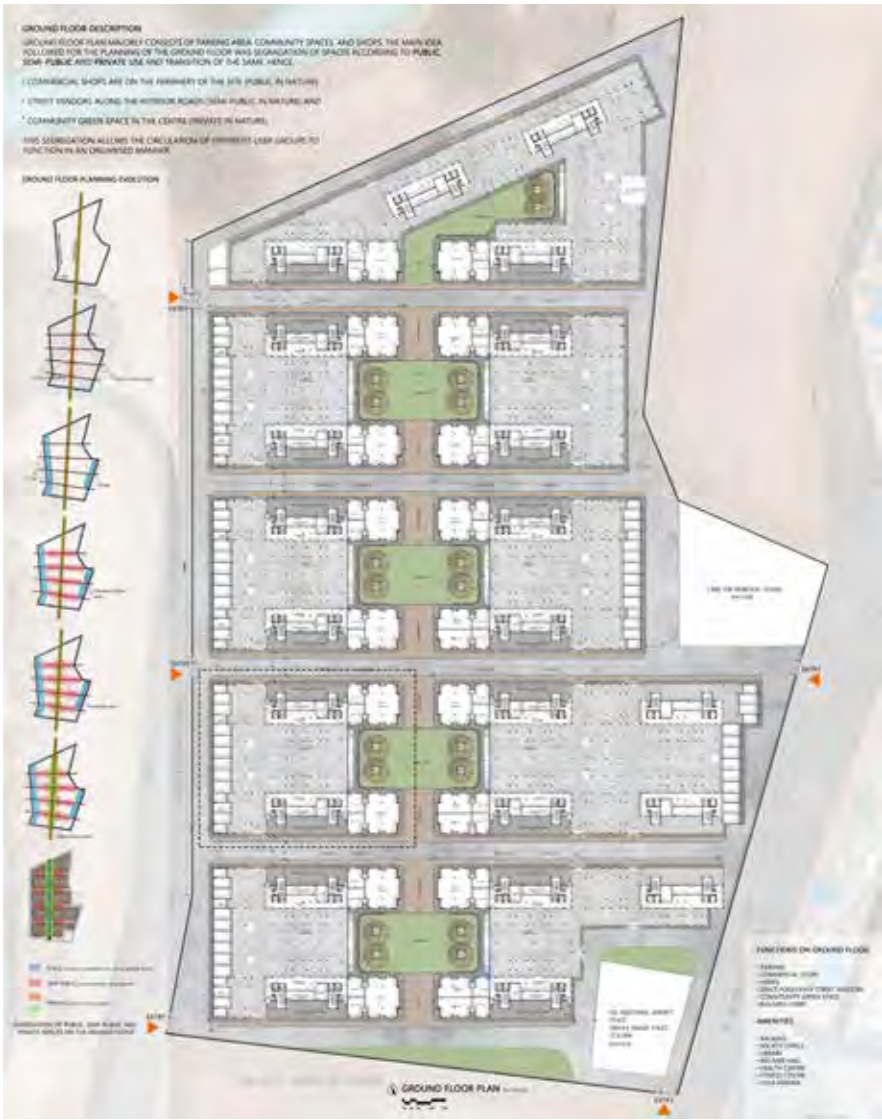

Fig. 4: Ground floor plan explaining the circulation of vehicles, commercial activity and common public space

This project is an experiment done on an existing resettlement colony named Natwar Parekh Colony in the eastern suburbs of Mumbai, India. The design process included regular discussions about their current problems and brainstorming possible design solutions with the residents of the colony itself, with the aim of achieving a comparative analysis model between the conditions of the existing resettlement colony and the re-designed resettlement colony.

The high floor space index (FSI) and regulations in the DCPR 2034 for slum rehabilitation schemes for PAP have led to high density of population in these colonies. This is because these regulations are more relaxed than they are for general residential buildings: for slum rehabilitation buildings the upper limit of FSI is 4 [Clause 3.8 of reg.33(10)] and for general residential buildings, a maximum of 2.5 is prescribed, depending of road width) [reg.30].

Moreover, survey by "Doctors for You" have shown that Natwar Parekh Colony has become a hotspot for tuberculosis because of poor planning and design. One of the major problems that has led to this health problem is the lack of natural light and ventilation. The distance between two buildings follows a very dangerous height (H) to width ratio of H/8. In fact, this should ideally be H/3 as per NBC 2016.

The re-design focuses on designing a module where the distance between two buildings follows the ratio of H/2 and H/3.6 along with retaining the FSI requirements. It also follows a module of staggered planning of buildings resulting in two different sets of distances and achieving almost the desired 63.5 degree rule in major parts. This rule is required for creating minimum air space between buildings (Iyer, 2014). Drawing a 63.5-degree plane from the top of one building towards the floor plane of the lowest habitable room of the adjacent building, making sure that the building is standing beyond that 63.5-degree line. As seen in Figure 10, This also helps regulate the height to width ratio as an essential health factor.

Other problems in the current resettlement housing module are lack of open areas and amenities, lack of services and lack of identity to name a few. The redesigned module experiments with massing by staggering the form of the building and creating pockets of semi open spaces at an interval of every four floors as common public space (see Fig. 7). The floor plan redesigned for each building in the complex also caters to the existing problem of dark and damp corridors in the design. An attempt is made to include a commercial component on the ground floor by providing shops which are public and semi-public in nature along the roads planned (see Fig. 3).

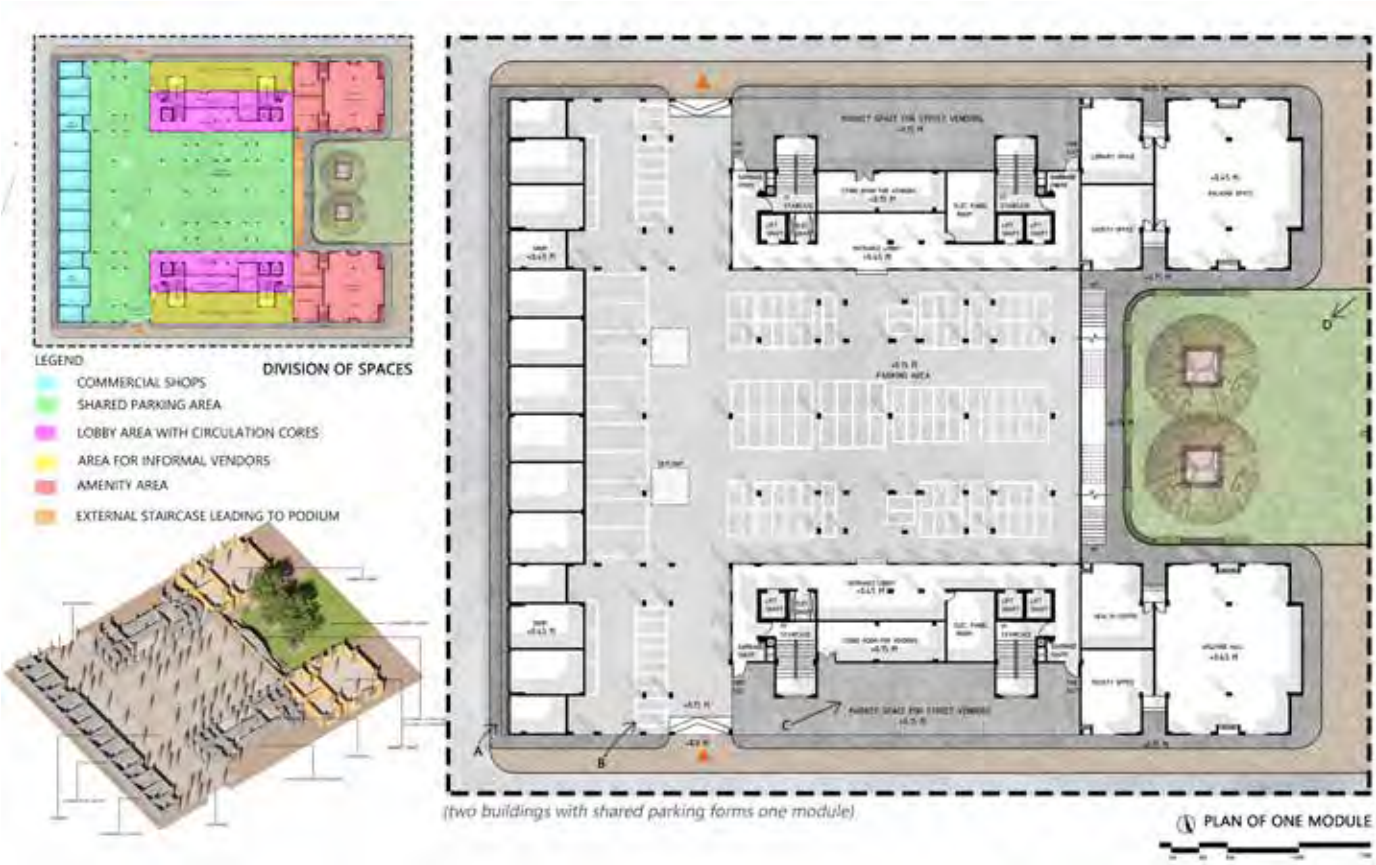

Fig. 5: Plan and view of the module designed for ground floor

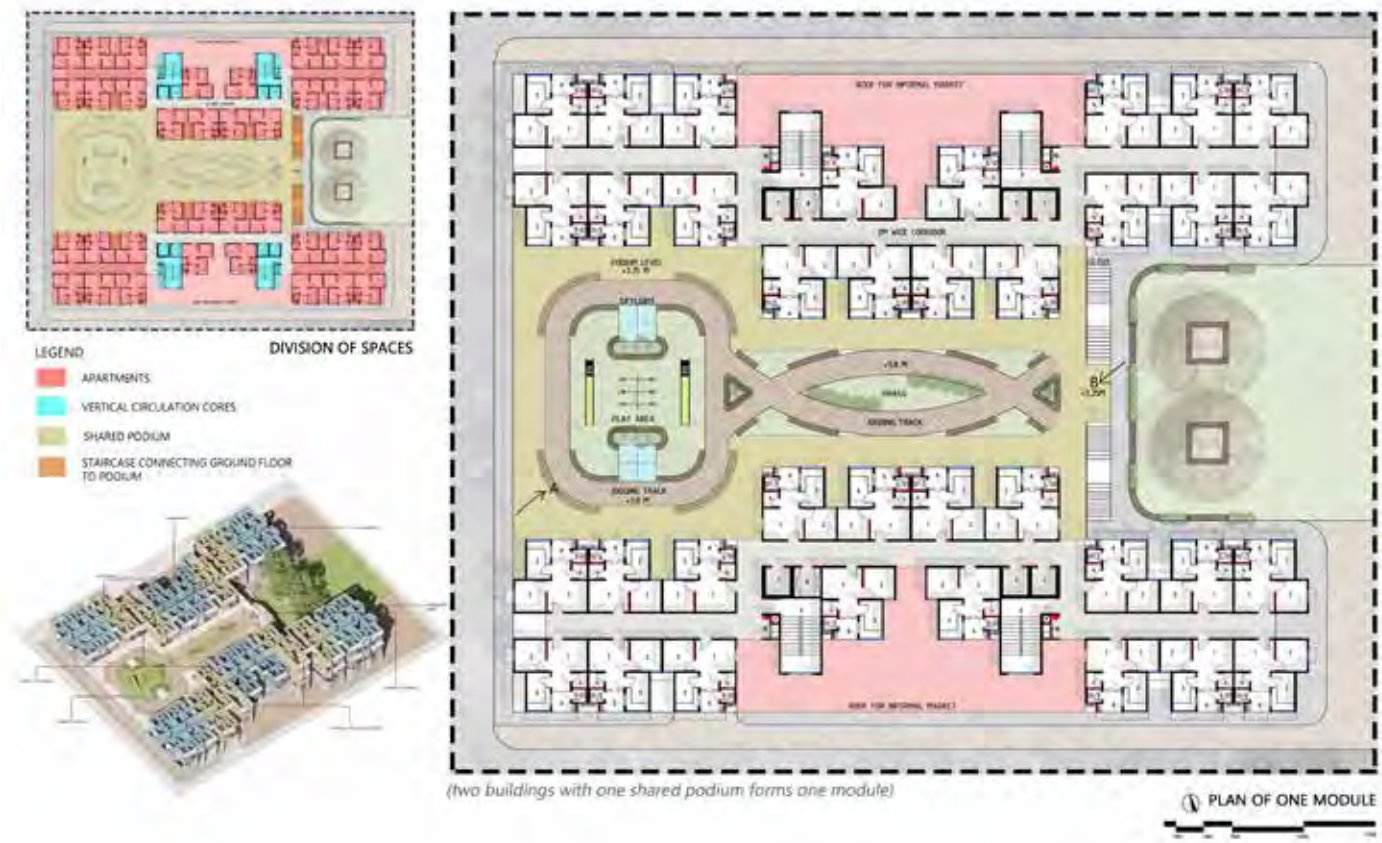

Fig. 6: Plan and view of the module designed for podium floor

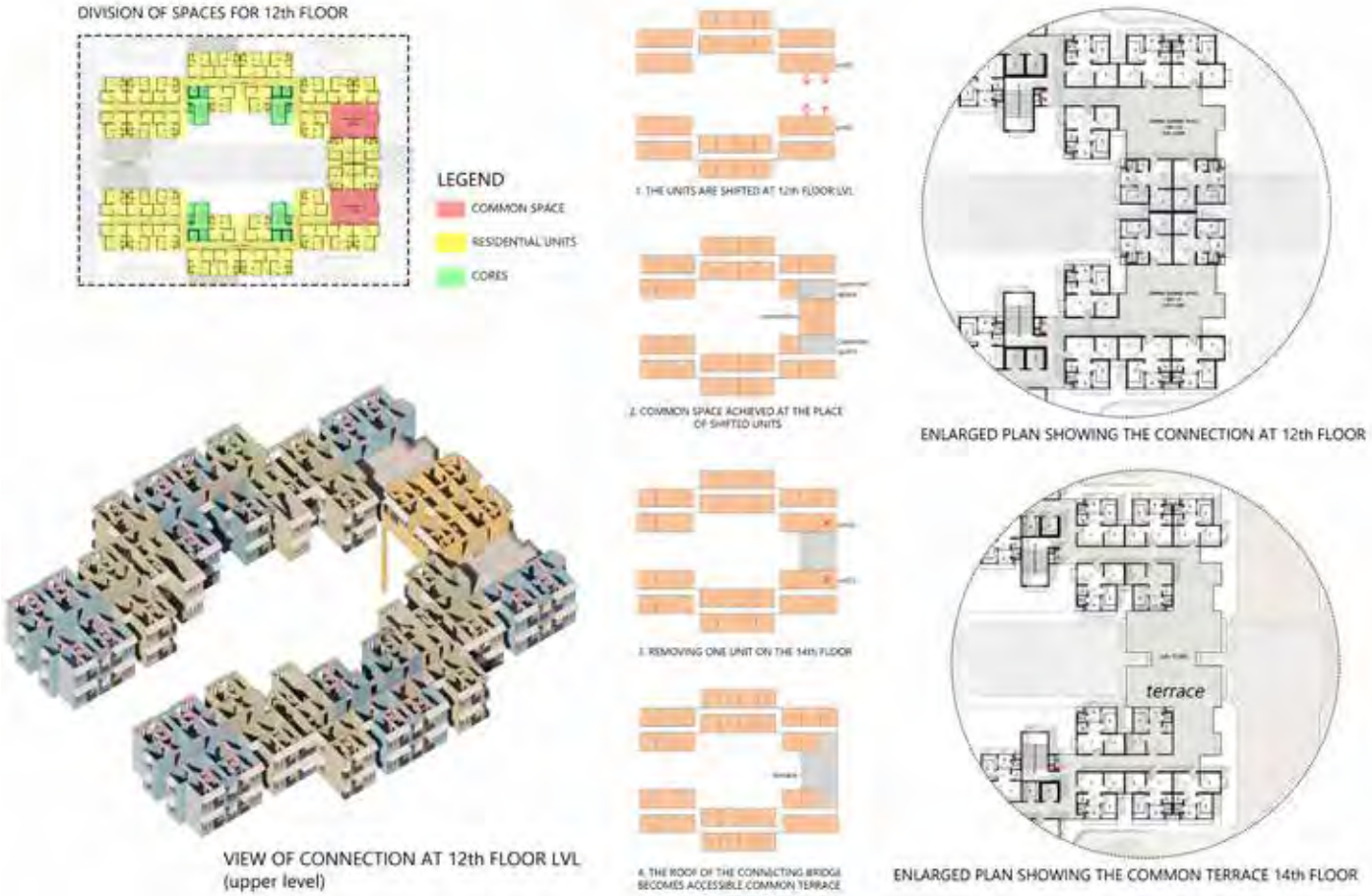

Fig. 7: plan and view of common sharing space at regular intervals of four floors: 4th floor, 8th floor, and 12th floor

Fig. 8: Isometric view explaining the activity pattern of the re-designed colony

Fig. 9: Section through the middle level connecting bridge and highlighting the double height common space

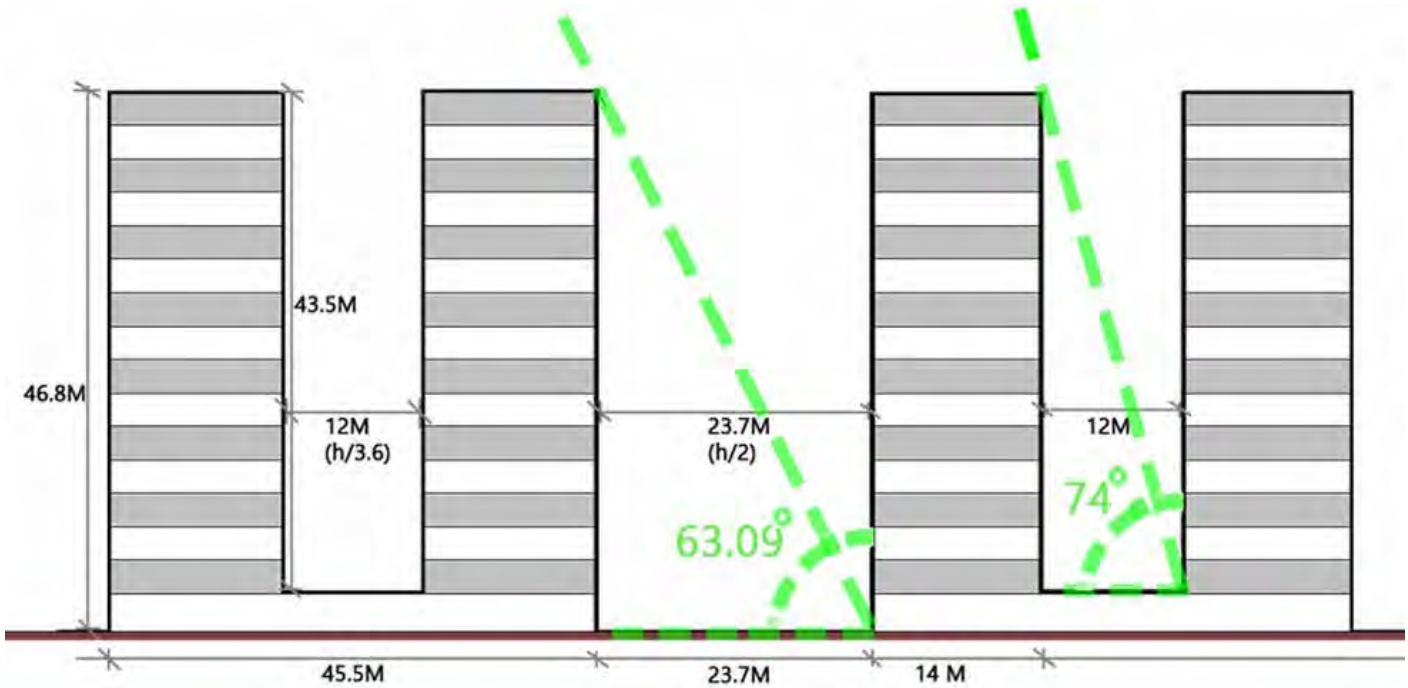

Fig. 10: Schematic redesigned section demonstrating adequate high to width ratio

The project attempts to understand and derive design-related improvements which can be a reasonable start in improving the resettlement housing situation in the city. The strategies and research in this project provides an architectural response to the existing condition and create a design module for developing more resilient rehabilitation communities in future. The redesign module focuses on achieving a better quality of life that these resettlement colonies should be providing to the PAP.

The ways in which the city is being socially and spatially transformed is critical to this study. The aim here is to understand and represent how designing as a tool can impact the life of these people and contribute in giving them a better life and standard of living than what they are getting in reality. Redesigning will give a comparative model of 'before' and 'after' conditions of the colony according to the needs of the people currently residing here, which is of immense importance for the study and to understand what will help in designing the future colonies for rehabilitation in the city. This, when done, will create a healthy and prospering society for project affected people and will have a positive impact on the surrounding larger social fabric of the city.

Acknowledgement

I would like to express gratitude for my mentor, Prof. Rajratna Jadhav, for his thoughtful guidance, motivation and all the teachings that I was fortunate enough to have received from him for this project.

All images courtesy : **Author**

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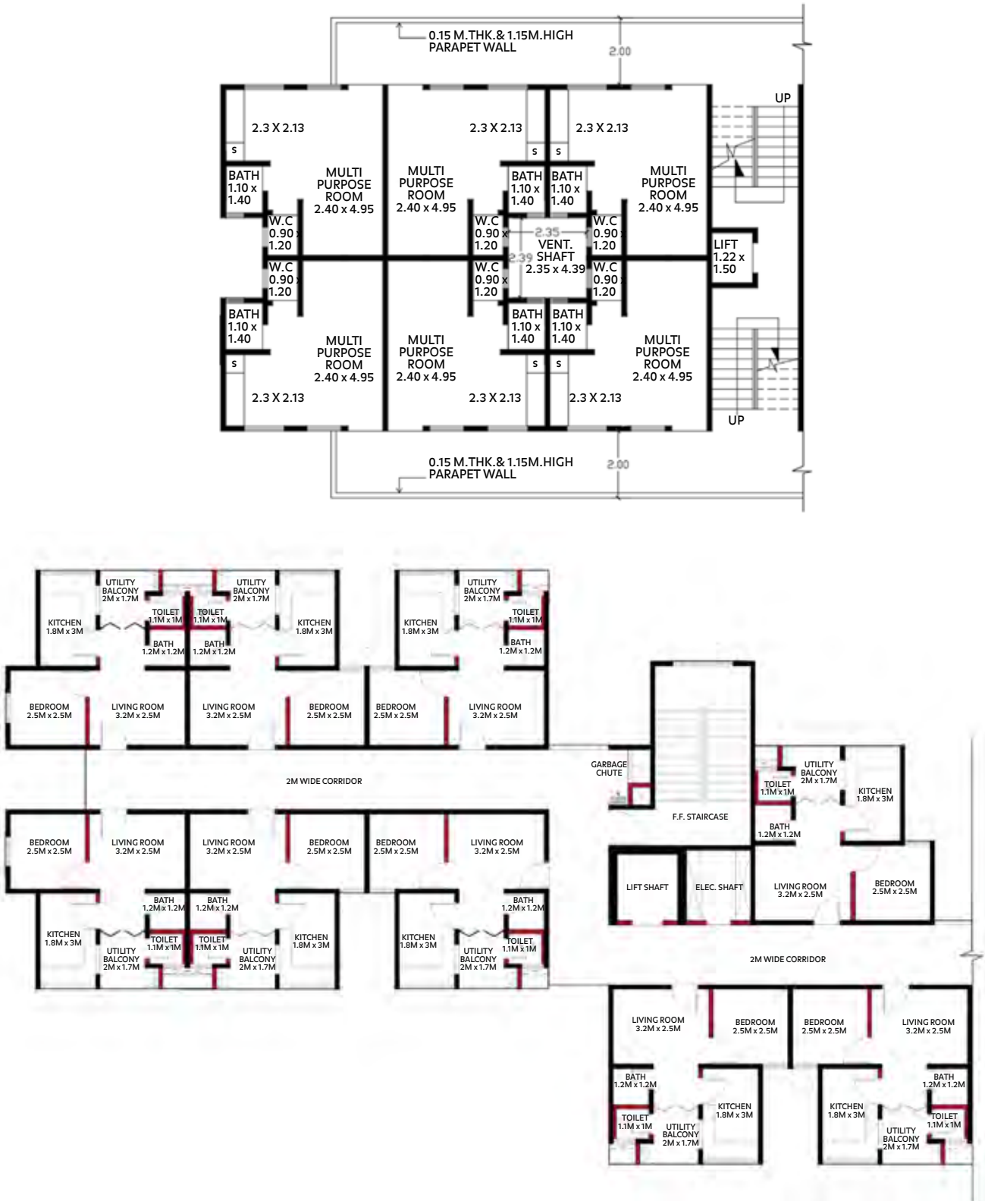

Fig. 11: Typical floor plans of Natwar Parekh colony (Top: existing and below: redesigned)

Tina Kedia graduated from IES's College of Architecture, Mumbai in 2020. Currently she is freelancing as an architect and artist. She is interested in natural building systems and aims at living a completely sustainable lifestyle. This project was ranked 4th in the IIA Brihan Mumbai Design Dissertation Awards 2020.

Prof. Siddharth Shirur
Having graduated from Academy of Architecture in 1996, Siddharth Shirur co-founded Vistaar Architects and Planners in 2000. He won the National Design Competition for the National Tax HQ Rajaswa Bhawan in 2011. Since 2019, he has been visiting faculty in IES College of Architecture, Mumbai. He specializes in low and high density mass housing for the government as well as NGO sectors apart from sports architecture design.

PUNARJEEVAN: REGENERATION OF INDIGENOUS TRIBES IN WAYANAD

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The thesis project started with a deep affection towards the indigenous tribes of Wayanad, Kerala with research questions and architectural inquiries addressing tribal community resilience by empowering their vernacular from getting endangered. The project also envisions the regenerative potential of architecture for creating a sustainable, ideal ecosystem by using nature as a building material.

Kerala's once-prosperous agrarian civilization had seen a steady metamorphosis over the years, shifting from the production of food crops to cash commodities such as spices and rubber. The situation was exacerbated by the conversion of large-scale rice farms. Kerala has lost more than 70 % of its land to rice cultivation in the last 30 years. Several farmers gave up farming owing to a drop in profitability, while others found new means of income such as international remittances. Kerala's consumerist society is now heavily reliant on its neighbouring states for grains, fruits, and vegetables, among other necessities.

The "Adivasi" or tribal group of Wayanad refer to themselves as the 'Ippimala Makkal' which means 'children of Ippi hill' of Banasura peak Wayanad. This is one community that urbanized non-tribal left their bad influence upon. Poverty and illiteracy are the two major reasons that led to the decline of the community. A group of people who have been living, sustaining and celebrating with a lot of values passed on from traditions and in-depth knowledge now have their skill sets which are currently on the verge of extinction. These groups need to be preserved without losing their cultural history and values.

As they strive to fit in with the rest of society, they not only find it difficult to blend in, but their values and traditions are also being forgotten. They are discriminated against and are under a great deal of stress. As a result, they find themselves working as unskilled labour on sites and in barren fields.

This project uses a participatory design approach to develop community resilience and regeneration in a dying tribal community. Native arts, languages, building methods, and ceremonies saw a comeback, resulting in a new sense of unity and cohesiveness among many tribes. The proposed centre has the potential to be an important tool in the formation of tribal identity. The proposed centre also envisions :

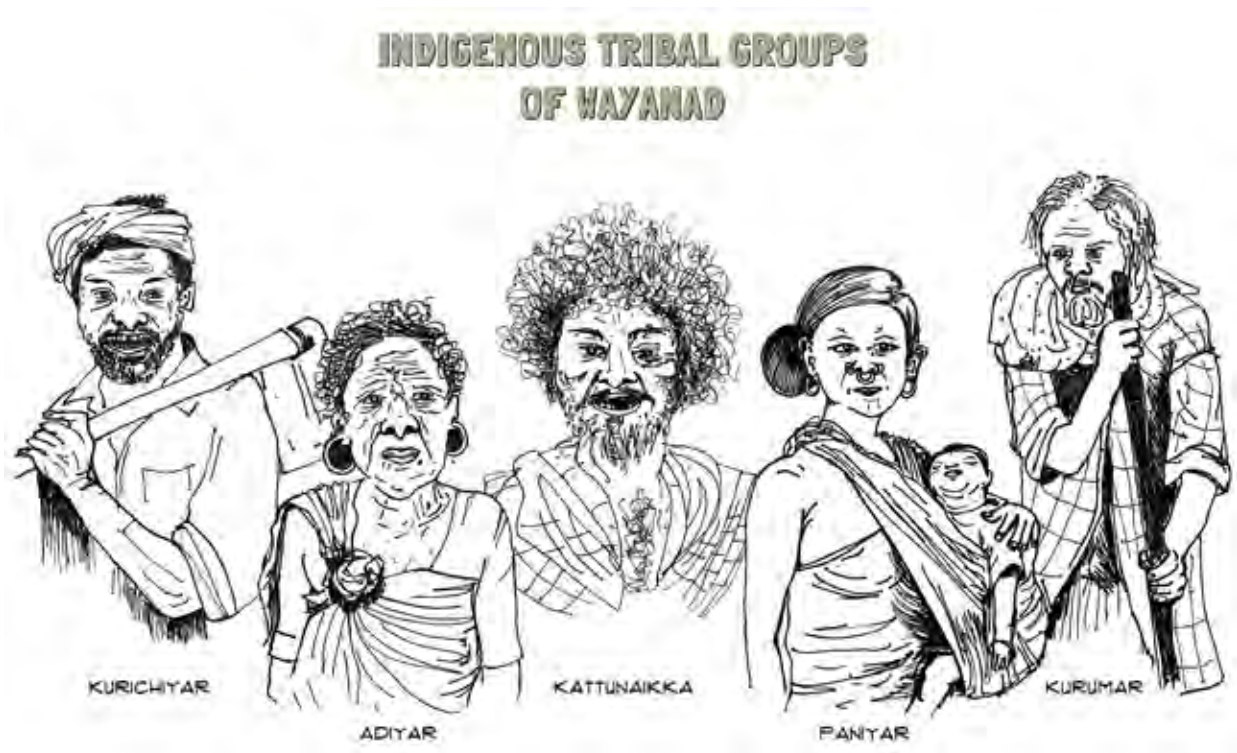
a) Development of the community by aiding them with adequate facilities, training and source of income generation.
b) Sustenance of knowledge by providing a platform to share their ideas and to implement them.

These would help in sustaining their community, increasing their knowledge, and mastering their skill sets.

Acknowledging the fact that different tribal groups have different histories, cultures, and beliefs, it is difficult to bring people together under a common umbrella of a dwelling system. Thus, only a unifying institution system, such as a school, training centre, or a cultural space where they can exhibit their dance and other art forms, can gather people together and save the dying communities from their introverted hamlets.

These tribal groups need to be enlightened about the payoffs of their strengths and capabilities to the degree that can make them proud of their traditions and values. Thus, an awareness centre can motivate and extract them from their depression and addiction. Only then will their younger generations stay with their forest roots and traditions and hence, saving an entire community from extinction.

My role as an architect has been to mediate and devise a system through which their voices can be heard and design a prototype model adaptable to their cultural beliefs which can be built with the participation of the whole community.



Architectural and Conceptual Strategies

The thesis intends to create an architectural interface bridging the gap between the tribal groups and the urban society. The space will act as a knowledge hub, a platform to educate and get educated, to share, understand and grow together.

- To examine, encourage and celebrate the traditional knowledge systems with their intricate links to the people, their crafts, and the forest.
- Implementing participatory design approach adapting to the vernacular construction techniques and locally sourced materials conveying a strong sense of ownership and belonging and setting an ideal example of the green-efficient carbon neutral construction system.
- The centre will act as an institutional hub with a residential school as core providing exposure to students - adapting to the green school - 'gurukul' education system where they learn through life experiences. They are also made aware of their traditional values and cultural significance along with the formal education system.
- Training centres will be provided for the elderly promoting their handicraft skill sets and knowledge systems.
- The spaces will thus complement the activities of the tribe which in turn would amplify the efficiency of the community.
- To enhance their needs and quality of life by bringing a balance between internal localized traditional culture, economy, and external links.

The 3 main user groups would be:

i) Tribal children - who will be given opportunities for green school - gurukul education system within the forest enabling them to develop respect and understand values carrying forward traditional practices

ii) Tribal adults - who will be given a space for community gathering, knowledge exchange, and vocational skill development which would also act as a source of income generation and add stability in life

iii) NGO representatives and government officials - would be provided with spaces to work and collaborate with tribal groups, providing better exposure.

Farming is a key component in achieving self-sufficiency. The Adivasis may be preserved through reviving traditional cultivation techniques and organic agricultural practices, which emphasize collaboration and teamwork. Permaculture is characterized as the construction of agricultural ecosystems that are self-sufficient and long-term. Bamboo is readily available, and its harvesting, treatment, and use for construction, handicraft product manufacture and other uses may all contribute to the development of a self-sufficient society. Using locally obtained bamboo for the building is cost-effective and environmentally friendly, having a minimal carbon impact.

Participatory design entails user participation in design for work practice. This involvement of stakeholders and end-users together allows the design process to be more open and lends itself to user-centred design innovation since it nurtures a more creative development atmosphere. The approach is focused on processes and procedures of design and is not a design style.

The site is located in the southern range of Wayanad district abode of the largest number of Adivasi (71.95% of state's Adivasi population), sandwiched between Padri Reserve Forest and Kabani River. It is located deep inside the forest where five main types of tribal groups are present in close proximity of the site. Access from the city is easy as the route provides a way for rear-side entry to Kuruva Island provided by the forest department. The site is adjacent to agricultural paddy fields where irrigation is possible with adequate water resources. Bamboo is available in surplus quantities as the region is proximate to the River Kabani.




Architectural Language

The project framework is characterized by a basic architectural language drawn from Wayanad's indigenous tribal groups' vernacular construction skills. Because the design is based on a participatory approach, community participation is essential for incorporating their practices and employing their knowledge and skillsets. As a result, the program has been divided into numerous modular pieces for simplicity of assembly.

With reference to the contextual material palate, the project utilizes locally-sourced natural materials such as earth for foundations and enclosures, bamboo for the structural system and rice straw for thatch roofing. Passive lighting and ventilation techniques are used while welcoming maximum natural light into the interiors and uninterrupted wind flows through the built form. Rammed earth walls provide sufficient insulation and control heat gain. A lightweight thatch roof with broad eaves provides shade and protection from driving in rain. The design strategically brings in skylights through roof openings and releases hot air by stack effect. Solar panels can be installed at ideal locations receiving maximum sunlight to increase energy efficiency.

Characteristic analysis of vernacular patterns and tribal interpretation of spaces enabled to embed a design strategy that is simple and open for user interpretation. Activity mapping from the existing tribal hamlets highlights the importance of verandas and supporting spill over spaces for recreation and social interaction. Veranda spaces are actively used for resting, eating, and discussion. Most of their activities occur in the open ground and courtyard spaces.

The visual connectivity and porosity of spaces allow natural elements to enter the constructed environment. The design was created with minimal border transitions and careful awareness of the ecology of the land while keeping a link to the forest roots. Using prominent features, the building modules are gently positioned along the axial direction of the site. This provides for optimum land efficiency with little changes to the topography of the site. The presence of many entries at various levels of the site emphasizes the site's spatial and functional aspects. This can also be used to regulate privacy levels.

The design concept of synergy is well explored by incorporating open and continuous spaces with multiple interconnections providing maximum opportunities for interaction. The open planning of spaces allows the user to utilize the space to their free will and own interpretation. Several nodes and transitional courtyard spaces act as gathering areas that accentuate activity generation. The design incorporates maximum views to the paddy field and adjacent surroundings maintaining harmony with the site context. Transparency is maintained with only sufficient buffer provided for efficient functionality and enhancing user experience.

The different programmes are categorized into 3 main zones : (i) Public Interface (i) Educational programmes (iii) Accommodation facilities.
The functional areas under the zones include a community hall 'Aetukottilu', a performance area for the tribal community, a green school for children 'Inchicolu' and a vocational training units for adults, bamboo craft production area and permaculture farm with granary storage units, hostel facility for school children and guest accommodation cottages for external public.

Aetukottilu: A community hall is designed with a simple open plinth base respecting the spatial requirements of the tribal user group. The building sits well on site contour with an entrance bridge provided from road level to the first floor. An arched bamboo structural system eliminates the central columns and achieves a larger span.

The NGO office block is planned with a very porous and welcoming atmosphere with verandas and a central courtyard area. The integrated amphitheatre seating spaces can be used discussions and cultural performances. Office spaces are internally connected giving maximum functionality and efficiency. Built-in seating spaces are provided along the passage areas.

Inchcolu: A school complex is made up of various masses, each of which serves a distinct purpose, such as classrooms, libraries, multifunction halls, offices, student dormitories, anganwadi and lunch halls. The school's atmosphere is reminiscent of the ancient practice of learning under the trees and might be seen as a modern adaption of the gurukul learning experience. It allows children to perform as they study, supporting the green school education curriculum of learning via actions. The dynamic in-between areas are crucial for multi-functionality and one's relationship to the natural environment. Adapting to natural biomorphic patterns and groupings aided in the creation of beneficial sensory and psychological effects.

Various landscape methods have been implemented with a context-sensitive approach that takes into account the ecology of the site. The runoff water from the slope is directed to the catchment pond via various bio-swales and drain pipes.

The thesis project 'Punarjeevan', as a whole, provides a chance to bring together various tribal groups through active participation and interaction. Various methodologies have been used to investigate the regeneration capacity of permaculture farming and bamboo as a lifeline material. An owner-driven construction handbook is also being produced as a first contribution to the implementation phase, which may be disseminated amongst the community. The guidebook explains the many stages of construction, as well as the instruments needed, material selection processes, treatment techniques, and joinery details. During the building of the project, the handbook can be used as a reference. Once implemented, the region may serve as a model - a catalyst for tribal revitalization and wellbeing.

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Ar. Varun Gopal graduated from T.K.M College Engineering, Kollam and completed his Masters from the University of Politecnico di Milano, Italy. He has worked with Mozaic Design Combines, Goa and NO Architects, Kerala. An alumnus of the 'Architecture for Society' programme by Ar. Aldo Rossi, he has participated in state-funded projects across Europe. He is faculty at Avani Institute of Design, Calicut, Kerala and associate architect with SOHO Architects, Calicut.

DIALOGUE
AR. GEORGE FERGUSON CBE

By Ar. Gita Balakrishnan

Ar. George Ferguson *(Source: Martin Hartley)*

Ar. George Ferguson CBE is an architect and Past President of the Royal Institute of British Architects (2003-'05) and first elected Mayor of Bristol UK (Independent 2012-16). Under his leadership, Bristol became the European Green Capital, Rockefeller Resilient City and UNESCO Learning City. He promotes liveable cities, local economies and the global environment through practical projects and his People & Cities consultancy.
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Ar. Gita Balakrishnan and George Ferguson converse about how an architect opting for public life can make a difference to policy, governance, and to the city.

Gita Balakrishnan (GB): George - you don many hats: architect, urban designer, urban enthusiast, politician, mayor, resident caretaker of Tobacco Factory, a restorer, social entrepreneur, speaker, writer and activist. How do all these roles intersect or come together? What is the essence that ties the multi-faceted George Ferguson together?

George Ferguson CBE (GF): Yes, my life does seem complex - but there are some unifying threads that weave through all these facets - the main threads being placemaking, community and environment, with the belief that if we all do what we can locally we shall make a better world. I could not have done what I have done if I had not trained as an architect and taken an early interest in such inspirational writers such as Jane Jacobs, author of Death and Life of the Great American City and Colin Ward, who wrote *The Child in the City*

GB: I am curious about your tenure as the mayor. What prompted you into politics? Tell us also how an architect or an urban designer is suited to politics and more importantly how politics receive architects. I understand that the context in your country is very different from ours but the underlying struggle to fit in and understand the system would be similar, I am sure.

GF: In some ways, I have had a life trying to avoid politics, and never got involved in politics at school or university. I have some distaste for tribal party politics and for career politicians who are not informed by life in the real world. However, I was approached by a neighbour and Liberal party member who saw that I was trying to change things in terms of social issues such as assisting Asian refugees coming over from Uganda at the time of Idi Amin and planning issues such as the desecration of Bristol's great townscape by intrusive highway and high building plans. She asked me if I would like to stand for the City Council as a Liberal. I was surprised that Liberal policy at the time fitted my beliefs and decided that this could be a way of implementing change beyond being an architect.

I agreed to stand and together with two others we became the first elected councillors in Bristol, not to be of one of the main political parties at the time. We were in effect independents which is where I feel most comfortable.

Architecture is a rare but good grounding for politics as it requires a multitude of skills and I would say that politics helps to inform good architecture and planning as it brings you close to all the challenges of society so giving a much greater understanding of the most important issues that the built environment needs to deal with.

I think coming from a profession probably helped acceptance within politics and that the greatest problem was acceptance of independents or minority parties by the ruling parties. My strongest power in the early days was one of being able to scrutinise and ask the difficult questions that would be difficult to do from outside the system.

GB: What was your biggest achievement as the mayor of Bristol and which of your initiatives brought you the highest satisfaction? You initiated the "George's Ideas Project" where citizens were asked to submit their ideas for improving the city. Could you share some of the ideas that you received and may be implemented? I would not mind hearing about some of the wild ideas too.

GF: Undoubtedly the greatest satisfaction as mayor was to be able to deliver European Green Capital 2015 and all the many environmental projects that derived from that: Bristol has become a beacon for the environment in the UK and has set ambitious targets for net-zero carbon, although I am impatient to see the implementation of the measures that will be necessary to make that happen. As a result, we took the lead, in partnership with Paris, with the cities initiative at COP21 of which I shall always be proud - but I would like to see much greater determination across the world to deliver the results that will have any chance of maintaining temperature rises below 1.5ºC.

The George's Ideas Lab was both a bit of fun and a serious way of engaging with the city over change, following my principle that 'fun is a serious business'! I was bowled over by the amount of engagement and some great ideas emerged some of which we were able to implement. We attracted 316 different ideas from Bristol citizens and thousands of ratings and comments that gave a clear sense of what was most popular. The prime aim was to harvest ideas to inform our bid for the Bloomberg Mayor's Challenge for which we were shortlisted with our combination of several ideas around the theme of 'The Learn, Grow, Eat Revolution'.

All 316 ideas can be found at the website (https://georgesideaslab.dialogue-app.com/ideas). One of the most outstanding ideas was 'The Wave' which was for a surfing centre based on an artificial lake which has now been realised through private investment and is a huge success. Other ideas inspired environmental projects for European Green Capital in 2015 for which we allocated £ 2m of grant funding on top of those projects adopted as part of the city's infrastructure investment such as improved cycle ways which has been a particular priority of mine.

GB: You have visited India a few times. Which cities have you visited and I remember you enjoy walking your way around to study the city and the countryside. What are your readings of India? What are the universal ideas that would make sense for a country like India too?

GF: First of all, I love India and have always had great contrasting experiences, learning so much on the way from people from all walks of life. The principal cities I have visited are Delhi, Kolkata, Mumbai, Panjim, Bangalore, Mysore, as well as travelling around the glorious historic cities of Rajasthan. I have also really enjoyed travelling deep into the Indian countryside, principally by train, in all classes, which is one of the best experiences in the world, especially hanging off the side of the Toy Train up to Darjeeling! Maybe the most visceral experience was arriving at Varanasi during a power black-out and following a torch-lit funeral procession through the dark and narrow streets down to the bank of the

Tobacco Factory Building *(Source: Ar. George Ferguson)*

Ganges where I was to stay, and early in the morning being taken out onto the river in a small rowing boat to view the rising sun, ghats and temples - with life and death floating by. But then there have been so many of these eye-opening experiences such as exploring the extraordinary temples of Khajuraho, walking the magnificent expanses of Hampi, or watching Bollywood films in the Raj Mandir cinema in Jaipur!

Maybe I should provocatively say that I have also visited Lahore over the border in Pakistan and wonder why nations have to see each other as enemies when we have so much in common including great global challenges that we must solve together if we are all to survive.

Whether in towns or villages, in a Sonia and Rahul Gandhi mass rally on the Parade Ground in Panjim, buying fresh vegetables in the bustling market in Mysore or being surrounded by happy children in the slums of Mumbai - I always enjoy the deep immersion, colour, smells and activity that is to me, the real India, even more than the grandest of architectural sights such as Shah Jahan's Taj Mahal or Lutyens' New Delhi.

It's not for me to teach India what to do, especially as my message is one of 'Beware false prophets from the West'. However, India only demeans itself if it follows a self-inflicted colonialism by aping some of the worst of the western world in terms of its urban planning and architecture, which is generally inappropriate for a tropical climate and a very different culture. India has such a rich culture and talent and, as I was quoted in the Times of India some 20 years ago, India can lead the way in showing us how to tread more lightly on our planet rather than follow the West's addiction for consumption that has put us all in such a perilous state.

GB: You have been christened "One Man Regeneration Machine". I presume the reference there is to your Tobacco Project, which I am yet to have the fortune to visit. Tell us about what prompted this project. What did you set out to do when you started? How did it morph along the way to what it is now? Where is it headed?

GF: The Tobacco Factory has been a life-changer for me and for the community in which it stands. I had lived on the hillside on the more prosperous North side of the river and harbour in Bristol, looking over to the more industrial South with its large red brick factories and warehouses built by W.D & H.O Wills and the Imperial Tobacco Co., at the turn of the century some 120 years ago. They had been a key part of the economic engine that helped make Bristol the successful city that it is today - some of it based on a shameful dependence on the slave trade of which there has been much soul searching including the tearing down of a statue to slave trader Edward Colston, which has projected Bristol across the world.

Real Regeneration-generating activity with local independant initiatives- Tobacco Factory in the background *(Source: Ar. George Ferguson)*

To cut a very long story short, in 1993, I ended up buying one key abandoned four-storey factory building, of some 4,000 sq.m at the heart of the community and high street that had suffered from the re-location and decline of the industry. It was part of a much larger complex that should have been saved and reused but was beyond my means. What is now called Tobacco Factory has enabled me to demonstrate what I regard as the good principles of real regeneration through the formation of a local circular economy. I had been frustrated by the limitations of architectural practice where we were commissioned to design buildings and places without being involved with the animation of those buildings through a mix of uses, something that property developers generally fight shy of. My aim was to save the building from demolition, to strip it back to its bones and inject it with activity.

Having bust the bank to buy the building I had no money to spend on the conversion so had to take it one small step at a time - slow architecture. The project benefited from this approach of trial and error. Fast forward 25 years on and we have two theatres, film and acting schools, cafe/bars, farm shop (served by our own small farm outside the city), creative industry workspace, living space, Sunday market and, down the road, our bakery and sister brewery. We can truly claim that South of the River in Bristol now has a cultural life of its own that competes with the richer North of the River!

GB: You have been wearing red trousers since you were an architecture student. To have that determination to make a statement at such a young age calls for a certain kind of personality. Should we call it perseverance or stubbornness? We all need to learn from you - an establishment rebel. Tell us more.

GF: I did not set out to brand myself but it has been useful in many ways, from the practical point of meeting people at train stations or acquaintances in foreign cities who have spotted me from a distance to making myself very recognisable to the architectural community when I was RIBA President, and more accessible to the citizens of Bristol when I was mayor. I think I always had a pair of red or colourful trousers from childhood and they simply became my favourite to the extent people started asking me why I wasn't wearing them, so I decided they would be my thing. It makes decisions about what to wear very easy! I have been mercilessly teased and shouted at bypassing car drivers but maybe I really enjoy the notoriety . . .

GB: Quoting you, "My idea of good architecture is about creating a place. It's not about providing glitzy iconic buildings, competing one against the other." You also speak of the city being a 'lab'. But are not all cities being treated as labs by most city planners and authorities with so many failed experiments?

GF: Thanks for the opportunity to answer this apparent contradiction: Absolutely - I do think that it is important that architects put place-making above ego. I am not sure that architectural education drums this home hard enough and that there is too much emphasis on the winning of awards for individual 'show-off' buildings with much less emphasis on the subtler and complex art of good urbanism. It is the good urbanists who should be the real heroes but in our fast culture we are suckers for the glamorous image - I blame the architectural photographers and magazines!

My claim that a good city should be a laboratory for change is not about an 'anything goes' culture but about testing solutions such as turning traffic-dominated residential streets into places for play, walking and cycling while experimenting with various forms of car-sharing to reduce car ownership. Can we extend the principle of sharing to energy-generating local renewable energy street by street? We need to experiment with the reduction of waste which applies to all resources from food to buildings. We need to make our cities carbon neutral as a matter of urgency - how do we do it without punishing the poor? We need to make our cities healthier - can we measure the benefit of getting all children to plant trees, both to their education and to a better environment for all? Running a city as a laboratory means applying some science to all we do and making the most of the great skills that lie within every city rather than simply acting on a political whim.

Let me finish where you started with the question of what drives me. I suppose it is that everything I take on is a project - whether it be an architectural project or a less tangible one. The greatest satisfaction comes from seeing something through, and as architects, we are so fortunate in being able to leave something tangible behind us in the form of a building or place that will hopefully not be demolished! In politicians and influencers, we can make a change but the curse of petty politics is that others may follow who take pleasure in undoing what went before! I have spent most of my life trying to make the city I live in, work and play in a better place than I found it - and passionately believe that is the responsibility of all good citizens with the means to do so!

Ar. Gita Balakrishnan
A graduate from the School of Planning and Architecture, New Delhi, Gita Balakrishnan is the founder and curator of Ethos, an organisation focussed on learning. She is also a trustee of the NGO AVAS, Association for Voluntary Action and Services and IHCNF, Indian Heritage Cities Network Foundation.
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REMEMBERING MIES

He who shaped the architectonics of the modern world

Ar. Manasi Chokshi

Ludwig Mies Van Der Rohe sitting on his infamous cantilevered chair
(Source: https://edithfarnsworthhouse.org/wp-content/uploads/2011/03/mies-van-der-rohe.jpg)

Less is more
God lives in details

Architects across the world, immediately associate with these powerful words of Ludwig Mies Van der Rohe. One perhaps may not recollect the exact details or projects but will recollect the architect who stated them.

Born Maria Ludwig Michael Mies, on 27 March 1886 in a provincial, medieval town of Aachen, Germany he was popularly known by his surname Mies. Born to a stonemason, he left formal education at the age of 19 and attended a local trade school to learn to draft, simultaneously apprenticing on building sites in local design firms. In 1905, Mies worked at a stucco work company and later joined the interior designer Bruno Paul in Berlin. He also studied at the Kunstgewerbeschule (School for Arts and Crafts) and at Hochschule fur Bildende Kunste (School of Fine Arts).

Mies was thus interacting with art and architecture, since and throughout his formative years. By the early 1900s, he could work with stone, lay bricks, carve and draft full-scale drawings on a vertical board.

At the age of 20, in 1906, Mies received his first independent project- the Riehl House in Neubabelsberg. Located along a sloping site, the landscape design was complete with a variety of gardens. The building rests on a podium that occupies the services while the living areas begin on the upper storey. The building sits quietly at the threshold of two prominent styles of his times- the Victorian and the modern.

The Riehls- Alios and his wife Sophie- were professors of philosophy and were part of the Berlin intelligentsia which further set the pace to his personal life and career. The simple, single-storeyed, pitched roof home did a lot more than just be his first project. The success of Riehl House also gave Mies an entry into Peter Behren's atelier. The training at Behren's office helped him in developing his signature style and the establishment of clean and basic forms in design. He continued getting commissions for houses in the Riehl's house neighbourhood of Potsdam suburbs following a similar style. However, it was only after World War I, in which he served in 1915-18, that he developed a new language of architecture.

Between 1921-1924 Mies designed five buildings- two skyscrapers, one office building and two villas, the Bismarck monument, Kroller Muller Villa- all unrealised. Though unrealised, these unbuilt projects helped propel the establishment of Mies' architectural practice. Around this time, the Werkbund exhibition titled 'The Dwelling' gave Mies a revered position on the international front. He designed, curated and organised the exhibition in Stuttgart Germany. Mies' genius was experienced in this exhibition is the form of the famous design of the cantilevered chair, The Glass Room, an experiential room using various types and coloured glass and the Material Show that had the new materials on display.

Mies uses the elements in the roof like the central gable dormer window, eyebrow dormer windows flanking either sides and minimal ornamentation to highlight his building *(Source: https://ofhouses.com/post/146589627148/322-ludwig-mies-van-der-rohe-riehl-house)*

The crisp, white lines of the Farnsworth house
(Source: https://www.archdaily.com/59719/ad-classics-the-farnsworth-house-mies-van-der-rohe)

Working on various projects through the years, with a succession of events like the wars, separation from his wife, in the 1920s Mies' style began to depart from the neo-classical threshold. He strongly began suggesting ideas of making buildings free from ornamentation. Modern buildings must use modern systems, materials, building techniques. He began advocating and believing in 'absolute truthfulness and rejection of all formal cheating'.

The success of the Dwelling landed him his most significant project- The Barcelona Pavilion. Originally known as the German Pavilion, Mies was commissioned to design for the International Exposition in Barcelona, Spain. He wanted the pavilion to be a work of art. The appropriate use of modern materials like travertine, onyx, steel cross-shaped columns, proportions of the columns and roof, a grid allowing these elements to exist are the striking and novel features that made the building a sculpture.

In 1930, Mies designed his last project in Europe- the Tugenhandt house. Similar to the Barcelona Pavilion, the house derived a new typology of housing in Europe, using absolute exquisite materials and technology. The house was a response to modern, urban living and new age requirements. From 1930 to 1933, Mies was appointed as the Head of the Bauhaus where he ventured into mentoring and teaching young architects.

Mies emigrated to the United States of America in 1937 and was appointed as the Head of the Architecture department at the Illinois Institute of Technology, Chicago. Some of his remarkable works like the Farnsworth House, the Seagram Building, Lakeshore apartments, Crown Hall at the Illinois Institute of Technology were built in the twenty-odd years after his immigration to the USA. His position as a teacher at the IIT and large building commissions not only eased his move but gave his style more encouragement in fast-evolving America.

The Farnsworth house built in 1951, near Chicago, displayed Mies' learnings of clean geometry, use of modern materials and technology which were brought it to an epitome of design. The small, white, transparent cuboid made with glass, supported on chrome finished steel columns, proportions that create an illusion of suspended planes marks a breakthrough in the milieu of the International style of architecture.

The Seagram building by night
(Source: https://www.archdaily.com/59412/ad-classics-seagram-building-mies-van-der-rohe/53834622c07a80946d00037b-seagram-building-mies-van-der-rohe-image)

Mies's buildings, be it the skyscraper apartments like Lakeshore building, office towers like Seagram building, or the villas and public institutions, all considered human desire and aspirations. By giving large open plazas outside of office blocks, opening up the floor areas, separating service cores from living areas, designing furniture, apartments without pre-planned interiors, all show these concerns he had. Through the use of modern materials and technology, Mies strived to balance both the form and the function, between comfort and aspiration.

One of the reasons that Mies is revered through the world, is the fact that he was a self-made man, combined with an interesting learning curve derived from a variety of sources. His humble beginnings, methods of learning, diversity of skills and experiences, his passion for technology helped him define his style in the modern world. His approach to design benefitted post-world war life with its limited resources. His passion and experimentation with glass, chrome finished columns, suspended planes, horizontal and vertical elements and mechanizations made the mundane and boring, extraordinary and aesthetic.

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VENKATESHWAR SIGNATURE SCHOOL, RAIPUR

By ENAR Consultants

Fact File

Name of Project	▶ Venkateshwar Signature School
Location	▶ Raipur, Chhattisgarh
Management	▶ Dharam Foundation
Site area	▶ 7.5 Acres
Constructed Area	▶ 1,70,000 sft
Project Cost	▶ 75 Crores INR
Architects	▶ ENAR Consultants, New Delhi
Structurals	▶ RSM Engineering Consultants, New Delhi
MEP & Green Building Consultants	▶ UEDC, New Delhi
MEP	▶ Blue Star Ltd.
Landscape Architect	▶ MG Associates New Delhi
Civil Contactors	▶ WG Contracts

Main Building View

The educational project for Dharam Foundation, The Venkateshwar Signature School is an institution with the revolutionary philosophy of providing a holistic learning environment. The visionary leadership of Captain Ankur Dhillon, the Chairman of the school reflects in the slogan that he has coined for the students: MAKE YOUR OWN SIGNATURE. His influence is seen in every aspect of the project right from the sweeping landmark design, the minimum resource consumption and an academic program that fosters excellence.

While most architecture is rectilinear – all straight lines and right angles – curves are often designed to soften the building's impact and help the structure blend into the surrounding landscape. the Venkateshwar signature school utilizes a curved profile to create a large span structure with impeccable finishes to conform to the highest standards catering to approximate 2000 students from Kindergarten to Higher secondary.at Raipur utilizes a curved profile to create a large span structure with impeccable finishes to conform to the highest standards catering to approximate 2000 students from Kindergarten to Higher secondary.

The project is designed for IGBC Platinum and boasts well-lit and ventilated classrooms, adequate outdoor and indoor extra-curricular areas, administration spaces, staff rooms, cabins for the principal/ director, sufficient toilets for both students and faculty members as the highlight of the design. The school has a large central climate-controlled courtyard which acts as an assembly and play space when the outdoor environment is not conducive.

The outdoor spaces include a football ground of international standards, synthetic basketball, badminton and tennis courts. A half Olympic size swimming pool that can be converted to a covered heated pool along with an attached state of the art gymnasium. All these facilities, oriented towards developing a healthy body complementing the intellectual development that the academic environment provides creates well-rounded students who are primed to excel as future citizens.

The school building is spread over approximately 46,000 sq ft on a 7.5-acre site. The total constructed area is about 1,70,000 sq ft. The ground coverage is deliberately kept at a minimum to leave the maximum possible space for landscape and play spaces. The design intent was to have an organic flow of learning spaces amidst landscaped areas of varying scales in the interior and exterior parts of the school. Children are encouraged to study not only in the classrooms but also to step out into shaded landscaped courtyards. These courtyards at the lower level act as a transition between outdoor and indoor spaces and have been found to be very useful for multifarious activities.

Childrens Play Area

Under Costruction View

Landscape View

Sectionally, the whole building has been sunk into the ground to take advantage of the cooling properties of the soil in the hot and dry climate of Raipur. This substantially reduces the height of the building and presents a more humane façade to the incoming children. The horizontality of the building is further reinforced by the soft curvilinear form and the horizontal ribbon windows.

The concept of outdoor spaces is carried vertically in the building as well. The 3 upper levels of the building have internal courtyards and terraces which provide breakout spaces for the children. Intriguing sweeping forms around these courts create a constant play of light and shade.

The central courtyard, split into two segments, is the hub around which the whole design revolves. The courtyard being naturally lit with soft filtered light via the tensile roof serves multiple purposes. Being climate-controlled, it acts as an indoor assembly, indoor sports arena and also a place from which the whole school can be monitored. The open design with singly-loaded corridors and safety glass railings look into this space, ensuring that there are no dead ends or dark corners in the design.

Structurally the school building is designed as a composite structure with predominantly RCC-framed construction in combination with steel structural elements. This allows for large fluid cantilevers which enhance the elliptical form of the building.
The façade of the building is clad with single sheet aluminium to synchronise with the form and has low E-glass on the openings to minimise heat gain while allowing the maximum amount of light.

The interior design of the school plays an important role in many aspects of student learning. From their chairs, the students sit on the colours on the walls, design choices have the ability to support an active learning environment. Keeping in view the curved profile of the building, the interiors of the building also have a curvilinear impact. The ceilings, walls and floorings- all have curves as the basic intent of the design. An ample number of colours and graphics have been used for the engagement of students in the learning process. Flexible and ergonomic furniture has been added. Creative use of colour, student art, murals that reinforce positive messaging is helping the school to feel more community-driven and encourage students to think more creatively. In the administration area of the school, a wooden look has been incorporated with wooden baffles in the ceilings, wooden flooring and veneer walls.

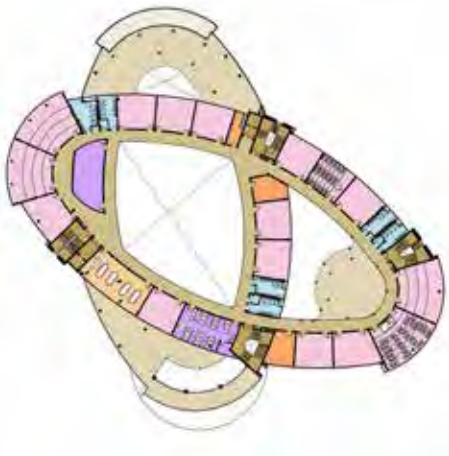
Modern technology in classrooms has been incorporated. Improved lighting and acoustics have been provided to support various activities in the school such as the dance room, music room, activity room, etc.

Site Plan

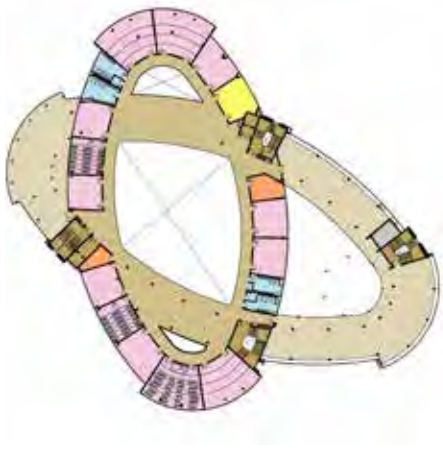
Basement Floor

Ground Floor

First Floor



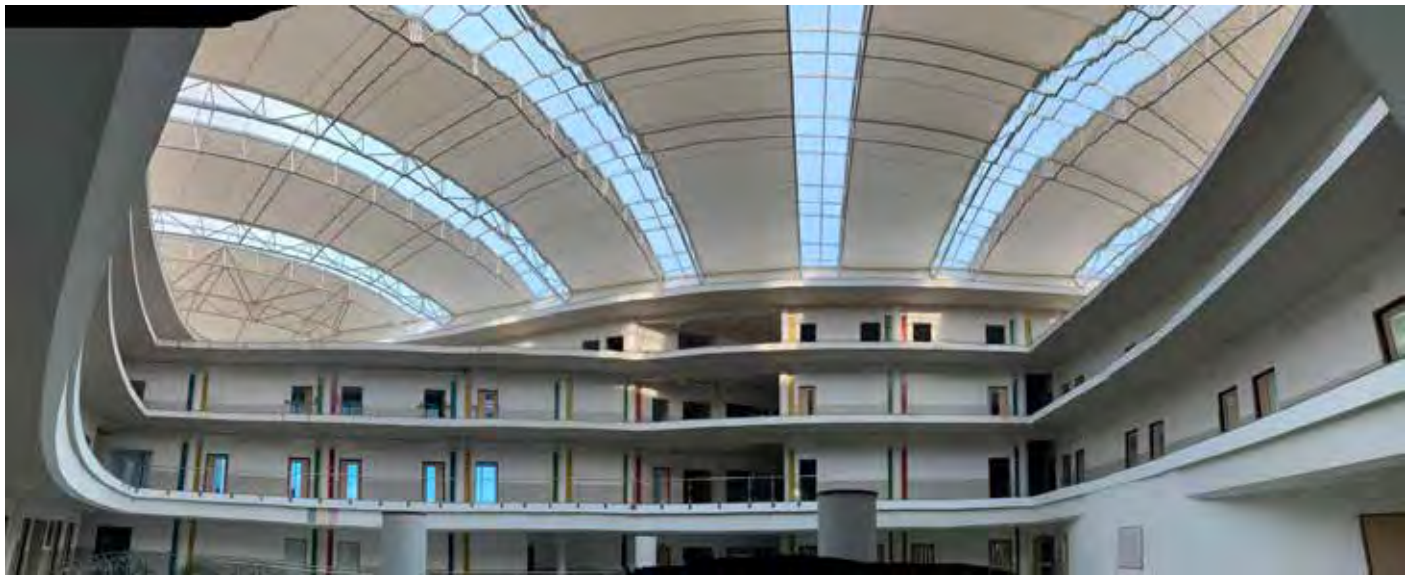
Second Floor

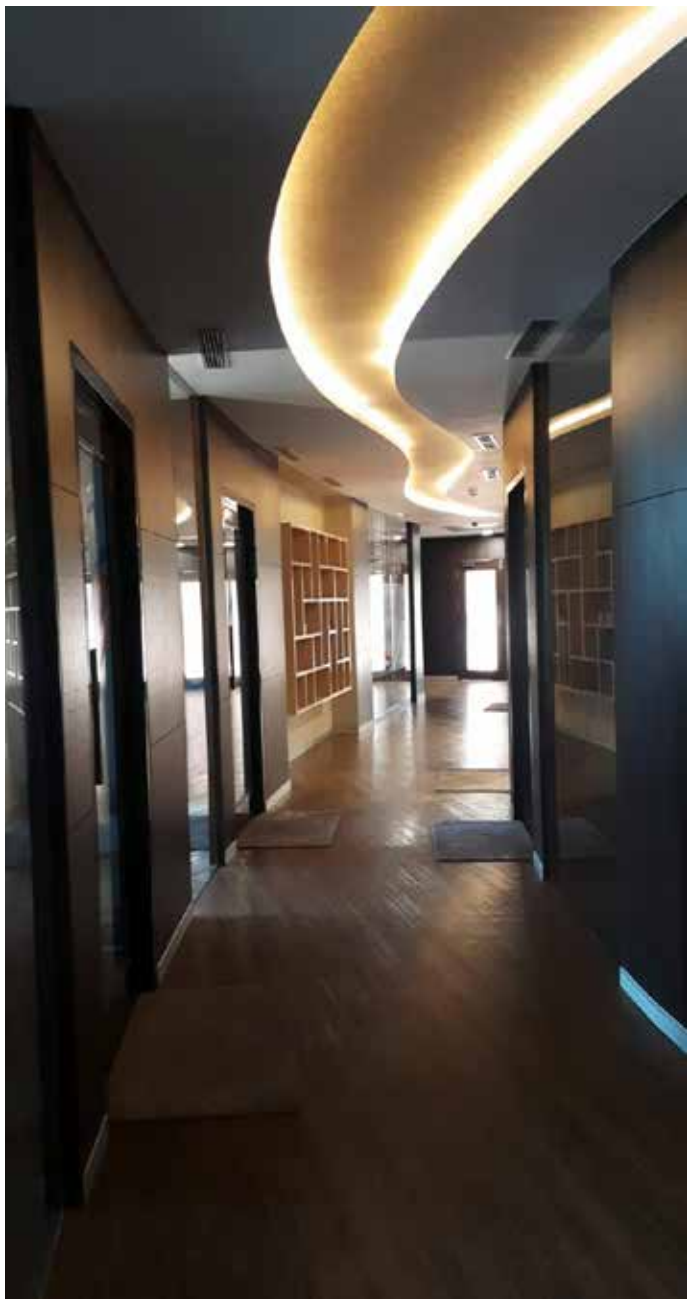


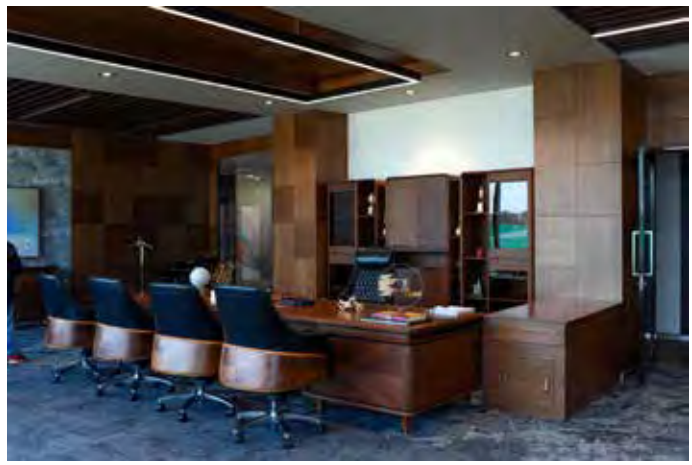
Third Floor

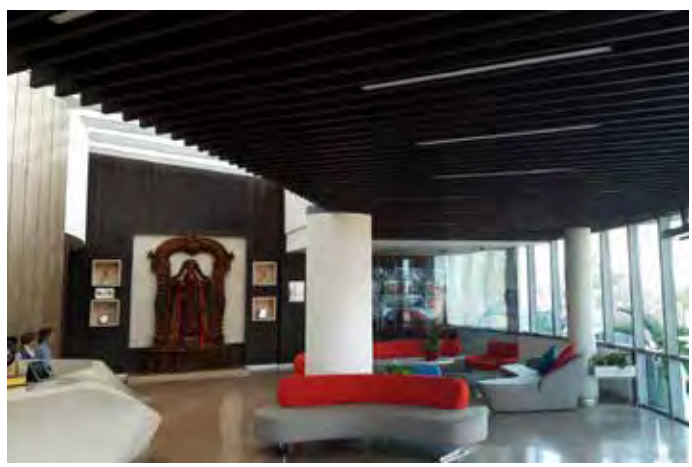
SERVICES
VERTICAL CORE
CLASSROOMS
LABS
ACTIVITY ROOM
STAFF ROOM
TOILET
AUDITORIUM
ADMIN AREA
MUSIC/DANCE ROOM
GREEN AREAS
LIBRARY
CIRCULATION AND PLAY AREA
TERRACE

Sections







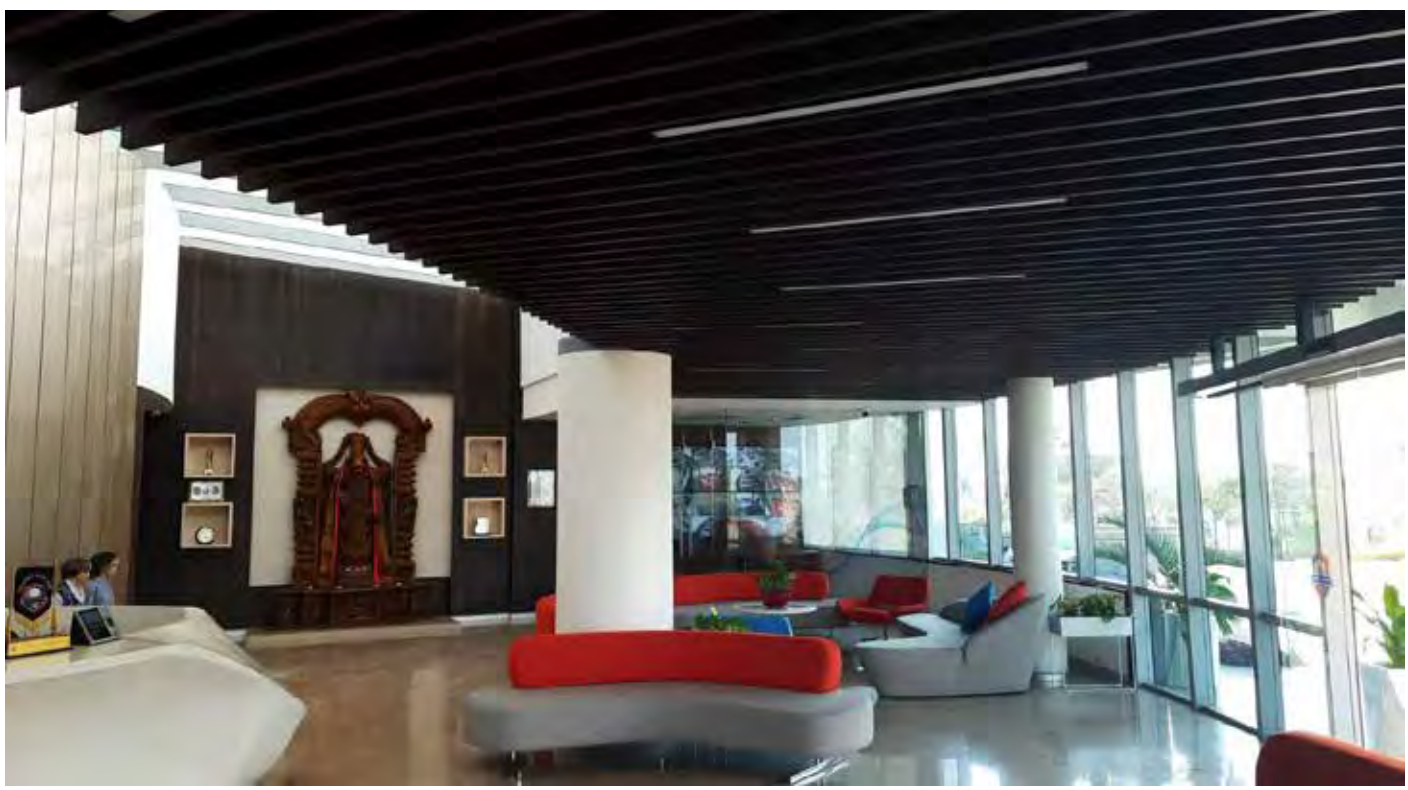


(Clockwise from L - R):
- ▶ Central Court Tensile Roof
- ▶ Chairman's Cabin
- ▶ Reception Lobby
- ▶ Classrooms Corridor

Reception Area

Reception Area

Internal Finishes



Reception Lobby

Site Aerial View

View Building From Driveway

Landscape features and elements play an important role in school premises and have significant importance. A thoughtfully arranged schoolyard brings up a feeling of beauty in children, raises their spirit, positively influences the health of children and adults, contributes to the aesthetic education of children, and develops their taste and creative thinking. Keeping this ideology in mind, the landscaping was done with the placement of various elements within the school campus as well as in the exterior part of the campus. Innovative measures like a butterfly garden, aviary, making extensive bird nests and bird feeders all over the campus foster a love for nature amongst the children.

Various colours and textures were used to arouse the feeling of excitement and joy in the students. Elements like gazebos, artificial water bodies, planters, etc. are used for enhancing the quality of exterior spaces. The intermittent green pockets along the corridors break the monotonous look and feel of a regular school and allow the freedom of thought and creativity for students belonging to all age groups. Thus, the building design of the school helps the students in their regular curriculum of learning and also helps them to safely explore their thinking processes.

The school is designed in a manner that helps and contributes to the holistic development of a student and helps them excel in their academic as well as extracurricular activities.

ENAR Consultants was established in August 1995 by Amit Khullar, B.Arch. (gold medallist), M.Plan. (Environmental Planning). From its humble beginnings, the organization has grown manifold in the 27 years of its existence. It was subsequently joined by Dipankar Mazumdar (B.Arch., M.Plan. (Environmental Planning)) in 1996, Pankaj Khullar (B.Arch., M.La.) in 1998 and Anubha Khullar (B.Arch.) in 2010. A steady stream of architects and designers have become a part of the organization enriching it with their varied abilities and creative visions ensuring several vivid imprints on the urban landscape.

All Images Courtesy: **ENAR Consultants**

SETTING THE BENCHMARK FOR SCHOOLS : GOVT H.S.S KARAPARAMBA

IIA Calicut Centre Pro Bono project designed by Design Ashram Consultants
Part of PRISM initiative under the leadership of A. Pradeep Kumar.

Ar. Nimisha Hakkim, Ar. Brijesh Shaijal

The library block brings a light and airy feel to the design, lined with glass framed on steel

IIA Calicut Centre - Known for its social and public initiatives apart from holding various events for the fraternity and the public. This chapter of the IIA's efforts to bring about a change on the face of Calicut has been a growing success, and Karaparamba being a pro bono project has reaped praises. The social commitment to develop the City in a functional yet aesthetic way, has been a social commitment by the organization for the last couple of years. IIA Calicut centre plays a significant role in actively educating as well as creating public projects for the society, always parallely working with it. The Centre has brought these initiatives and projects to other centres and chapters across the country, to replicate or follow the footsteps of Karaparamba school and other projects.

Pradeep Kumar MLA: A. Pradeepkumar was a member of the 12th, 13th, and 14th Kerala Legislative Assembly from Kozhikode (North) constituency. A Kerala state committee member of the Communist Party of India and a strong supporter of bringing in development to the state and constituency, Pradeep Kumar has been the torchbearer for the PRISM project, and other IIA ventures. He has always been a politician who understands the value of designers and Architects to shape the Urban environment with aesthetics and function. A person who enjoys working very closely with the Architects, until the final product is created and shows complete commitment to guarantee that the project is made a reality without setting any limits to the scope of creativity in approach. During his tenure as MLA, with the support of the government, he has overseen projects that are part of PRISM and other projects in the constituency from Hospitals to cemeteries, and schools to community centres and bus shelters. His efforts to bring architects and use their service in cities has not just shaped the city, but also set a platform to bring in architecture to the social and urban context.

Team DAC: DAC is a consortium of architects, designers, and engineers with years of experience in architecture and design. Familiar with various project categories and with expertise even on an international platform, DAC delivers design solutions that surpass expectations in quality and in timely completion. Our core team, with the assistance of a wide array of professionals we associate with other designers and consultants, enables us to bring into each endeavor the finest minds suiting the project at hand.

Humble beginnings

A new century breaks the horizon, a century of black and white films, slate boards, and one where the social pressure of competing with peers hadn't taken over the peaceful home-like aura of public schools. This generation of schools cast long shadows. Not with shades of tension between those sitting across the woven bamboo mat with a makeshift jackfruit leaf spoon, slurping rice soup. Neither the layers of societal pressures nor the family incomes or backgrounds budged them.

The school becomes a neighborhood with different kinds of functions, without overlapping or interfering with the activities

The indoor court transforms into a seminar hall or even a worshop space

Established in 1894, Karapparamba school began functioning by 1907, But by the turn of the 20th century, the cracks had gotten wider and the plaster flaky. Something needed to be done. To revive a school that saw lineages of families walk through its corridors, two or three generations before.

A growing need

What if there could be schools that take in the value of coexisting community neighborhoods that not just behave as an educational institution, but a space of expression and ideas, combined with the latest technology that could make the globe an interconnected village.

The prism project

In a world with growing criticism and lesser solutions, the nagging question was the absolute stunted growth and development of a government institute like a school compared to its higher degree counterparts. Why couldn't the same trend happen for schools in India, where students prefer government institutions for higher studies at least in Kerala? Why aren't there schools that compete at international standards?

In the current societal structure where educational institutes such as schools exist with their motive only towards academic excellence like a horse side blinded to focus on just its path ahead, PRISM - 'Promoting Regional Schools to International Standards through Multiple Interventions' was introduced. This initiative was a boon to redesign schools and their premises to see the infinite possibilities each space could be used as through various Interventions. These could be anyone who's showcased beyond ordinary works in any field of life, be it intellectual, business, art, and architecture, coming together, joining hands to create an amalgamation of what everyone has to offer.

Hundred Hands on a mission

While Design Ashram Consultants, through Ar. Brijesh Shaijal and Ar. Nimisha Hakkim, with a competent team blessed with a creative and technical workforce, took on the architecture and finished it with grace; other fields such as Information technology, Electrical and Electronics, Kitchen equipment, and other fields were taken up by similar highly competent organizations and people who supported the cause since its inception.

Not just inside the building, the spaces throughout the design can ammodate diiferent kinds of functions

A person whose effort stands out through sheer will and determination combined with the belief bring a change in how government institutions, primarily school, looked and functioned was former MLA Pradeep Kumar. After careful analysis and comprehensive study of the issues faced on this subject, Pradeep Kumar launched an initiative still making ripples across India on how educational institutions can be created and maintained at the highest standards possible, known as PRISM.

The primary motive of this initiative was to provide the best quality of education accessible to people from all walks of life. Quality not just in terms of curriculum or faculty, but the whole atmosphere that shapes a learning environment. Free, open, inspiring.

Becoming a part of life.

It was a fact, plain as daylight that a facility such as this had to be thought out for a more extended period of time. If it has already passed the test of time for over a century, it could stand at least one more. Hence the space has to be maintained in a way that the youthfulness of the area is well kept. The design synchronized when the wide range of user groups, including the neighboring communities, teachers, and students of the school, took ownership of the space took it upon themselves

The amphitheatre hosts public events to in house activities

to keep the essence of the place alive. To treat it like their own. Another equally crucial aspect that makes this project a bit special on its own was the importance given to learning life. The beauty and the reality, the shades of greys that make themselves pitch-black shadows hard to escape from, and how humanity prevails every time. There's a saying that roughly goes, "It's not necessarily that the ones who topped in class are the ones who succeeded in life. Success could mean different for many. Being better humans and helping each other grow definitely is one formula to win in life," and that is precisely what's being promoted in the school.

Setting an example in all ways

The multiple interventions of the school did not merely send at giving a complete makeover to the school premise. From the purpose of education to the change in uniforms, the initiative aimed to make an impact in people's lives directly, especially that young mind that shapes the future.

The project has been an enormous success, with praises from the students and teachers, to the Chief Minister of the State. The aim to create a model for the state, an example that could be looked up to, was realized when the state issued funding for 100 more schools to follow the same approach of PRISM.

When the students believe that it is their turn to act now and provide to society by becoming better versions of themselves, as a result of a change in their scholastic and co-scholastic environment that is a milestone that stays in place.

When architecture adds value to life, improves quality, and raises standards of living, there is meaning to the creation. But making a mark through the language of expression is no easy task, let alone for a government project. Rarely have there been government buildings that have stood out and made a statement to express their identity. For architecture to not stop at bounds set by the society and tower above is a mission accomplished.

Designed for the neighbourhood - inclusive, open and social

The design was a carefully crafted masterpiece by the design team of DAC headed by Ar. Brijesh and Ar. Nimisha Hakkim. Bold, Eloquent, and truly sustainable in all terms. The place throbs with life with the interaction of local communities, conducting events, and using the space as part of their daily routine. These interactions not just bring in the sense of oneness but also a commitment to grow together. The involvement of the public is massive in the design of the school, from Bands like Oorali performing to the music fans of Calicut to Riyas Komu, co founder of Kochi Biennale contributing to the wall murals and artwork in the school.

From the paved joggers' path that line the school premises, to be used by the public to build on their cardio fitness regime, to the auditorium that not just hosts science fairs and workshops but also seminars and conferences by proficient dignitaries in their fields and a host of events, the spaces in the Karapparamba school are threaded through a line of inclusivity. On one hand, where the social responsibility takes

The inside spaces are airy and light with openings that make the space dynamic

The retained trees add life to the space and blends the built and unbuilt

an extrovert turn through the use of the school's kitchen facilities as a home base for the Government's community kitchens during COVID, the library spreads a calming aura to the readers in the evenings.

Right from the entry, the inclusivity in design is evident through a ramp that runs across the school's premise, connecting floors vertically, evading through the trees that cross paths with it. Every feature of the design is an architectural element that functions to perfection, from the offsetted walls that act as backdrops for the stage to courtyards that are spread across the design. When the boldness of material and function is exhibited through the entrance stairway, symmetrically placed to form a panoramic view, the lightness of character is brought out in the library. Replacing stacks of wooden shelves to a glass-enclosed space, neatly naturally lit by punctures on the surface, the library becomes a focal point in the design, and the outdoor garden adjoining it provides a serene atmosphere to read and learn.
The thought given to individual aspects of spaces, as minimal as it may sound, creates a massive impact. The girls' washroom is placed around a courtyard that makes the area much more than a washroom, but a space to even relax during their menstruating period. The boys' washroom, usually sketched with obscene graffiti or casual strokes of a pencil, was equipped with a blackboard. For those who like to explore the art world while urinating, this element was seen as something that does not have to be repainted or one that causes permanent visual messiness on walls.

The commitment to protecting the environment was a clear guideline to be followed throughout the design. This resulted in retaining all the trees present before construction and to make them focal points. Fitted inside courtyards or stationed alone, the green cover adds life to the space.

The next was through the usage of materials. Raw and Earthy. From exposed laterite walls that put out a bold red to the clay roof tiles that have been donning the face of Kerala architecture for the past couple of centuries. They hover over the verandahs of classrooms like a beach cap, opening out through perforations to let out the hot air. All the elements are planned with respect to the context of the place. Contemporary materials like steel and exposed concrete are also used in a way to blend with the language created by the vernacular palette.

Channeling the Winds blowing from east to West, the muttam or court becomes the centerpiece that makes up for the obstructing buildings on the West, creating a patterned flow of wind that knows no boundaries of mass or material, free. Boundless or wall less, the Dining area is a free space, lined by columns, looking out into the series of connected courtyards, flagged with trees.

While the campus could sustain itself economically through the wealth generated from events held in its premises, the call for being a Green School is answered through Rainwater harvesting, waste management, and powering the school through electricity generated from solar panels.

A statement of Architecture

If this example of an architectural marvel can be made a case study, the inference would be the way how the design broke barriers to achieving something that speaks volumes of how architecture can express itself: the people, the context, the creativity, and most importantly, timelessness. The Karapparambu School showcases what architects can deliver with the proper support to break stereotypes of conventional thinking and to make a lasting impression. Carving out a distinctive niche, the design stands as the face of the town and a model for the schools to come.

A. Pradeep Kumar, MLA was a member of the 12th, 13th and 14th Kerala Legislative Assembly from Kozhikode (North) constituency. A Kerala state committee member of the Communist Party of India and a strong supporter of bringing in development to the state and constituency, Pradeep Kumar has been the torchbearer for the PRISM project, and other IIA ventures. He has always been a politician who understands the value of designers and architects to shape the urban environment with aesthetics and function. A person who enjoys working very closely with the Architects, until the final product is created and shows complete commitment to guarantee that the project is made a reality without setting any limits to the scope of creativity in approach. During his tenure as MLA, with the support of the government, he has overseen projects that are part of PRISM and other projects in the constituency from Hospitals to cemeteries, and schools to community centres and bus shelters. His efforts to bring architects and use their service in cities has not just shaped the city, but also set a platform to bring in architecture to the social and urban context.

Ar. Nimisha Hakkim and Ar. Brijesh Shaijal
Nimisha graduated with Bachelor's in Architecture from the College of Engineering, Trivandrum and has since then completed her Masters in Urban Design from School of Planning and Architecture, New Delhi. Ar. Brijesh Shaijal is graduate of Architecture from BLDEA's CET, Bijapur. Both of them have co-founded Design Ashram, a multidisciplinary Architecture firm in Calicut.

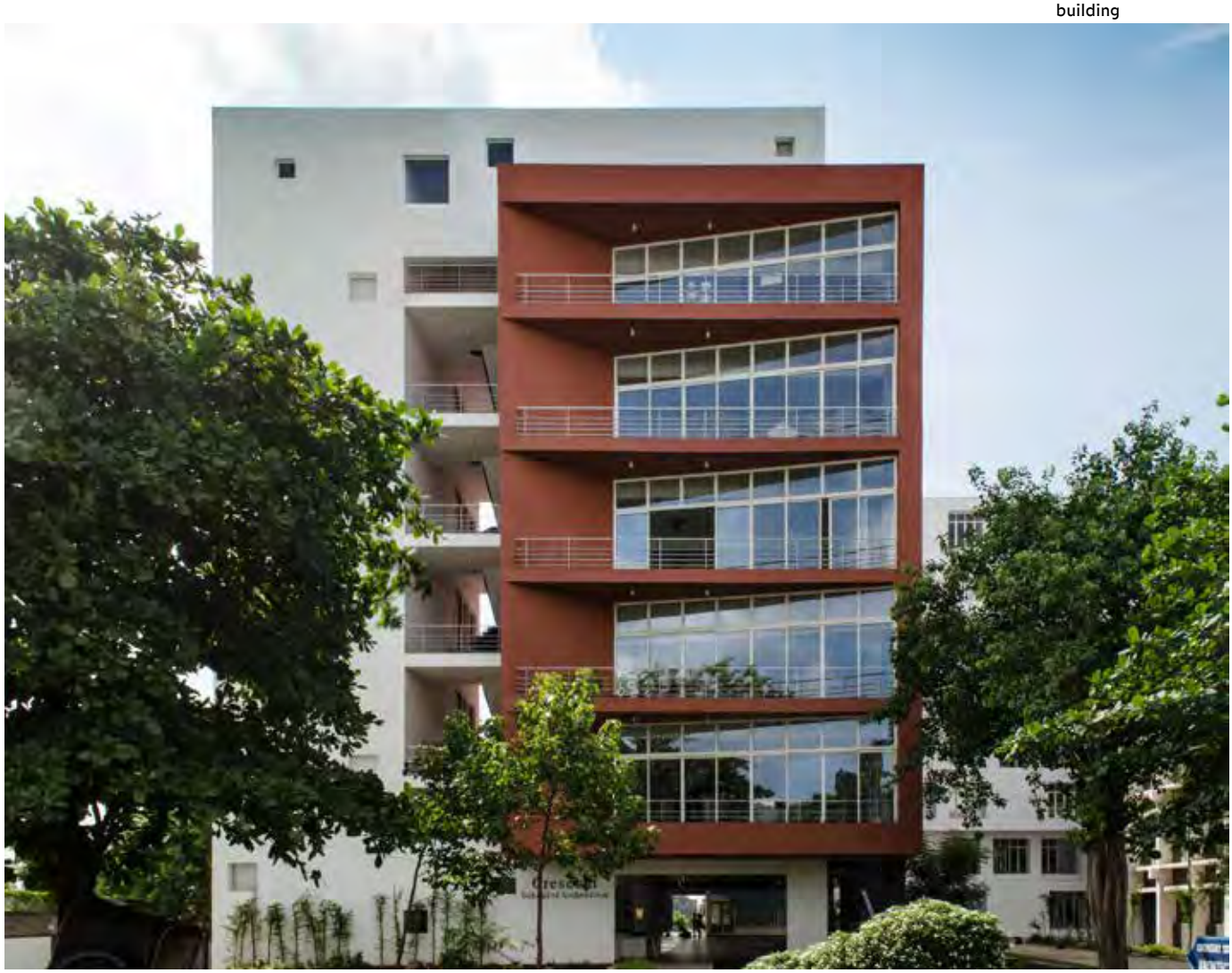
Team DAC
Nimisha and Brijesh have co-founded Design Ashram, a multidisciplinary architecture firm in Calicut. DAC is a consortium of architects, designers, and engineers with years of experience in architecture and design. Familiar with various project categories and with expertise even on an international platform, DAC delivers design solutions that surpass expectations in quality and in timely completion. Our core team, with the assistance of a wide array of professionals we associate with other designers and consultants, enables us to bring into each endeavor the finest minds suiting the project at hand.
dac.clt@dacglobal.org

All Photographs Courtesy: **Andre J Fanthome, Studio Noughts & Crosses.**

SCHOOL OF ARCHITECTURE, CHENNAI

By architectureRED

Front elevation and main entrance into the building



Fact File

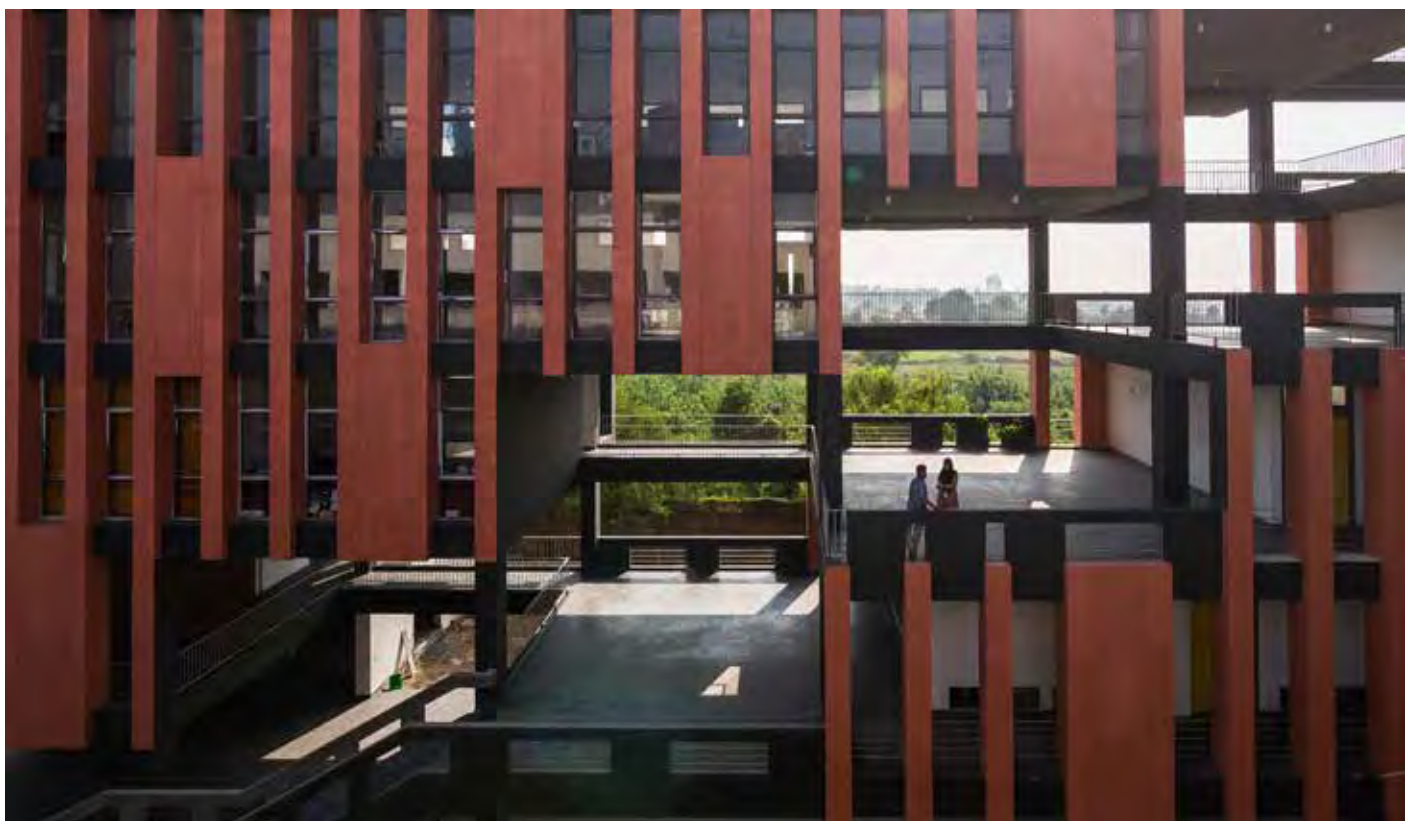
Project Name	▶ Crescent School of Architecture
Project Type	▶ Institutional
Location	▶ Vandalur, Chennai, India
Client	▶ Crescent University
Project Status	▶ Completed, 2019
Built-up Area	▶ 1,25,000 sq.ft
Client Team	▶ V.N.A Jalal, M.S Jagan, Shuja Ahmed, Jamal J
Project Design Team	▶ Ar. Biju Kuriakose, Ar. Kishore Panikkar, Kani Pandian, Yasir Azami, Gero Rajan, Jagadesh, Chandana Ramesh, Reshma Chandrashekar, Syed Munavar, Shashank Muralidharan
Structural Engineers	▶ Somadev Nagesh Consultants
MEP Consultants	▶ Air Treament Eng. (P)ltd.
Photographs	▶ Fazal Hussain, Lakshiminaraayanan, Smrithi M Kulkarni

Distinctly identifiable by its stepped terraces and red striated facade, the Crescent School of Architecture by architectureRED occupies a relatively small lot of the 60-acre university campus, in Vandalur, Chennai. The project brief envisioned studio spaces along with lecture halls and administration areas which the architects chose to augment with necessary 'de-programmed' spaces for collective working and gathering. This allowed for the exploration of redefining not only the nature of spaces found in an architecture school, but also offering the possibility to inform the future pedagogic programme that it could accommodate.

An architecture school has socio-spatial requirements that are two-fold in nature, both extroverted and introverted, with spaces that allow its users to work in multiple ways. The ideal school should allow for an open-ended programme, where spaces offering opportunity for discussions and chance encounter become key in shaping the student experience. Therefore, spaces that can have transformative pedagogical implications becomes imperative; wherein collective creation is encouraged within the institution's pedagogic programme, by explicitly offering spaces that urge for learning outside of the confines of the classroom. Through means of an unconventional spatial method, the architecture school presents its users with various options for inhabitation and use.

Extending the ground plane into the building became imperative because of the limited site allocated for the large programme of the architecture school. It was decided to eschew the need for a restricted entrance and instead choose to maximise the openness of the building's connection to the ground – creating a large shared piazza that extends the urban structure of the university campus into the school, and flows through an open stilt area to the edge of the reserved forest. One is offered a multiple choice of accesses, including an open yet shaded access to the first floor.

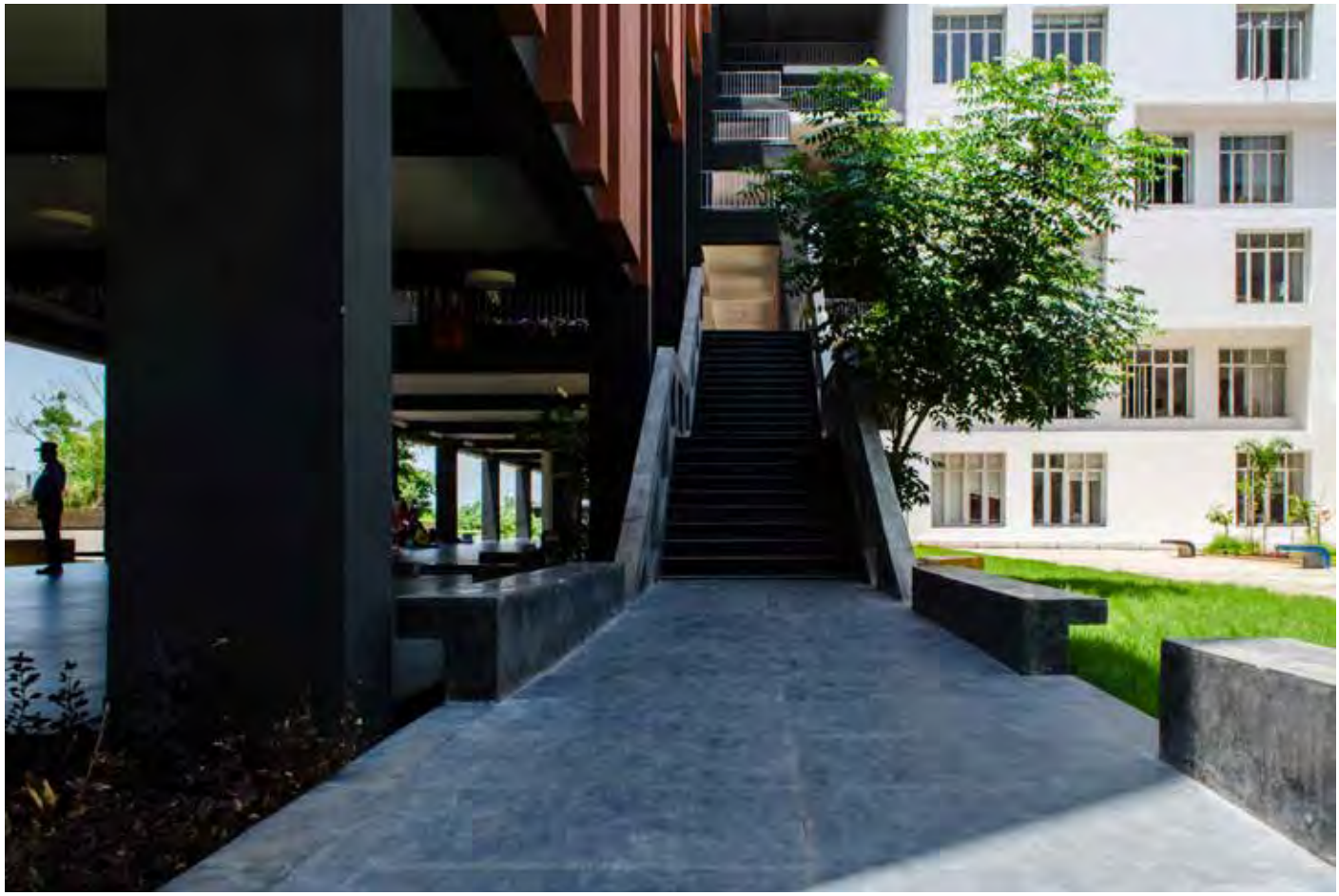
A reinterpretation of the traditional courtyards found in institutional buildings: a sectional courtyard is carved out of the built mass, across the floors. This is articulated by a multiplication of the ground, staggered at each level and overlapped. An additional 'new ground' is thus created at every floor level within the building – that extends the ground upwards into the building volume. This facilitates a series of spaces that work independently on every floor as a place for congregation while collectively, they tie the building with the ground plane and the larger campus.



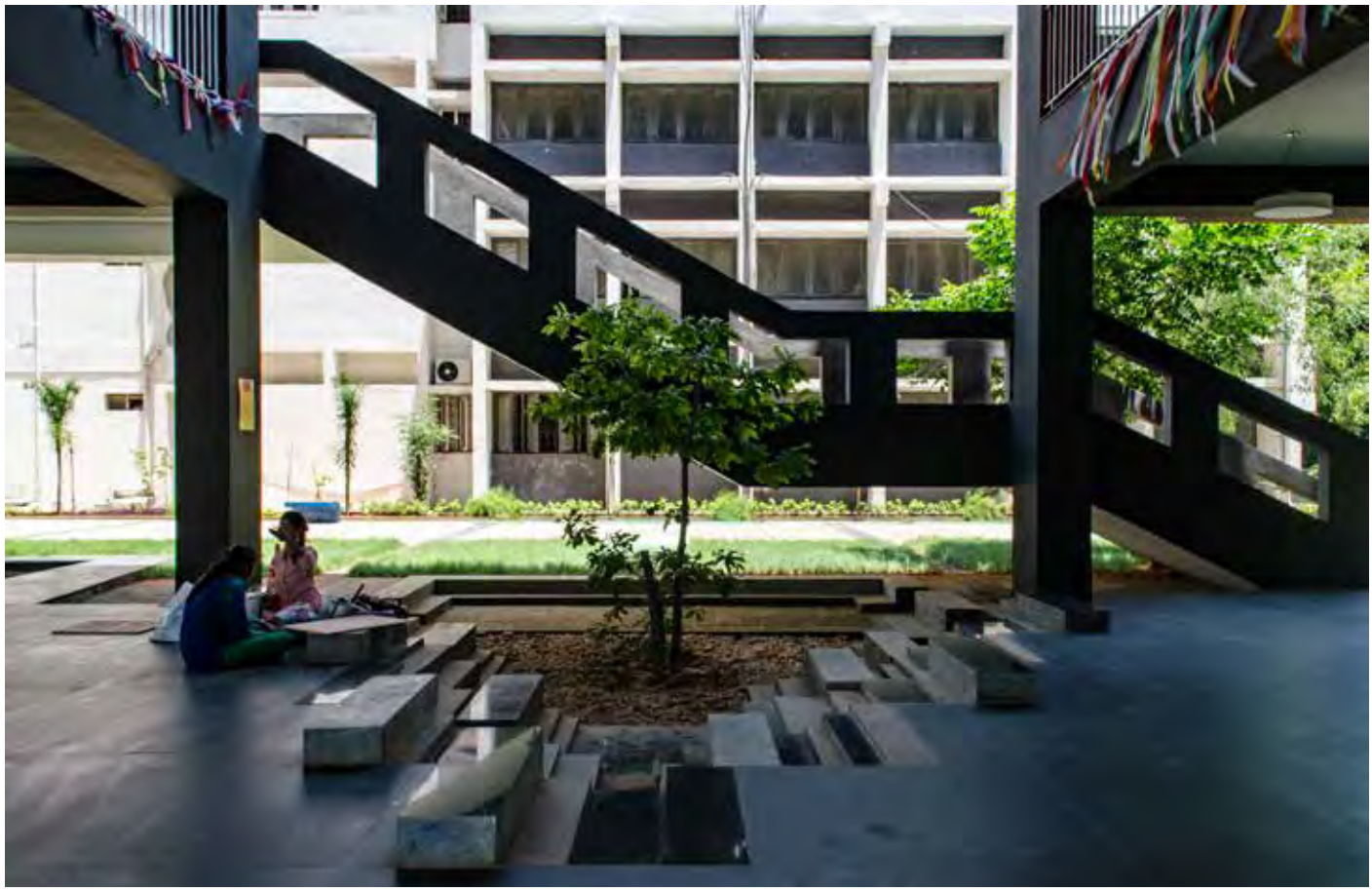
Views to the reserved forest, as seen from the courtyards

Entrance staircase tying the ground plane to the upper courtyard

A view of the sectional courtyard, tying the building to the ground plane



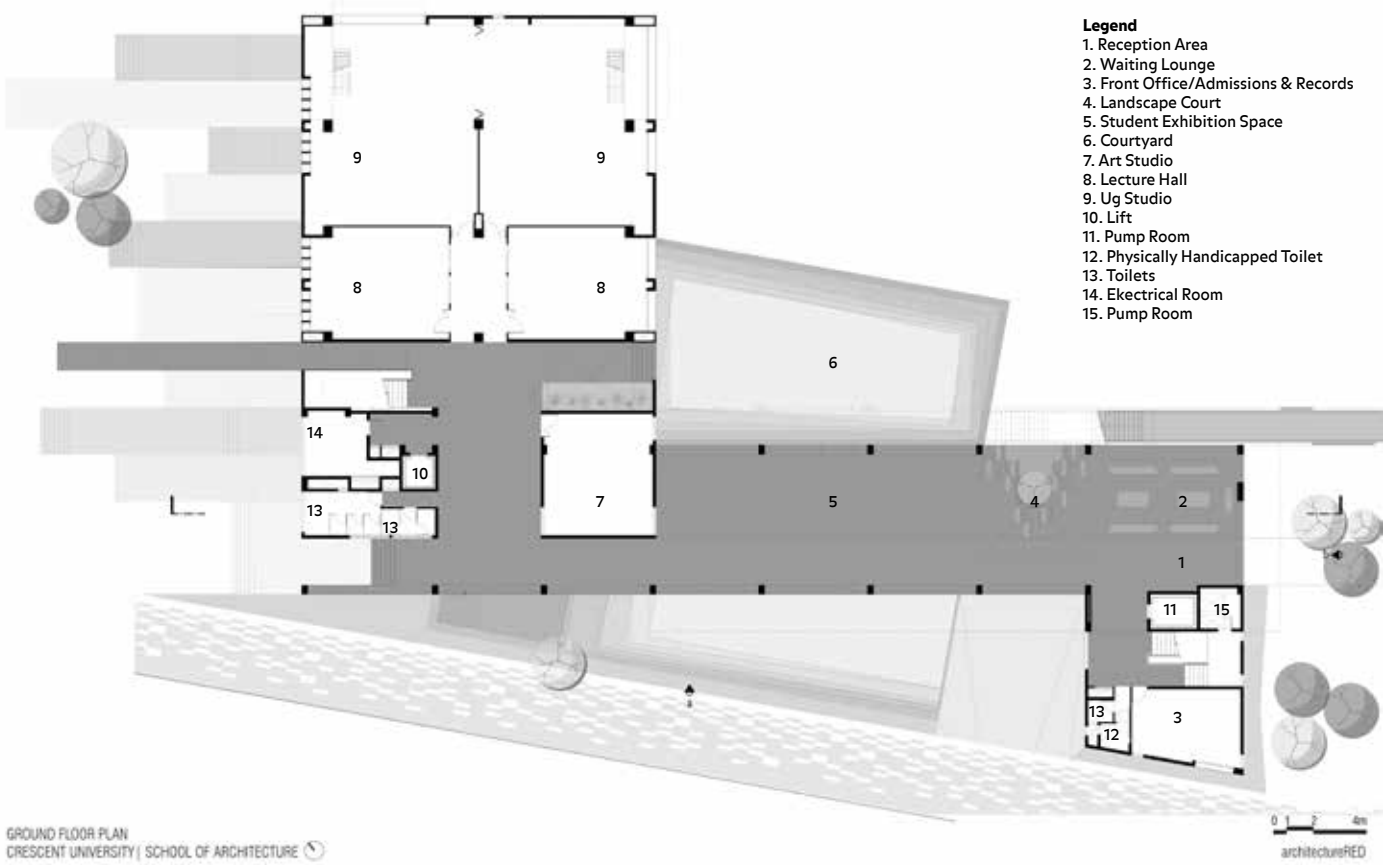
Entrance staircase tying the ground plane to the upper courtyard



Seating court at the ground level, a place for social interaction.

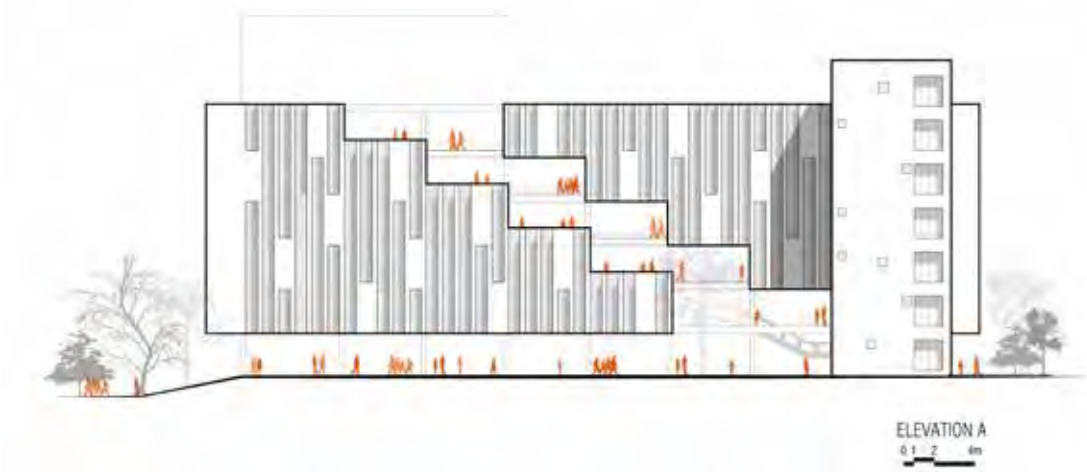
Seating court at the ground level, a place for social interaction.

Seating court at the ground level, a place for social interaction.



Ground Floor Plan

Section



Elevation

Double height courtyards, extending the ground plane vertically into the building

Striated façade detail as seen from the ground

Open breezy nature of the courtyards, offering views to the surroundings while tying the building together

Views to the reserved forest, as seen from the courtyards.

Visual connection established between all the double height courtyards

Building Context from the national highway

These voids, in addition to making the building mass lighter, also perform the important task of creating an 'outdoor-like' experience – with the wind blowing through, the sun traversing across the spaces during the day, the shaded spaces feeling connected to the elements and the campus (to which the building forms and urban edge), and with views across the reserved forest on the west side and the campus towards the east and south. From a social perspective, they serve as dynamic spaces that allow for chance interactions, student discussions, class reviews and much more. They become a place to celebrate the collective, where over time, diverse activities and functions stitch together a strong memory of place.

Each studio space opens onto its adjoining double-height terrace (shaded by the overhanging floors) through a set of large sliding folding doors – offering the possibility of open studio/workshop spaces and/or open exhibition and review spaces – that can be viewed together diagonally across, during 'open-house' days and common review days. Design studios that placed adjacent to one another may be transformed into one large space hosting shared classes or studios between two different sections, avoiding complete isolation. Each design studio also accommodates a mezzanine level that houses its respective lecture hall.

The Crescent School of Architecture aims to deploy a spatial methodology to suggest possibilities in which different programmes may be adapted through innovative infrastructural and spatial solutions and possibilities.

With open spaces present at its base that offer possibility of intense activity, gathering and socialising, a strong connection between the school building and the campus is reinforced. This connection permeates the structure enhancing its experience in the hope of giving birth to a new system where users can begin to take charge and re-configure spaces that adapt to changing needs and demands, tuned towards their own specific purposes, and as such the buildings posits a proposition for a sustainable institutional architecture that will adapt to its times.

Ar. Kishore Panikkar **Ar. Biju Kuriakose**

architectureRED is an award-winning architectural, planning and urban design firm, based out of Chennai, India, and focuses on creative design solutions for a variety of project programs, including commercial, residential, institutional, hospitality and urban design. To rationalize design, capitalizing on the opportunities and untangle the constraints from the context and the program, to weave with the exciting design fabric, to evolve a built-form strategy which captures the essence of the project, forms the crux of what they do.
ksuresh@architecturered.com

STONE LODGES

By Earthitects

Fact File

Project Name	▶ Stone Lodges
Typology	▶ Private Residences
Project Location	▶ Wayanad, Kerala, India
Plot Area	▶ 26,500 sft (for a single residential unit)
Total Built Up	▶ 7320 sft (for a single residential unit)
Structural Consultants	▶ Ar. George E. Ramapuram, Irene Koshy, Muhammad Jamaal, Johnson Joseph, Sarmas Valli
Project Completion	▶ 2019

Experience 'natural living' at the lap of infinity

Stone Lodges are private residences spread across a forested hillside. Built on sloping land on the side of a mountain, they are inspired by the grammar of mountain lodges and the native design aesthetic. With sheer simplicity and understated elegance, each villa intertwines harmoniously with the mountain on three distinct levels and blends seamlessly into the natural landscape. Staying true to our philosophy, the materials used are natural, with wooden flooring, random-rubble walls, cobblestone pathways, and log rafters.

Showcasing a joyous interplay of stone and wood, the villas are hidden amongst dense foliage and designed with unique elements, keeping sustainability and innovation in mind. Every bit is finely nuanced bespeaking a luxurious yet environmentally responsible aesthetic - A Collectible that ages graciously!

Reverse Urbanization

We believe that the 'future of living' is our visionary philosophy of 'Reverse Urbanization' as we are passionate about pioneering, creating and constantly innovating a positive change in the way people live. The advent of ultra-high-speed internet, the ability to now work from anywhere in the world and the abundant availability of conveniences for everyday living have led us to pioneer this new philosophy in living, which we call 'Reverse Urbanization'. A post-pandemic living experience suitable for socially-distanced living - with the ever-growing cities, many are considering making such oases of calm, their home. A home amidst nature is what we as humans were meant to live in, as people are burnt out from their regular lives and want to shift to tranquil locations. Focused on living in harmony with nature, we want to change the way people live, by bringing a new dimension to luxury with the essence of the wilderness in every square foot.

A Second Home

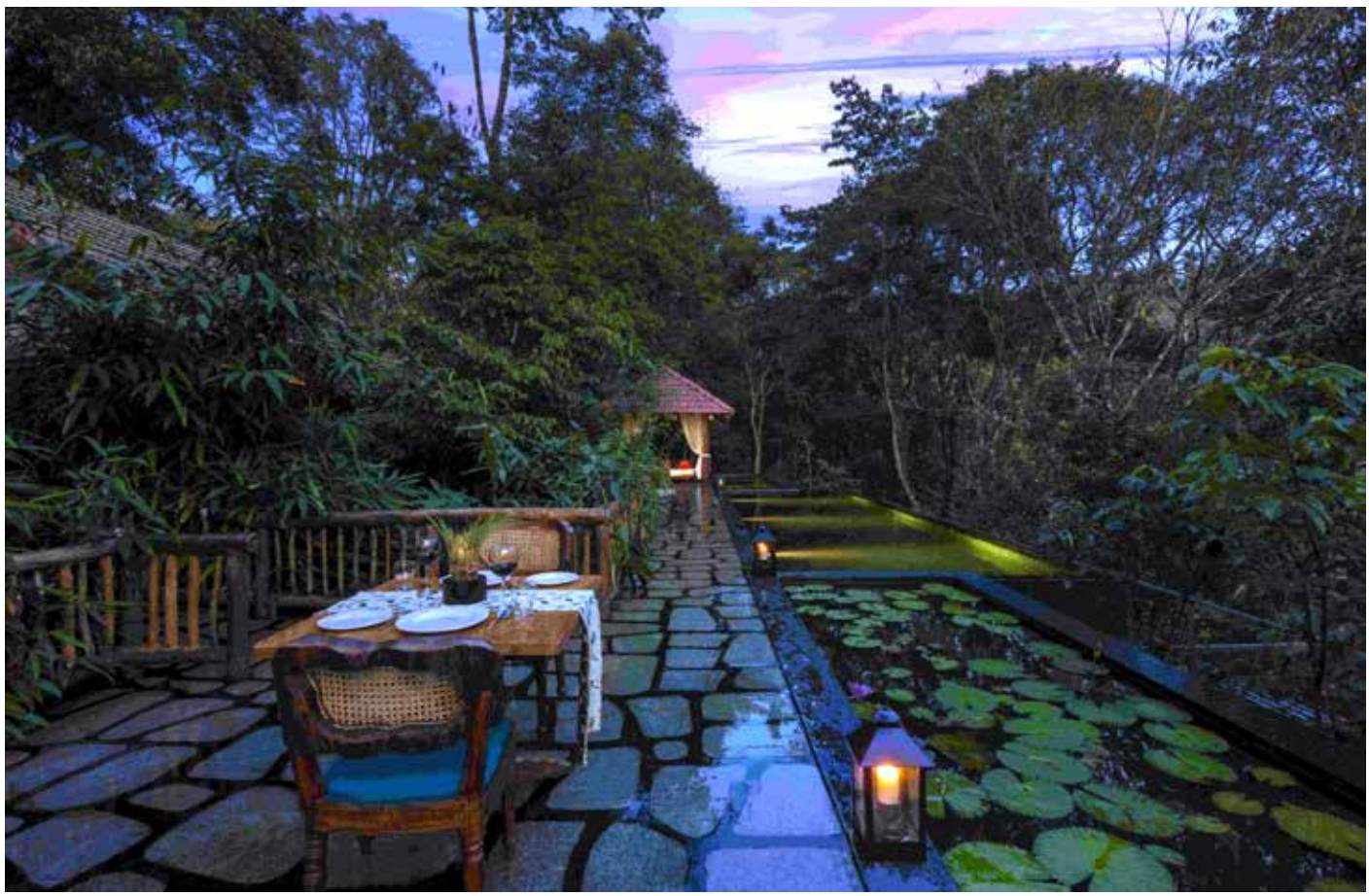
There is now, more than ever, a need for balance and a longing for man to reconnect with nature. A longing fulfilled by the establishment of a second home located in the lap of nature and a place to nurture one's hobbies like photography, organic farming, gardening, birding, trekking and more. We wanted to provide this second life for our owners – a life that would be one with nature.

Natural Life

Natural life is about re-establishing the revealing experience of connecting with both oneself and the natural environment - a relationship that has been severed by our modern, urban-centric lifestyles and changes in the way of life brought about by today's work culture. We re-imagined the experience of everyday living by allying with Mother Earth in designing and creating dwellings that are in harmony with oneself and the natural environment, dwellings that facilitate natural life.

Values of the Land

Rooted in the values of the land, we believe that every dwelling should blend seamlessly into its natural habitat and emanate from the very earth that binds us all, staying true to our philosophy by creating 'around' nature rather than 'on' it. This has been the light that has guided us in any design journey we embarked on like the design of the globally acclaimed *Evolve Back Resorts* and while envisioning *Stone Lodges - Private Residences.*



Dine in harmony with nature


A natural powder room in tune with nature


Wake up to your second life

Focused on designing spaces that are 'one with nature', our objective was to change the way people live. Our journey has culminated in every space envisioned and crafted, thus achieving the truest form of spaces in collaboration with Mother Earth and blending seamlessly with the greatest design to exist - nature. By adopting the native design sensibilities of the land, our villas bespeak the spirit of the land and is a blend of mountain and manor.

Location of the project

Wayanad, sun-kissed by the clouds and beloved of the gods, is an emotion waiting to be experienced. Suffice to say that Wayanad is less of a place on the map and more of an emotion to be experienced. It is, at once, a primal and throbbing vein that taps into its tribal heritage to infuse you with boundless energy, as much as it is a contemplative hermit that draws on hidden reservoirs of spirituality to calm your racing mind. It is a world that lives within you, as much as you live within it, and constantly exhorts you to find your own mountain. And climb it.

Wayanad was an obvious choice, after all, it is rated by National Geographic as one of the '50 Must-See Destinations in the World.' Besides that, Wayanad is in the wilderness, yet not totally disconnected from the wider world. Be it beautiful locations, airport connectivity, internet, restaurants or daily needs. In Wayanad one has the luxury of having a UNESCO world heritage site called the Eddakal Caves, wildlife sanctuaries, trekking peaks and other beautiful sightings right at one's doorstep, making it the perfect place for a second home.


A space to ponder, surrounded by peace and serenity

For the Homeowners

The home is a collectible, a legacy that the homeowner can pass down over generations. *Stone Lodges Private Residences* are spread over an expanse of 13 acres of lush mountain-side that is secured with a compound and advanced security systems. Along with this, *Earthitects* provides facilities such as 24-hour security, upkeep and maintenance of the property, water and electricity, rainwater harvesting, Harmony, Serenity and Intimacy decks for resting and entertaining guests. We also upkeep and maintain organic vegetable gardens, bee-houses (apiculture) to conserve and protect the native bees, carefully selected Butterfly-friendly plants to welcome the indigenous butterflies in each of the estates and common areas. The integration of outdoor seating made out of natural materials and a common pond have also been planned along with a variety of unique experiences like bird watching, trekking, butterfly-quest, apiculture tour, private outdoor dining, etc.

Return of Investment: The homeowners also have an option of renting out their homes as a holiday home for an additional income while they are not at residence through our Villa Rental Programme.

Characteristics of Stone Lodges

Every single action taken during the journey of this project from its inception till today has set it apart from others From the concept of 'Reverse Urbanization to the detail of the smallest door knob. This thoughtfully designed community allows one to experience the innate beauty of nature with every modern convenience at one's beck and call.

1. Unique Design

The design of Stone Lodges is inspired by the grammar of mountain lodges and the native design aesthetic. The villas are hidden amongst dense foliage and designed with unique elements, keeping sustainability and innovation in mind. Every bit is finely nuanced bespeaking a luxurious yet environmentally responsible aesthetic - a collectible that ages graciously!

2. A Second Home: Providing a Second Life

The concept of second living is rooted in man's need for balance – between the urban and the rural, between work and life. With the changes in lifestyle brought about by today's work culture, this need for balance is manifesting itself in a longing for man to reconnect with nature. We wanted to provide this 'second life' for our owners by the establishment of a second home in the lap of nature, a place to nurture hobbies like photography, organic farming, gardening, bird-watching and trekking.

3. A Home that is one with nature

We re-imagined the experience of everyday living by allying with Mother Earth in designing and creating dwellings that are in harmony with oneself and the natural environment, dwellings that facilitate natural life. Envisioned to intertwine with the natural slope of the mountains, the villas are designed 'around nature, rather than on it'. Our journey has culminated in every space envisioned and crafted, thus achieving the truest form of spaces and blending seamlessly with nature.

To create the 'perfect living experience': A hill-town home that would be in perfect harmony with the greatest design to ever exist - nature

Down to the details - handcrafted collectibles

Indulge in a bathing experience amidst the greatest design to have ever existed - nature

When the building comes in the way of a tree or boulder, the design is modified to go around the existing tree or boulder and accommodate it to be a part of our natural design. Thus the existing flora and natural features on the site play their part in enhancing this carefully designed living experience.

4. Crafted with natural materials

Staying true to our philosophy and keeping up with our eco-friendly ethos, the materials used in the villas are natural, with wooden flooring, random-rubble walls, cobblestone pathways, and log rafters, showcasing a joyous interplay of stone and wood. The wood used in crafting the space portrays its authenticity with 'live edges' accentuating the natural character of the wood. The floors, joinery, switchboards, skirting and furniture are handcrafted with live edge teak wood that adorns the spaces with warmth and grain. Rough, uncut and unpolished stone each with a character of its own, forms the thick random rubble walls of the lodges. Other natural materials portrayed in Stone Lodges are the clay roof tiles, eucalyptus poles in the ceiling, customized-finish granite for counters and stone deck floors.

5. A Story in every piece - Crafted in-house

Our skilled craftsmen, our team of passionate carpenters, create and build our hand-crafted furniture and fixtures in-house. Each item at the villa is made at the property including the switch boards, joinery, kitchen counters, shower tray and cabinetry. All of this ensures that our items are unique to Earthitects and every piece conveys a unique story. The wood is intentionally left unfinished to really accentuate the live edge, and can thus be expected to age gracefully over time.

While most of the natural materials are sourced from the site itself, other materials are sourced locally to promote the nativity of Wayanad. To ensure that no resource goes to waste, some boulders are cut to form random-rubble walls, while leftover teakwood goes into the making of fixtures and fittings.

Sustainability

Eco-friendly Landscape Measures:

Stone Lodges is spread across 13 acres of lush vegetation and grand contours. Our landscape design concepts implemented with sustainable measures encourage the protection of the native species of flora and fauna. With an uncompromising motive to maintain the ecological balance, we have created an environment where man and nature coexist with each other.

With a focus on environmental sustainability, the entire site has been afforested with over 8000 endemic species of trees making it a forested hillside today. With the careful implementation of our eco-friendly landscape measures, *Stone Lodges* is now home to a variety of native birds, butterflies and other creatures. The integration of prolific fruit trees and birdbaths and lily ponds, invite the birds to coexist, luxuriating the birding experience. Some of the birds spotted at *Stone Lodges* are the crimson-fronted barbet, Malabar hornbill, white-cheeked barbet, orange minivet, red-whiskered bulbul, blue-capped rock thrush, grey wagtail and white-browed wagtail. Some native trees are the Indian rosewood, jamun, Indian fig tree, jack tree, wild neem, teak and mango. Fruit trees found here include avocado, Malabar plum, star fruit, ramabuttan, cherry guava, velvet apple, mosambi and sweet cherry. The bird-friendly trees here are breadfruit, wild jasmine, egg fruit, blackberry, papaya, velvet apple, mango, jambootikaba, achacheru and sweet cherry.

The population density and its pressure on the land are already heavily minimised in addition to undertaking water harvesting and composting measures to achieve zero-waste homes. In order to give back to society, the earth's natural replenishing capacity is made positive rather than just equal. This leads to a sustainable lifestyle that results in giving back to our earth, rather than taking from it. Large parcels of land are assigned for each unit to ensure that the luxury of space can be experienced with fruit trees and herbs grown in the property. Apiculture, along with bird and butterfly friendly landscape measures, has ensured that the native ecosystem is flourishing because the residences are present in these locations, not in spite of it.

Sustainable Construction:

Design Concept: Sustainable bespoke fixtures handcrafted with uncompromising attention to detail. With sustainability as the core idea, up-cycled wood from construction is used for the craftsmanship of the fittings and furnishings while maintaining the organic shape of wood. While most of the natural materials are acquired from the site itself, other materials are sourced locally to promote the nativity of Wayanad. To ensure that no resource goes to waste, some

Experience the innate beauty of nature with every modern convenience

boulders are cut to form random-rubble walls, while leftover teakwood goes into the making of fixtures and fittings. The thoughtfully designed switch boards, mirror frames, knobs, cloth hangers and skirting are hand-crafted from remaining pieces of teak wood. Intentionally left unfinished to accentuate the live edge. The wood used in the crafting of the fixtures will age gracefully over time.

Challenges:

The biggest challenge was to retain the natural character of the topography and features of the site with no spatial re-tailoring. When the building comes in the way of a tree or boulder, the plan was modified to go around the existing tree or rock and accommodate it to be a part of our natural design ensuring that no stone was turned. The villas were designed around nature, rather than on it, such that the existing flora and natural features such as boulders, play their part in enhancing this carefully designed living experience. And even those boulders and trees that we couldn't avoid doing away with were integrated with the interior design of each villa.

The challenge of designing a dwelling on a natural slope was the difference in the contour levels and how we would turn this into our biggest opportunity. We overcame this challenge by designing the villa on three distinct levels. The first and second levels house the spacious residence. Nestled amongst the luxuriance of the wilderness, the third level comprises the exterior deck with an infinity pool surrounded by lily ponds. Due to the levels, each deck has an endless, unobstructed view of the forest. The challenge of building on a natural slope was taken as an advantage by achieving the best views of the forest and the surrounding mountains from every space in the home. We believe that larger the challenge, the greater the opportunity. The challenge we faced, gave us an opportunity to design dwellings with spectacular tree-top views from every space.

Lighting Design

The lighting design is envisioned so that it follows the architecture of the space. Automated soft lights are specially customized as per the user to provide a bespoke experience with the help of sensors. The thoughtfully designed warm lighting is concealed such that the source of light is not visible to the eye. The interior trail is led by the soft non-glaring warmth of the lights emanating from a concealed source. Upward lighting illuminating from the eucalyptus poles on the ceiling, creates an Arcadian setting.

Ar. George E. Ramapuram MD and Principal Architect George E. Ramapuram has always been mesmerized and inspired by God's greatest design - Nature. After the completion of his Bachelor of Architecture from the University School of Design, Mysore, he decided to further his passion and knowledge in the practical applications of architectural concepts. During this period, the formal inception of this division as 'Earthitects' was envisioned and initiated by him.
info@earthitects.com

About Earthitects

Ecologically conscious design and careful selection of materials provided by nature that age gracefully, is our guiding principle in any endeavour we undertake. This has been the light that has guided us in any design journey we embarked on like the design of the globally acclaimed *Evolve Back Resorts* and while envisioning our private residences in tranquil destinations.

All Photos Courtesy : **Earthitects**

A PARSIMONIOUS EXTRAVAGANZA OF DESIGN

Nestcraft's Design Studio

'Architecture for us is 'inventing lifestyles' at a macro-level and at a micro-level it is doing utmost justice to the environment, functionality and practicality of spaces and architecture as a product, a conscious response to the budget of the client and innovating to the maximum within the limitations.' according to Ar. Rohit Palakkal. 'As a Young Practice, we started off with projects having high budget limitations and now it has become our practising philosophy to work on limits, to reduce the usage of resources, materials, space and energy. We look forward to reducing square feet of built area and educating the user about what is not really needed room in the design programme, which finally is being generous to Mother Earth.' 'Our design approaches try to explore the right mix of having the least carbon footprint, recyclable, natural materials and passive lighting and ventilation, complementing its natural textures and colours to deliver an artful feel. Light is the core idea for designing any building. We centralize the entire design around it, aiming at creating optimum space on the plot available and maximizing light penetration across the buildings. The space is supposed to serve the users not only in terms of functions but also to make nature the core of the building.

Nestcraft's Design Studio

On the fringes of Kozhikode, where emerald doves and paradise flycatchers can be spotted just as easily as the friendly neighbourhood dog, Rohit chanced upon a rare opportunity. "Our old office was pressed for space and we had been

Office Space

Office Space

Resiential Space

Resiential Space

Unbuilt project

scouting around for the perfect site to move our architecture studio, away from the hustle and bustle of the city. When I saw this particular one, I knew I'd hit the scenic jackpot," says the Founder and Principal Architect of *Nestcraft Architecture,* about the site's tropical proportions.

Inside-Out Architecture

The location inspired Rohit to flip the architecture inside-out: green pocket gardens were brought in, windows were encased by aluminium, brick was left bare, walls and ceilings wore concrete (both inside and outside) and the floors went naked. "I don't believe in cosmetic treatments," declares Rohit, adding, "I believe there is an inherent beauty in natural textures and colours. I believe in the magic of wabi-sabi: the incomplete and the unfinished satiate my soul." There's something about Rohit's design vocabulary that whispers of Le Corbusier. "It's the tropical brutalist flourishes," Rohit informs us, referencing the architectural style that picked up steam in India post-Independence. "Local architects adapted the brutalist forms of doyens like Le Corbusier and Paul Rudolph to suit India's tropical context." True to his words, the office's plain-spoken geometry, cavernous interiors and concrete are softened by coconut groves, banana plants and areca nut trees around the edges, and ferns, calatheas and colocasia in between. "There was no need to plant anything," says Rohit l, "The site was blessed with a variety of tropical plants and an unending green landscape."

Multifunctional Avatars

For Rohit, the opportunity of being his own client was rare, and it bestowed on him the freedom to flex his design muscles in a way he never had before. "I could finally reinvent my style of architecture," he shares. And so began an experimental ambit that included cantilevering, beamless concrete slabs, metal-sheet bookcases, industrial-style steel staircases and water- and termite-resistant workstations that eschewed form for function. In his semi-open cabin, he turned an antique door into a conference table, while wooden pillars and other architectural elements were repurposed into the decor. By the same token, there are no internal partitions: "It's a single room with two mezzanine levels and 12 workstations," says Rohit l, making no bones about the stripped-down interior. Minimalist, it may be, but the office brims with functional pockets- a bijou lobby flanks the main door, the western mezzanine hosts a pantry and a terrace, while the eastern one features a display court with artefacts and project models. "There's also a conversation pit, a mini library, a patio and a storeroom," Rohit reminds me. The office was designed to take on various avatars to suit the occasion. It is sometimes an art studio; at other times, a meeting point for music and social gatherings. The front yard oscillates between serving as a badminton court and an open-air party venue, while the conference table often masquerades as a dining counter.

Climatic Controls

Kozhikode's equatorial climate served as the lynchpin for the architectural blueprint. Besides angling the building in an east-west direction to mitigate the sunlight, Rohit also opted for a double-height ceiling to reduce heat gain and shelf windows and rectilinear skylights to trap the northern light. "We also created openings along the width of the building to promote cross-ventilation and evolving patterns of light through the day," explains Rohit The architect's adroitness is evident in the fact that the fans are turned off during the day. "Through a combination of high volumes, clever angles and well-positioned openings, we've managed to keep the sun at bay and save as much as Rs 1200 per month on electricity," he says.

Ar. Rohit Palakkal is steeled with a B.Arch from Mumbai's PiCa (2009). He started his professional journey as a junior to Ar Vinod Cyriac of Space Art Architects, Calicut, where he found a true mentor-having worked with him for few years before setting up Nestcraft Architecture in Calicut in 2012.He is also a contributor to academics being a visiting faculty in several architectural schools.
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All Photographs Courtesy: **Nestcraft Design Studio**

ARTICLE

LAST MILE CONNECTIVITY : CASE OF RURAL AND URBAN FRINGES OF INDIA

Ar. Sandeep Parkhi

BACKGROUND

Based on the United Nations Population Division's World Urbanization Prospects: 2018 Revision, the World Bank estimates that the rural population shall be 65% of the total population. As per the Census of India, 2011, the rural population contributes to 68 % of the total population.

The Government of India has taken up various projects to ensure the urban-rural connectivity and rural connectivity improvement byways of road improvement such as the Pradhan Mantri Gram Sadak Yojana. With improved road infrastructure, urban-rural connectivity is getting easier and more convenient. The roads infrastructure and means of transport need to be looked upon in alliance with other means of transport. The intermediate public transport (IPT) and use of private vehicles as means of last-mile connectivity (LMC) are one of the important parameters of the network.

In the case of urban areas, LMC has numerous options to commute from city nodes to residences or places of work such as rental and hired vehicles, two and three-wheelers, sharing and non-sharing mobility, etc. In the case of rural areas, intermediate last mile connectivity still remains a challenge. With limited options such as hiring and sharing three-wheelers, animal-driven carts, personal two-wheelers and heavy vehicles with multiple usages for cargo and passengers, rural areas need intervention for improvement of LMC.

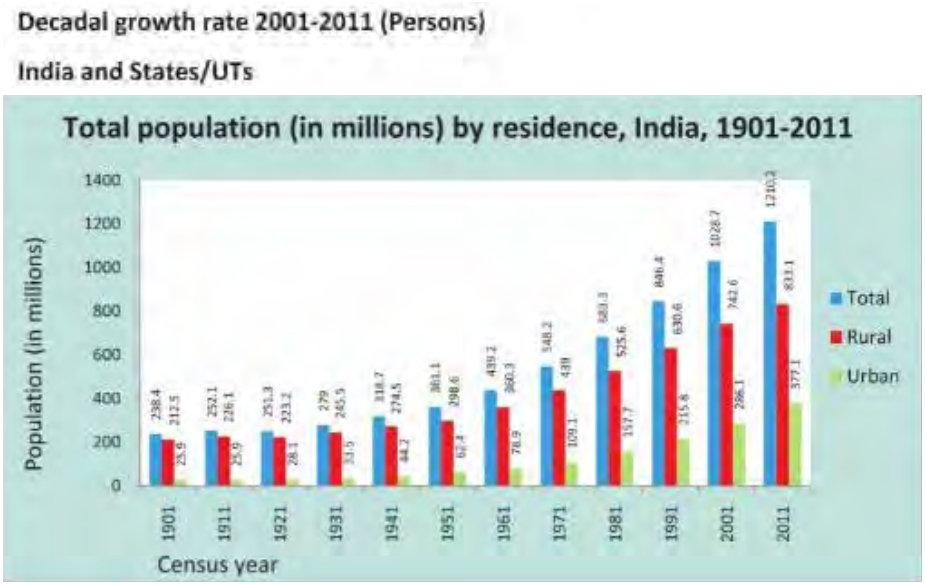
Challenges in LMC in Rural and Urban Fringes

Most of the parts of rural India as well as urban fringes witness 'shared IPT'. Typically, these modes are accompanied by challenges such as:

i) Mixed-use of vehicles for passengers and goods, questionable maintenance of vehicles, leading to concerns of safety of passengers
ii) Polluting or non-green vehicles leading to increased air pollution raising concerns of health
iii) Comparatively higher fare structure or no fare regulations.

Case Studies : Improved LMC in Rural and Urban Fringes

The provision and facilitation of last-mile connectivity in urban fringes and rural areas varies from country to country and region to region depending upon the dynamics of culture, funding mechanism, road infrastructure, coverage of area and population. Some of the following case studies depict various ways different organisations have made efforts to resolve challenges to provide better last-mile connectivity using different modes of IPT.



Decadal growth rate 2001-2011(Persons) India and states/ UTs
(Source- Census of India 2011, Provisional Population Totals, Paper 2, Volume 1, 2011, Rural-Urban Distribution)

I. The Community Bus Project at Kosgala, Sri Lanka

In order to arrange an integrated solution for IPT, in Sri Lanka, Lanka Forum for Rural Transport Development (LFRTD) arranged a community bus project. In 1998, the pilot project was implemented in Sri Lanka to assess the feasibility and capacity of a village community to manage its own community bus service. Sixteen years after its inauguration, the bus service is still in operation, despite the fact that the project implementing agency withdrew its support about six years after the service was established. Initially, it was operational in three villages of Kosgala, Kitulpe and Halpe covering a population of about 3500. Some of the key highlights of the project are:

i) The Intermediate Technology Development Group (ITDG), as the principal partner of LFRTD, provided initial Capex and a social mobiliser.
ii) Roads were improved with the free labour contribution of the villagers.
iii) Fund contributions were also raised from local social organisations
iv) Buses were purchased from accumulated funds a loan from People`s Bank and cooperative credit banks. The registration fee, insurance premium costs, etc., were also covered by the collected funds.
v) LFRTD managed to get the bus driver trained on basic bus maintenance by the Lanka Ashok Leyland free of charge through negotiations made between its member the NTC.
vi) A CBO was registered with the Registrar of Companies of Sri Lanka, Rural Transport Promoters limited with ten company directors elected annually by annual general meeting consisting of 100 representatives from 6 community organizations.
vii) Over the recent period with improvement in roads and increased private vehicles, the profits of bus system have reduced, earns small profits till recent past.

II. The Alwar Vahini, Alwar, Rajasthan, India

Alwar city, with a population of about 0.3 million, is one of the fastest-growing cities of Rajasthan. With the increasing demand of transport needs for surrounding industrialization and economic development in the district, the District Administration with the support of agencies like RTO, nationalised banks, Urban Improvement Trust (UIT) and Tata Motors have intervened to improve the IPT in December 2011. Multi-stakeholder participation appears to be one of the key success ingredients of this successful IPT in Alwar. Some of the important components are:

- Euro IV compliant four-wheelers are deployed to replace the auto-rickshaws, each vehicle has a unique number painted in bold for quick identification.
- Bank funding and exchange programmes of old auto-rickshaws are implemented
- Zero investment by the government generates revenue to the government from permit fees and taxes.
- Support infrastructure and soft skills training were provided to drivers by NGOs.
- A control room to monitor traffic is put in place.
- A cooperative society was formed of all the Alwar Vahini owners so that common benefits like insurance can be provided to the members. Officer bearers of the society are the contact persons so that administrative orders can be conveyed to all members through the co-operative.
- All members shall have to undergo a free annual compulsory medical check-up which shall involve physical fitness, eyesight check etc.
- To engender a feeling of belonging to a close-knit group and build up a unique group culture of 'samman aur seva', the motto of Alwar Vahini, regular meetings and get-togethers are held.
- Incentives like loan facilities at reduced interest rates from nationalised banks and financial institutions and RTO formalities under one roof are arranged under the District Administrator.
- The RTO office is responsible for allotting the route permits to the applicants and also ensuring that all the passenger vehicles ply as per the government norms.
- UIT Alwar and Bhiwadi have built the support infrastructure, borne the cost of uniforms, identity cards, group insurance and soft skills training of the drivers.
- Mahila Alwar Vahini launched in January 2012 with women drivers has enhanced the livelihood of women as well as ensured secure travel options for women. A special uniform, lighter red in colour has been provided to lady drivers

A makeshift para-transit vehicle
(Source-Economic Times-Autonews,10 July 2016)

Enhancing rural transport connectivity
(Source- Monograph on Rural Transport-Enhancing rural transport connectivity to regional and international transport networks in Asia and the Pacific. UNESCAP, 2019)

- A 24-hour taxi service was also launched in January 2012. Booking can be done by making a call for the vehicle through the Alwar Vahini helpline.
- The Alwar Vahini vehicles carried more than 100 thousand passengers every day in the year 2018, especially from the weaker sections of the society with a fleet of about 1300 vehicles.
- A D.O. letter no.K-14011/1/2013-UT-I dated 14 January 2013 from Dr. Sudhir Kumar, Ministry of Urban Development, Government of India has advised all Secretaries of all states in India to emulate and take cues from the Alwar Model.

G-Auto icon symbolises an autorickshaw
(Source-https://www.vskills.in/certification/blog/the-story-of-g-auto/)

Fleet of Alwar Vahini vans
(Source- http://govpreneur.in/422-alwar-vahini-a-transport-model-for-emerging-cities/)

An autonomous e-bus shuttle service near Bad Birnbach railway station, Germany
(Source-https://easymile.com/news/first-germany-autonomous-shuttles-connect-rural-town-train-station)

III. Distributed Nodes- Ngoundere, Africa

The Capital of Adamawa Region of Cameroon near Central Africa has a population of about one million with a peri-urban environment. In order to address the issue of poor transport services and high fares, the local mayor decided to address the issue. In Cameroon, transport syndicates determine fares and routes, and they negotiate with the authorities for access, and fees, for use of the terminals. In Ngoundere, the mayor licensed different transport agencies to operate from different terminals in competition with one another. In two years, passenger fares dropped by 50 per cent, and there was reported to be a greater frequency of service, with cleaner and better-maintained vehicles. As a result fares in Ngoundere became dramatically lower than comparable operations in the South of Cameroon, which were found to be between 53 per cent higher (for trips of 10 km) and 370 per cent higher (for trips of 200 km).

IV. Get Fare-G-Auto, Rajkot, Ahmedabad, Gandhi Nagar, Guajrat, India

A fleet of about 10,000 autorickshaws run by Nirmal Foundation, a charitable trust is one of the examples of successful para-transit modes of transport available in urban and semi-urban areas of Ahmedabad, Rajkot and Gandhinagar in the state of Gujarat, India. It is an attempt to revolutionise para-transit system in terms of safety and comfort for passengers. The key features of the system are:

- G-Auto earns by two modes: facility charge on every booking and advertisements on the outer surface of the G-Auto
- The G-Auto project was selected among the top 15 projects for the International Mobility Award by the University of Michigan and Rockefeller Foundation, USA.
- The service has been extended to New Delhi in February 2014 as 'Any Time Rickshaw', accessed by dialling a number or booking through a mobile application to call/ book an auto-rickshaw at point of origin.
- The auto-rickshaws are fitted with a vehicle tracking system
- The service promises trained auto-rickshaw drivers, 24/7 booking facilities through call centres, free of cost newspaper and magazines to read whilst travelling, a city map with a list of important places marked on the map, bill books, government-approved meter rates and a complaint-and-suggestion number displayed in the auto-rickshaw.

V. Driverless Electric Shuttle Service, Bad Abbach, Germany

A shuttle service from the urban centre in Germany to the rural SPA town surplus with natural springs of Bad Abbach in Germany is a driverless electric mini-bus service launched in October 2019. Its key features are:

- A single onboard steward to monitor the autonomous driverless electric minibus.
- Two automated EasyMile EZ10 Gen2 electric buses run daily between the market square in the town centre and the Bad Birnbach railway station
- An innovative traffic control system in the form of variable traffic signs is used to ensure the necessary safety and at the same time to disrupt traffic as little as possible.
- The eco-friendly electric bus has no driver, no steering wheel and no accelerator pedal.
- There is only one steward on board who can intervene if necessary.
- An extendable ramp makes the vehicle accessible for the differently-abled.
- The vehicle is enabled with wi-fi and USB charging ports

Economical and sleek three-wheeler pedicabs
(Soure-https://blogs.adb.org/blog/last-mile-e-pedicabs-can-transform-urban-transport)

VI. Pedicabs, Lumbini, Nepal

A pilgrimage and tourist town, Lumbini in southwest Nepal, has been the ground for implementation of Pedicabs introduced by the Asian Development Bank (ADB) since 2017. This is a modern version of the traditional cycle-rickshaw. Prominent features are as follows:

- Launched in 2017, 28 pedicabs are currently under trial in Lumbini and another 28 in Kathmandu.
- Zero-noise and zero pollution vehicles provide income to the poor.
- A modernised version of the conventional cycle-rickshaw is available, using lightweight material, such as aluminium and carbon fibre, a modern and comfortable design and electrical assisted driving.
- The design of the pedicab is open-source (as per requirement by ADB) so any manufacturer can use it.
- Initially, these have been offered free of cost to the operators in Lumbini and Kathmandu.

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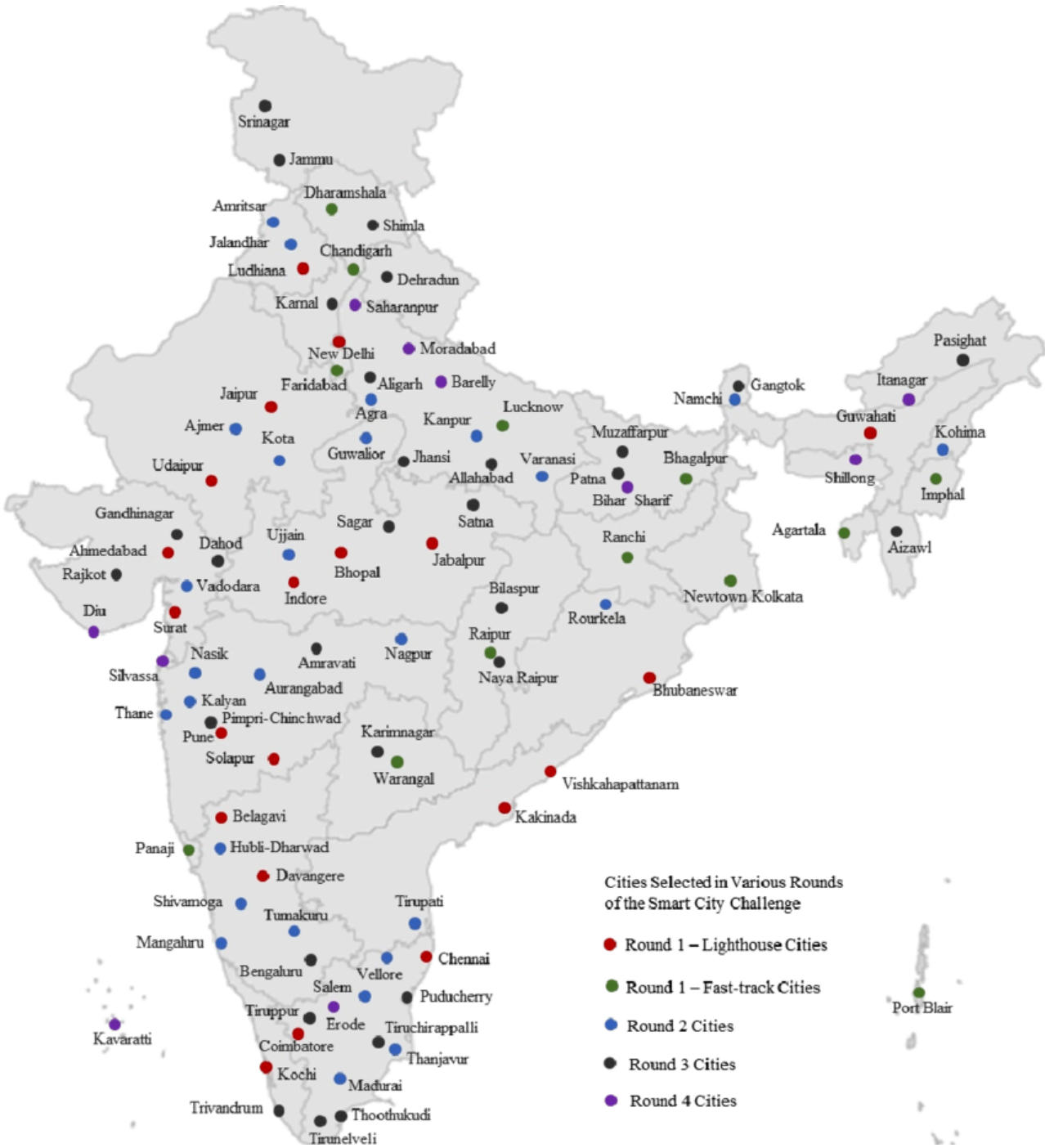
ARTICLE

ROLE OF IIA MEMBERS IN SMART CITY MISSION

Ar. Sanjay Goel



The hundred cities-selected in various rounds under-the-Smart-Cities-Mission
(Source: https://www.researchgate.net/figure/Location-of-100-cities-selected-under-the-Smart-Cities-Mission-Source-Author_fig2_334172302)

Role of members of Indian Institute Of Architects(IIA) is very important in Smart City Mission(SCM) scattered all over India. Each and every upcoming smart city out of hundred is having a number of IIA members. IIA members must be very active socially not only for their city/centre/sub-centre but for chapter and country too.

Role of architect is very important in Smart City Mission(SCM) and local/regional architects/centres/chapters must be in touch with Local Government so that their Chairman stands nominated in Special Purpose Vehicle (SPV) of concerned smart city.

Punjab chapter was the first in India where its chairman Ar. Sanjay Goel was nominated by state government in SPV of Ludhiana Smart City Limited (LSCL).

Ludhiana was shortlisted in first list of twenty proposed smart cities declared by Government of India in 2016 and since then Punjab Chapter through its Chairman is providing services to Ludhiana Smart City Limited and other cities of the state. During last five years many projects were executed successfully including under Area Based Development(ABD) as well as under pan city initiatives in all upcoming smart cities.

How government can run smart city mission without involvement of senior local expert planners and architects?

So far public participation is not up to the mark in majority of the upcoming smart cities and we hope that many new committees will be created to involve more prominent citizens, associations and NGOs to achieve best results in Smart City Mission.

We all know that upcoming hundred smart cities in India are scattered throughout country and every year ranking is shared by the central government to create best possible future competition. Smart citizens are most important in upcoming smart city mission.

CHANDIGARH NEWS

'Chronic issues being ignored': Ludhiana Smart City Ltd director wants Punjab CM to intervene

One of the directors of the Ludhiana Smart City Limited, Sanjay Goel has written a letter to Punjab CM Charanjit Singh Channi, urging him to convene a meeting with architects and officials of special purpose vehicle formed under the smart city mission to resolve the problems

Ludhiana Smart City Ltd director stated that the cities of the state, including the upcoming smart cities like Ludhiana, Jalandhar and Amritsar, are struggling due to traffic congestion and lack of parking space is further taking toll on the public. (Image for representational purpose)

IIA members must regularly highlight deficiencies in their city
(Source: https://www.hindustantimes.com/cities/chandigarh-news/chronic-issues-being-ignored-ludhiana-smart-city-ltd-director-wants-punjab-cm-to-intervene-101641162386238.html)

One of the entry points in Ludhiana (from the Jalandhar side)
(Source: https://www.tribuneindia.com/news/ludhiana/more-funds-needed-to-make-ludhiana-smart-city-48664)

One of the entry points/ chowks in Ludhiana *(Source: https://smartcity.eletsonline.com/two-smart-city-dprs-of-ludhiana-get-green-flag/)*

CEO OF Ludhiana Smart City Limited attending a meeting conducted by IIA Punjab Chapter and Ludhiana Centre
(Source: https://www.cityairnews.com/content/role-of-architects-is-most-important-in-smart-city-mission-ceo)

Chairman of IIA Punjab Chapter, Ar. Sanjay Goel attended first anniversary interaction with the Prime Minister
(Source: https://modernregionalism.wordpress.com/2017/11/09/architect-sanjay-goel-first-nominated-director-of-any-smart-city-in-india/)

100 upcoming Smart Cities of India

Maharashtra	*West Bengal*	*Gujarat*	*Madhya Pradesh*
1. Pune	7. Calcutta	12. Ahmedabad	19. Bhopal
2. Mumbai	8. Durgapur	13. Surat	20. Indore
3. Nagpur	9. Haldia	14. Vadodara	21. Gwalior
4. Nashik	10. Habra	15. Rajkot	22. Burhanpur
5. Aurangabad	11. Jangipur	16. Bhavnagar	23. Jabalpur
6. Bhivandi		17. Junagadh	
		18. Gandhi Nagar	
Tamil Nadu	***Karnataka***	***Kerala***	***Telangana***
24. Chennai	30. Bangalore	37. Thiruvananthapuram	44. Hyderabad
25. Coimbatore	31. Gulbarga	38. Kollam	45. Warangal
26. Madurai	32. Bidar	39. Kottayam	46. Karimnagar
27. Tiruchirappalli	33. Bijapur	40. Tiruvalla	47. Nizamabad
28. Salem – Tamil Nadu	34. Badami	41. Ernakulam	48. Nalgonda
29. Tirunelveli	35. Pattadakal	42. Cochin	
	36. Mahakuta	43. Thrissur	
Andhra Pradesh	***Uttar Pradesh***	***Rajasthan***	***Punjab***
49. Guntur	53. Kanpur	59. Jaipur	66. Ludhiana
50. Vijayawada	54. Allahabad	60. Ajmer	67. Amritsar
51. Kurnool	55. Lucknow	61. Bharatpur	68. Jalandhar
52. Chittoor	56. Jhansi	62. Bikaner	69. Patiala
	57. Faizabad	63. Jodhapur	
	58. Varanasi	64. Kota	
		65. Udaipur	
Bihar	***Haryana***	***Assam***	***Odisha***
70. Muzaffarapur	75. Faridabad	79. Guwahati	84. Bhubaneswar
71. Patna	76. Gurgaon	80. Tinsukia	85. Cuttack
72. Gaya	77. Panipat	81. Odalguri	86. Rourkela
73. Bhagalpur	78. Ambala	82. Tangla	87. Sambalpur
74. Bihar Sharif		83. Goalpara	88. Balasore
Himachal Pradesh	***Uttarakhand***	***Jharkhand***	***Sikkim***
89. Shimla	92. Dehradoon	95. Jamshedpur	98. Gangtok
Manipur	93. Haridwar	96. Dhanbad	99. Pelling Sikkim
90. Bishnupur	94. Roorkee	97. Ranchi	100. Yuksam
91. Chandel			

Ar. Sanjay Goel
Chief Architect-Designex Architects, Ludhiana; Director- Ludhiana Smart City Limited; Chairman-Indian Institute of Architects Punjab Chapter; Expert Architect- Ministry of Education, Government of India; Member of IIID, IOV, FSAI; Expert Architect- Punjab Health Systems Corporation, Chandigarh; Executive Member of Ludhiana Management Association; Member of Confederation of Indian Industries.
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DOUBLE-YOU

Ar. Harshad Bhatia

On the occasion of **International Women's Day** *I remember the valuable qualities of women at various stages in living.*

Of all alphabets **W** is the most mysterious. It takes more effort to say W, pronounced as "Double-You", compared to all other alphabets in the English language. Wit, wisdom, work, worship, wealth, wonder and woman are some of the many words, including the very word "word" itself, which are led by the alphabet W. I am curious about this alphabet. My curiosity led me to look beyond the language and relate it to my life. And so, I asked **Dad.**

Who, Where, When, Why and What are five, one word questions.

Who am I?
I am ***Who.*** Yes, my name is *Who.* It gives me an identity. For example, Who's *Who?* So that is my reference. You can call me *Who.*

Where am I?
Geographically, *Who* is in his motherland. He speaks in his mother tongue. ***Where*** is the first woman who gave him life. Yes, *Where* is my mother. She is that point of reference to which *Who* can relate to the roots of his being.

When am I?
When is that moment in time that *Who* belongs to. *Who* is of that generation. ***When*** is his *sister.* She grows along with *Who* and experiences life in those times of *Who's* age. They are contemporaries of a time zone in the process of life.

Why am I?
Who is playing his role in life. He is for her. Yes, *Who's wife* is *Why.* ***Why*** is his spouse. She is a reason for *Who* to understand his part in the process. While *Where* is *Who's* reason for birth, *Why* is his partner for sharing life, enabling birth and continuing a presence in life.

What am I?
Who is alive. And as long as I live, *Who* becomes a tangible physical part of life. It is vital for *Who* to stay that way if he has to provide any meaning to his being a part of life. Life is an ongoing, continuing process. There can be birth and death but life goes on. ***What*** is *Who's* contribution to that ongoing part of life. *What* is his continuity. Yes, *What* is *Who's* daughter. A replica of her mother, *Why.*

But what about Who? Is he merely a gender that lives for the four *women* in his life only or does he have an identity linking him to his father?
Yes he does. His *father* is ***How.*** Who is an anagram of *How.* With a similarity in his constitution, stature and a liking to his father, *Who* is another life of How.

Who is fine. Where, When, Why and What are well too.

***How,* are you?**

Ar. Harshad Bhatia
is a skilled urban designer, architect, ekistics intellectual, educator and writer-editor based in Mumbai, India. He was a student laureate in all graduate and post-graduate semesters at Sir JJ College of Architecture, Mumbai and the School of Planning and Architecture, New Delhi respectively. Now a solo practitioner, since 1986 his firm has dealt with a wide range of projects. Currently also a tenure professor, board member and visiting teacher, he is an innovative communicator and author of 'Becoming Hafeez Contractor - The Making of an Architect' (2019 HarperCollins India). He was Honorary Editor of the Journal of the Indian Institute of Architects (JIIA) from July 1996 to April 1997 and in September 1996 he redesigned the JIIA logo, which crossed 25 years in 2021.
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ARTICLE

COA NATIONAL AWARDS FOR EXCELLENCE IN ARCHITECTURAL THESIS 2021 A REPORT

Ar. Jayashree Deshpande

The architectural thesis project, done as part of the B. Arch. Programme, is an expression of the dreams and visions of the student. The projects provide the students a chance to apply whatever they have learnt during the course to address real-life issues, while portraying their imagination and interest. In 2006, the Council of Architecture (COA), with a view to encourage and motivate the students of the graduate courses in architecture instituted a National Awards for Excellence in Architectural Thesis. The COA Awards Programme has seen an escalating response each year and is immensely popular among students of architecture across India. All colleges having a batch that has appeared for thesis are eligible to apply. Eligible colleges are divided into five geographical zones. Five best projects in each zone are selected for presentation in each of the two categories viz. Category A: Architectural Project and Category B: Project Addressing Concerns within the Society. One best project from every zone is selected for presentation at the national Jury in each category.

The projects presented in the 2021 cycle of the Awards Programme displayed a wide range of topics, issues and complexities. Ten projects were presented at the national Final Jury, five in each category.

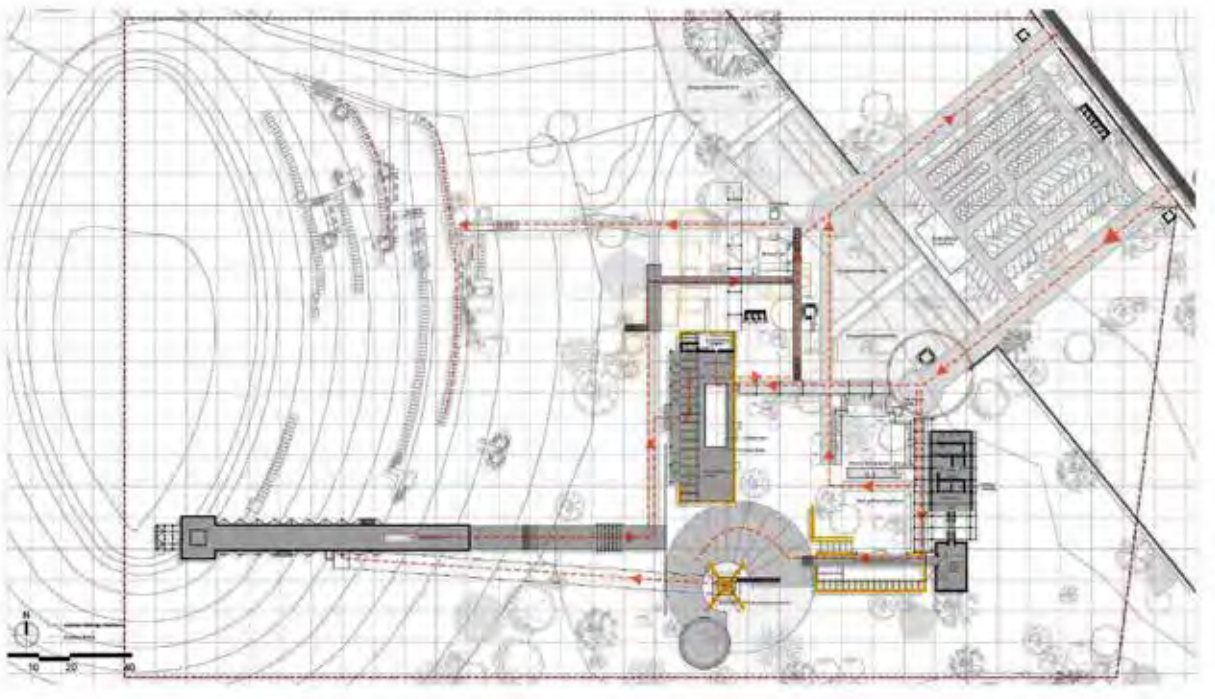
In Category A, the two projects selected as winners were:

a) *The Mining Museum- Reuse of an Abandoned Quarry* by Shalini Polra from the Faculty of Architecture, Maharaja Sayajirao University, Vadodara

b) *Deciphering Play: Exploring Affordances in Social Housing* by Serah Yatin from Academy of architecture, Mumbai.

Three other projects presented in Category A were :

- *The Contemporary Expression of Tradition – International Convention Centre at Jodhpur* by Ayushi Saxena from School of Planning & Architecture, New Delhi
- *Arambham* by Arya Arun from R.V. College of Architecture, Bangalore
- *Exploring Narratives for Archaeology Museum at Pattanam* by Richa Babu Katticaren from College of Architecture, Thiruvananthapuram.



Plan of the Mining Museum

In Category B, the projects selected as winners were:

a) *Construction and Demolition Materials: A Waste or A Resource?* by Abhishek Chintaman Sathe from D.C. Patel School of Architecture, Vallabh Vidyanagar

b) *Punarjeevan: Regeneration of Indigenous Tribes in Wayanad* by Alan George Joseph from Avani Institute of Design, Calicut.

The three more projects presented in category B were :

- *Architecture for Upliftment: Transformation of Ram Leela Maidan to Elevate the Urban Poor Youth* by Ashni Jain of Sushant School of Art and Architecture, Ansal University, Gurgaon
- *Repurposing Quarries as Public spaces* by Tamanna Parwani, Pillai college of Architecture, New Panvel
- *Reconstructing Childhood : Through Learn, Play and Connecting Memories* by Ullas M. from R.V. College of Architecture, Bangalore.

The jurors in the panel at the national level were Ar. Salil Ranadive from Mumbai, Ar. Jacob Cherian from Cochin and Ar. Radhika Nagpal from, Sonepat.

The four other projects presented in the five zones under the Category of Architectural Project were:

Zone 1:

1. *Mopa International Airport* by Sameer Ashraf from Faculty of Architecture, Integral University, Lucknow.
2. *Srinagar Museum – Placemaking through Re-Collective Identity* by Zainab Bhat from School Of Architecture and Landscaping, College Of Engineering, Katra.
3. *Reimagining the Flow: Public Introduction to Dynamic Life of Wastewater Management* by Anjum Ansari from Faculty of Architecture and Ekistics Jamia Millia Islamia, New Delhi.
4. *Rethinking Architecture College – NEP 2020* by Sunaina Prabhakar from Chandigarh College of Architecture, Chandigarh.

Zone 2:

1. *Rethinking Factories: Adaptive Reuse of Historic Industrial Site of Kozhikode as a Social Hub* by Muhammed K Abdulla from School of Planning and Architecture, Bhopal.
2. *Redevelopment of Shahgunj Market Area as a Socioeconomic and Cultural Hub (Aurangabad)* by Safiya Raheman from School of Planning and Architecture, Bhopal.
3. *Multispecialty Hospital, Bhuj* by Doshi Healik Vijayakumar from Institute of Architecture and Planning, Nirma University, Ahmedabad.
4. *The Interlace* by Nishanth Krishna from Faculty of Architecture, Centre for Environmental Planning & Technology (CEPT) University, Ahmedabad.

Zone 3:

1. *Hyper-Resilience and Memory* by Utkarsh Kumar Verma from L.S. Raheja School of Architecture, Mumbai.
2. *Mending the Mills* by Dhiraj Sachdeo from VIT's Padmabhushan Dr.Vasantdada Patil College of Architecture, Pune.
3. *Apparatus of Amusement* by Aum Gohil from Academy of Architecture, Mumbai.
4. *A Self Sustaining Architecture for Disaster Relief, Majuli* by Fatema Khurshid from SMEF'S Brick School of Architecture, Pune.

Zone 4:

1. *Entrepreneurial Development Park – A Holistic Growth Environment for Enterprises* by Arunabh Kaushik from Piloo Mody College of Architecture, Cuttack.
2. *Minimalism and its Emptiness: A Contemplative Youth Centre for the Students of Kota, Rajasthan* by Umme Hanny Ilkalwale, School of Architecture, Karnataka Law Society's Gogte Institute of Technology, Belgaum.
3. *Urban Nomad* by M.G. Varshitha from BGS School of Architecture & Planning, Bangalore.
4. *Cultural Corridor* by Suraj Karwasra from K.S.School of Architecture, Bangalore.

Zone 5:

1. *Desert Mirage - Reminiscence of Thar Desert Vernacular: Eco-Lodge & Interpretation Centre* by Santhosh Narayanan S from MEASI Academy of Architecture, Chennai.
2. *Evoking the Sense of Memory in Space* by Soundarya Arumugam from C.A.R.E. School of Architecture Centre for Academic Research and Education, Tiruchirappalli.
3. *Chimney Enne Nokki Chirikkunnu Redevelopment of Calicut Tile Company, since 1878* by Mohammed Anas P from TKM School of Architecture, Kollam.
4. *Architecture for the Senses: Learning Centre for Autistic Children* by Nandagopal M from SCMS School of Architecture, Ernakulam.

Section through the Mining Museum

The four other projects presented in category Project Addressing Concerns within the Societ' in the five zones were:

Zone 1:

1. *Tourist Amenity Centre and Revitalization of its Precinct, Dashashwamedh Ghat, Varanasi* by Sharan Chatterjee from Faculty of Architecture, Integral University, Lucknow.
2. *Re-Thinking for Hunger through Architecture- An Awareness Centre* by Mohammad Sadan Khan from Faculty Of Architecture And Ekistics Jamia Millia Islamia, New Delhi.
3. *A Post-Pandemic Public Space* by Prakriti Vasudeva from Sushant School of Art and Architecture, Gurgaon, Haryana.
4. *Janpath Streetscape, Bhubaneswar, Odisha* by Somesh Panda, Indo Global college of Architecture, Mohali.

Zone 2:

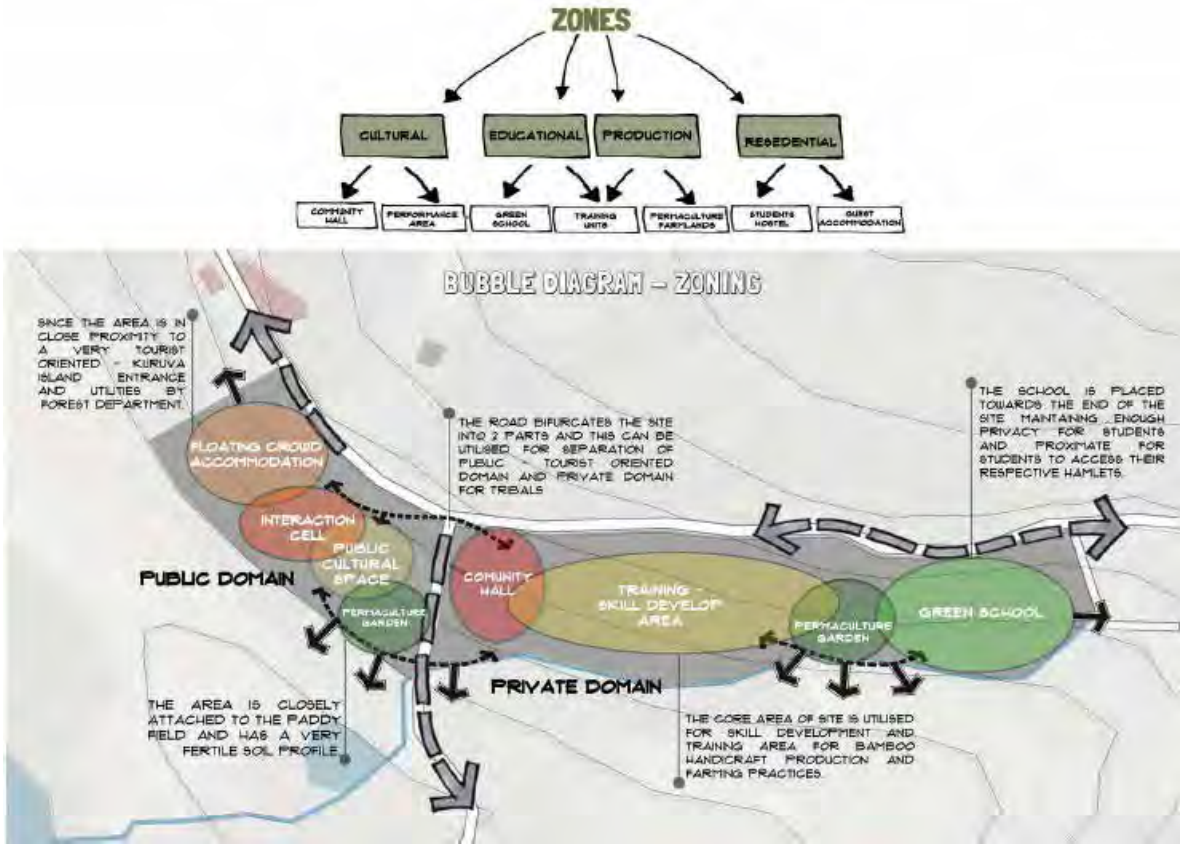
1. *Adaptive Reuse: Converting an Industrial Site to a Public Area* by Ananya Vachher from School of Planning and Architecture, Bhopal.
2. *Participatory Housing Approach for Conservation Induced Displacement: Case of Siddi community of Uttar Kannada, Karnataka* by Jay Jignesh Kapadia from Faculty of Architecture Sarvajanik College Of Engineering & Technology, Surat
3. *Growing together - Tribal Empowerment through Architecture* by Prachi Sanjaybhai Jariwala from Faculty of Architecture Sarvajanik College of Engineering & Technology, Surat.
4. *Reknitting the Ripped Urban Realm* by Virtue of Ontology in Architecture: A Case of Pilgrimage Complex Merging Communal Essence of Banaras along River Ganga by Netal Subhash Chandak from Institute of Design Education and Architectural studies (IDEAS), Nagpur.

Zone 3:

1. *Disaster Resistant Rural Housing* by Kunal Dalvi from Mahatma Education Society's Pillai's HOC College of Architecture, Mumbai.
2. *Negotiating Commons* by Ashi Chordia, School of Environment and Architecture, Mumbai.
3. *An Urban Utopia- An Urban Laboratory to Revive NRC Colony* by Riya Girish Tiwari from Lokmanya Tilak Institute of Architecture & Design, Koperkhairane , Navi Mumbai.
4. *Eco-Ville: Self-sustainable Community* by Karan Machhindra Ahire from Aayojan School of Architecture and Design, Pune.

Zone 4:

1. *Space for People and Identitie: Resilience Centre for Half Widows* by Arghajit Mazumdar from Piloo-Mody College Of Architecture Ajay-Binay Institute Of Technology, Cuttack.
2. *Talaash- A Covid Memorial that Allows the Community to Grieve and Come Together in Solidarity* by Mahek Jain from Mysore School of Architecture, Mysore.
3. *An Alternative Primary School, Designing for Inclusive Learning Environment* by Mehul Sarkar from Sri Sri University, Cuttack.
4. *Empathy in Architecture- Achieving Meaningful Educational, Social, and Economic Spaces for the Deafblind at Bangalore* by Sandra Rex Shifani from School of Architecture, Karnataka Law Society's Gogte Institute of Technology, Belgaum.



Punarjeevan

Construction and Demolition Materials

Zone 5:

1. *A Place to Nowhere People- Urban Nomads* by Sharun Christo M from McGans Ooty School of Architecture, The Nilgiris, Tamil Nadu.
2. *Kumudh - Flower Upcycling Innovation Hub, Kanpur, Uttar Pradesh* by Haritha B Nair from School of Architecture Rajiv-Gandhi Institute of Technology, Kottayam.
3. *Pratheeksha Bhavanâ: Attapadi Community Development Center* by Jerin J Panakkel from College of Architecture, Thiruvananthapuram.
4. *Redevelopment of Chengalchoola, Thiruvananthapuram* by Sareena Sirab from School of Architecture MES College of Engineering, Malappuram.

The Jury Panels in various zones were graced with the presence of:

Zone 1 – Ar. Anup Naik, Bangalore, Ar. Shantanu Poredi, Mumbai, Ar. Shraddha Sejpal, Mumbai.
Zone 2 – Ar. Biju Kuriakose, Chennai, Ar. Leena Kumar, Bangalore, Ar. Sathyaprakash Varanashi, Bangalore.
Zone 3 – Ar. Jaisim. K.R., Bangalore, Ar. Sandeep Sen, Bangalore, Ar. Ujan Ghosh, New Delhi.
Zone 4 – Ar. Jaffer Khan, Chennai, Ar. Jaimini Mehta, Vadodara, Ar. Nilakshi Sharma, Guwahati.
Zone 5 – Ar. Amarja Nimbalkar, Kolhapur, Ar. Aziz Rajani, Bangalore, Ar. Surya Kakani, Ahmedabad.

At the national event, the awards in each category have two components: cash and books for all winners along with Crossword vouchers for the best four. The authors of the best two thesis projects in each category are each awarded prizes worth Rs. 75,000 and a certificate and the authors of the next three thesis projects presented in each category are each awarded prizes worth Rs. 20,000 and a certificate. Of the ten projects presented at each zone, the two winners selected for presentation at the national jury receive a cash prize of Rs. Rs 10,000, a book and a certificate each and the authors of the remaining eight projects receive a cash prize of Rs 5,000, a book and a certificate each.

Ar. Jayashree Deshpande, architect, sociologist, educator and author, is recipient of several awards and scholarships. She reviews for indexed journals and presents at national and international conferences and workshops. As Director, Academic Unit of Council of Architecture, Jayashree conducts Training Programmes, Research, Publications and Awards Programmes for architects and students of architecture.
jddeshpande151@gmail.com

ARTICLE

RAJASTHAN ARCHITECTURAL FESTIVAL

Ar. Manguesh R Prabhugaonker

The process of transformation of various Architectural typologies across the journey of evolution from Heritage to Modern times spread over different era, does generate a need for a dialogue that can emerge with planning guidelines and strategies for the Architects fraternity. We need forums that address such multi-dimensional changes to our heritage vocabulary through architecture design process during challenging metamorphosis.

The forthcoming Rajasthan Architecture Festival is one of the key initiatives by the Indian Institute of Architects - Rajasthan Chapter which seems appropriately aimed to create a platform that can strengthen the engagement between the stakeholders, masses and the relevant policy makers to give a direction and strategic broad perspective towards the architecture & culture of Rajasthan. The conglomeration that looks at more than 1500 architects from around 26+ different countries seems well planned to create a dynamic and effective platform for the design fraternity that can be an instrumental facilitator in taking forward the ongoing issues of a place like Rajasthan including the ground realities and emerging trends of architectural practice in Rajasthan & beyond which also looks at promoting the architecture profession and providing a platform for inclusive growth.

The issues across India linked to the Evolution of architecture from the past to the present can certainly be widely debated and included in this forum especially the Evolution of inherited perception, Architecture Transformation, The architecture of democracy, Heritage under threat, Imagining a Re-adaptive future Cities, protest, and social change, Coalescing Modern Materials in a Traditional Terrain and supplemented by Adding 'Green' to the Sand . Pedagogy in architecture education with special emphasis on the Young Minds: Thinking beyond the curriculum , and formulating futuristic design & planning guidelines in the post pandemic newer normal design spaces can open up a newer thought provoking Pandora boxes at the festival

India with its major challenges to the design fraternity in terms of fast growing urbanisation policies and also a post covid reverse migration trend from urban to rural , can be looked at such forums to showcase new and innovative building materials with sustainable goals and resilient design output products so that technology and automation can be very well accepted for the future but with sensitivity towards conservation and preservation of architecture in the our heritage of the country. Re- adaptive usage of heritage properties and inserting the layers of infrastructure and utility services for operations and maintenance can also be an added factor that can emerge with affordable design frameworks and policies in terms of economics linked to such metal metamorphic transformations in the country .

Every design process having an envelope of regulations and zoning guidelines under town planning codes and practices, needs a review too which has to accept the changing times and make way for transformations in heritage areas both in terms of identities and also with TDR type of incentive based densities in our towns and cities . Health of person and health of a building both post pandemic can do take a centre stage that needs a strategic analysis which can not only evolve newer guidelines but also set a direction towards deteriorating heritage areas. Automation and engineering based technology is taking over the design process, but what happens to the existing pallets of traditional artisans and craftsmen's which was and are richly available in our country. What are the challenges faced by them either to survive or face the changes in technological tools at work. Do they need an attention in terms of newer skill development courses in our country or we completely surrender to technology that can be a concern for the our heritage and its existence In the country. Audience and their inputs has to look at the innovations for the industry but identity of the context and the place with historic connections of the past that cannot be ignored, with an objective of highlighting the rich heritage of Rajasthan and with a vision of encouraging conservation, preservation, and adaptive re-use of the built heritage. let's look at creating a set of guidelines for our new emerging India.

let's encourage sustainable development through the promotion of the Green Building principles and also analyse learning from vernacular wisdom, present trends and challenges for architecture education beyond their curriculum.

The education system in Architecture Conservation especially in heritage areas has to focussed on all the stake holders which should include Architects, allied professionals, policy makers, developers and masses with entire public in particular. The education and educating the industry is the key which involves going beyond the classrooms and spreading awareness of the spectrum across the Evolution of architecture from the past to the present in both Heritage to Modern typologies. Vernacular traditional practices and techniques with local materials is a hidden treasure that needs to get inserted into the process of the skill development for the generation next .

Significance of the past, Analysis of the present and conceptualising the futuristic vision is the need of the hour which I am sure can makes its presence so that draft guidelines and formulations emerging from such forums can show a direction via the Indian institute of architects and reach the policy makers to take this entire process to a different constructive and sensitive road map.

Let's educate and ensure the emergence of sensitively planned methodologies in Architecture conservation to reach the masses so that we are able to preserve the characteristic identities and also take up the transformations with appropriate engineering challenges of the futuristic design world with appropriate planning theories and techniques.

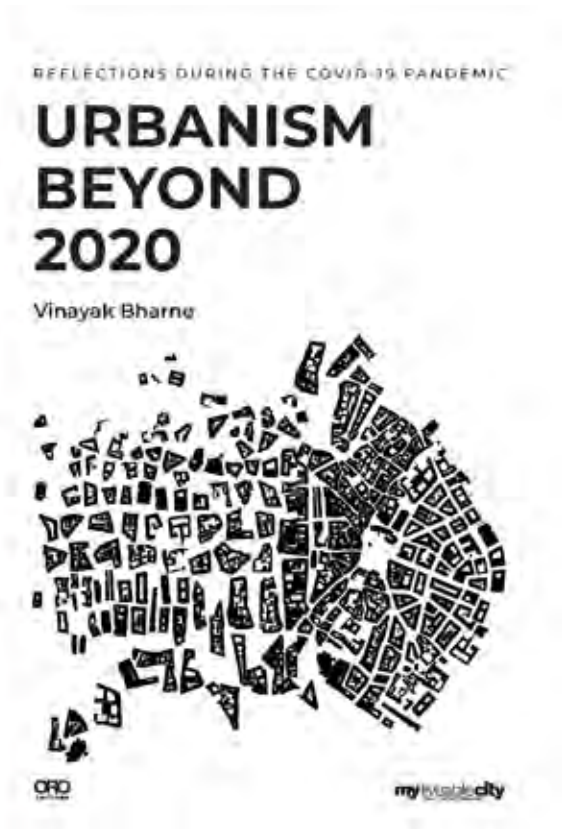
Ar. MANGUESH R PRABHUGAONKER, along with B Arch degree, has a Masters post graduate degree in Landscape Architecture from SPA New Delhi and is a Fellow Member of IIA , ISOLA and an Associate Member of IIID. He is a National Council Member of the National Council Member, The Indian institute of Architects. He is Senate Member at School of Planning & Architecture , New Delhi.

BOOK REVIEW

URBANISM BEYOND 2020

Author: Ar. Vinayak Bharne

Review By Dr. Aarti Grover



It is not far in the history of mankind that we used to live in a symbiotic relationship with our environment. But our evolution as a global community changed this relationship to consuming more and replenishing little, burdening our environment. And now, the impact of the pandemic has revealed some harsh realities of our place within nature and our association with cities, while also demonstrating how resilient, and imaginative we can be during uncertain times.

Urbanism Beyond 2020 by Vinayak Bharne looks at our cities in the wake of this pandemic from various epistemological lenses. The book contains twenty insightful chapters on numerous pertinent aspects - from ecology to morphology, health to art, informal economies to vernacular infrastructure and governance to places for protests. The examples discussed go from Banaras to Medellin, Yazd to Tokyo and New York to Shanghai. The essays, though impelled by the pandemic, emphasize extremely relevant issues facing our cities today and effectively touch upon numerous subjects that need the urgent attention of our policymakers, professionals and city dwellers. The book's tone is erudite, consistently backed by data and facts, but immensely crisp and readable. Each chapter is a short but truly thought-provoking narrative on a specific aspect of our cities. Each presents a very convincing case, but four pieces stood out for me.

Chapter 2, "The Forest and the City" displays phenomenal sensitivity by explaining how ecology and the environment should become the basis of any spatial planning decision. It argues that the conservation of natural resources and systems in a city is of the utmost importance; that our cities are multi-species ecologies for humans, birds, beasts and bees to share; and that there needs to be an ideological shift in our attitudes to contemporary urbanization.

02

The Forest and the City

12

Saving Vernacular Urbanisms

Chapter 08, "Paradigms of Open Space" is about new patterns of publicness and emerging aspirations for public spaces that are shaping up during the pandemic. This essay argues that the lasting value of our public spaces will only go as far as their ability to benefit the needs of the underprivileged, the elderly and the infant during calamities like the ongoing pandemic, thereby bridging social injustices and economic biases.

Chapter 12, "Saving Vernacular Urbanism" is yet another piece that is absolutely crucial to the contemporary urban discourse. This chapter focuses on the significance of vernacular infrastructure, local knowledge and indigenous wisdom specific to water that is vanishing from the contemporary urban situation in the name of modern and technological development. Because the pandemic has only aggravated the water crisis, it is even more urgent for designers and researchers to contemplate and act on ecology-sustainability-habitat associations.

Chapter 18, "Embracing Uncertainty" challenges the very concept of how we think about and perceive a city - assuming that it is forever and constant. Taking the example primarily of Tokyo, this essay leads one to wonder how cities can respond to unpredictable events and calamities which may have a deep impact on their form, ecology and culture. It raises the question of effective disaster-preparedness in our cities, something staring straight at us in these times.

On the whole, the book successfully triggers a critical global examination of both our current urban realities and future possibilities - which may have a key role in rendering new meanings to urbanism, especially post-pandemic. The book's relevance is exponentially augmented because of its appropriate time during this crisis. But perhaps equally so because it comes from a widely respected and distinguished urban designer and city planner whose own projects and research span the United States, China, Panama, Australia, Kenya, Japan and more. Parts of this book, therefore, display a deep, nuanced understanding of the evolution, history and socio-political realities of cities, that can only come from first-hand experience. Other parts reiterate the author's dedication to his subject and skill, born out of more than two decades of practice and scholarship.

This book must therefore be seen as part of Bharne's continuing advocacy for an ecologically conscious and socially inclusive urban future. His previous books, "The Emerging Asian City", "Affordable Housing: Inclusive-Cities", "Zen Spaces and Neon Places" and the "Routledge Companion to Global Heritage Conservation", all raise significant questions on the way we think about cities and are widely appreciated in the professional and academic fraternity. Urbanism Beyond 2020 is another significant contribution to this existing body of knowledge. This book will no doubt be appreciated by partitioners, scholars and students of urban design, ecology, landscape architecture and urban planning across the world. But far more importantly, the tone and readability of this book make it relevant for a much wider audience. As such, for anyone invested in our cities, their dynamic processes and the immense opportunities they offer, this compilation is an outright must-read.

Author
Ar. Vinayak Bharne is a practicing urban designer and city planner based in Los Angeles, an adjunct Associate Professor of Urbanism at the University of Southern California and co-director of the India-Netherlands-based knowledge platform, *My Liveable City*. His books include *The Emerging Asian City and Affordable Housing: Inclusive Cities*.

Reviewer
Dr. Aarti Grover is the Head of the Department of the post-graduate course of Landscape Architecture at the School of Planning and Architecture New Delhi, India, an institute of national importance. She has over 20 years of multi-disciplinary experience in academics, practice and research. Her commitment to the profession is reflected in her diverse professional portfolio comprising numerous prestigious projects spanning landscape architecture, ecology, habitat design and architecture in both, the public and private sectors. Her research, including her doctoral work, focuses on the morphology, meaning and perception of public spaces in our contemporary cities.

PHOTO ESSAY

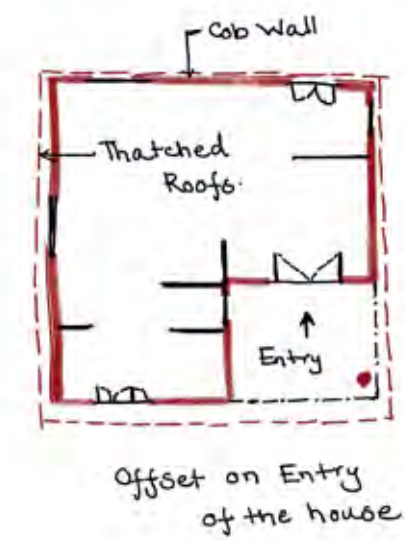
WINDOWS OF THE PAST

Learning the importance of climatic design from the built heritage of Mumbai

Ar. Esa Shaikh

Mumbai, initially known as 'Bombay' or 'Bombaim' by the Portuguese. Because of its favourable climatic conditions for tropical Europeans exploring the eastern world for the first time, they enjoyed the wilderness, green landscape, and tropical climate of the coastal Islands of the then-Bombaim. Mumbai is blessed with a tropical climate that can be enjoyed outdoors. Therefore, the buildings here can be designed to use the natural conditions. Until recent times, the architecture of Bombay played in conjunction with the regional climate. Let's explore the journey of modifications in planning and designing of the space with respect to the climatic condition of the city.

How it Started: Houses of Native Tribes



House of the Warli tribe, with an offset entry made by cob walls which helps maintain the temperature of interiors.

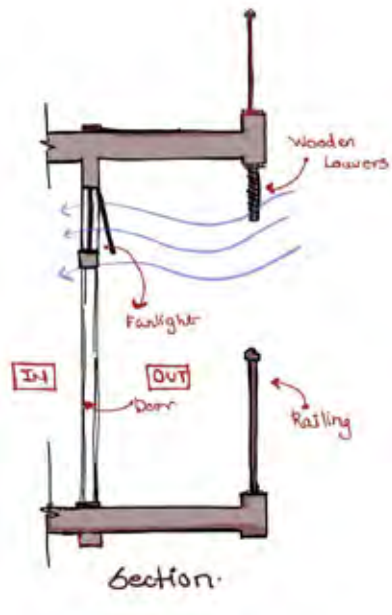
Long before, when Mumbai was not invaded by foreigners, many native tribes used to dwell in the city, each with their own distinct way of building houses. A few tribes, known as the Warli tribes, still stay in the forest of Sanjay Gandhi National Park. Their techniques of constructing houses and planning space are far ahead of their time. They design houses without interrupting the natural flora and fauna of the environment. Cob walls are used by placing mud from The River Dahisar on straw, which maintains the temperature of the interior of the house. Huge trees are grown around the house which provides shade to the structure. The entrance of the house is offset and not direct.

The Gaothans of the City

Semi-transparent openings can still be seen in the gaothans of Khotachi Wadi and Ranwar Village

Later when the Portuguese took hold over the islands of Mumbai, they brought the European touch to the style of architecture in the region. Apart from adding bright colour to the houses, bungalows welcomed the bright sunlight in their houses by introducing huge bay windows or balconies in the house. Verandahs and balconies overlooked the streets which made them very socially active. The semi-transparency of the house was provided by the huge openings.

Sensitive Urban Planning during the British Raj



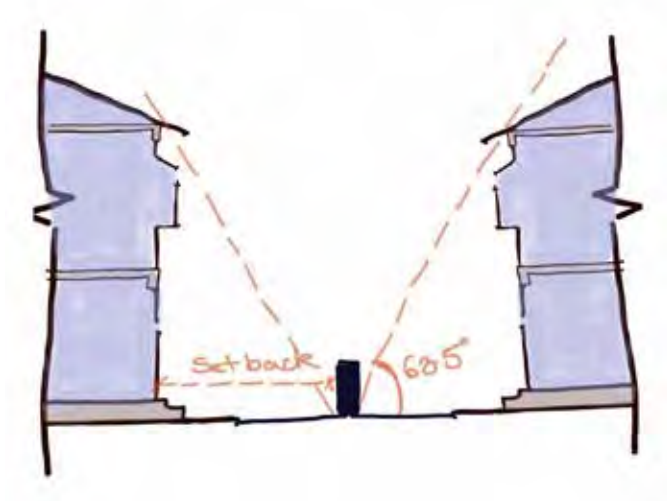
Apartment buildings with personalized balconies which provided 'eyes on the street' while enjoying the tropical climate of the suburbs of Dadar - Matunga

During the British Raj, Bombay became a trading hub and industrial city. The architecture of the city was developed in a way to suit the living condition of the influx of population. The British planned and intervened in the area of Chira Bazaar by following the Haussmann Theory of Paris, removing the stretch of rotting old houses for welcoming clean air and breeze in the dense native neighbourhood.

After the plague, the British went ahead and formed BCIT (Bombay City Improvement Trust) by expanding the city and designing the newly-urbanized areas of Dadar-Matunga following the principle of the Green City Movement. Wider streets laid with sufficient tree cover enhanced the experience of the user. The setbacks between buildings allowed sunlight to penetrate and have better wind circulation. BCIT bye-laws made it compulsory to follow the 63.5-degree angle rule between two buildings which allowed light to penetrate and breeze to circulate between two buildings. Ar. Kamu Iyer, in his book Bombay, mentions the importance of the 'otla' or semi-private space at the entrance of a house, where a person could talk to neighbours or bargain with the hawker while enjoying the tropical weather and greenery of the area.

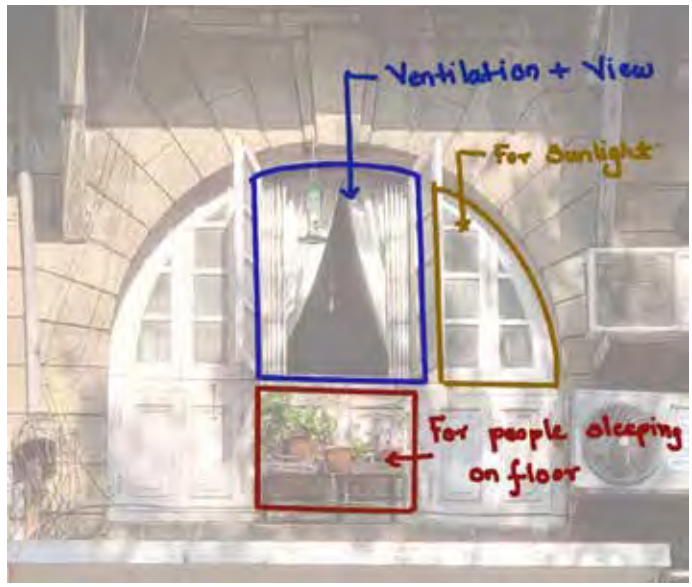
Planning of buildings near Khodadad Circle in Dadar by BCIT

The Dadar Parsi Colony where BCIT mandates leaving setbacks



Section through the Dadar Parsi Colony showing the mandated leave setbacks

During the industrial era of mills, ports, and trade, many working opportunities welcomed the large influx of migrants from the hinterlands of the region. Poor stayed in chawls where more than six people were stuffed in one small 'kholi' or room with an area of barely 15 sq.m, whereas middle-class businessmen chose the *'apartment'* typology to live in. Both chawls and apartments have their own distinctive ways of ventilation.



Rear door-windows, where both upper and lower shutters can be opened, allow the breeze to circulate for people sleeping on the floor in the small kholis of chawls

Well- ventilated corridors in front of houses in the chawls which cut off direct sunlight and allowed people to interact

Concrete balconies replaced timber but followed the same design pattern. The role of the carpenter was replaced by the mason in the new designs

Apartments with setback and colonnades which allowed breeze to circulate

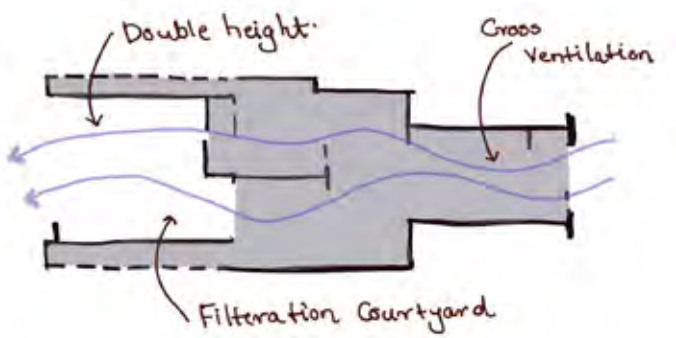
Experimentation in the chajjas of buildings which cuts direct sunlight and enhances the aesthetics of the building

The modern method of Ventilation

Jumping to the era of the 1970s and 80s where stalwart architects like Correa, Doshi, Chowdhary and others were returning from their post-graduation from abroad land and began working under influential architects such as Le Corbusier. They learned to integrate traditional techniques in modern avatars of buildings to derive an eclectic mix of regional and modern in their architectural styles.

Ar. Correa in his building of Kanchenjunga had assured that the high-rise of Bombay was naturally well-ventilated. He did not limit traditional techniques to only small houses but went on to compose it in tall ones too. The Jenga-looking subtle building overpowers the tall dominant structures of Mumbai in terms of form and design. He provided two lines of defence to stop heat and rain, simultaneously allowing people to enjoy Mumbai's tropical climate from cantilevered balconies.

Ar. Achyut Kanvinde, while designing the Nehru Science Centre, reached the epitome of modern design by designing public buildings with wind chimneys which allowed the larger spaces to be ventilated throughout the day. These chimneys adorned the skyline of Worli and became the image of scientific buildings throughout the country. He challenged the notion of the horizontal window in his design and substituted windows with vertical slits which acted as vertical light shafts on the facade and core of the staircase.



Section through Kanchenjunga explaining the cross ventilation

Nehru Science Centre by Ar. Achyut Kanvinde in Worli, Mumbai

Kanchenjunga in Mumbai, a modern high-rise

The chajjas of the Art Deco building, also called 'eyebrows', protect the building from harsh monsoon rains

Where it went wrong

The change in the new DCR in 1998, where the FSI calculation for carpet area included the area of the balcony, hampered the balcony development by the builders in any building. Builders covered the balcony and compromised the quality of light over the price they had to pay per inch of the carpet area. Providing a balcony to any house became a major hindrance to the builder. This was an amendment in all the sections of Clause 33 which dealt with the development of any form of building.

The newer post-modern buildings with 'dead' facades and sometimes no scope for cross ventilation and protection from rain

With the introduction of apartment housing and reinforced concrete, buildings began to experiment with galleries, windows, and chajjas. The Art Deco style fits perfectly to blend flexibility and explore the creative aspect in terms of design. Galleries were now constructed by masons who adorned with details inspired by tropical environments and the modern era.

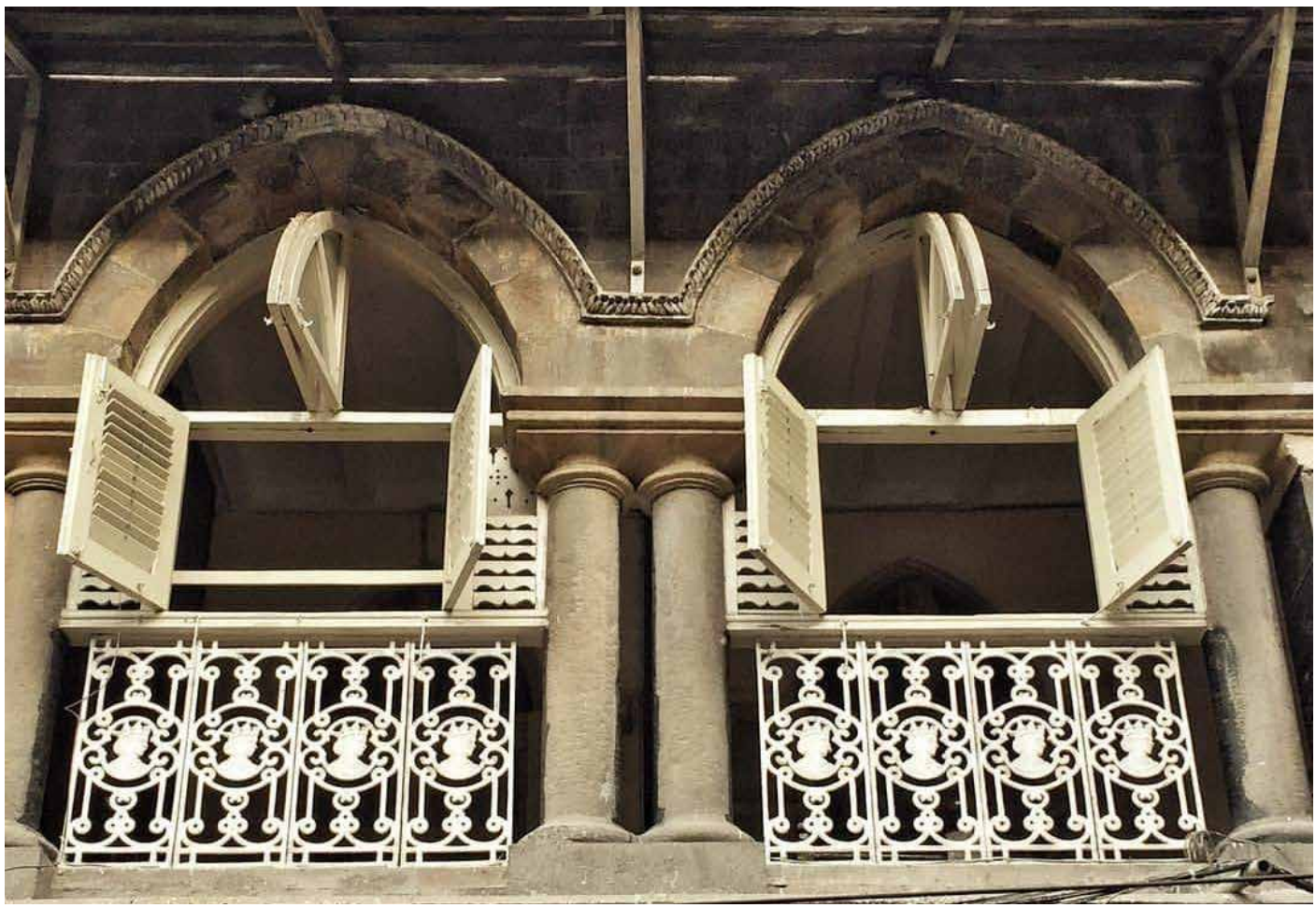
Curvilinear balconies of Art deco buildings at Oval Maidan with tropical details in RCC

The Fairlawn building which overlooks the Oval Maidan, distinguished by the style of its balconies and compound wall.

Conclusion and Learnings

Windows and balconies have always played an important part in understanding buildings, both internally and externally. Externally, windows made the building porous, transparent and more welcoming. They provided a platform for the 'eyes on the street' and adorned the elevation of the building with manifestations of various styles. On Bombay streets, just by looking at the building elevations and windows, one can identify buildings' age and architecture style.

Internally, windows purified the air, allowed cross-ventilation and brought in the necessary quality of sunlight. It reduced the impact of stress on the eyes due to artificial lights, though sometimes, lights do change the mood of the user and suffice the basic comfort level required. In recent COVID conditions, people have realized the importance of balconies and windows as they were stuck within their houses. It also raises the question of the importance of the role played by windows and fenestration in day-to-day life and ever-evolving architecture. It challenges the concept and notion of what a transparent and porous facade can do with the quality and comfort of life in the specifically the tropical climate of Mumbai.



Top Right: Multiple fenestrations along with the queen's insignia on the railing, in the windows from the past

Bottom: Multiple fenestrations along with the queen's insignia on the railing, in the windows from the past

All photographs by: **Ar. Esa Shaikh**

Ar. Esa Shaikh is an urban researcher who has trained as an architect (2014) and urban designer (2016) from Mumbai University. He balances his time between research and academics. Ha has worked with Ar. Rahul Mehrotra, Ar. Bimal Patel and Ar. Hafeez Contractor on various projects across India. He is a city-explorer and heritage enthusiast who likes to capture architectural nuances through mobile photography or live sketching.
tsap.esashaikh@gmail.com

SKETCHES

Ar. Hardik Patel

Ramji Temple

SPA Delhi campus

Orchha MP

Ahmedabad pol

Fakadu Moshque, Old Delhi

Kashmire Gate Area, Old Delhi

Ambedakar University, Old Delhi

Mayur Vihar, New Delhi

Orchha MP

Mud House,
Dhima village,
Guj.

Old-New Delhi

Ar. Hardik Patel is an architect and an urban designer, from Patan city, initially the capital of Gujarat State. Being born and brought up in a historic city, he believes in conserving heritage and also takes lessons from nature for its logic with an eye for climate responsiveness and vernacular architecture for its efficient and intelligent use of available building materials. He loves travelling and exploring urban realms through sketching, photography and documenting which becomes a source of inspiration for his architectural journey. He is also a passionate academician, believes in creating awareness about the issues concerning conservation of Urban and rural heritage through the medium of sketching and documentation in the newer generation of students. Mostly practicing in rural and semi urban cities, he faces lots of restrictions but transforming them in to limitation, Hardik Patel's architectural journey can be called as an enjoyment with adversities.
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BEYOND THE HORIZON, LIFE AWAITS

Ar. Darsan Babu

Mahatma Gandhi Mar in Gangtok, Sikkim

Scenic view from Lachung to Zero point, North Sikkim

Five years of architecture passed in the blink of an eye, from walking like a sleepless zombie through the college verandah, with a stack of models, to waking up before the sun. When the final year was coming to an end without many complications, life decided otherwise, or some virus did. The last semester was spent staring at a laptop screen and being a night watchman at my own house. The pandemic made everyone, including me, withdraw myself to the walls of my home in Kochi. Almost a year went by, which started with everyone trying to cheer themselves up through challenges of all sorts, from making fancy coffee to politicians taking a pay cut for unpaid government staff. Living in the mountains or at least in a civilization close to them was probably every nature lover's dream. So was mine. I applied for a government internship under the TULIP program and bagged that through the constant pressing of the hiring team and my proliferated CV. One year in Arunachal Pradesh, Pasighat, to be exact. Not that I had ever heard of the small town that spread across a 5 km radius or so, but the prospect of experiencing life as an urban designer without a master's degree seemed fascinating, at a place closer to the Great Himalayan mountain range than a trip to my neighbouring district.

Part 1 : Arunachal Pradesh, the mystical land where the sun glows first

Pasighat, being located in the foothills of the Himalayas, was, to my surprise, as hot as it was in Kerala. With the sun rising at around 5 am and setting at a time when people from the south might think about going for an evening chai, the land was full of surprises. From the natives walking around with a machete 'banduk' tied to their hips, to the tribal festivals like 'solung' where usually an animal called mithun was shoved up a pole and danced around. The place was filled with customs, unfamiliar to people from the so-called mainland. When the creativity of the inhabitants was portrayed through the innumerable objects, from walls to vessels and cradles to bags made of cane and bamboo, the lack of innovation was seen in the overwhelming use of tin sheets as roofing. From thatch to tin and tin to concrete buildings were the pattern. For instance, the innovation in the roofing system, slate in the North, or clay tiles in the South, were absent.

Even though mornings were early and nights dawned even earlier, the work hours stayed the same. To my luck and outrageous impulse, I visited places like Tawang, Namsai, Mechuka, Shillong, and parts of Assam during my tenure in the Northeast as a government intern architect. When the scenery changed drastically from the village greens in Pasighat to the plains of Assam and then a different kind of mountains all the way from Dirang to Tawang, the 5 am prayer in the largest Buddhist monastery in India, with little monks struggling to stay awake, the head monks chanting prayers and blowing horns made it worth it. The aura that surrounds the town of Tawang, welcoming as well as compelling, was the best part of the trip. Sixteen hours on a bullet felt other-worldly on the way, but it felt like it took twice as much time and effort on the way back. With a toothless chain sprocket, a kota stone-like leather seat, and a broken clutch cable, I made it back in one piece, thanks to the kind people who helped me all along the way—being an architect has its charm! From getting free accommodation and food to VIP treatment at a new hotel that the host took me around.

Buddhist monks dispersing from a Coronation ceremony

The ghats, almost looking empty in the early hours of the day

Ganga Aarti at Dashashwamedh Ghat

I decided to quit my job working for Pasighat Smart City after six months. After months of salary, stuck in the government's treasury due to the lack of any motivation for the government to complete the work, I took my leave. I had mapped out this trip ever since I got there, a bike ride covering the Northeast. A close friend of mine came over, and we headed to Guwahati on 16 December. Bags tied on both sides to a saddle stand, riding gear, sleeping bags, tents, and a cooking stove. We were all set. With pit stops at Guwahati for a day and then Binnaguri for another, apart from the scarcity of chai shops on the way, all was well.

Part 2 : Sikkim, shaped like a snake, spotted at the belly, cold at the ends

Sikkim was beyond expectations, the topography of the place was similar to that of Itanagar, Arunachal capital, but the way it has been developed was a spectacle in itself. The roads nestled through mountain ranges that behaved as plains. Cut and filled at almost every nook and corner, the city had been made of a thousand levels. Even though I had been to Guwahati occasionally, which was supposedly the most developed, Gangtok showed more prowess. Vertical car parks, foot over bridges, and strict traffic rules. The Gandhi Marg in Gangtok bustled with life. From momo shops to art exhibitions, the place was energetic and full of life. You could get a cold beer or a Buddha souvenir, but to walk along the pedestrianized street felt like an urban design project from college, the aftermath of mapping out footfalls and roadways. Carefully crafted to merge with the incoming traffic on the far end and divert from the one at the onset. We spent the night looking out to glimmering lights from houses, almost like a galaxy above. Coming from the southern part of India, it felt like one too.

With all permissions ready, we set off to Lachung in the North of Sikkim. The temperature dropped faster than the pine cones. Occasional photo sessions and smoke breaks were the only instances where the thumping of the engine was interrupted. By the time we camped, the temperature had dropped to minus 2 degrees. Snuggled in a sleeping bag and nothing but a monkey cap to cover our heads, we woke up to a giant snow-capped mountain. Camping next to a pig shelter wasn't exactly ideal, but the noise woke us up early in the morning. We reached Zero point in the north by noon. The road was one of the hardest that I had to ride. Occasional muddy roads to Tawang felt more effortless compared to the road that seemed to grow old and less functional during winters with streaks of white taking over its otherwise pitch-black tarmac. Twenty minutes in, it started pouring snow. Eternal bliss. When nature spreads itself like an endless bounty for the eyes to feast, we might think, why do we even disturb this beautifully created showpiece.

Part – 3 Varanasi. Folklore, Smoke, and the City of God.

On the way back from Sikkim, we stopped for a day at Darjeeling. The town, surreal as it is, felt like a scene from the movie Barfi. Huffed-out engine steam blended with the clouds that hovered above. The Steel tracks that sliced the roads at acute angles were made slicker when the heavens poured down. Gleaming raindrops reflected red, white, and yellow from the light of vehicles and shops.

The journey from Darjeeling to Varanasi was not as action-packed as the days before. Bihar came to a close when the highways that sang Bhojpuri music every time a tractor or truck went past turned to a sea of saffron-flagged, heavily jammed roads.

Varanasi had always captivated my imagination. The rich culture it saw blossom over the centuries, from Hindu temples that claimed the presence of gods to the Islamic tombs and lively afternoons. The week we landed in Varanasi saw more than 3 lakh people jostling for a spot within the city. Maybe it

Teesta River in all its beauty and colour

Sangetsar or Madhuri Lake in Tawang

was because of the flock of people that the experience was not as amusing as I had hoped, or perhaps the animated shows that glorified gods and the river. The ghats, as much as it is an architectural wonder that has stood the test of time, the Ganga Aarti made the ghats look less visible in the draped sarees and black smoke from the boats that sort of veiled a darkened filter over your eyes. I found the morning aarti in Assi ghat to be more appealing, with fewer people to witness the performance of stylized priests and more people who come to enjoy the Ghats and Ganga. The tranquil stretch of water, showing glimpses of what lay across, maybe because of the smog from the previous day's aarti or Lord Indra himself dropping by in a pool of clouds. Half an hour away from Varanasi was Sangath where Buddha had performed his first sermon, a land with ruins that showcased bricks laid out in patterns and sculptures crafted on stone. The clean air and the peaceful environment were a getaway from the tightly packed streets of Varanasi, where even if another vehicle bumps into you, nobody bats an eye. Varanasi sounded more of the blaring horns than the resonating conch blows. The city was never for a second lifeless, neither the street nor the people. Gallis, hardly a meter wide, systematically connected through the heart of the city. Where they got a bit wider, a tuk-tuk tried to fit in. Buildings like BHU as old as religious scriptures and with immaculate artworks on walls. The malai and chai in kulhads. Sadhus in khadi, powder coated with ash and ornate with rudrakshas. The city is like no other.

Half an hour in, and the highway roads welcomed us like a mother-in-law with a lit lamp receiving the bride, the tolls took our dowry and we stretched miles. We were moving at a pace that was only interrupted in 100 km intervals till we reached Lucknow—planned, tidy, and timeless. With its kebabs to drool over and biryanis that fill your heart and stomach, the City of Nawabs was a visual and delicious treat. From Lucknow to Agra, the highway expanded even more, at some places to even fit an airplane during emergency landings. The long smooth ride was calm but paced. By the time the biriyani from Lucknow was digested, we had reached Agra. We tried the usual tourists' routine to cover the Taj Mahal and Fatehpur Sikri but couldn't get as far as the latter as we had to reach Delhi soon. Tiredness was catching up to both of us and my bike. Slowly but comfortably, we reached Delhi and some friends. It was New Year's Eve. Edging towards another lockdown, we managed to make the most of the New Year and flew back home.

From the bamboo houses in the north-east to the towering apartments that pop out at every interval in Delhi, To the gompas in the mountains to the temples and mosques along rivers, from the earth that gives way to build structures to how the pavement spills out a block to be filled with a neatly cut grass, travel is about learning change. Change in lives and cultures. And to look at it from an architect's eyes, you can see the world change around you. From the evolution of innovation by necessity to the plague by greed.

Ar. Darsan Babu, an architect, dreamer and a storyteller who loves to take on challenges and reform perspectives on some days, but sit by the mountain and quote words of Howard Roark on others. Would love to explore all things architecture, educate and shape the Urbanscape soon enough.
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All Photographs Courtesy: **Author**

THE SAFE HABITAT: ESSENTIAL BUILDING SERVICES IN THE PEDAGOGY OF ARCHITECTURAL DESIGN

Ar. Adnan Nakhoda

INTRODUCTION

Architectural design studios in academia have come a long way. The interesting and multi-layered design briefs introduced in the studio, lay emphasis on the form and function of buildings, as well as on extraordinary sites with strong contexts. Faced with this challenging task and all efforts of the student being funneled into the conceptualization of design is the student forgetting one fundamental principle : that built environments are meant to serve the primordial needs of shelter, comfort and safety? This article aims to address the neglected aspect of building services in a project, especially fire services, which are critical to ensure safety in any built habitat.

In Academia, it is observed that the student is mostly engaged in three all-important tasks:

- Understanding the project and its context
- Arriving at a core design rationale
- Attempting to convey ideas through proper representation

What often does not get due diligence, is *realizing* the studio concept into a buildable, comfortable and safe habitat. The concepts brought to the table are often seen to be a collection of amorphous abstractions or an imitation of global design trends, adopted without addressing the larger issues of climatology, sustainability and life safety. In the site analysis phase of the design process, colorful sun-path and wind-flow diagrams are prepared, but how many designs do we see that really celebrate natural light and wind and provide a highly live-able and comfortable environment? Most importantly, is the environment safe from the most common of hazards such as the outbreak of fire?

Frequent fire occurrences in buildings alarmingly highlight the lack of properly integrated safety measures in their design and construction. The National Building Code of India makes fire safety mandatory in all buildings and lays down various criteria to be followed in different types of buildings. Fire safety is thus to be viewed as an essential building service, and not a later plug-in to satisfy rules and regulations. What better way to achieve this than in the design studio, at the grassroots level? Described below are some general as well as specific design considerations:

1. Site planning with sufficient building set-back

Laying down a building's block footprint on site requires careful sensitivity to context and regulatory standards. Fundamentally, any building must allow easy movement of people and vehicles around it. A sufficient setback ensures access to light and air for the inhabitants of the building and greatly affects site micro-climate. Importantly, it allows a fire –fighting vehicle to gain easy access all around in the event of a hazard (Figure 1). A recommended clear set-back of 6m width around the building allows for two-way traffic to flow when one part is used by an emergency vehicle. This open set-back area also requires a minimum height clearance of 4.5 m for unhindered movement of the fire vehicle. These recommended standards should only be compromised marginally in high density areas with narrow access roads.

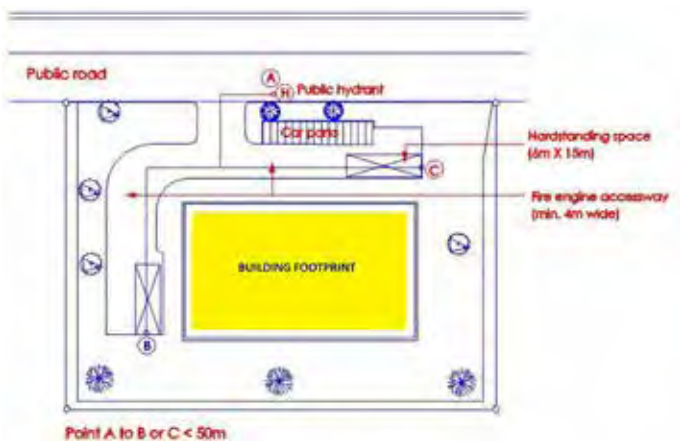

Figure 1: Site Planning to enable proper service access *(Source :scdf.gov.sg)*

Figure 2A: Traditional Indian courtyard house
(Source: deccanherald.com)

Figure 2B: Owls house in London by Mies Van der Rohe
(Source: designsourcebook.net)

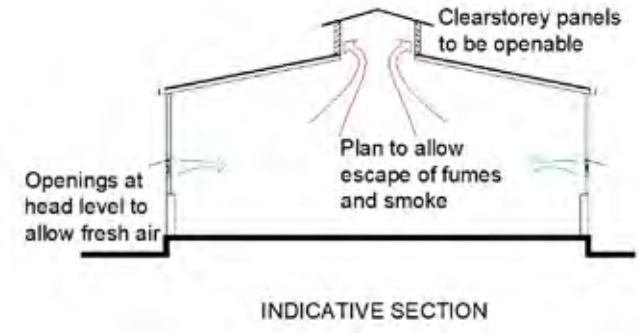

Figure 3A: Indicative section
(Source : Author)

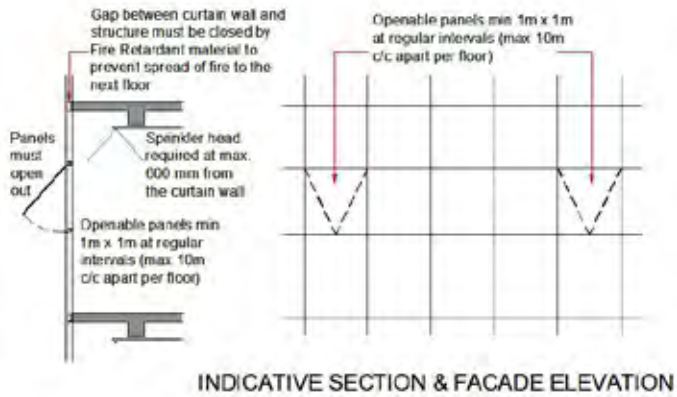

Figure 3B: Indicative section and part elevation of a typical glazed curtain wall
(Source : Author)

2. Proper segregation of spaces

The classic courtyard has always served as the traditional feature of indoor light, spatial aesthetic and climate control. This gains new significance from the safety point of view as well. The central open area serves as an immediate space of respite (Figures 2A & 2B) and a buffer to counter an interior mishap.

The segregation and separation of spaces is highly important for all buildings that generate heat, such as industries, workshops and commercial kitchens. This can also be achieved by walls and screens of a good fire rating.

3. Increasing breathability of buildings by access to daylight and natural ventilation

Providing natural ventilation to all areas of the projects, especially service areas and basements, has a number of benefits. Not only does this allow access to natural daylight and outdoor views, but also enables the release of heat, and smoke in the event of a mishap. The design of wall and roof fenestrations gains great significance in not only playing with the quality of light, but also allows vital air and wind. Figure 3A indicates how the roof vents play an important role in the release of heated air and toxic fumes. The design of curtain walls needs to be handled with care with an emphasis on not sacrificing ventilation for the purpose of pure aesthetics. Curtain walls should have open-able panels at regular intervals (see Figure 3B).

4. Proper Planning of circulation cores and exit ways

The planning of entrance foyers, lobbies and vertical transport cores are of paramount importance as these are to be planned in centralized locations to be easily reachable from all parts of the floor. This is so that quick exit is possible in the event of an accident. Figure 4A indicates the layout of a compact fire-safe vertical transport core. Any building or project requires at least two stairways, which may be open plan or enclosed, and should always be located in different zones, to enable egress in different directions, as indicated in Figure 4B.

5. Designing to accommodate essential fire safety systems

A building plan requires certain spatial provisions to accommodate the necessary safety equipment. This comprises of:

a) Plumbing : water tank reservoirs and dedicated plumbing lines for fire-fighting

b) Electrical : control panels, alarms and detectors

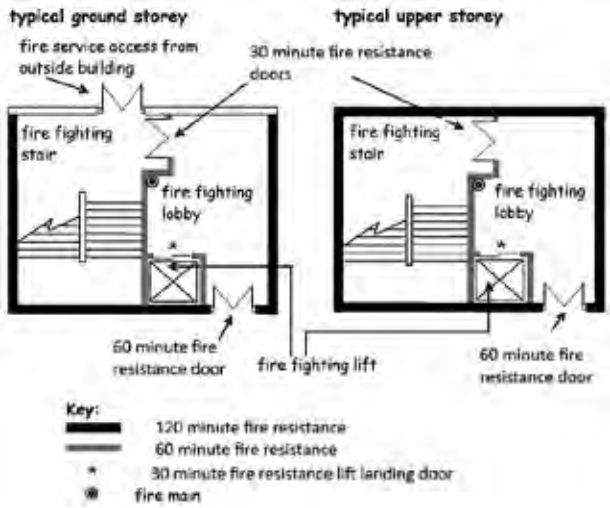

Figure 4A: A prototype vertical transport core
(Source :scdf.gov.sg)

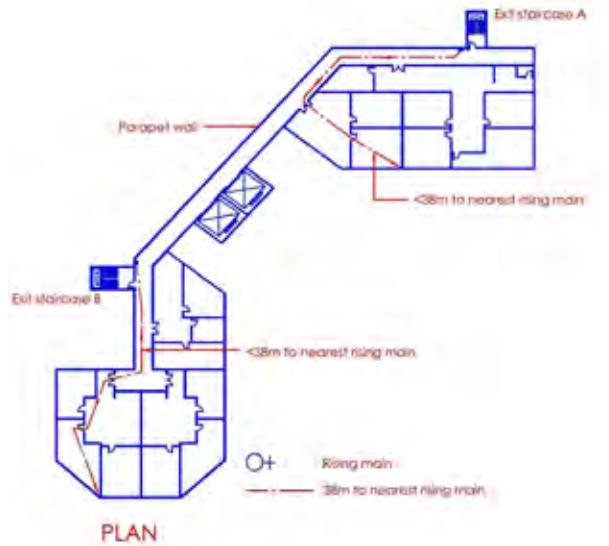

Figure 4B: An example of a building floor plan with exits in different parts
(Source :scdf.gov.sg)

Plumbing: The general format of the plumbing system is indicated in Figure 5A, which comprises water reservoirs or tanks of the required volume. These tanks are connected to dedicated risers which supply water to each floor for manual fire-fighting by means of outlet valves and hose reels. Additionally, these pipes also supply water to a network of ceiling pipes installed below each floor slab for automatic fire fighting by heat activated sprinklers. Therefore, the following provisions are required while planning:

- Adequate space for underground / roof level water tanks- at least 50,000 litres of water reservoir to be available per 500 sq.m of BUA
- Service cores and shafts at central locations to enable space for vertical pipes and related firefighting equipment (Figure 5B).
- Sufficiently large ceiling height at each floor to enable the installation of sprinkler systems below structural slabs.

Electrical: The electrical system comprises of a control panel box which receives signals from heat detectors and smoke detectors in the building, and pinpoints the location of the fire. It then activates the various alarm devices to warn building occupants. Figure 5C indicates the general format of the fire alarm system. The control panel must be installed

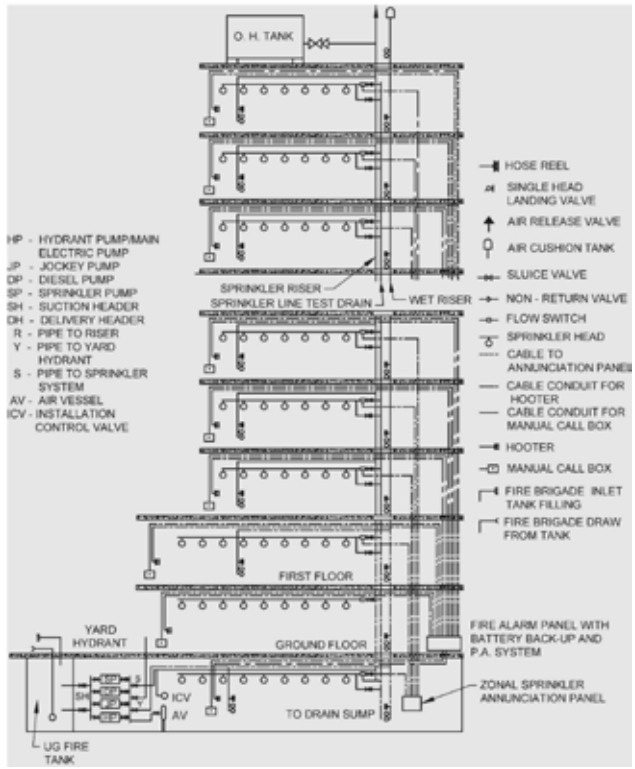

Figure 5A: Plumbing arrangement for fire-fighting in multi-storey buildings
(Source : NBC 2016 Part 4 – Fire and Life Safety)

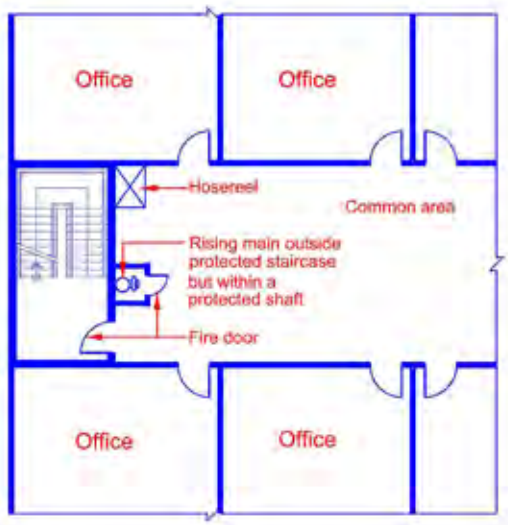

Figure 5B: Provision of service shafts and equipment for firefighting in the plan
(Source : scdf.gov.sg)

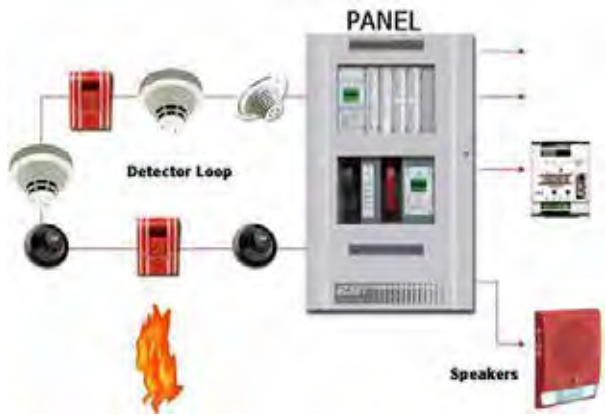

Figure 5C: Provision of service shafts and equipment for firefighting in the plan
(Source : scdf.gov.sg)

at an easily accessible location. The installation of heat and smoke detector devices is mandatory in all enclosed areas and must be installed in the necessary locations and spacing as per the standards. Moreover, it should be realized that fire-fighting devices form a necessary part of the ceiling's aesthetics in interior design.

The Present Studio Process

The student is mainly consumed with arriving at an interesting design strategy and its proper representation. The detailed design stage of the project seems to stop when the structural form and enclosure system gain some definition, and subsequently only the presentation targets are fulfilled for the purpose of a jury. Hence, what goes un-realized is how the project or building functions with respect to the user or occupant, and how the standard services, especially those related to fire safety, are incorporated into the overall design scheme. This is the general problem with the outcome of the design studio, and the project remains more conceptual than detailed, and more utopian than realistic. It has therefore become essential to emphasize and re-iterate the aspects of Function, occupant- comfort and life safety in the pedagogy of design.

Recommendations

In the first four semesters of an undergraduate architectural programme, the student learns the fundamental theories and basic principles of architectural design. The projects assigned in the studio are aimed at making the student imagine the project with proper planning and at the proper scale. These early semesters are also crucial for the student to understand how to understand site context and how to arrive at a suitable concept in design. Armed with these fundamentals, the student is now in a mature position to understand and imbibe the learning from building services and life safety into projects. It would therefore be suitable that the proper and explicit incorporation of essential building services into projects is made mandatory in the architectural design studio from the fifth semester onwards. A proper elaboration of core deliverables must be undertaken in the classroom soon after the studio design brief in introduced, so that the student is well aware of the same before embarking on case studies and schematic design.

During the case study phase, the measure of how well a project has laid out its essential services should also be stressed upon as an important aspect of case study, along with the other deliverables.

In the concept design phase, the same awareness will enable the student to bring greater maturity of thought to the table. It may be noted that the guidelines listed and explained in this paper, are those that may straight away be integrated into concept design, so that service provisions are not plugged-in later as an after-thought.

In the higher semesters, the detailing and elaboration of general climate control, electrical, plumbing and fire safety services must form part of the studio design program and become a compulsory part of the project deliverables. This will go a long way in ensuring that graduating students have learnt how to deliver real world architecture, thereby becoming better and more responsible practitioners of our art.

References

1. National Building Code of India 2016, Part 4 Fire and Life Safety, BIS 2016
2. National Fire Protection Agency, USA. www.nfpa.org.

Ar. Adnan Nakhoda graduated in 1997 and is currently based in Bangalore. He has diverse work experience in residential, commercial and educational projects. Sustainability and energy efficiency in buildings are his key focus areas in practice and research. He has been a visiting faculty at the RV College of Architecture since 2014 and at the Centre for Interior Design, Jain University.
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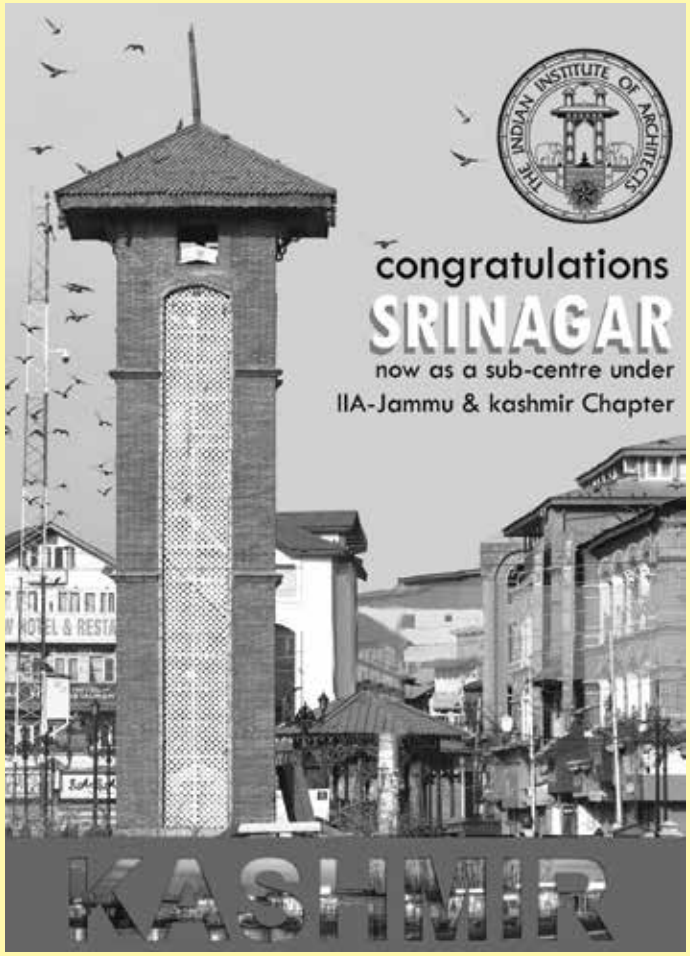
NEWSLETTERMARCH

President's Trail

Women empowerment was at it's best at the Utkal Diwas at Bubhaneshwar with the leadership of Ar.Rajkunwar Naik, Chairperson,Ar Swapna Mohanty,Vice Chairperson,Ar Keerthi,Jt Hon .Secretary giving their best for the celebration of Architecture, lifetime achievement award to Ar Ratnamala Mishra,recognition of senior architects, members , IIA medal for students of affiliated Institutions and cultural programme by the members.

Recently I had the opportunity, on behalf of IIA, to felicitate Ar. B. V. Doshi at an event, organized by IIA Ahmedabad Centre. The venue was the OAT at Shreyas designed by Doshi ji 62 years ago ,a symbol of sustainability as his architectural works and exemplary life. His acclaimed awards ,recognitions and life time experiences were related with nostalgia.

The curtain raiser of IIA Natcon at Hyderabad by IIA Telangana Chapter was an event to behold full of zest, enthusiasm and energy as a precursor of what to expect. The Chairman, Ar Uday Shankar Doni ,the Convenor, Ar Sridhar Gopisetti and the entire Team have planned an engaging three days to make it one of the best with alround participation.



OBITUARY

AR. SOMASHEKHAR DHOTRAD
(b. 27 July 1965 – d. 5 March 2022)

With a tremendously heavy heart, we share with you the passing of our dearest friend and Jt. Hon Secretary of IIA Karnataka Chapter, Architect Somashekhar Dhotrad on 5th March 2022. He was serving as Associate Professor, School of Architecture, KLE Technological University Hubballi (formerly BVBCET). He was the Principal Architect of Dhotrad Associates, Hubballi.

He gained his Bachelor Degree in Architecture at the Department of Architecture, B.V. Bhoomaraddi College of Engineering and Technology, Hubli. He acquired a Master's Degree in Transport Planning from the School of Planning and Architecture, Delhi.

He was an active member and office bearer in various posts for the IIA and ITPI. He served as the Chairman of the IIA Hubli Dharwad Center. He was involved in organizing events and exhibitions and creating awareness about the architecture profession.

He was a modest man, a real gentleman, with extraordinary merit, ever-smiling, dependable, kind, always ready to pitch in, and down to earth in attitude. He added so much to every life he touched.

He will be remembered a lot by his students, who will miss his generosity and affection. He was always there to encourage and help out his students in all ways possible.

Spreading happiness and staying connected with people will be the finest tribute one can pay to our dear Somu. Gone from sight but never from our hearts. His beautiful soul will be never forgotten. We will miss him and remember him in our prayers.

While no words will fill the void left behind by Ar. Somashekar Dhotrad, all members of the IIA Karnataka Chapter pray that his noble soul rests in peace. We offer our deepest condolences to his family, relatives and friends.

IIA-Rajasthan Chapter

1. Award Ceremony for EXPRESSion

In a grand gala night, IIA Rajasthan chapter announced the winner of the concept design competition *EXPRESSion* for its proposed research building in Jaipur. It was well attended by the fraternity of the state. Ar. C.R. Raju and Ar. Charanjit Singh Shah were amongst the dignitaries present.

There was an exhibition of the top 10 finalists of the competition which were adjudges by the jury panel comprising Ar. Rita Soh, Ar. Abu Sayeed, Ar. C.R. Raju and Ar. Charanjit Singh Shah.

Ar. Dhruv Gupta was announced as the winner of the competition. He received a trophy, certificate of merit & prize money of Rs. Two lakhs. Ar. Tushar Sogani, the Chapter Chairman, conveyed his best wishes to all the participants for their participation and congratulated the winner. Ar. Preethi Agarwal, the Competition Co-Ordinator explained the entire chronology of the competition, which was a two-stage competition and had been peer reviewed by the IIA Rajasthan Chapter members.

2. Unveiling the Newsletter

Along with the award ceremony for the Expression Competition, IIA Rajasthan Chapter started a Chapter Newsletter that covered the various events organised by the Chapter. Ar. Tushar Sogani, keeping in mind the thought of inclusive collaboration in the Chapter activities, announced the unveiling of the newsletter by the senior-most and youngest members of the Chapter. Ar. Shweta Choudhary, Ar. Abhishek Jain, Shrutika Jaybhaye and Khushi Modi were the members of the Editorial Board.

3. Launch of Rajasthan Architecture Festival

Keeping in line with its tradition of hosting and successfully organising mega-architectural events of international repute, IIA Rajasthan Chapter has announced the Rajasthan Architecture Festival, RAF, to be held in the Pink City Jaipur on 20 to 22 May 2022. The theme for this year's festival is *Metamorphosis in Architecture- Heritage to Modern.* The IIA National President, Ar. C.R. Raju and Ar. Tushar Sogani launched the poster of the event, along with the start of on-line registration for the event. The festival is expected to attract the stalwarts of the industry with many keynote sessions by international architect speakers.

Ar. Dhruv Gupta was declared the winner of the Expression Competition.

IIA-Haryana Chapter

Holi Milan at Faridabad

The Faridabad Centre of IIA organised a Holi Milan get-together at The Aravali Golf Course Faridabad on 16 March, attended by about 30 architects from Faridabad and Gurgaon. They discussed issues pertaining to the online plans sanctioning processes in the state and problems. The recent discussions with Municipal Corporation of Faridabad, who have requested IIA Faridabad Centre to provide assistance in preparing plans of non-sanctioned buildings in the city under its jurisdictions, was discussed to understand the role the Centre can play. The Executive Committee Meetings were also held. Members of the press were also present.

Industry Visit and Interactive Session at Roorkee

A delegation of 23 architects from IIA Haryana Chapter visited a glass factory at Roorkee on 19 March 2022. They saw the process of glass and mirror manufacturing, processing, quality control and packaging.

On 20 March 2022 the delegation met with the Chairman and Office Bearers of IIA Uttarakhand Chapter and some senior faculty members from IIT Roorkee. During the interactive session, organised by IIA Uttarakhand Chapter, various issues were discussed including professional practice, municipal regulations, etc. Ar. Shashi Mohan Srivastava, Chairman Uttarakhand Chapter welcomed the delegation and stressed the need for a proactive role to be played by the profession. Ar. Punit Sethi, Chairman Haryana Chapter, highlighted the problems being faced by young architects in the region and ways to address the challenges.

It was decided that the two Chapters shall join hands and set up a joint committee to study by-laws and development control regulations in the two states to understand their best practices and produce a document that can help understand the strengths and address limitations and shortcomings. The members also visited the holy city of Hardwar.

Knowledge Session at Gurgaon

IIA Gurgaon Centre organised a Knowledge Session, sponsored by Ultratech Concrete, at The Bristol Hotel, Gurgaon on 26 March 2022 attended by over 100 Architects from Gurgaon, NCR and other parts of Haryana. Mr. Prateek Khanna, Associate Counsellor CII, gave a presentation on 'Green Concrete - A step towards Sustainability'. Ms Shilpi Jain gave a talk on 'Very Amazing Concrete'. Ar. Vivek Singh Rao, Chairman IIA Gurgaon Centre, explained the importance of technological advancements in sustainability. The session was followed by a fellowship dinner. Executive Committee Meetings of IIA Haryana Chapter and Gurgaon Centre were also held.

Architects during the Holi Milan program at Faridabad.

IIA-Karnataka Chapter

Felicitation of players who represented IIA-KC in IIAPL at Hotel Lalit Ashok, Bengaluru on 18 February 2022

TALK BY DR. JAFFER AA KHAN

A talk on 'A Journey through Architecture - Past, Present and Future' by Dr. Jaffer AA Khan was organized by the Events committee of IIA, Karnataka Chapter at Hotel Lalit Ashok, Bengaluru on 18 February 2022. The talk was well attended by nearly 330 architects.

Preceding the event, the 5th IIA Karnataka Chapter's Executive Meeting was held in Hall - 3, Hotel Lalit Ashok, Bengaluru at 2.30 pm on the same day.

FELICITATION OF THE WINNERS & PARTICIPANTS OF IIAPL FROM IIA-KC

All the winners and participants who represented the IIA Karnataka Chapter at IIAPL held in Kholapur in December 2021 were felicitated at this event on 18 February 2022.

ANNIVERSARY OF INSTALLATION CEREMONY – IIA MYSURU CENTER

IIA Mysuru Center held an anniversary event of the center's installation on 25 February 2022. The event was well attended by nearly 250 architects, academicians and EC members from Mysuru.

IIA-Tamil Nadu Chapter

IIA Tamilnadu Awards 2022

IIA Tamilnadu Chapter has resumed the State Architecture Awards, which will encourage Members to document their works and submit their entries for the State Awards which in turn will act as a stepping stone to compete in the IIA National Awards. After the current overwhelming response, the Jury and Awards Ceremony will be held in April. Ar. Senthilkumar K., Immediate Past Chairman of IIA Tamilnadu Chapter, is the Convenor for IIA Tamilnadu Awards 2022.

INSPIRE

The Chapter conducted a programme *INSPIRE* sponsored by Ultratech Cement at Hotel Accord Metropolitan, Chennai on 12 March where four young practices -*Studio Context, Stomp Architects, K Square Architects and Midori Architects* presented in the 10X10 format. This was followed by a Fireside Chat with a panel of eminent architects. Thanks to Ar. T. Loganathan- Chairman, Ar. Kosalraman- EC Member, Ar. Malli Saravanan - EC Member for making it a grand success.

Site visit to LIGHT HOUSE PROJECT

The Chapter conducted programme "SITE VISIT TO LIGHTHOUSE PROJECT" at Semmanchery, Chennai on 26 March 2022 to go around the notable Central Govt funded Housing project - 1052 houses for EWS in 12 blocks constructed in 12 months using Precast Technology carried out by State Govt. which is part of the Energy conservation

Building practice. Pre-registered IIATN Chapter members attended the event. Ar. Kosalraman, EC Member had coordinated this programme.

City Design for Urban India

IIA Chennai Centre organised a lecture on CITY DESIGN FOR URBAN INDIA on 28 March 2022. The event was hosted by MEASI Academy of Architecture, Chennai, at the Altaf Ahmed Auditorium. The key speakers were Prof. Sanjeev Vidyarthi, Professor, Director, Master of City Design Program, Urban Planning and Policy, University of Illinois, Chicago and Prof. Nik Theodore, Professor and Department Head, Department of Urban Planning & Policy, Director, Center for Urban Economic Development, University of Illinois, Chicago. The programme was attended by architects, planners and students of architecture from institutions across Chennai.

IIA-Telengana Chapter

A curtain-raiser for the forthcoming NATCON was organised by our Chapter on 30 April 2022 at Hotel Avasa, Hyderabad. The idea was to formally announce NATCON to our members and seek their support. Attended by more than 300 members, the event was a huge success. We were happy to have our President Ar.C.R.Raju grace the occasion and encourage our team in the NATCON preparations. Other dignitaries who spoke were Ar. Kavita Daryani Rao, VC, JNAFA University, Ar. Bhanu Prasad, sitting MLC who offered all help from the government side and Ar.Padmavathi Reddy, ex MLA who has always supported our chapter activities. Sri. Sunil Saraf, Chairman, Radha TMT Steels who is the main anchor sponsor for NATCON was forthcoming in his support for the event. Secretary Ar. Aditya Singaraju gave the report of Chapter activities followed by a vision statement by Ar. Uday Shankar Doni, our Chairperson. Ar. Sridhar Gopisetty, Convenor for NATCON laid out the strategy for making the event a success.

The evening rounded off with excellent presentations by four teams of young architects who shared with us their projects. It was heartwarming to see the calibre and quality of work from:

1. Ar.Shweta Balasubramoni – Vistaar Architects
2. Ar. Srikanth and Ar.Neelesh – 23 Deg Design Shift.
3. Ar. Nawazish Kirmani – Dastkari.
4. Ar. Priyanka and Ar.Kasi Raju – Prelab Design Studio.

The cocktails and dinner that followed helped the fellowship quotient by many degrees.

IIA-Odisha Chapter

Reverences to the departed members of the architects fraternity in the Covid Pandemic.

The Indian Institute of Architects Odisha Chapter celebrated the "Utkal Divas" in amidst a glitz and glamorous with several eminent Architects and Film Stars adorning the Event based on Odia Theme at the Hotel Lemon Tree Premier, Bhubaneswar.

The Hon'ble President of Indian Institute of Architects (IIA) - Ar. C.R. Raju was the Chief Guest whereas Shri Satyabrata Tripathy, Odia Film Actor , Chairman Odisha Film Development Corporation was the Guest of Honor for the event which was attended by about 100+ architects in the State .

The Jt.Hon. Secretary Ar.Kirti Yogadarshini welcomed the guests for the event wheras Ar. Rajkunwar Nayak - Chairperson of the IIA Odisha Chapter spoke about the activities of the Indian Institute of Architects Odisha Chapter. National Council Member Ar. Akshay Beuria also addressed the gathering on the occasion. The installation ceremony of the IIA Odisha Chapter was done by the Hon'ble President IIA - Ar. C. R. Raju, Chief Guest for the Event which was followed by an Award Ceremony. In the Award Ceremony conducted on the occasion of the " Utkal Divas " The IIA Odisha Chapter

honored Eminent Woman Architect Ar. Ratnamala Misra with the Lifetime achievement Award. The Chief Architect of the State Ar. Sushant Patra was also honored on the occasion. The IIA Odisha Chapter also felicitated the best performances of the student fraternity. Best Students of the Year Awards were given to Ar. Abhishek Rao from Piloo Mody College of Architecture, Ar. Sneha Pradhan from KIIT University and Ar.Purushottam Nanda from the NIT Rourkela who were presented with the medals by the Chief Guest. Ar.Shakti Nanda and Ar. Suvaj Mohanty received a special mention for their prize winning entries in the IIA National Competitions - Bond of Hopes. The Indian Institute of Architects had organized free consultation by reputed medical professionals alongwith Yoga and Reiki sessions for the members of architect fraternity during the Covid pandemic. Four eminent doctors Dr. K.S. Reddy, Sr.Consultant - Care Hospital, Dr. Girija Priyadarshini Mishra - Sr. Psychologist - ESI Hospital, Dr. Siddharta Shankar Ray - Sr. Opthalmologist - Advanced Eye Care Hospital and Dr. Harpreet Kaur - Sr. Consultant , Amri were also felicitated by

the IIA Odisha Chapter during the felicitation ceremony. Yoga Expert - Ar. Abhishek Mohanty and Reiki Master Ar. Priyanka Mishra - Faculty KIIT University were also felicitated for conducting Yoga and Reiki sessions.

The Hon'ble President IIA - Ar. C. R. Raju delivered his special address on the occasion of Utkal Divas to the fraternity of Architects. The IIA Odisha Chapter felicitated Hon'ble President IIA – Ar. C.R. Raju alongwith all the senior architects of the State of Odisha. Reverences were offered to architect members who lost their lives in the Covid Pandemic.Hon' be Vice Chairperson Ar. Swapnadutta Mohanty finally delivered the vote of thanks and concluded the formal session. Amongst the glamorous Cultural Odissi dance, Fashion Parade based on Odia Traditional Wear, Orchestra and Odia Cuisine were the main attractions of the event.

IIA-Kerela Chapter

IIA Calicut Centre was invited by IIA Navi Mumbai to present the story of public projects' initiatives of the centre. Ar. Sham Salim (Secretary) represented the Centre in Mumbai on 5 March 2022.

IIA Kerala Chapter in association with KRERA organized an awareness program for Architects about their role in RERA. The talk was headed by Kerala RERA Chairman Shri P.H. Kurian IAS (retd) and Ar. L Gopakumar, Chairman IIA Kerala Chapter on 19th March 2022 at Crowne Plaza, Kochi.

IIA Kerala State Awards 2021 hosted by IIA Kannur Centre is to be held on May 6th and 7th, 2022. The projects shortlisted for 16 categories have been announced. The live presentations will be held on the same dates in the presence of the jury panel including Ar. Madav Raman, Ar. Girish Doshi, Ar. Bijoy Ramachandran, Ar. Biju Kuriakose, Ar. Abha Narain Lamba and Ar. Anand Wadwekar.

IIA-Chandigarh Chapter

Architects' Conclave & EXPO at Chandigarh

The Architects Conclave was organised by The Times of India in association with Archex by Minds Media & Management Inc. at a Hotel in Zirakpur on March 12, 2022, supported by IIA Chandigarh and Punjab Chapters. Dr S.S. Bhatti, former Principal of Chandigarh College of Architecture was the Chief Guest. Ar Surinder Bahga, Chairman GEM-Punjab Chapter and Ar SD Singh Chairman, IIA Chandigarh Chapter graced the occasion as guests of honour. Prominent architects, Archex exhibitors, members of the business fraternity and other esteemed guests from north India were present on the occasion.

After the ceremonial lamp lighting by Dr S.S. Bhatti, Ar Surinder Bahga, Inder Dhingra and BS Rana from Minds Media and Management Inc, Ar SD Singh and other dignitaries, Dr. S.S. Bhatti gave the welcome address. A panel discussion on the topic 'Architecture after Covid' was held where Ar. Surinder Bahga; Ar. Harish Saini, founder, Vaastu Consultants; Manujit Khurana, professor, Chandigarh University and Kanika Bansal, Professor and Dean of Academic-Advanced studies at the Chitkara School of Planning & Architecture, Chitkara University, deliberated upon the emerging trends in architecture, design, interiors, landscaping, construction and things which will have an impact on how we work and live in the post-covid work. Along with new trends in décor, technology application, experts spoke about the challenges and their solutions emphasizing the need for sustainable architecture, and structures/designs to support the differently-abled.

15 leading architects and other professionals from the region were felicitated for raising the bar and setting new benchmarks in the field of architecture, landscape, construction, design and energy conservation, by Dr SS Bhatti, Ar Surinder Bahga and SD Singh. These included Dr Aarti Grover (Landscape Architecture); Ar Shilpa Das (Hosting Chandigarh Urban Festival); Ar Sarbjit Bahga (Office Buildings); Ar KP Singh (Young Architect); Dr Harveen Bahandari (Architectural Education); Er BK Trehan (Structural Consultant); Ar Sarab M Singh (Residential Architecture); Ar Dhruv Sarveshwar Lal & Ar Sheetal Sharma (Interior Architecture); Ar Kanav Khosla (Commercial/Institutional Architecture); Ar Rupinder Ahuja (Hospitals); Ar Anmol Pupneja (Educational Building); Ar Arpan Aggarwal (Young Architect); Er Ashwani Kumar (Electrical Consultant); Ar Naveesh Sharma (Residential Architecture) and Ar Suman Kaushik (Awareness about Energy Conservation).

Rajiv Rampal, Head, Technical Sales, Duraton Cement; H Prasad, GM sales, Fortune TMT Group; Sandeep Gupta, head business development, Punjab, Haryana and Himachal Pradesh, HDFC Home Loans; Anoop Kumar from Panjab Motors were also present on the occasion. There was also an exhibition on building materials and technologies (11-14 March 2022) which was inaugurated by Chandigarh Mayor Ms Sarabjit Kaur.

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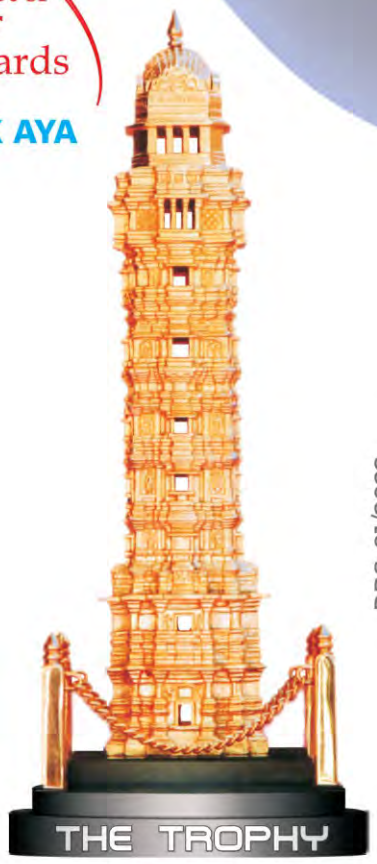

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