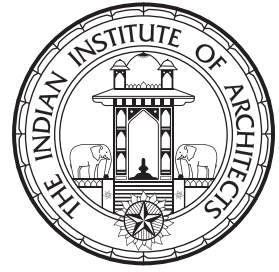


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Ar. Anand Palaye

EDITORIAL

Dear Fellow Architects and readers

The response and appreciation of our institute's first of its kind event of the **On-Line National Convention** and the launch of a dedicated exclusive **CAD Software for our Members** have really provided a warm feeling in a general gloomy scenario. In fact, the digital platform for National Convention provided ample scope for participation of architects from various geographical locations without the troubles associated with long haul travels and fatigue. Subsequent holding of council meetings and other programs have firmly ushered in this era of '**New Digital Normal**'.

In this issue we have a range of varied subjects like **people's perception of facilities for physical activities, developing pollinator corridors for greener urban environment, design of a city library, glimpses of Jammu city and highlighting of how humanity gets affected in making of modern cities**. I am sure our readers will find these useful and relevant.

Ar. Anand Palaye

Chairman - Publication Board & Executive Editor, IIA



Ar. Divya Kush

PRESIDENT'S MESSAGE

Dear Fellow Architects,

Warm Greetings

In spite of the enormous problems and hardship caused due to COVID - 19, it has been a period of exploring new ways for the life to move on.

The Institute and our members have been handling the situations with a great degree of self confidence and empathy for all.

Having organised a very successful **online Natcon 2020** and **launching of IIA CAD for the benefit of our members**, our various Chapters and Centres have been particular organising essays, competitions, sketch competitions, photography competitions etc. across the country to keep the spirit.

World Architecture Day was enthusiastically celebrated by the fraternity in the first week of October.

I am sure our fraternity will continue to put its best efforts for the benefit of our fellow beings and particularly for the section of the society which is at the bottom of the pyramid in this period of unprecedented crisis.

Jai Hind

A handwritten signature in black ink that reads "Divya Kush".

Ar. Divya Kush
President,

The Indian Institute of Architects



Ar. Vijay Gupta - Email : admin@vga.co.in

Ar. Vijay Gupta is the Founder of Vijay Gupta Architects (VGA), New Delhi-based architecture and design firm established in 1968. The firm possess a rich portfolio of works spanning multiple domains, with a strong foothold in the design of institutional spaces. An alumnus of SPA Delhi, Ar. Vijay Gupta has helmed the design process for projects of national significance – including several school and university campuses for Amity Group, Safdarjung Hospital, Euro School Bengaluru, GD Goenka Signature School Gurugram, as well as several other Healthcare and Housing projects across major North Indian cities.

GD Goenka Signature School, Gurugram

- *Project : GD Goenka Signature School*
- *Client : Sona Education Society*
- *Location : Gurugram, Haryana*
- *Site Area : 20 Acres*
- *Year of Completion : Phase 1 Completed in 2015.*



THE RIVER OF KNOWLEDGE

A dynamic stream of water flows through the site, connecting all the learning spaces around it.

The Design

Children's mind is like a 'tree'. It has the power to gather food from the surroundings. "

- By Rabindranath Tagore

Children gather knowledge from their surroundings, not just the text books, they gather inferences from nature not just teachers and class rooms. Children gather knowledge from their whole body, mind and senses not just by listening. - As explained by Rabindranath Tagore while discussing his concept for Shantiniketan.

The World School is like a woven fabric of built and open. By the virtue of its design, the school blurs the threshold between inside the building and outside. All the activity rooms in the campus are designed to spill out in the open and hence broaden the platte to learn from and teach from.

The river of knowledge is also a symbol of this dynamic and ever changing world that has all the activities around it, visually and physically connected, seamlessly flowing into each other. Therefore, enabling a strong exchange of thoughts and ideas across various disciplines.

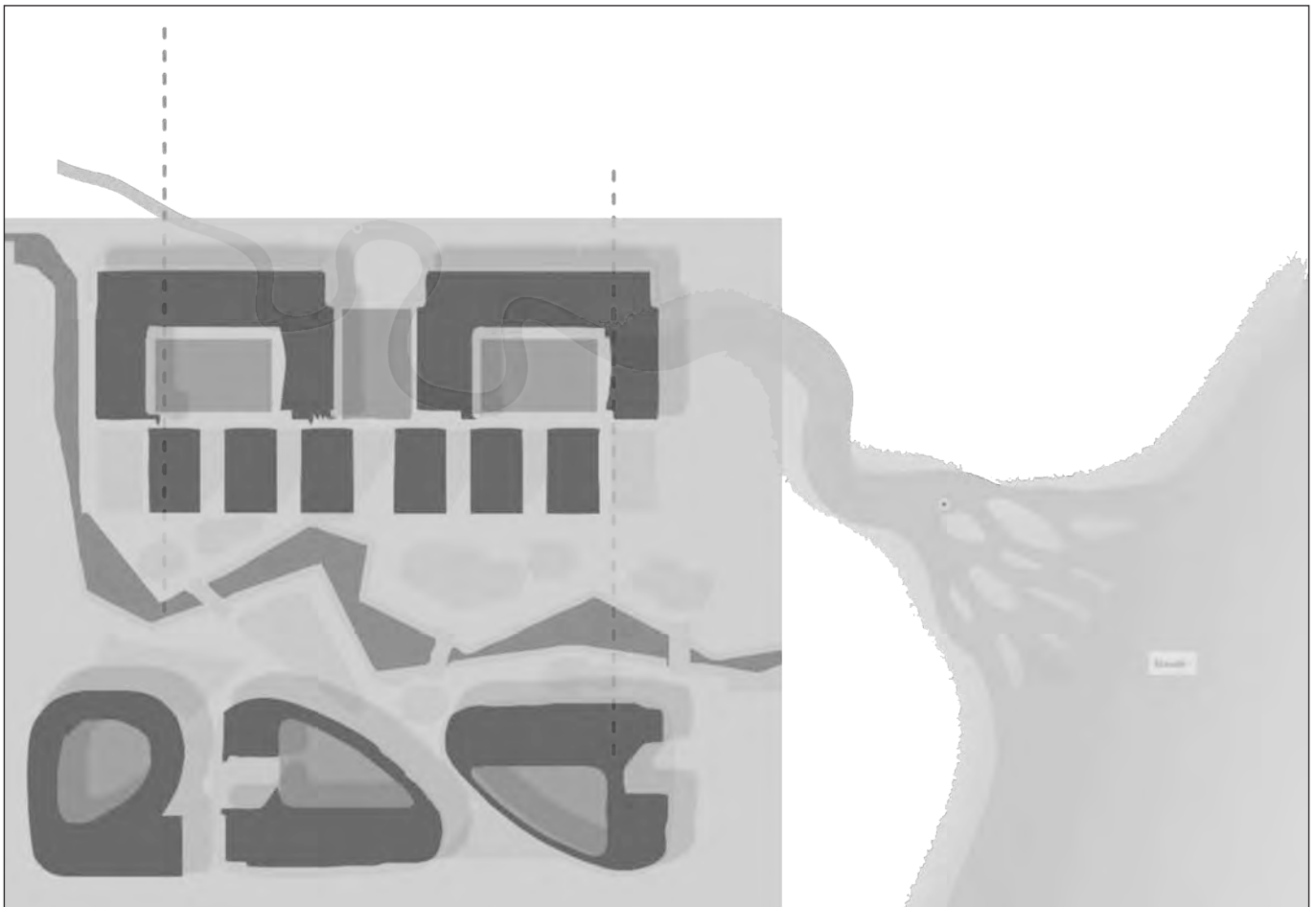
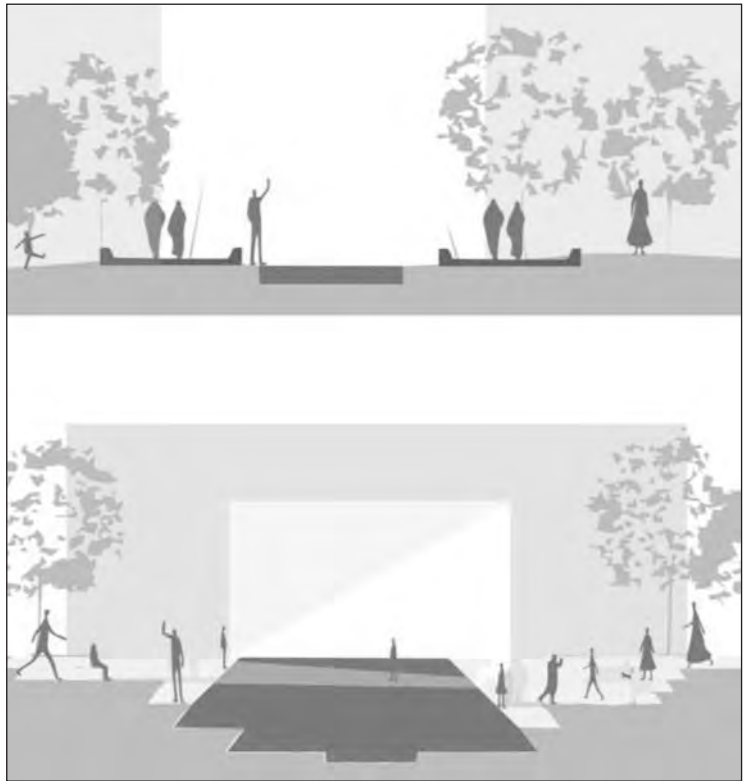


Diagram explaining the interwoven fabric

It is from diversity, as much as commonality that communities are born.

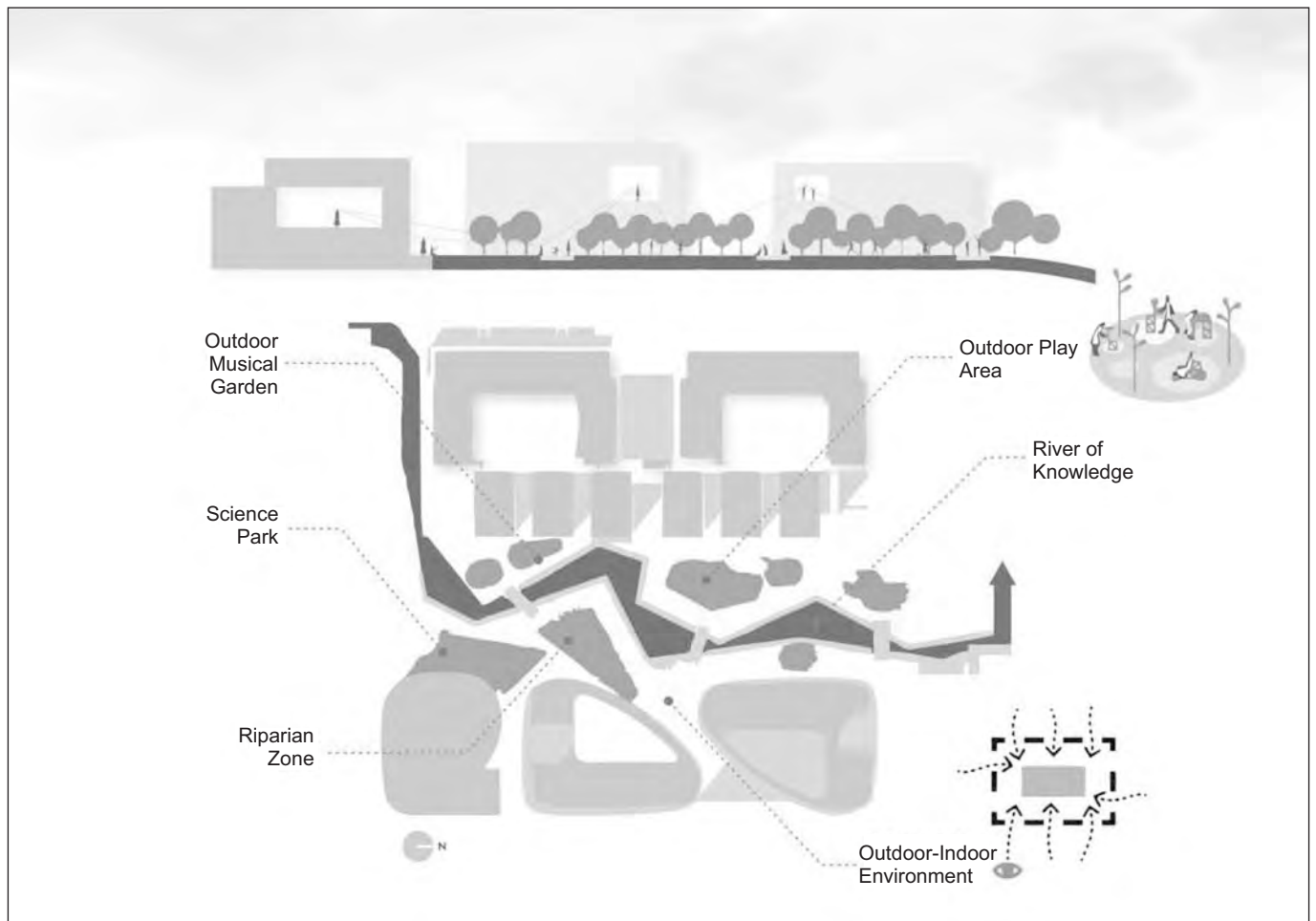
This exchange develops critical thinking in students as they exchange ideas, explore concepts and even question the basics of their observations.

Planning of the blocks is such that there is perforation between all the spaces. The spaces have been planned in such a way that each block is independent yet interdependent on each other. A series of built masses on site are connected to each other via pathways, corridors, ramps etc. this creates a sense of privacy as well as an environment wherein there is maximum interaction among children.

Ghats and outdoor classrooms have been created to encourage outdoor interaction among students. Children can contribute to the knowledge flowing over the entire stretch of area and also acquire the same from other sources in nature like what they see themselves. This would result in less dependency on man-made elements and more on the basic elements of nature like sun, wind, water and sand. The flora that develops around the water body is dependent on the seasonal changes.



Class Room



A relatable and sensitive school environment. Not every student responds to one condition. A school which connects with all has to have diversity in its environment which invites every student equally to engage with its surroundings.

Variety of open spaces and variable scales of open and built spaces enable every student in this school to find his space and comfort. Landscape plays an important role in the development of a human being. Various landscaping elements act differently in nature.

Children engage more cooperatively in more creative forms of play in the green areas. Play in nature is especially important

for developing capacities for creativity, problem-solving, and intellectual development.

Proximity to, views of, and daily exposure to natural settings increases children's ability to focus and enhances cognitive abilities.

Children can be more self-disciplined. Access to green spaces, and even a view of green settings, enhance spaces where children will interact more with the environment and acquire practical knowledge. Children's social, psychological, academic and physical health is positively impacted when they have daily contact with nature.

Sensory Garden

Sensory Play Supports **Language development, Cognitive growth, fine, gross motor skills**, problem solving, reasoning, and social interaction. It makes them more aware and observant about their surroundings and develop a better understanding of natural processes.

Music Garden as Sound

Equipment Such as **Sound tubes**, mounted xylophones, plants that make a rustling sound when breeze passes through them such as grasses, trees with wind chimes on them, gurgling water.

Fruit and Vegetable Garden

Children who grow their own food are more likely to eat fruits and vegetables and to show **higher levels of knowledge** about nutrition. They are more likely to continue healthy eating habits throughout their lives. A vegetables garden with individual patches for children.

Science Garden

Open air science gadgets have been installed for a play way learning of science. Aesthetically designed and ruggedly fabricated science gadgets for mechanics, sound, light, meteorology, heat etc. Shall be installed to benefit children by covering many topics in science.

Signage

Signage is a key element of sensory garden. Children become familiar with plants if they are prompted by clear labelling. **Colour coded signage** can also be used to high light the different senses associated with each plant.

Orientation

Buildings have been oriented in the North-South direction to minimize heat gain inside the building. The windows have been planned in a way considering minimum heat gain and maximum daylight inside the building.

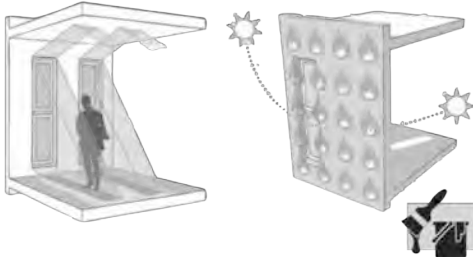


Aerial View

SHADING ANALYSIS

North Facing Windows

The north facing windows on ground floor are shaded by deep vertical shafts. On upper floors, the north facing windows are shaded with 450 mm deep overhang.



South Facing Windows

Windows in studios facing south direction are shaded by existing horizontal louvers that are 50 mm deep that helps in minimum heat gain.

West Facing Windows

Reception : The Reception-Hall of Fame, which is a doubled storey space is exposed to West sun during late afternoon period. As the sun is at the low angle, closely spaced horizontal louvers are effective to cut direct solar ingress.

Administration : Area have west facing windows. The windows have existing horizontal louvers that are 50 mm deep, spaced at 250 mm and 3000 mm away from the window along with vertical fins that provide shade.

East Facing Windows

The windows facing east are exposed to low angle sun during morning hours. The building mass in north and south is providing self-shading to these windows, but only till 1st floor. As the sun is at the low angle, closely placed horizontal louvers are effective in order to cut direct solar ingress.

The existing external shades for this window in addition to the shade provided by the building mass are the horizontal louvers that are 50 mm deep, spaced at 250 mm and 450 mm away from the window.

Storm Water Design

The landscaped area has a pervious surface and also one long bio-swale. The bio-swale will collect storm water and allow it to discharge underground naturally. Additionally, rain water harvesting tanks and pits will be used to collect roof water. This creates a mini ecosystem of river, rains and vegetation, a dynamic entity that changes with seasons.

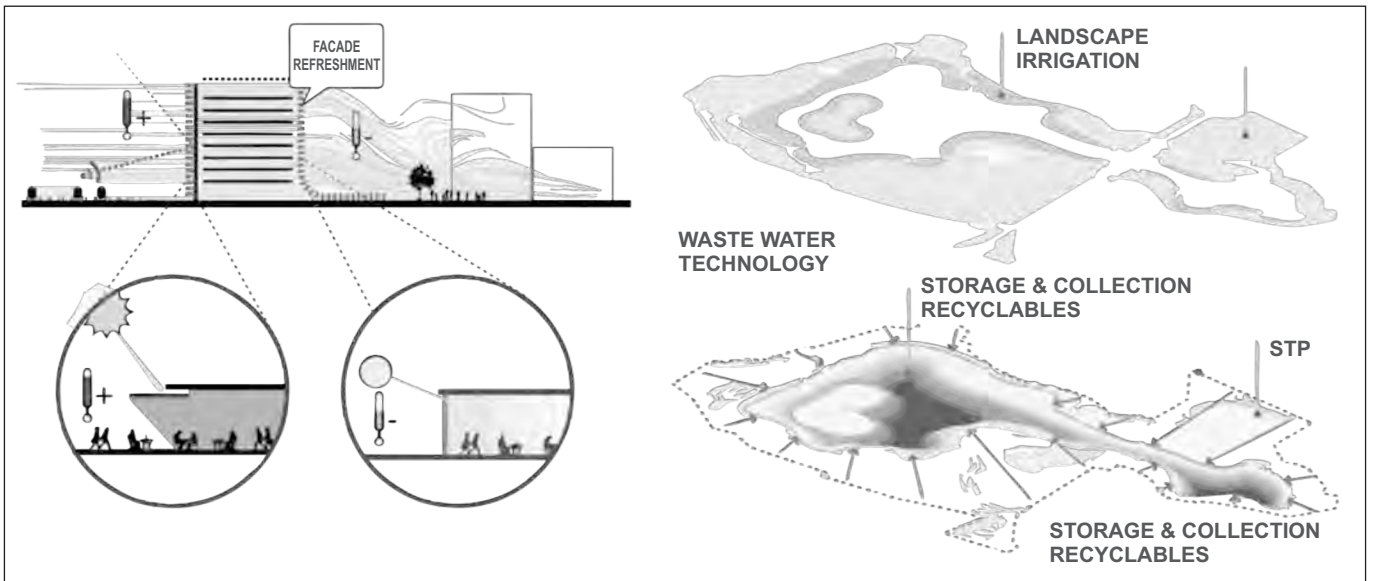
Daylight Analysis

The daylight analysis is done to evaluate the daylight levels achieved in each space. The intent of this analysis is to achieve minimum of 75% area of regularly occupied spaces adequately day lit in both School building & Sports building individually and together.

As per the daylight analysis, the regularly occupied spaces in the project achieves minimum 87% of the area which is day lit between 110 Lux to 5400 Lux.



Aerial View



Heat Island Effect

Project roof is provided with high reflective paint.

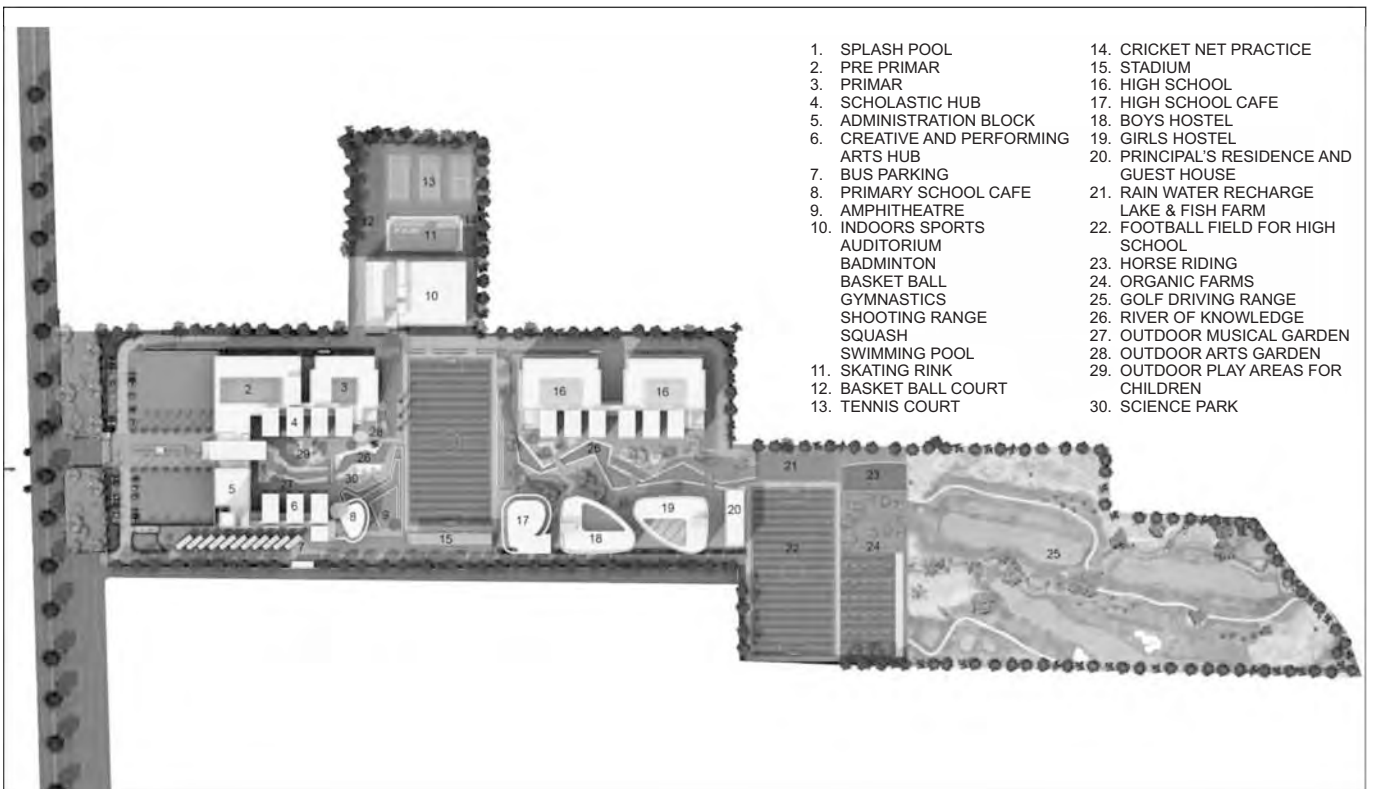
Parking lots will be paved with open grid pavers and shaded with trees.

Waste Water Technologies

STP is being provided for the project to treat 100% waste water generated on site to tertiary standards and treated water shall be used to meet landscape irrigation & flushing requirements.

Storage and Collection of Recyclables

Designate well marked areas for separation, collection and storage of materials for recycling including office paper, newspaper, cardboard, glass, metals and plastic. The collection and storage area is located in a manner that it has an easy access for waste collection vehicles.



Site Plan

School at Bannerghatta, Bengaluru

- *Project : School At Bannerghatta*
- *Location : Bengaluru*
- *Site Area : 20180 Sq. m*
- *Year of Completion : 2021 .*

As humanity progresses in leaps and bounds, the nature of urban life is changing just as rapidly. One symptom of this change includes the diminishing culture of outdoor engagement – which, even ten years ago, was considered a staple of life in the city. Now, however, much of our lives are led within four walls, and the most affected by this shift is the youngest generation.

Children these days spend more time on screens than swings, and their interaction with their natural environment is meagre. This shift leans dangerously close to an irreversible disconnect between man and nature, one which will only accelerate the deterioration of the bounty of resources mother earth has blessed us with. How, then, do we ensure that children – who will be most affected by the world we are creating today – have equal access to the joys of outdoor

engagement as older generations once did? How do we ensure that the youngest among us grow in tandem with their environment, and foster a consciously symbiotic relationship with it?

The solution lies within the domain of education; given the many hours that a child spends in school each day, not only does this environment present immense potential for cultivating an understanding of and respect for nature, it also liberates children from the confines of closed spaces and ensures their holistic development. A viable model for this liberation is presented through the design of a school at Bannerghatta in Bengaluru, where the built environment is shaped by – and stands in deference to – the natural vegetation on site.

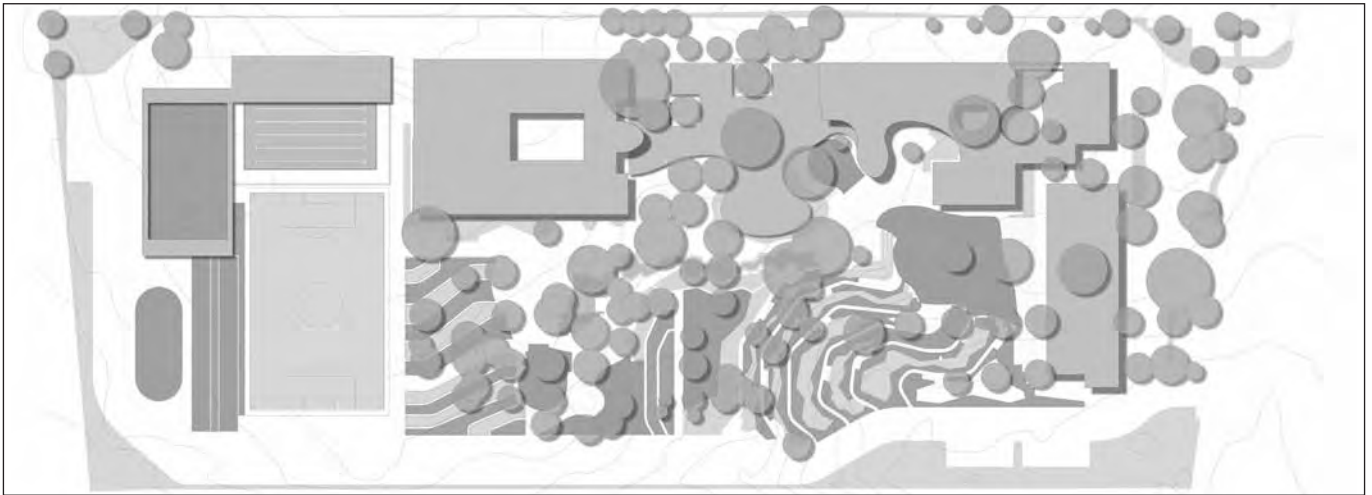


Elevation - Block A&B

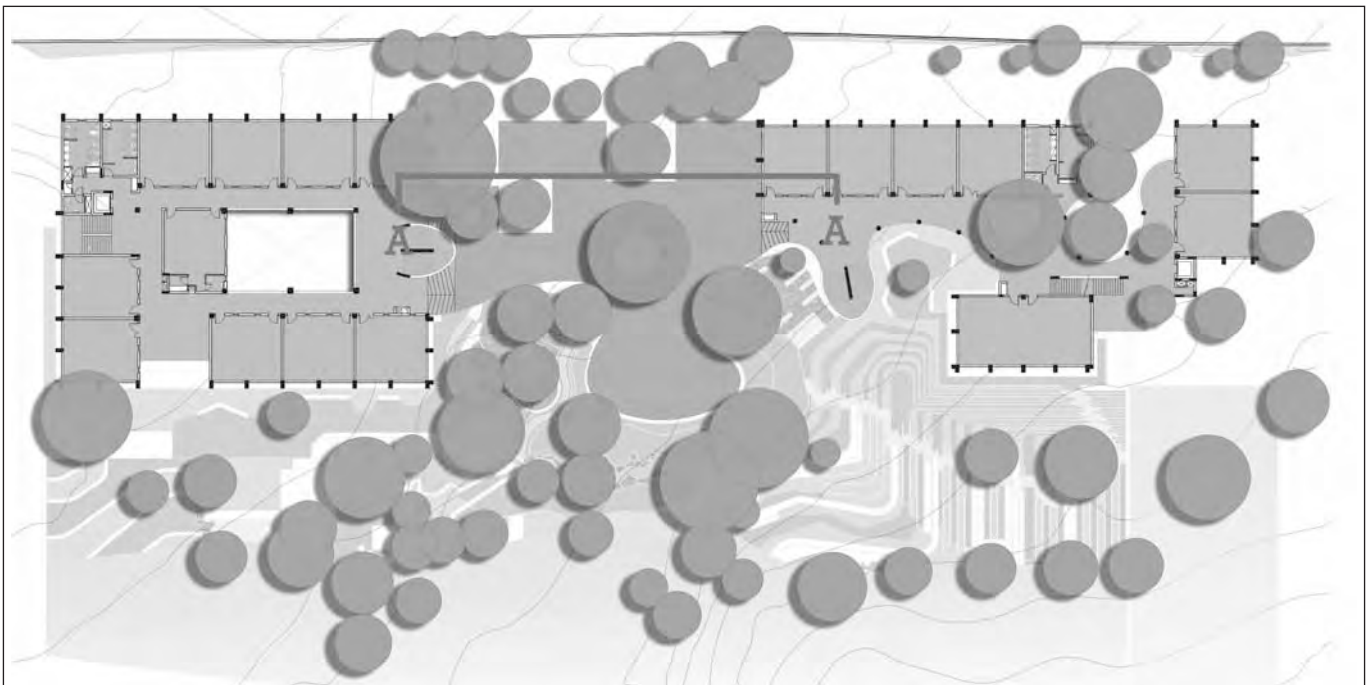


Elevation - Block A&B-2

Site – Context and Conceptual Role



(Site Plan : The building footprint of the school at Bannerghatta was evolved in deference to the existing tree cover on site, with outdoor activity areas and non-conventional learning spaces planned in the interstices.)



(Connection between the indoors and the outdoors is maintained at multiple levels, with a terrace garden connecting the two academic blocks parallel to the central green space below.)

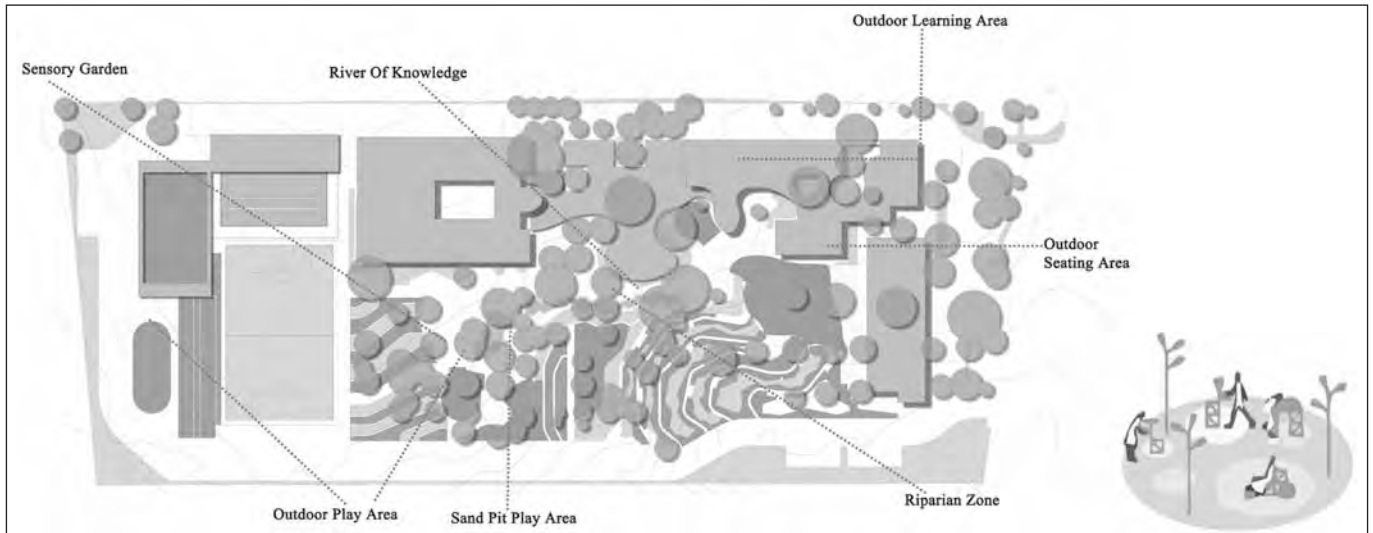
The project site lies in close vicinity to the Bannerghatta National Park, with a lush green cover of its own. This green cover is the primary guiding principle for the design scheme, with a majority of the trees retained in place and encapsulated within the built fabric. The trees, thus, act as focal points for a network of transitional spaces, framed within an organic building profile. The focal points manifest as courtyards between classroom clusters, as spill-over spaces from activity zones, as green edges to walkways, and as visual respite for congregational spaces.



Section showing connecting bridge

The built mass thus evolved has been placed along the northern periphery of the site, creating a large central green space that connects all building blocks as one contiguous whole. This central green space includes a terraced lawn that follows the site contours, seating ledges and nooks, play areas,

sand pits and vegetable gardens; several of these interventions double as outdoor classrooms during inclement weather, subverting the expected morphology of learning spaces. A water channel spans across the central space, echoing the fluidity of the building profile.

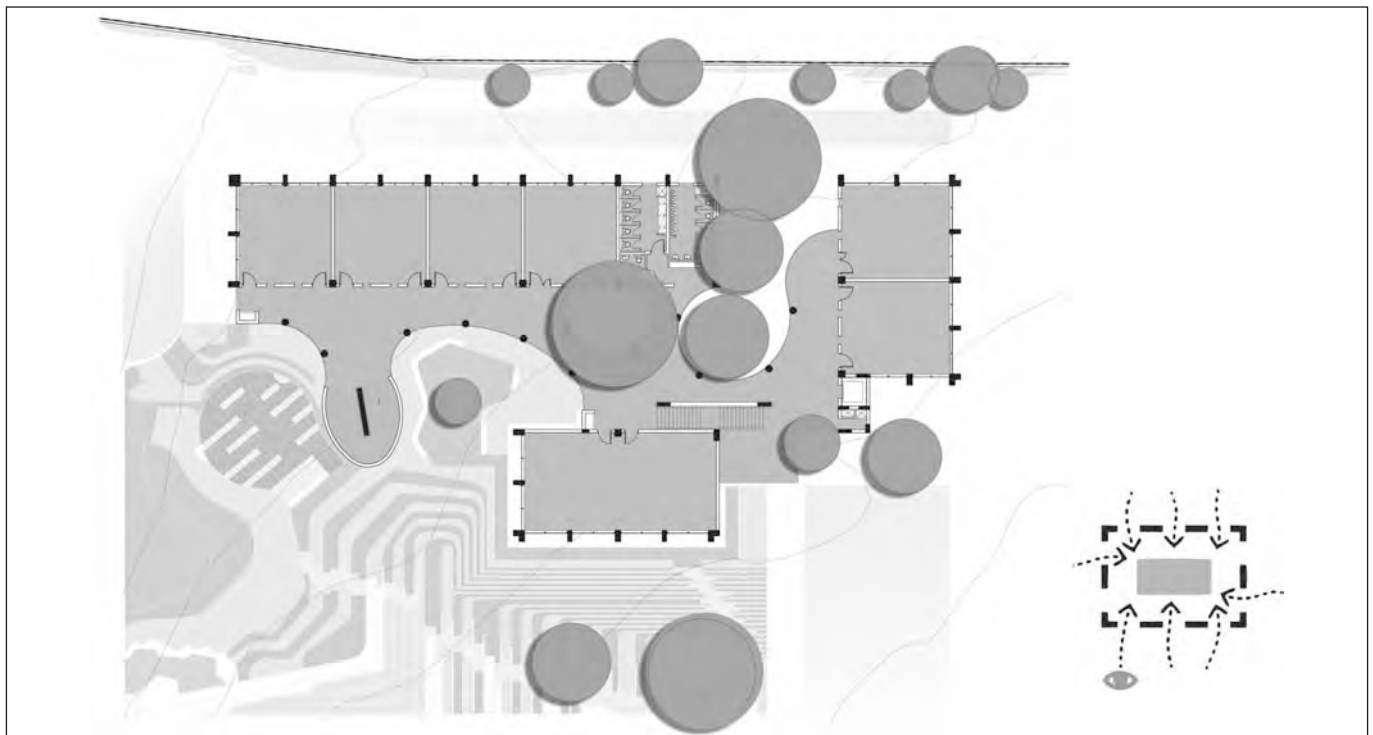


(Conceptual layout showing existing tree cover, water channel, and the block placement around it)

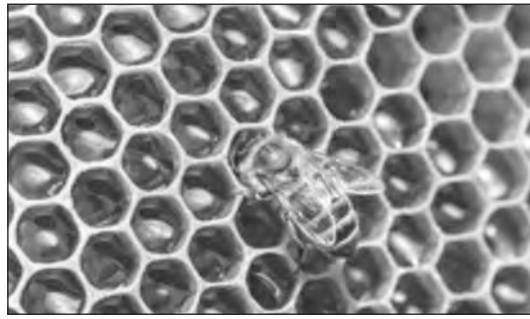
Design – A Tool for Learning

At the ground level, the connection between the built fabric and the central green space is tectonic, as all the activity spaces open directly into this area. At upper levels, this connection is visual, with extensive glazing across the built envelope providing expansive views of the meticulous

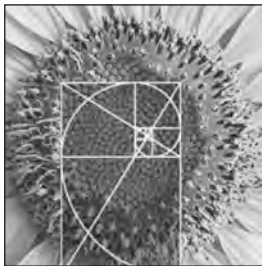
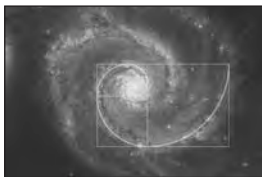
landscape. This relationship between the built mass and the central green space replicates the dynamic interface created within the individual blocks, allowing students to experience their natural environment and built habitat as interdependent entities.



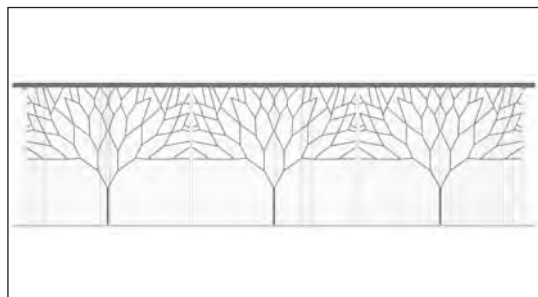
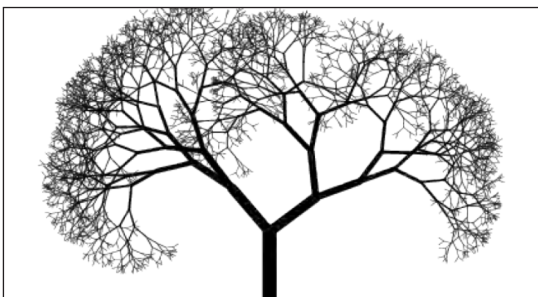
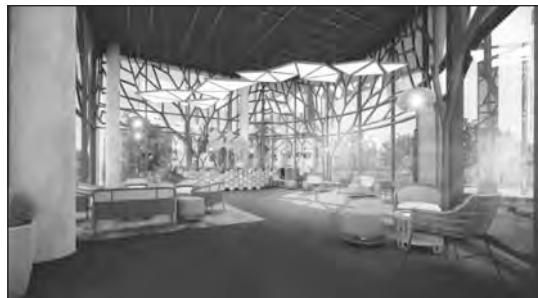
(Relationship between the built mass & green)



Adapting honeycomb structures to create furniture units, ceiling and wall finishes.



The use of the Golden Ratio series in panelling patterns.



Using natural motifs as overlays over glazing as shown in the above elevation of double height glazing.

Sustainability – A Holistic Approach

The spatial strategies utilized in the project allow students to interact freely with their environment, and aesthetic interventions allow knowledge gained within the classroom to be contextualized. However, the design scheme plays a third role as well: promoting sustainability beyond the rigid parameters of energy ratings and material selection. By highlighting natural processes within the school campus, the design propagates sustainability beyond the confines of building techniques and embeds it into the students' consciousness.

Be it through appreciating the positive impact of natural elements on their own psychological wellbeing, or through learning how to protect fragile natural processes, students at School cultivate compassion for their surroundings from an early age, which may not otherwise happen within the technology-fuelled isolation of urban life.



Aerial View



Cafeteria View



Reception View



Class Room



Corridor

Amity University, Mumbai

Invigorating Spaces of Higher Education

- *Project : Amity University*
- *Client : Ritnand Balvad Education Foundation*
- *Location : Mumbai*
- *Site Area : 20 Acre*
- *Year of Completion : 2021*

Education Institutes bear the immense responsibility of providing an environment perennially conducive to learning, exchange and engagement. Part of this responsibility is borne by teachers and students, but a substantial share relies on the built environment within which learning takes place. This is especially true for institutes of higher learning: readying students for their foray into the world as independent beings with drive and agency, tertiary education spaces must foster freedom of thought and exploration.

While pedagogy introduces new ideas to young minds, spaces that support learning at one's own pace and forging meaningful connections with one's peers are what allow these

ideas to flourish. The campus for Amity University in Mumbai has been designed keeping this ideal in mind. Mumbai, as India's financial capital and global commercial hub, is a hotbed for economic opportunities and cultural diversity. The spirit of entrepreneurship and innovation drives the city, important values that must permeate the institutes situated within it.

Imbibing these values with the client's vision for a future-forward campus, the design scheme for Amity University proposes a built environment that breaks the traditional mould of classroom learning and blurs the boundaries between instruction and engagement.

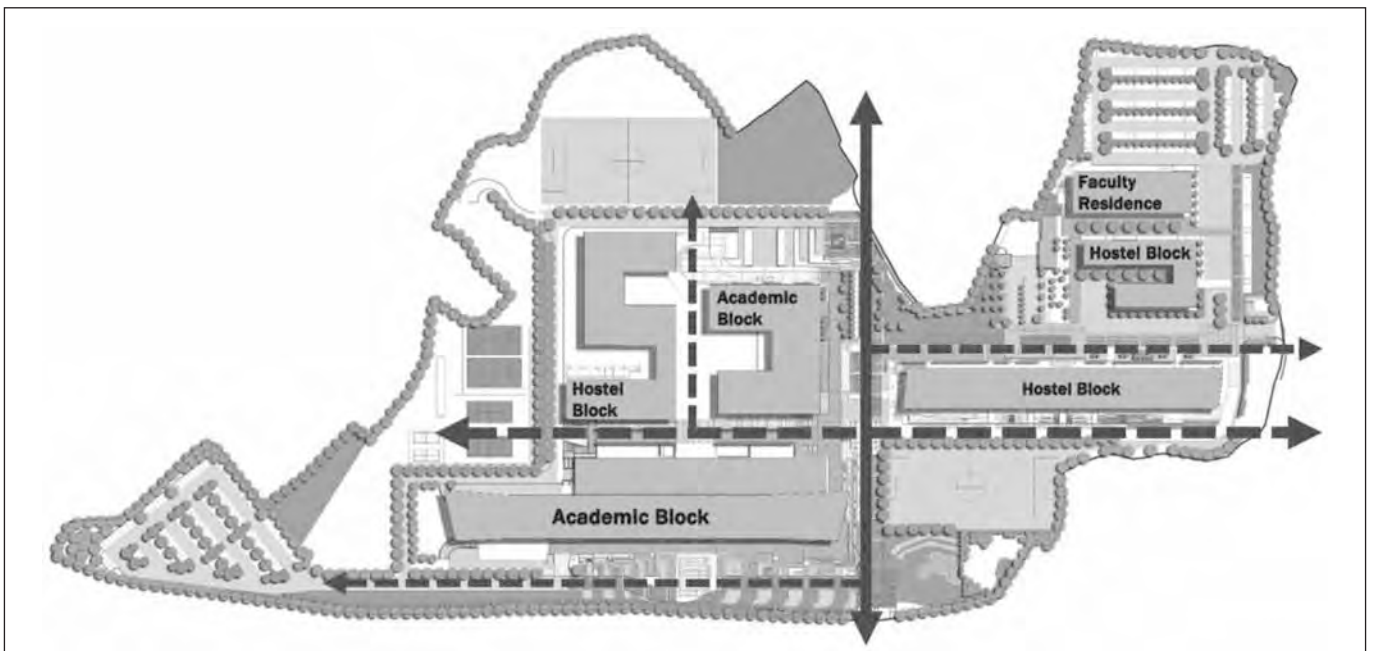


Located on the Pune-Mumbai highway, the Amity University campus possesses an imposing, monolithic appearance befitting an institute of higher education

Site Planning – Enabling Interconnection

The sprawling 20-acre site on the Mumbai-Pune highway accommodates a nexus of built and open spaces to create a round-the-clock campus, which does away with the rigid segregation typically seen in institutions of higher education. Instead, the major functions of the campus – academics, residential facilities, recreation, and administration – have been strategically split and placed in close conjunction with each other. This decentralization of functions has helped create a dynamic spread that bridges different aspects of campus life to create one cohesive whole.

The design strategy enables this cohesion through the creation of a central spine, on either side of which are laid out the major academic and residential blocks. Each of these blocks is connected to its adjacent structures by strategically landscaped zones that consist of shaded walkways, plazas, sunken courts, sit-outs, and lawns; these zones act as extensions of the ground floor layouts of the blocks they abut, and provide crucial points of congregation, relaxation and recreation. A variety of sports facilities and ancillary functions have been placed on the farthest arms of the campus framework, creating a largely pedestrian zone in the centre.



A central spine forms the core of the design strategy, on either side of which the major functional blocks have been placed



A network of plazas, shaded walkways, sunken courts and sit-outs connect the various blocks on campus, providing crucial points of congregation, relaxation and recreation

Spatial Planning – Activating Interstices

The built mass of the Amity University campus is characterized by an imposing, monolithic appearance, punctuated by sleek fenestration. The brick envelope of the buildings is intersected by glass extrusions, creating large overhangs for walkways below. Within these blocks, the functional requirements of

the institute have been clustered around expansive atriums and courtyards; these indoor voids not only act as spill-over spaces for the mix of classrooms, lecture halls, seminar spaces and administrative facilities, but also enable a visual connection between multiple floor levels.



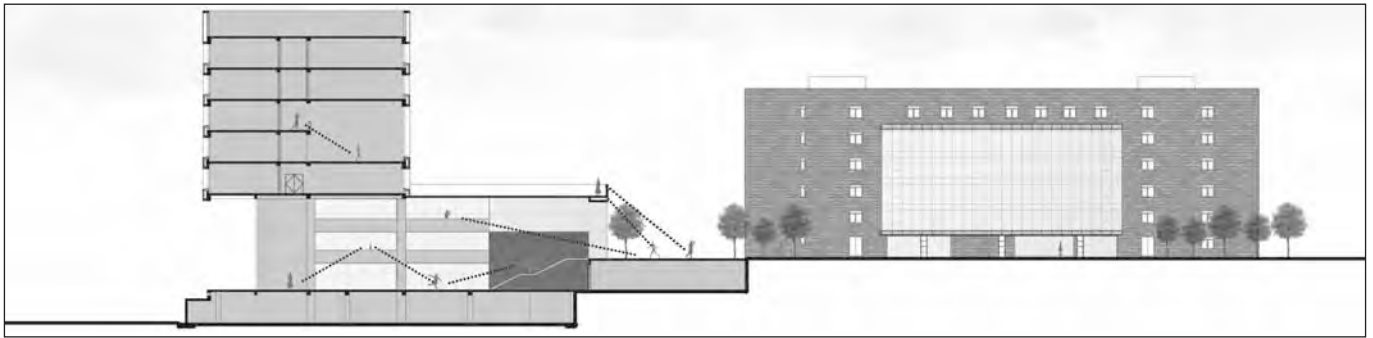
Large overhangs, nestled porches and extensive glazing on lower levels of each block soften the transition between indoors and outdoors.



This disruption of compact built spaces with expansive open areas helps provide physical and visual relief, and has been replicated on a smaller scale throughout the design scheme via the introduction of double-height break-out spaces and verandahs.



The interstitial open spaces on the campus are connected to the voids within each block through multiple entry points and nestled porches. Uninterrupted sightlines between the indoors and outdoors has been further established through extensive glazing at the ground level. This network of built and open creates a highly active framework within which students can learn, inquire, engage and unwind.



Atria have been created within individual blocks to enable visual connections between multiple levels as well as provide crucial spill-over space

Sustainability – Utilizing Topography

The campus is located in the Western Ghats, which experiences tumultuous rains in the monsoon but high temperatures through the rest of the year. In order to ensure year-round supply of water without external assistance, a series of water channels and underground wells have been created to harvest surface run-off and deposit it in a large reservoir.

By these means, the natural gradient of the site has been utilized to enable the sustainable reuse of an important resource. The storm water run-off is also used to recharge

artificial water bodies on the site, which help create cool breezes through the campus and allow students to use outdoor spaces even during the summer months.

The Amity University, Mumbai campus embodies the spirit of inquiry and collaboration that forms the cornerstone of modern education. By shifting the paradigms of what constitutes an educational institute, the design of the campus encourages one to cultivate an invigorated approach to learning, which will benefit them lifelong.





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SCHEDULE OF IIA ELECTION FOR THE TERM 2020-22

Sr. No.	ACTIVITY	NATIONAL COUNCIL	CHAPTER	CENTRE & SUB-CENTRE
1.	Uploading the final list of eligible Voters	22nd October 2020 Thursday	22nd October 2020 Thursday	22nd October 2020 Thursday
2.	Invitation of Nomination	29th October 2020 Thursday	29th October 2020 Thursday	29th October 2020 Thursday
3.	Last date for receipt of Nomination	7th November 2020 Saturday	7th November 2020 Saturday	7th November 2020 Saturday
4.	Scrutiny of Nominations	8th - 12th November 2020 Thursday	8th - 12th November 2020 Thursday	8th - 12th November 2020 Thursday
5.	Mailing of scrutiny report	12th November 2020 Thursday	12th November 2020 Thursday	12th November 2020 Thursday
6.	Last date of receiving objections if any	16th November 2020 Monday	16th November 2020 Monday	16th November 2020 Monday
7.	Display of List of Eligible candidates	19th November 2020 Thursday	19th November 2020 Thursday	19th November 2020 Thursday
8.	Last date of withdrawal of nominations	21st November 2020 Saturday	21st November 2020 Saturday	21st November 2020 Saturday
9.	Scrutiny of withdrawals	22nd - 23rd November 2020 Monday	22nd - 23rd November 2020 Monday	22nd - 23rd November 2020 Monday
10.	Publication and mailing final list of eligible candidates	25th November 2020 Wednesday	25th November 2020 Wednesday	25th November 2020 Wednesday
11.	E-Voting Opens	8th December 2020 6.00 AM Tuesday	8th December 2020 6.00 AM Tuesday	8th December 2020 6.00 AM Tuesday
12.	E-Voting closes	10th December 2020 11.00 PM Thursday	10th December 2020 11.00 PM Thursday	10th December 2020 11.00 PM Thursday
13.	Counting of E-Votes	11th December 2020 10.30 AM Friday	11th December 2020 10.30 AM Friday	11th December 2020 10.30 AM Friday
14.	First General Body Meeting	12th December 2020 3.00 PM Saturday	12th December 2020 3.00 PM Saturday	12th December 2020 3.00 PM Saturday

P.N : National/Chapters/Centers & Sub-Centers Election will be conducted from IIA Head Office.



Capitol Complex - World Heritage Site

Our excitement about Technological Advancement with Smart Phones and WhatsApp is mindlessly misplaced. It signifies that as we advance along these lines of perverted progress Humans will become more and more “Robotised” while “Robots”, not surprisingly, get more and more “Humanised”.

By 'City' I mean an 'Urban', as opposed to 'Rural Centre', where 'Urbanity' as refined courtesy or politeness, and suavity is cultivated. 'Humanity' is the Essence of Man that encompasses 'humaneness, kindness, benevolence, goodwill. 'Man' stands for all members of the species *Homo sapiens* collectively, without regard to sex. We move to cities for many reasons, but the metaphysical ones are the human values we define and cherish as the crowning features of Humanity

The making of Chandigarh, which is a good example to illustrate the theme of this article, is an irony of history. It was created out of widespread chaos and destruction, and symbolises the indestructible spirit of Punjabis and Punjabiya and their indomitable will for significant creation. Chandigarh is a “world city” *not* merely “world-class” city. It has become the Mother City for several 20th-century capitals like Islamabad, Dacca, and Brasilia.

Unfortunately, politicians, bureaucrats, and technocrats have together with the citizens' anonymous indulgence contributed to the ruination of the **city's original concept**. (1) For instance, there was no third phase in the master plan. Le Corbusier had suggested “Re-intensification” of first-phase sectors for accommodating the growing population.

I had pointed out in an article published in *The Tribune* in 1991, how the “City Beautiful” was turning into a shanty town. But

nobody paid any heed to the SOS that I gave. Later, I spelled out in a special symposium in 2006, organised under the auspices of First Friday Forum, how Chandigarh was *Modern Heritage*. On the basis of my PhD thesis earned in 1991, I drafted the Chandigarh Administration's Heritage Report that was approved by the Centre, and the rules notified for implementation.

We are quite excited that the '**Capitol Complex**' (2) has been added to the UNESCO's world heritage list (in utter ignorance of the crucial fact that the monuments which it contains have significance *only* with reference to the city as a whole). Rather than jump around like frolicking brats on this long-awaited news, we should have committed ourselves to safeguard Chandigarh from incurring irreparable damage by political interference and bureaucratic bungling. For the past many years I have been propagating the idea that the Government of India should set up a high-powered, autonomous “Chandigarh Heritage Conservation, Design & Development Authority” headed by a farsighted architect, with the UT Urban Planning Department, the Municipal Corporation Chandigarh [MCC], and Chandigarh Housing Board answerable to it. The local MP [Member of Parliament, Chandigarh Administrator or his representative, and Mayor] would members to give inputs concerning the citizens' aspirations and wants; administrative problems, and civic issues. Chandigarh administration job would be to provide funds for new projects as well as conservation of heritage buildings, furniture, etc. besides the maintenance of law and order, traffic management, with the Engineering Organisation looking after construction, etc. MCC would manage city services, maintenance of parks, etc.



IT Park Developed near Chandigarh

Chandigarh fondly nicknamed the “City Beautiful” has rapidly assumed multifaceted ugliness that apart from disfigured buildings (4) and monsters produced by wilful violation of the Building Rules and Zoning Plans has generated and promoted crime of various kinds. Shouldn't this discomfiting fact wake us up to ask “What has gone wrong and why? What is it that gives the politicians and bureaucrats to have their way in this unseemly adventure? Why have professionals failed? What can be done before it is too late to retrieve the City's pristine glory that was once reflected in its peaceful ambience and beautiful environs?”

My quandary is suicidal. Although I have not yet resolved to kill myself I have the material ready for the suicide note. “How could innocent migrants from the villages become criminals and nasty individuals when they come to live in the same city with their educated and *smart* urban brethren? Why should tragedy show up when we have perhaps the best amenities in all spheres of human life: education, health, sports, art and culture, transport, and what have you? I am resigning myself to utter helplessness by attributing full responsibility to my fellow citizens. Rather than somehow prevent the powers-that-be from killing the Soul of the City that had put India on the world-map of Modern Urbanism indulge in mass uglification of their 'City Beautiful' as if they were playing Holi on the progressive success of their wanton vanity.

Are cities designed and meant to turn innocent rustic souls into “Urban Savages”? Or, are they motivators and movers of people to become “civilised”—which means “having advanced beyond the primitive savage state; to be refined in interests and tastes; to be self-controlled and fair-spoken”;

above all, to become embodiments of 'Humanity' as the 'Essence of Man'. Why have we become schizophrenics—split personalities who think something quite different from what we do, self-alienated from our thoughts and words? To me, 'City' means 'Civilisation and culture Inspired and invigorated by Truth as the primary attribute of God in the bipolar working of the Yan-yang principle during workaday existence, everywhere, all the time, for everybody.

The case of Chandigarh should be a befitting example to illustrate the moot points involved in the view sketched before. Chandigarh was conceived to be an administrative city, its chief function as the capital of the bifurcated Punjab. Le Corbusier called it a “finite city” with a precise aim. The projected population of 500,000 was to be accommodated in two phases: first, for 150,000 and the second, for 350,000. There was no third phase. The master planner suggested that more people could be accommodated by “Re-intensification” of the upper low-density sectors. As you may know an attempt at this exercise was made when the high and mighty of Chandigarh met Sonia Gandhi and successfully thwarted the scheme called Apartment Act. This brings out our intrinsic dishonesty in making Democracy a reality. We continue our congenital tendencies to discriminate against the poor and the underprivileged without any sense of shame for our anarchic attitude towards the interests of 'Civil Society' as a whole.

We don't even know that Le Corbusier authored the historic document the “**Statute of the Land**”, in which he defined the city's concept and its expected use by the citizens, with the administrators regulating and monitoring its growth according to the master plan.



Public Spaces taken over by Informal Sector, Disfigured Buildings

The duty of an authority is to be honest; it is to control things which belong to a regime of rules (existing and understandable) which have to be created by the will of a collectivity. In other words there exists true merchandise, which has to be sold to true customers and which will never lose their primitive value in the case of arbitrary decision coming later.

Is it possible to conserve such realities during the **IT Era (3)** which has been hijacked by India's greedy, luxury-loving élite?

Nothing of the kind envisioned by Le Corbusier has happened—thanks to the conceit and confusion of the powers-that-be. The so-called third phase of Chandigarh has come up as an act of expedience containing sectors beyond Sector 47. No data has been collected and compiled over the years to see what went wrong where and how to stem the rot.

The precise function of the city is gone. Now you have Malls in the Industrial Area. There is so much noise about the introduction of Metro—an unaffordable public service that is out of place in a city like Chandigarh. Mohali was the first to violate in a big way the Periphery Control Act (1952) to which the Punjab Government was the original signatory. From the State Capital it was made a Union Territory without any attempt at understanding its repercussions. Some wild brainwave prompted the politicians to keep four villages within the *planned* city without any plan to conserve the original Chandigarh—creating a repulsive rural-urban *pot-pourri*.

Population fixed at 500,000 was intended to maintain such quality of life as you expect from a city planned by the 20th-century's greatest architect. PGI [short for Post-Graduate Institute of Medical Education & Research] that was established by Chief Minister Partap Singh Kairon to outclass AIIMS has come down to the level of a General Hospital from that of Tertiary Health Service, vitiating its role as a centre for advanced research and higher medical education. The population has risen to 12 lakh. Open spaces now have



Smart City Initiatives in Chandigarh

permanent **Rehri (push-carts) Markets. Violations of the Building Rules are galore. (4)** Our 1,000-year-old slavery has impoverished us in body, mind, and soul, so much so that hunger, nudity, and homelessness haunt us. Our baser instincts have mutated into perpetual land-grabbing. To add fuel to the fire, various Chief Commissioners, with the sole exception of Dr MS Randhawa, and Administrators of Chandigarh have come and gone leaving behind monsters upraised to personal glory. The first Prime Minister's rhetoric of “Socialistic Pattern of Society” was nowhere in sight from the very beginning, and the North-South Divide among sectors and citizens has only aggravated to repulsive ugliness.

First 10 sectors, leaving the Capitol Complex or Sector 1, have 25,000 persons on 1500 acres, which is a density of 17 persons per acre.

First Phase in the original Master Plan was planned for 1.5 lakh on 8,000 acres [19 persons per acre]; the Second Phase was to accommodate 3.5 lakh on 6,000 acres [58 persons per acre]; and the monstrous Third Phase would house 4 lakh on 2,000 acres [200 persons per acre]! Six-storey buildings are allowed now, but this height would go up to 10 storeys, the height of Secretariat building.

If you don't like what I have said, please ask for a SANE, *not SMART, City (5)* that calls for our collective creative contribution—beginning in SANITARY minds. The word 'Sanity' is distinguished from 'Sanitary' only by two letters: 'a' and 'r' which stand for 'Active Reason', meaning thereby such Sanity as finds its ultimate consummation in Reasoned Action, *not* noisy debate or theatrical declamation.

In 1991, we had a population of 5.75 lakh on 14,000 acres [41 persons per acre]. Now we have four lakh people doomed to live on 2000 acres when only 25,000 persons live on 1500 acres in the first 10 sectors. This qualmless discrimination puts a question mark on the sacrosanctity of PREAMBLE OF THE CONSTITUTION OF INDIA that promised to secure to all its citizens: “JUSTICE, social, economic and political...”



The city of sun, space verdure

The crime of various kinds little known until two decades ago is now rapidly growing reminding us that the Preamble is hollow rhetoric fit only for political debates—far removed from socio-economic reality. It makes Chandigarh a modern monument of chronic sickness. It brings alive Darwinian imperative of 'survival of the fittest, the weaker must go to the wall', the scary difference it demonstrates in perverted power of crime as the handy weapon of the deprived and the wilfully neglected to claim their space in the rapidly shrinking Space that is telling upon the **health of Sun and Verdure, (6)** Le Corbusier had fancied to be the three Principles of Town Planning.

But how do you expect Humanity to strike root in the sordid soil composed of real-estate greed, *laissez faire*, polluted air, congested roads, haphazard parking, road rage, discriminatory overcrowded housing, etc. **(7)** The blame game, though easily available, enthusiastically engaged in, and enormously enjoyable, will not avail because we are all party to the *unmaking of humanity*, and we hail from the same source—a lingering legacy of indiscipline, unbridled ambition, mythological mindset, political egotism, bureaucratic barriers, professional incompetence, industrial exploitation, traders' wilfulness, and tropical lethargy that we sorely mistake for a spiritual endowment.



Its very building is the beautiful Soul of Urbanity



Laissez faire, polluted air, congested roads, haphazard parking, road rage

Let us celebrate our grand, if unenviable, victory in Urban Planning: *We have made the City by Unmaking Humanity.*

Is there an alternative to this damning doom? Yes. We should build more and more cities. Urbanising India would require 2,000 cities of the size of Chandigarh. If we build 40 cities at 25-year intervals we will be busy for 1,250 years. As the example of Chandigarh has proven "Urbanism" sells, which substantiates my thesis that the making of cities is the surest way of creating evermore jobs of all kinds for the largest number of people. However, keeping in view our great tradition grounded in 'Forest Culture', I have developed the concept of *Van-Urbanisation* (*Van* means 'forest'), which is the planting of all kinds and scales of forests from the national to the regional to the state to the district, down to the level of the neighbourhood. Such a holistic plan requires that we superimpose on the country's map 60 kilometres by 60 kilometres grid to plot the location of new cities.

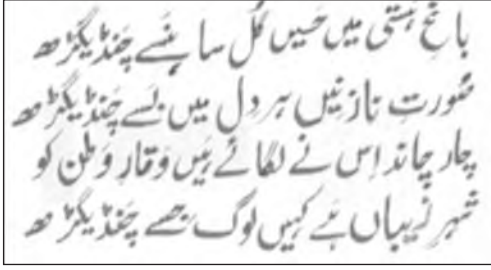
The Directive Principle of our national urban-planning policy should be to *ruralise* our cities rather than *urbanise* our villages. This approach would ensure that our centuries-old culture is kept vibrantly alive. Our national trait is *rusticity*, not sophistication, that remains rooted in our 'Collective Unconscious' as a living tradition of humaneness, compassion, camaraderie, and informal lifestyle sustained by undiminishing love of Mother Nature!

Equipped with our **Holistic Humanism** that had taken birth with the Vedas centuries ago and our fertile imagination for innovation not only can we accomplish this formidable task gloriously well but also show the world a model that subsumes all the 'isms' associated with the correction of things gone awry by unbridled lust for creature comforts made available by soul-consuming greed.

If charity is to begin at home let us start with Chandigarh, appreciating the aesthetic charm of its Built Environment and resolving to conserve it as the world's most significant Modern Heritage—beyond the capricious urge for UNESCO's certification.

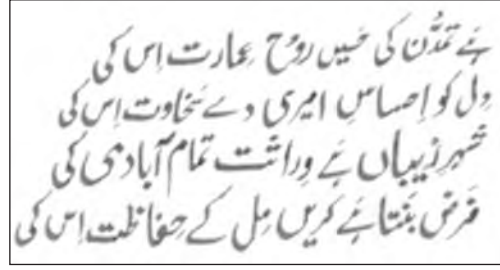
Let me wind up my weird verities by my two Urdu quatrains which I have rendered into English verse for the benefit of the

readers who cannot read Urdu script even though it is an Indian language.



*Baagh-i-hasti mein hassen gul sa hansey Chandigarh
Soorat-i-naazneen har dil mein basey Chandigarh
Chaar chaand is ney lagaaye hain waqaar-e-watan ko
Shehr-e-zeibaan hai kahein log jisey Chandigarh*

Chandigarh blooms in Life's Garden like a Beautiful Flower
As a pampered Beauty dwells Chandigarh in every soul
It has enhanced the country's glory manifold
What people call Chandigarh is, indeed, the City Beautiful



*Hai tamaddun kee haseen rooh imaat is kee
Dil ko ehssas-e-ameeri dey sakhaavat is kee
Shehr-e-zeibaan hai viraasat tamaam aabaadee kee
Farz banta hai karein mil key hifaaizat is kee*

Its very building is the beautiful Soul of Urbanity (8)
Its generosity makes the heart feel a touch of wealth
City Beautiful is the Heritage of entire Humanity
It's our collective duty to protect its aesthetic health



Pencil sketch on canvas of Le Corbusier by Dr. SS Bhatti

An Imageability of Heritage Core of Walled City of Jammu



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Ar. Lokakshi Gandotra, currently working with Border Security Force, Ministry of Home Affairs, New Delhi, India as Architect with designation as Inspector (Architect) from last six years by incorporating the knowledge of Sustainable Architecture to the work entrusted through innovation. I did my B.Arch from Guru Nanak Dev University, Amritsar and passed out in 2012, thereafter did Masters in Sustainable Architecture from Central University of Rajasthan and passed out in 2014 and joined Border Security Force, Ministry of Home Affairs in 2014.

ABSTRACT : *Historic cities exhibit rich Architectural and Cultural Heritage. These cities are the manifestations of tangible and intangible heritage following evolution of Human generations. Most of the historic cities in the developing countries are facing a major threat due to rapid urbanization and has changed the perception of cities. To meet the need for more facilities and development for managing the high density in the central core, the pressure is building over the land and other major resources of the city.*

This leads to haphazard developments within the city core, change in land use and encroachments. The city basically transforms its originality and succumbs to the demand of economic forces. Quite often, the joy and pleasure of watching the Architectural imagery and organization of spaces is totally lost.

Kelvin Lynch says "looking at cities can give a special pleasure" and "nothing is experienced by itself but always in relation to its surroundings. The sequences of event leading up to it, the memory of past experiences, every citizen has hold long associations with some part of his city and his image is soaked in memories and meanings".

It is thus important that the Heritage and Architectural character of cities is conserved while catering to the economic imperatives. This requires study of core area of city to maintain its image.

Jammu, "Duggarpradesh", the city of temples and the winter capital of Jammu & Kashmir, located on both the banks of the River Tawi is well known for its Architectural Heritage and beauty. The Old Walled city of Jammu is situated on a hillock on the right bank of Jammu Tawi. All economic, social, government and cultural activities are concentrated in the this area .This area comprises of Mubharak Mandi Palace Complex, Raghunath Bazaar, Gummat Bazaar, K.C.Residency road ,Kanak Mandi, Gummat steps, Upper Gummat and Vivekanand Chowk.

This paper aims to imbibe the issues and problems of the heritage core of Jammu city which can become the basis towards framing of appropriate development regulations and strategies for a city.

KEYWORDS : *Architectural Heritage, Heritage Core, Imageability.*

Introduction :

Architectural heritage of any city is a rich treasure. It gives a holistic experience to the international and domestic tourists and rejuvenates a sense of pride amongst the residents. It is also an important tool for urban renewal of the city. By developing a tourist itinerary through a most representative historical fabric of a city, it is intended to incite a number of ancillary projects that support economic regeneration of the area and encourage the municipal authorities to address long term sustainability issues. These could include : improved conditions for the local craftsmen, local restaurants and accommodation facilities for the tourists, developing a community area or even infrastructure projects for improved drainage, solid waste management or rain water harvesting with participation of the residents along the week. Thus,

studying heritage core can be a micro project that addresses wider heritage conservation issues related to the city and, serves as a role model for heritage conservation of the entire city. This paper aims to imbibe the issues and problems of the heritage core of Jammu city which can become the basis towards framing of appropriate development, regulations and strategies for a city.

1. Jammu "Duggardesh" :

Jammu, "the city of temples" and the winter capital of Jammu & Kashmir, is located on both the banks of the River Tawi. The old city is situated on a hillock on the right bank of River Tawi. The old city area constitutes the highly congested and thickly populated with a variety of zones. All economic, social, government and cultural activities are concentrated in this

area, on one hand and many unauthorized housing colonies have mushroomed, on the other hand, in the area. The pattern of development is such that there is no scope of further development in this area on the basis of standard planning policies and controls. Hence, it shall have to be given the status of 'Special Area' to be treated in a different manner (Authority, Master Plan 2021).

This area comprises of Mubharak Mandi Palace Complex, Raghunath Bazaar, Gummat Bazaar, K.C.Residency road, Kanak Mandi, Gummat steps, Upper Gummat and Vivekanand Chowk. It stretches over an area of 404.1 ha of which an area of 249.44 ha is residential and lies between B.C. Road and River Tawi. The demarcation of the study area constitutes Planning Division-A of Master Plan 1994.

2. Image ability Analysis :

Image-ability according to Kevin Lynch is the quality of a physical object to evoke a sense of image in an observer. Physical attributes of the object including color, shape, texture, arrangement contribute in framing a structural image of the object. It represents the form of the city. It is the ability of an environment to evoke a mental image. Lynch defined a method of analysing legibility based on five elements: paths, edges, districts, nodes and landmarks.

THE ELEMENTS OF A CITY KEVIN LYNCH



Fig. 1 : Elements of city by Kevin Lynch

2.1 Paths :

Paths are the channels along with the observer customarily, occasionally or potentially moves. Eg. streets, walkways, transit lines, canals, railroads. Paths are the accessibility criteria of the urban form and it depends on how well and easily accessible it is within any area of a city .

The Paths in core city are named as Raghunath Bazaar linked to Kanak Mandi and Residency road which connects to B.C. road towards Mubharak Mandi Palace complex.

The inner parts of roads are well connected by the streets.



Fig. 2 : Arched Gummat Gate



Fig. 3 : Sabat



Fig. 4 : Modular System of Arches

2.2 Edges :

Dividing lines between districts are the linear elements not considered as paths by observer. They are boundaries between two phases or linear breaks in continuity.

In the heritage core city of Jammu, the edges of the path are well defined by buildings matching the profile of path. The buildings which focus towards the punctuation created by identity of market.

2.3 Districts :

These are Series of parts of which the city is composed and which are recognizable as having some common identifying character.

The character can be Typical Architectural features of the bazaar i.e. the use of chhajjas (sunshades) resulting in strong horizontal lines, projecting vertical blocks on bracket, a modular system of arches filled with delicate latticed screens to cut direct sun and glare of reflected sun in the street.

The elements usually found above the road were a Sabat, a room bridging the street, and the buttressing arches spanning between walls on either side of the street to provide structural strength and support for the opposite walls. Wooden balconies is another main element which is seen projected out on roads as chajjas for lower floor .Such Architectural features of old heritage buildings act as unifying aspect and very well defines district.

2.4 Nodes :

Centers of activity - strategic foci, which an observer can enter .these may be simply concentrated foci which gain their importance from being the condensation of some use or physical character. E.g. junctions, crossing or convergence of paths.

A typical feature of old walled city of Jammu is the chowk where smaller narrow lanes meet the main street of the mohalla at the end of a street or bazaar, serving as common meeting place for local community.

Major Chowks of the city are Raghunath chowk (junction of intersection of Gummat Bazaar, Raghunath bazaar and residency road), City chowk (connects Raghunath Bazaar to old city hospital road, Shalimar road and Kanak Mandi) and Shaheedi chowk (connects Kanak Mandi to Residency Road).



Fig. 5 : Panoramic view of Raghunath Chowk from Raghunath Mandir (left) to Residency Road (Right)

2.5 Landmark:

Landmarks are Point of references, simple physical elements external to the observer. These are prominent places in image ability of city. Systems of landmarks (sequential series) are important for way finding.

In heritage old walled city of Jammu, the major landmarks from Gummat Bazaar to Residency road are: Gummat Gate, Hanuman temple and Laxmi-Narayan Temple in Gummat Bazar ,Raghunath Temple in Raghunath Bazar, and Mubharak Mandi Palace Complex is itself a landmark for the area near Mubharak Mandi Complex.

3. Findings :

The old core city of Jammu has rich Architectural Heritage. The architecture of the buildings is a mixture of architectural styles and construction techniques, some specific to Jammu and others borrowed from outside. Though the Architecture is predominantly Hindu, it has interspersed Islamic influence of Late Mughal period with a blend of modified European Style and Rajasthan features.

Each district is unified by uniform architectural style .Each and every element used in traditional street furniture like lamp posts, railings, water taps reflects the same.

Original markets in the city, starting from left to right, include Gummat Bazaar, Raghunath bazaar, Kanak Mandi, Residency road along the main north-south and east-west axes that intersect at chowks.

4. Issues :

- Raghunath market being market of Kashmiri and Dogri Handicrafts, dry fruits, tea etc., and a full-fledged Jammu and Kashmir themed market resulting in Poor circulation pattern with excessive congestion due to ribboning of commercial activities along the roads and lanes.
- Inadequate parking.
- Increasing pressure of personalized modes i.e. autos etc. and parking of personalized modes on the roads.
- General Bus Stand within the city core and mushrooming of a large number of repair/workshops at the northern end of General Bus Stand and along Road is causing traffic congestion.
- The city is observed to have trends of Encroachment by on street parking alongside road reducing road width besides the provision of parking lots at different locations in the city.
- This all results in Low area under roads in CBD which is only 4%.
- Existing wholesale market at Kanak Mandi, Existence of the Old Sectt. New Sectt. Assembly Hall, Old Telephone Exchange building which generates heavy traffic.



Fig. 6 : Gummat Gate
(Main entrance of Jammu City from plains)



Fig. 7 : Raghunath Temple



Fig. 8 : Hanuman Temple



Fig. 9 : Mubharak Mandi Palace Complex

5. Recommendations :

5.1 Pedestrianization :

- Encouraging pedestrian friendly measures which would reduce vehicular congestion in the core.
- This would help preserve the environment and character of the old city and heritage structures.
- In view of this, wide pavements can be proposed in the area.
- This area can be delineated by introducing better pavements and regulating the flow of motorized vehicles will ensure more safety for pedestrians.

5.2 Promoting Pedestrianized Heritage walks :

Promoting Heritage walk with the help of signage and improved conditions. In offensive and defensive operations, this latter form of the linear pattern facilitates developing a series of strong defensive positions in depth, effectively blocking or delaying an attacking force moving along the canalized terrain.

- Promoting heritage walk with the help of signage and improved conditions in walled city from Gummat bazaar to Residency road and allowing only Cycle Rickshaws for movement of tourists and local people.
- In Mubharak Mandi Palace Complex itself, Heritage walk should be done and vehicles must be restricted to main gates of Complex with signage of all important monuments on the route.
- This will lead to zero destruction of Buildings of the complex which are being restored under the conservation project of Mubharak Mandi Complex.

5.3 Controlled parking :

- Cycling and walking can be promoted in these areas.
- A mixed land use can be promoted further. This is because it provides a certain sense of identity to the area that has been its unique feature since the beginning. If the residents are moved out, then this would lead to encouraging them to buy cycles to enable them to travel from home to their work places
- Improving existing roads.

5.4 Provision of street Furniture :

- Social spaces can be created in form of Street furniture in the city core such as lamp post, barricades (railings and bollards), seating, and litter bins as places for people to rest and interact with community along pedestrian travel way.
- Core zone street furniture can have special heritage character suitable for the ambience.

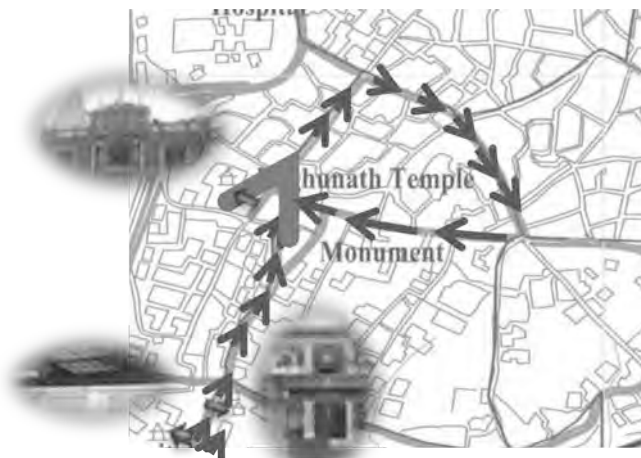


Fig. 10 : Conceptual Sketch for the Route of Heritage Walk in the city.

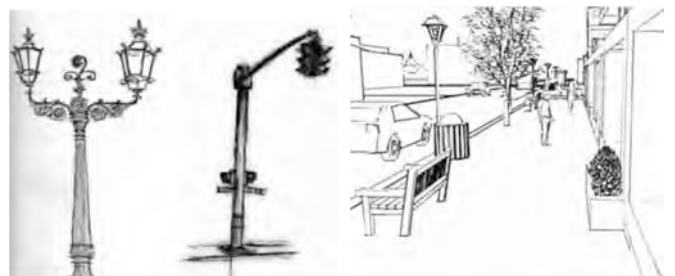


Fig. 11 : Recommended sketches of lamp post and street furniture



Fig. 12 : Existing antique taps

5.5 Restoring Image and identity of Heritage of city :

5.5a Restoring Elevations of buildings by repair and maintenance of faces of Old buildings and shops in the city.

- Irregular shop front name plates need articulation. It is proposed to have uniformity in dimension and mounting height. The shops can have a new outlook, which will merge with the existing architecture.
- Drinking water kiosks and toilets can be erected at regular intervals. Information kiosks are proposed to be installed at the entrance and exit of the core area.
- Posters, advertisements, and compound wall writings need to be controlled.
- Decentralized Activities centers (spatial-economic plan)

5.5b Improving layout of antique Heritage elements of city :

Improving the layout of traditional taps in bazaars and providing the same in streets with proper maintenance.

6. Land value :

As enquired in core city, Saleable plot area of 1 carnal(5440 sqft) has land value of about 1-1.5 crores in old city of Jammu. It is quite high even more than 1.5 crores on the main commercial roads of walled city of Jammu. (dealers, 2013)whereas many properties in old city of Jammu are evacuated properties which according to Custodian General J & K cannot be put for selling and comes under the State Govt/ which are giving them on rent basis.

Continuous population growths resulting in high residential density . These evacuated properties are of more cost value.

6a Recommendations for saving maintaining the land value:

- Government should identify development for positive change and value additions to business/people.

- To reward heritage properties that enhance or serve community goals(lowering property tax and vice versa)
- Governments can work with individuals, resident associations, trusts, affected communities, business houses, international donors, professional groups, academics, etc.
- Augmentation of existing infrastructure.
- To prepare design guidelines for façade control/sub division/signage/structural repairs/activity control to heritage property after their due classification as significant/medium/low cultural value.
- To visually integrate on the Axis all the important heritage components.

7. Conclusion :

To maintain the image ability of Old city of Jammu, measures have to be taken considering all the issues i.e. its Architecture, Congestion, encroachments, lack of amenities i.e. appropriate drinking water facility and toilets.

The increase in population is aggravating the problems pertaining to the core city and its enhancement should be taken up as the major aspect for future planning and development.

There is need of appropriate sustainable methodology to alter the city so that its image can be maintained for centuries.

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Humanities - Attempts at Interpreting the Syllabus for F.Y.B.Arch Students



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Introduction :

Humanities, as a subject, is prescribed in the first semester of First Year B.Arch curriculum. This subject aims to introduce students to social, cultural, anthropological dimensions of human behaviour. The subject and its application as such, are far reaching and questions regarding what should be emphasized, how to conduct the subject and how to sensitize students to above concepts require constant exploration. There is a risk of using terms such as 'culture' and 'society' in a very generic level, and the challenge is to make students aware regarding their own groundedness in such phenomena and at the same time interpret the phenomena according to their understanding and potential. In other words, the central issue is how to become aware of the reality of 'Self' and the 'Phenomena' and become aware of a relationship between the two? This article is our attempt in interpreting the aims of humanities to students' level of understanding.

Approach :

As far as humanities is concerned, we begin by seeing 'space' as a socio-cultural product. By extension, we mean that the experience of 'space' is informed by environment (or geography), culture (or memory) and any other values shared across humans. The domain of thoughts become important and how these inform our actions and manifestations in terms of architecture/ built environment become critical aspects to be considered. Our approach is to expose students to 'situations' (or phenomena), wherein, they realize/ experience/ interpret space (or the built environment) as informed by geographical, historical and philosophical factors. For the batch of 2017-18, we decided to explore the theme of 'Man and Nature'.

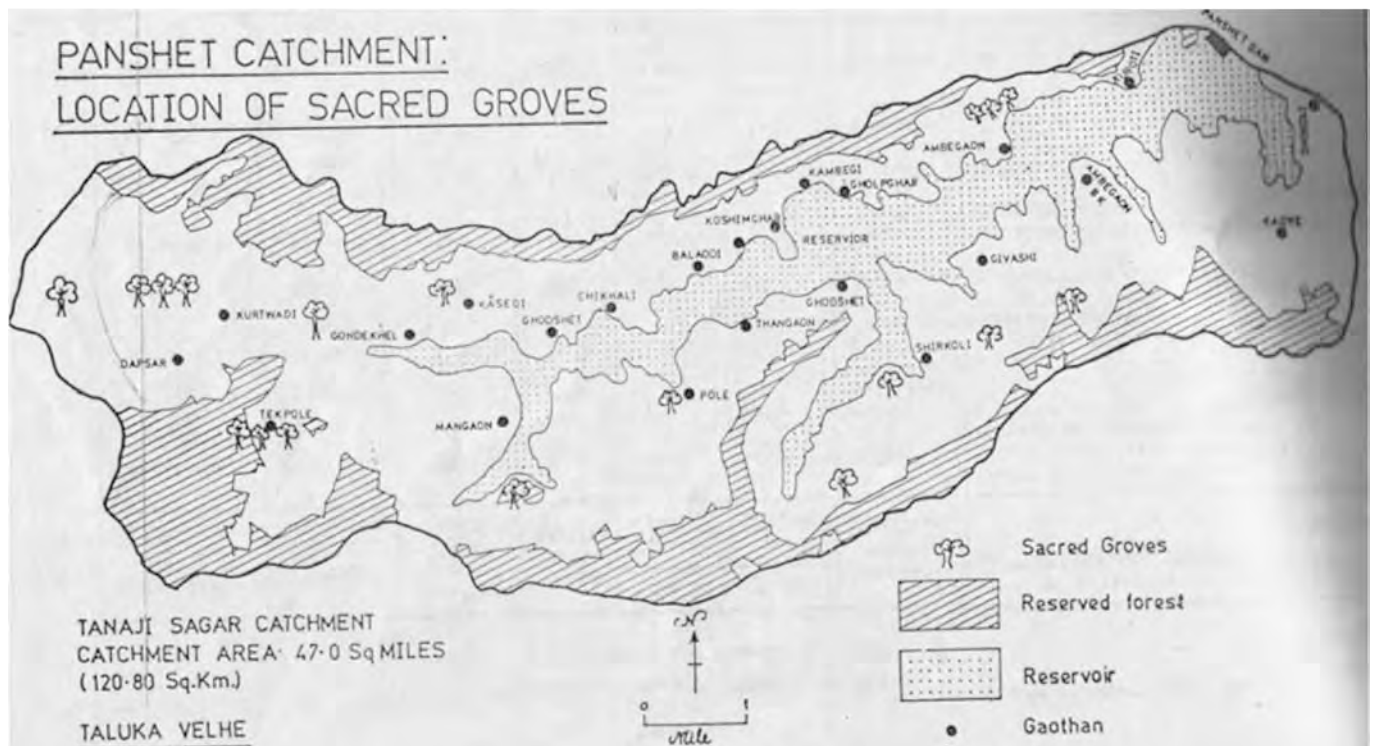


Fig. 1 : Map of Catchment Area of Panshet Dam and names of settlements, Source - Google

Selection of Case study/ situations and preparations :

We required a more direct or less sophisticated relationship of Man and Nature, wherein wholesome awareness of following factors that informed the character of built environment, could be perceived by the students, namely: agricultural practices, resources of food supply and storage systems, construction practices (and usage of habitable spaces), animal husbandry, tools and equipments that form a part of their life style, clothing, and forms of art.

These factors became the criteria of selecting case studies - extremely small hamlets located along the backwaters of Panshet dam. These hamlets were untouched by urbanizing forces and continue to depend extensively on natural environment (climate and agricultural practices). We did a reconnaissance survey and shortlisted four settlements - Kadve, Varghad, Giwashi and Shirkoli. We were assisted in conceptualizing the approach and selecting the cases by Oikos, a firm involved in Nature Restoration and Biodiversity Conservation.

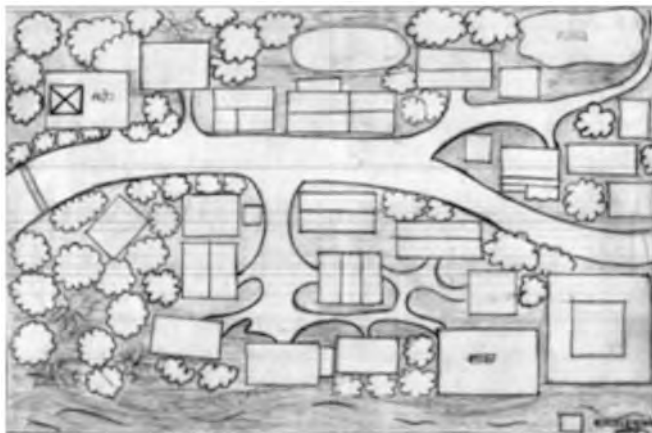


Fig. 2 : Cognitive Map of Givashi - Note the distribution of pathways, built forms, panshet backwater and landscape elements shown in the map. Credits - Rajsheel Bhutkar, Ankita Bura, Muskan Chatwani

Planning of the Semester :

Humanities was conducted for three consecutive lecture periods (45 minute duration each) once a week for a total of 12 weeks. Thus, we were looking at 12 interactive sessions with the batch. We spent four sessions for orienting the students to the Theme/ purpose of the subject along with preparing them for the planned site visit, one day for site visit, followed by balance six sessions for studio working and discussions to generate tangible output in terms of quarter imperial sized portfolios. We describe each stage of conducting humanities studio as follows:

Orienting the students to site visit :

To begin with, the students were shown a ten minute video clip of 'Varasa' conceptualized by Oikos. Varasa focuses on indigenous lives of rural settlements in Maharashtra and how an intimate relationship of ecology and their life exists. We thought that the idea of wholesomeness of architectural

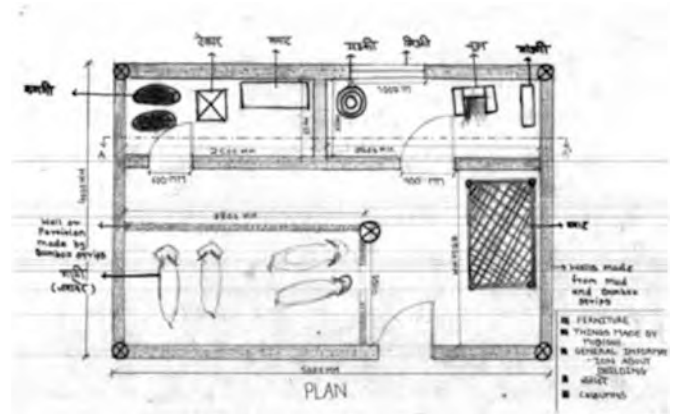


Fig. 3 : A typical unit plan showing spaces, furniture items in local terminology. Credits - Rajsheel Bhutkar, Ankita Bura, Muskan Chatwani

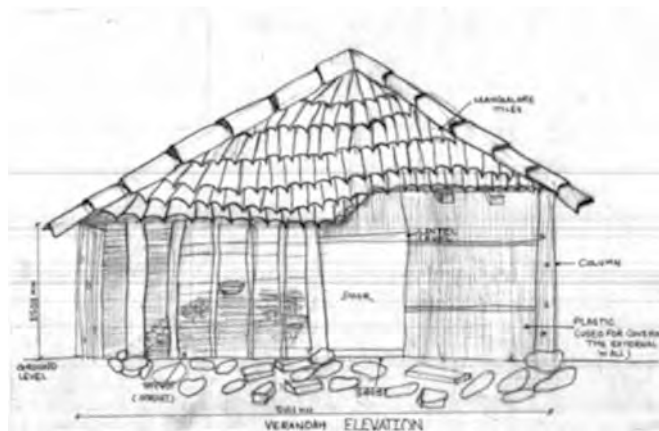


Fig. 4 : Typical schematic elevation of one dwelling. Credits - Rajsheel Bhutkar, Ankita Bura, Muskan Chatwani



Fig. 5 : Photos depicting local food resource, spaces of storage and indication of how many people were required for constructing the dwelling. Credits - Rajsheel Bhutkar, Ankita Bura, Muskan Chatwani



Fig. 6 : Local terms used to describe spaces, utensils, food items, clothing and miscellaneous terms.

Credits - Rajsheel Bhutkar, Ankita Bura, Muskan

phenomenon could be referred to this video (Oikos, 2017). The students were asked to review the clip and state the categories under which, architecture seems to be informed.

As far as the case study is concerned, observation, sketching and drawing expressions were intended to be a part of documentation process. Therefore a discussion about the site settlements and the probable interview questions to be asked to the people were discussed with the students and a list of questions was prepared. The categorize under which, questions were to be visualized were - community information (people, occupation, family unit, daily routine, activity patterns etc.), nature of built habitat (construction, material, processes of doing, processes of maintaining, systems of protection, spaces organized etc.), food cycle (agriculture, cropping patterns, proximity to habitat, storage areas, tools and equipments etc.), art (any signs of painting, dance, festivals and corresponding spaces). The students were divided into four groups (from 10 to maximum 20 people) and each group was given one settlement to study. Some references for doing preliminary drawing exercises were also undertaken to represent the nature of the built environment corresponding to the organic spatial quality (Alghamdi, Mohammad., Bhat, Vikram., Rybczynski, Witold. 1984).

Planning at site :

All the four groups with six faculty members were taken to the settlements early morning. One entire day was planned for this exercise. Each of the group interacted with the villagers in the settlement. The students were free to enter any house, observe the physical built and unbuilt environment, interview people, take photos and sketch spaces/ items/ activities. They

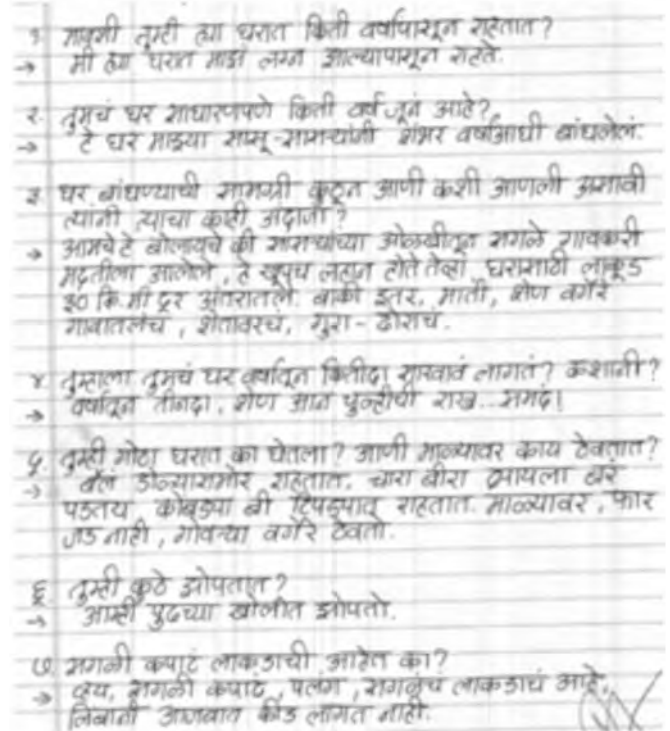


Fig 7. : Part transcript - on site interview + recording done regarding one family unit.

Credits - Sanika Mate, Ayushi More

were also told to prepare a list of spoken terms that they thought 'new' and had to categorize these words denoting space, furniture, activity, food. As felt necessary, photos and recording were taken by consent.

The final compilation of above data (portfolio) was generated in groups of three students. Each portfolio consisted of cognitive map of settlement, sketch plan, section and elevation of a house with local terminology of spaces, elements and other architectural and non-architectural elements. Interviews were transcribed as felt necessary. And each student within the group was told to graphically illustrate the idea of inter-relationships of phenomena and illustrate the idea of settlement through drawing. The following illustrations (fig 2 to fig 7) are an output of one portfolio of three students.

Faculty Learning :

We feel that the relationship of Man and Nature has been satisfactorily attempted by the students. Many ideas, especially about interconnection diagrams were a result of their observations of the site and ongoing studio discussions with the faculty. One such idea is expressed below diagrammatically :

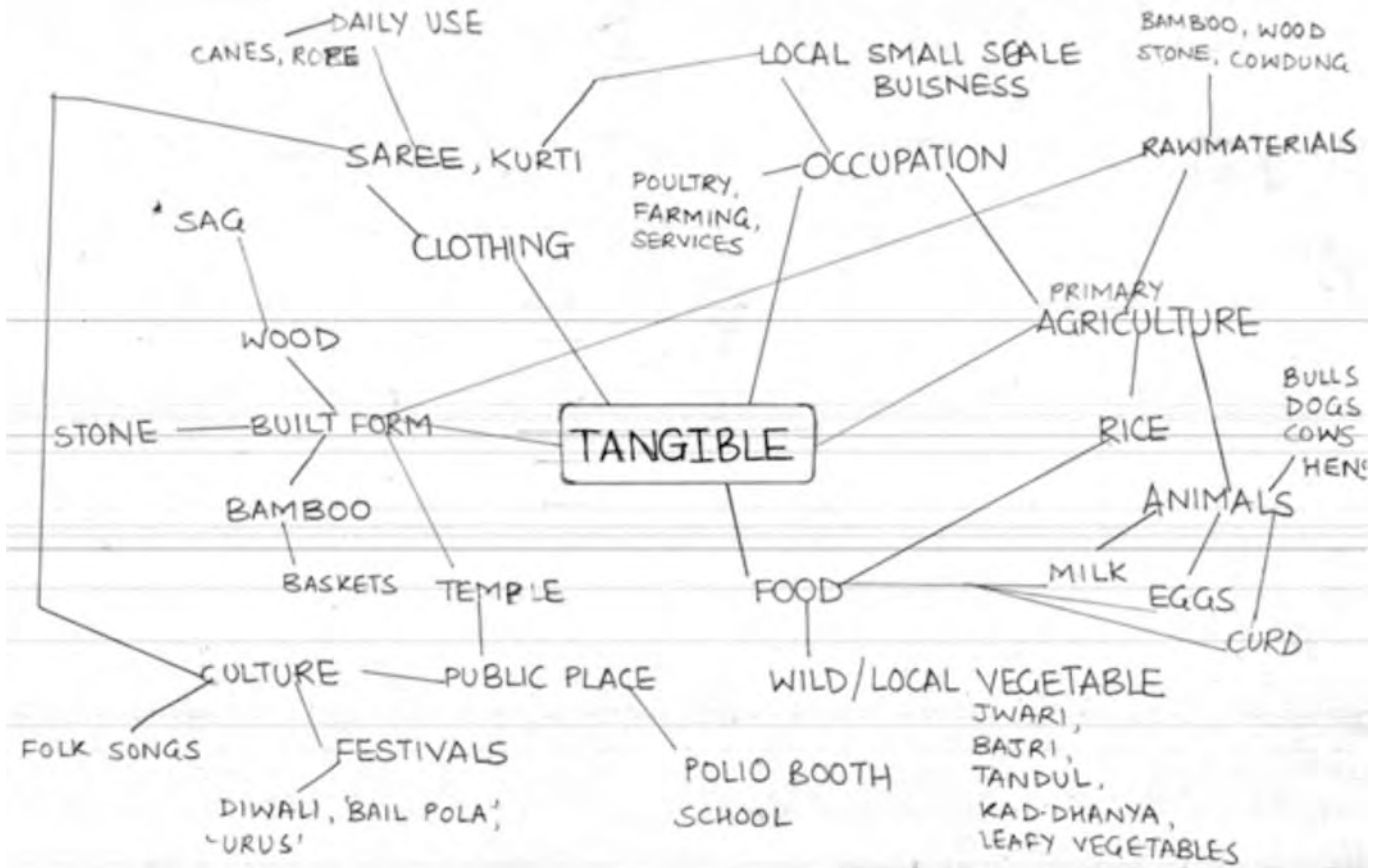


Fig. 8 : Student's attempt to shown interconnections or factors that affect the creation of built environment. Credits - Sanika Mate

Emphasis on the use of local terminology also pushed the students to see 'space' as a contextual idea - an idea that is informed from geography/ environment primarily and subsequently by ways of doing things. The phenomenological approach ensures that students need to 'interpret' the situation based on their own discoveries and reliance on internet therefore becomes redundant. Necessarily, the post-site studio interactions become more discussion oriented and modes of debates and discussions churn out ideas of interpretation - for students as well as the faculty. The mode of inquiry, therefore, places students and faculty at a peer-to-peer level and faculty learns as much as the students themselves. Apart from this, students learn to see 'form' as a result of various factors stemming from geography, history and indigenous values. Thus, talk of 'local', 'sustainability' become extremely contextual and they start to be viewed critically, thereby avoiding generic usage. The learning gets carried forward for subjects such as history of Architecture in succeeding terms, wherein the built form is seen in contextual terms. Humanities can also be seen as a potential to sensitize

student's understanding of a design response. Naturally, their way of looking at architectural design also changes in appropriate ways.

Acknowledgement :

We wish to express our acknowledgement to Ketaki Ghate, Founder and Managing Partner of Oikos For Ecological Services for helping us in conceptualizing the exercise and Sarika Gidde for assisting and accompanying in reconnaissance survey of the hamlets.

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Exploring People's Perception about Facilities for Promoting Physical Activities in Urban Areas : Case of Pune.



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ABSTRACT : Regular physical activity is widely accepted as behaviour to improve quality of life which is largely neglected in busy urban life. Cities need different kind of space to promote physical activity which also contributes to psychological well-being, and the health of urban residents. This research presents people's perception involved in urban interventions linked with physical activity in context of residents of city of Pune as a case. The synthesis of evidence indicates that several attributes of urban environments which are associated with physical activity are used as well as valued differently by urban dwellers.

1. INTRODUCTION :

Public open spaces such as parks, playgrounds, and green spaces are key built environment elements within neighbourhoods for encouraging a variety of physical activity behaviours. The city dwellers are experiencing poorer health and declined quality of life due to urbanization as well as loss of urban green space. (Byomkesh et al., 2012) Living without natural environment which is dangerous to human health is a common phenomenon in urban areas around the world. (Maller et al., 2008) Health and well-being of people is benefitted by reconnecting with natural environment through urban parks & green spaces. (Brown 2014) It is widely recognized that the health value of physical exercise is strengthened by promoting healthy activities. Urban environment include a number of indoor and outdoor spaces and facilities each of which has their own intent as well as they are used by urban dwellers differently. Research established the need to design and develop attractive streets, parks and other outdoor spaces to promote walking providing health benefits for the population at a larger scale. (Thompson, 2013) The motivation of doing physical activity by the features of built environment like presence of sidewalks, streetlights, interconnectivity of streets, population density & use mix leads to drastic reduction in obesity & other health problems. (Lopez, 2006) The rise in physical activity such as walking,

biking is associated with the setup of infrastructure like leisure, sports facilities or parks. (Bedimo-Rung et al 2015) The sports activities have an influence on motivation, skills and frequency of participation in context of their typologies as well as availability. Experience associated with a sport activity changes with the personal characteristics, motivations and skills of an individual. (Chalip, 1984) Adequately designed sports facilities is an important influencing factor which affect people's participation where physical activity behaviour is affected by perceive safety. (Aradim 2015) This research is an inquiry about the importance of physical fitness in urban living and which could be achieved with active participation in various kind of sports and other allied activities available to city dwellers.

2. METHOD :

This research is aimed to examine the pattern of participation and explore people's perception regarding health related facilities in urban areas with city of Pune as a case with a questionnaire survey. First people's involvement and use of various activities are examined. Activities were classified as outdoor and indoor activities where outdoor activities included, running, walking, cycling or play a sport. Indoor activities were yoga, gym and dancing. The results of questionnaire survey are presented in the next section.

2.1 PARTICIPATION IN OUTDOOR ACTIVITIES :

It has been found that 34% people go for running every day, 26 % thrice, twice or once however 20 % either go on holidays or they never go for such an activity. Most preferred activity found is walking as analysis indicated that 76% people go for a walk everyday 20% thrice, thrice a week, 6% on holidays and just 4% not included this activity as a part of their day to day life. Cycling is considered predominantly a leisure time activity as 50% respondents reported that they go for a bicycle ride on Sundays or holidays, for 16% respondents it is an integral part of daily life and they go for it daily, 14% try to make it to go at least thrice a week while 14% did not have any interest in this activity. Similarly playing a sport is also found an activity preferred by respondents on holiday as reported by 40% respondents, 10% play a sport daily, 14% play thrice a week, 3 % each manage to play a sport once or twice a week however 30% respondents are not at all play a sport (fig.1).

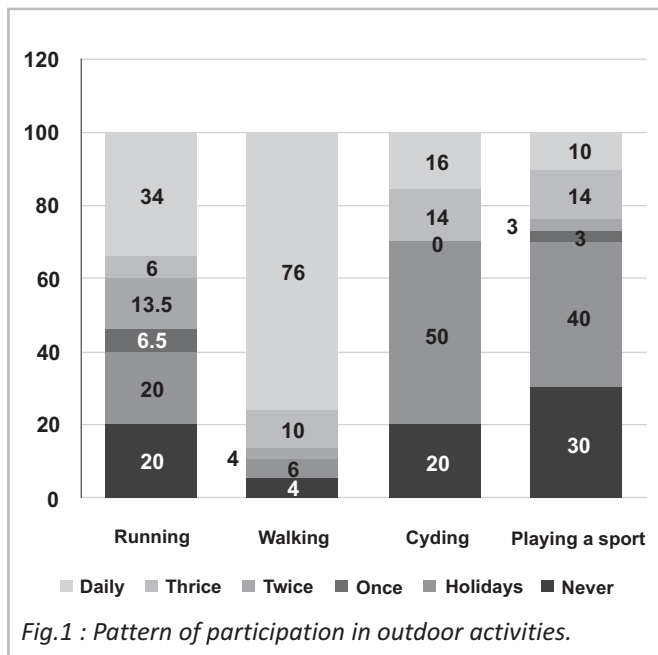


Fig. 1 : Pattern of participation in outdoor activities.

2.2 PARTICIPATION IN INDOOR ACTIVITIES :

Yoga is not found as an activity preferred by many as only 6% people go for yoga every day, 10 % thrice, twice or once a week , 13 % either go on holidays however 50 % never go for it. As per analysis going to gym for physical fitness is comparatively preferred activity as 30 % people go for gym every day, 10% to 16% go twice and thrice a week , 3% once a week however 10% go on holidays still 30 % never opted to join a gym. Dancing found a specialized activity which is not preferred by a large majority as 57% do not have any interest in dancing as an activity to perform for health benefits, 16.5% respondents try it as a change in routine life and go for it in leisure time, 10 and 6.5% try to make it once or thrice a week however very small number of respondents were found passionate about dancing and they do it regularly. (fig.2)

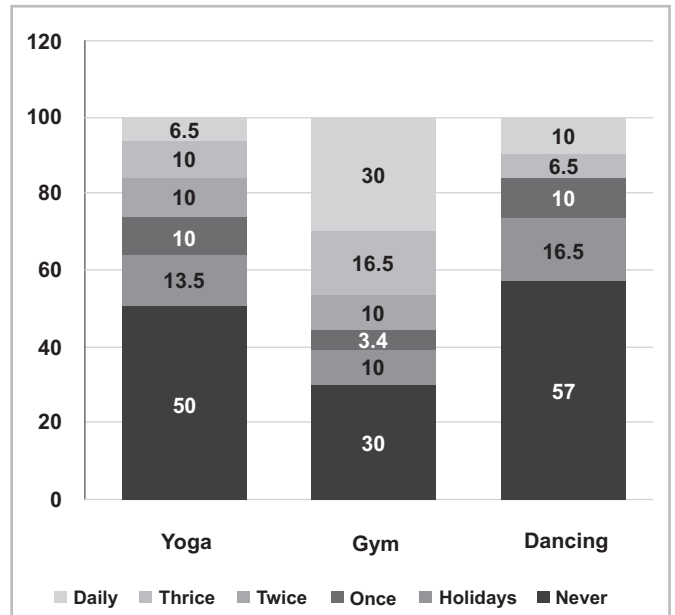


Fig. 2 : Pattern of participation in indoor activities.

3. NEED OF VARIOUS FACILITIES AND AMENITIES :

The people's perception regarding need of various facilities and amenities that support physical activity and consecutively promote health are further explored. The inquiry was focused on two types of facilities viz. outdoor and indoor where outdoor facilities included swimming pool, walking track, park, playground and cycling track.

3.1 PEOPLE'S PERCEPTION REGARDING NEED OF OUTDOOR FACILITIES :

Need of a swimming pool was strongly felt as 70% respondents rated it as very important. Walking being the most preferred activity for health promotion presence of a well designed walking track was rated very important by 83.3 % people while not a single respondent denied about its importance.

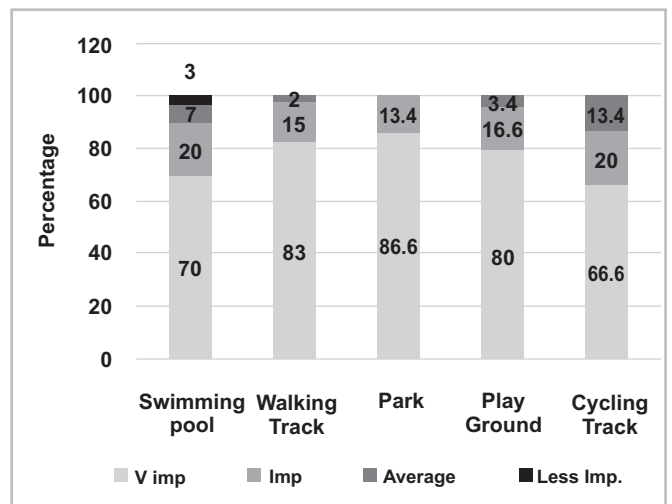


Fig. 3 : Need of outdoor facilities

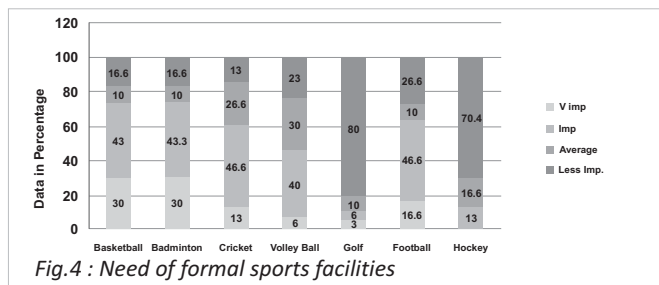
EXPLORING PEOPLE'S PERCEPTION ABOUT FACILITIES FOR PROMOTING PHYSICAL ACTIVITIES IN URBAN AREAS : CASE OF PUNE

Presence of a park reported as the most needed place as majority of respondents that is about 87.6% found it very important, 13.4 % opted as important. Playground was also found one of the important facility as per analysis which indicated 80 % people's preference for it, 16 % found it important and just 3 % people were not strongly preferred it.

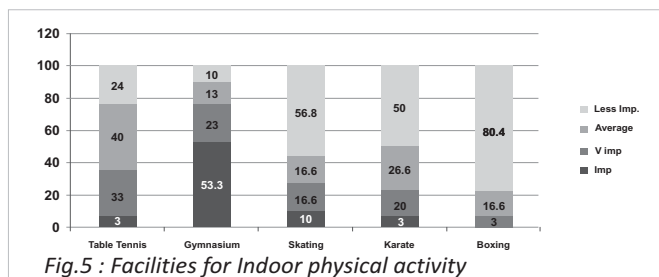
Preference for a cycling track was rated as least preferred as 66.6% found it very important, 20% important and for 13.4% respondents it is moderately needed. (fig.3)

3.2 PEOPLE'S PERCEPTION REGARDING NEED OF FORMAL SPORTS FACILITIES :

Formal sports are also part of life of urban dwellers for which specialised facilities are required. How people rate importance of such facilities is further examined. Basketball and Badminton court were rated as the most preferred facility followed by Cricket and Volley ball while need for a football court was preferred to certain extent. People's inclination towards hockey was not found much even it is India's national sport however, need of a Golf course is preferred by noticeably less number of respondents. (Fig.4)



Facilities for Indoor physical activity play an important role to keep urban dwellers fit, need of which is further examined. A well equipped gymnasium was rated as the most important followed by a Table tennis court, facility for skating and karate were marginally preferred however least preferred facility found was boxing. (fig.5)



Participation in an activity in urban environment is associated with need of various amenities that are needed differently for different people. As per analysis drinking water and safety is mostly needed by almost all the respondents followed by availability of seating and toilets however need for parking and adequate lighting is rated very important by 77% people however 23% rated it as important. Presence of amenities were found important as nobody rated any of such amenity moderately or less important.

CONCLUSION :

Research established that higher quality playing and exercising facilities promote physical activity and serve city dwellers in a better manner. There is a need of creating new places for physical activity as well as enhancing existing facilities in urban areas. It has been found that despite the benefits and opportunities provided by the facilities that promote physical activity in urban areas an overall concern in providing such facilities is lacking. Such facilities need to be provided considering the aspirations, needs and their social and spatial distribution within the city so they can be used by larger and different cohort of populations to their full potential. Physical fitness is of utmost importance to cope with ageing and health related disorders. Participation in activities that increase physical fitness also affects the mental health of people. Reflecting on this provision of the green spaces, playgrounds, gymnasiums, walking tracks, swimming pools and other facilities are recommended in urban areas. Such facilities need to be made available for every person adequately in order to fulfil need of all age groups. At urban level it is recommended that planning should be aimed to create an environment that maximizes participation with required safety and other amenities. For senior age group it is important that such facilities should be within walking distance so they can take the benefit of them and motivate them to visit outdoors regularly. Pattern of participation in activities like outdoor sports, yoga, gyms, walking etc. differs from person to person depending on various factors like age, gender, aptitude, physical fitness etc. Presence of such facilities is desirable as it makes a city more adaptable, lively and sustainable.

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Development Of Pollinator Corridor



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Introduction :

The world cities continue to experience the fastest pace of urbanization for the past few decades and have been associated with significant economic, social and environmental transformation. The scale and speed of urbanization has posed serious concerns and additional challenges to maintain a balance between sustainable development and ecological preservation leading to resource scarcity, economic disparities, environmental degradation and pollution and loss of biodiversity. With soaring urbanization, the ecosystem has shattered, leading to the demolition of nests & foraging habitats for biodiversity. Sadly, it is often the case that urbanization causes biodiversity to decline. As cities grow vital habitat is destroyed or fragmented into patches not big enough to support complex ecological communities. In the city, species may become endangered, or even locally extinct as previously natural areas are swallowed up by the urban jungle. This paper proposes the development of pollinator corridor for highly fragmented local ecosystems in an urban area by introducing green museum and pollinator corridor platforms in neighbourhood parks. Beyond a certain point,

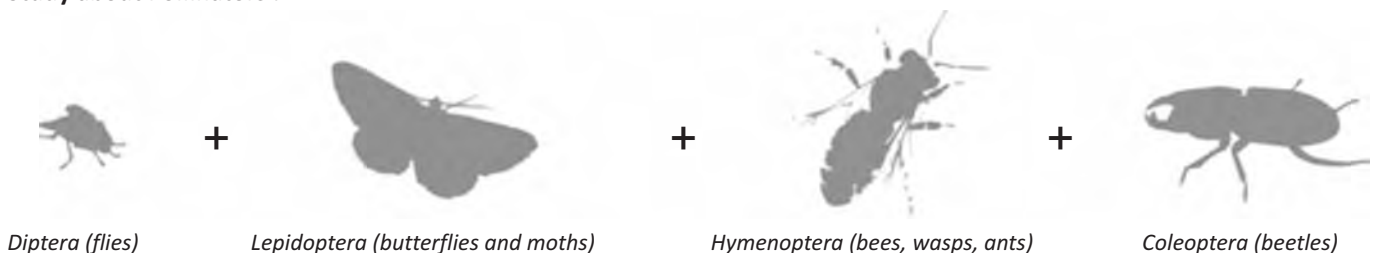
crucial and sensitive fauna such as pollinators, risk elimination. Pollinators place high-priority and high-impact urban conservation within reach. The reasonably small spatial and secular scales of insect pollinators in terms of functional ecology (for example, habitat range, life cycle, and nesting behaviour compared with larger mammals) offer opportunities for small actions to yield significant benefits.

Native pollinators facilitate one of the most basic and essential processes on the planet—plant sex. Some 90 per cent of flowering plant species depend at least partly on animal pollinators for reproduction. Pollinators, however, are declining in both diversity and number, facing threats including development, pesticides, invasive species and climate change.

Numerous analysts, including those included in a significant U.N. report on pollinator health note that associations among territories secure pollinators by permitting them to move to more hospitable climates, or maintain a strategic distance from intermittent threats such as pesticide application.

CROSS POLLINATION → SELF INCOMPATIBLE → PLANTS LEADING POLLINATORS

Study about Pollinators :





Each insect species has its own role in the ecosystem, and its loss could affect the complexities and abundance of other organisms. The honeybees are insects of an order Hymenoptera, which also includes wasps and ants. Numerous studies reveal members of Hymenoptera (bees, wasps, and ants), Coleoptera (beetles), Lepidoptera (butterflies and moths) and Diptera (flies) as the chief pollinators. Among them the Hymenopterans, especially the bees, are the most effective pollinators of crops and various other flowering plants, singularly accounting for pollination in about 70% of the world's cultivated crops. [04]. It is not just the self-incompatible plants that benefit from cross-pollination, but self-fertile varieties also produce better and healthy fruits and seeds on getting cross-pollinated.

The decline in the pollinator population and its diversity presents a severe threat to agricultural production, conservation and maintenance of ecosystem in many parts of the world.

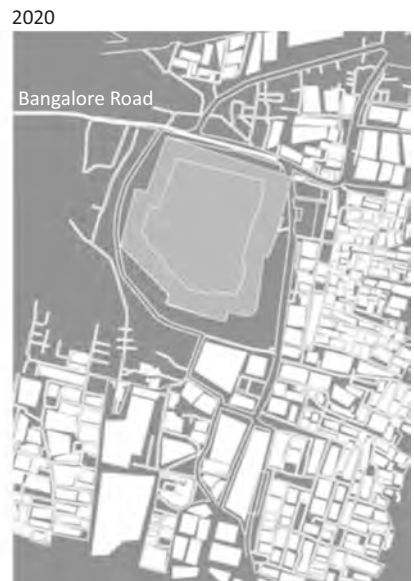
The figure shows the pollinator contribution to biodiversity. Corridors may benefit pollination services by facilitating pollinator movement among habitat fragments, pollinator demography and higher availability of pollinators and outcross pollen.

The chosen city for this project is "VELLORE". Vellore, city, northern Tamil Nadu state, southeastern India. It lies along the Palar River, about 80 miles (130 km) west-southwest of Chennai (Madras). The N.H 46 from Ranipet to Krishnagiri (forming part of madras - Bangalore corridor) and the state highway No.1 (Cuddalore - Chittoor) cut across the town. Palarriver passes through the city, and the city is located close to the forested slope of eastern ghats with the gentle slope from west to east. The Vellore and palamathi reserved forest areas are located on the eastern side of the town. The southern and the western sides of Vellore are mostly plain agricultural lands with many irrigation tanks.

Why to select Vellore city?

Vellore is chosen as one among the 60 smart cities for development. Also, it is one among the four cities to be chosen in Tamil Nadu. Smart city work research was undertaken by a private analytics company Athena Infonomics [01]. A combination of 'Retrofitting' and 'Redevelopment' is proposed in a delineation of 1588 acres covering 12 wards occupied by the fort, vehicle garage centres, CMC hospital, market area, and a mix of low and high-income household groups.

Morphology



● Rice Fields ● Vellore Fort

The above morphology analysis shows the drastic change in the land use of the area around the site, implying that due to modernization after the independence, the agricultural lands have entirely vanished. The ratio of voids to built space has also reduced massively. Hence, having a green museum with pollinator corridor will aid in bringing a balance of biodiversity and ecosystem in an overly congested area.

Percentage of voids

The number of public open spaces such as grounds and parks, were analyzed to derive the ratio of voids to built forms in the zone. The first study concluded that there are inconsistency and a high imbalance in the ratio of the voids to built spaces.

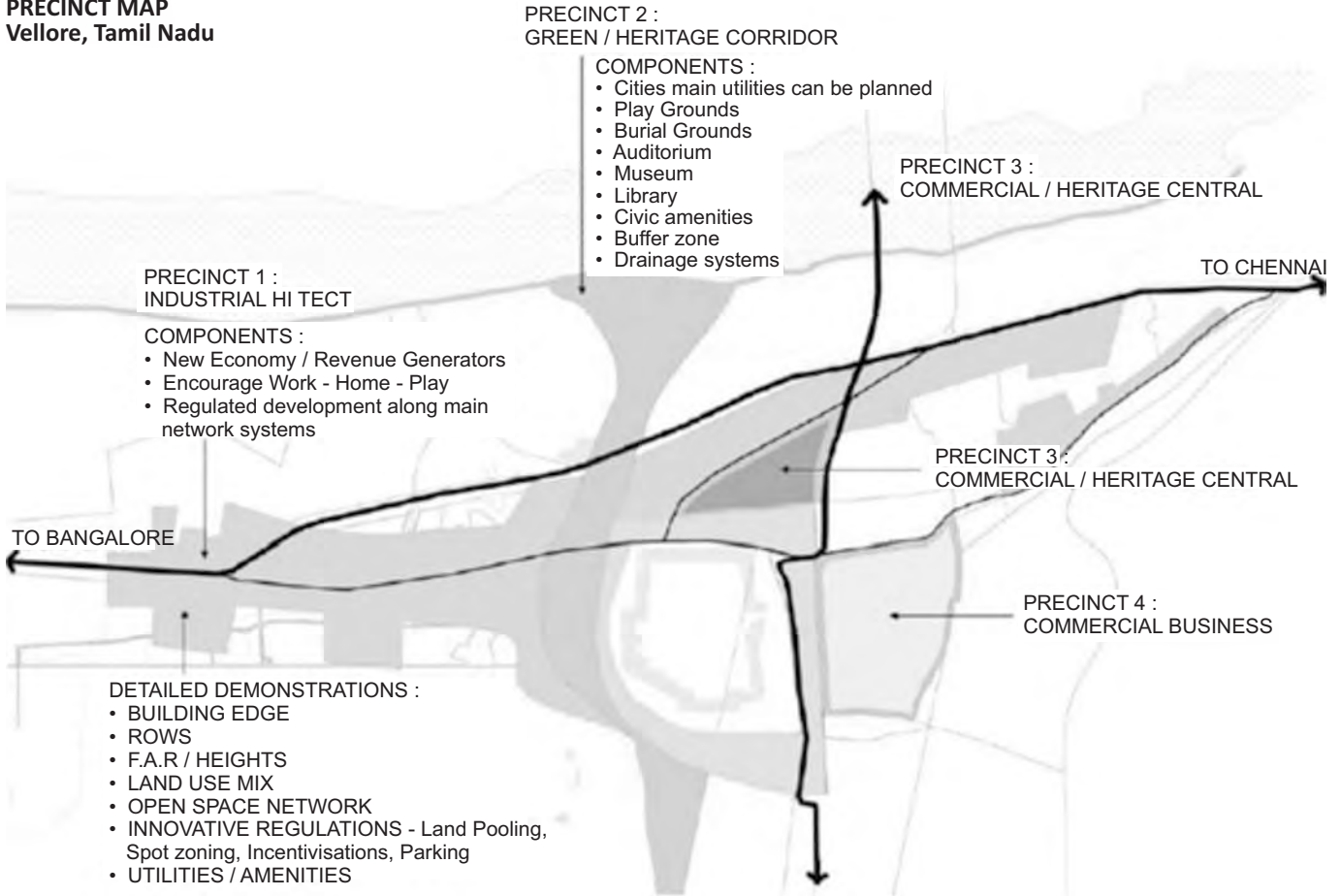
The city has 102 open spaces marked for park development, however most of these location lack green cover today. Open space availability in the Vellore city is 0.95 Sq.m/person, and open space availability in the built-up area is 1.20 Sq.m./person against benchmark of 9-10 sq. m per person respectively. The city should move towards CITY FOREST model promoting dense green cover areas in the city. Also parks and playgrounds to be created in every locality to serve various sections of society such that adequate public space is created to encourage space for social interactions in the city.



Mapping around the Fort

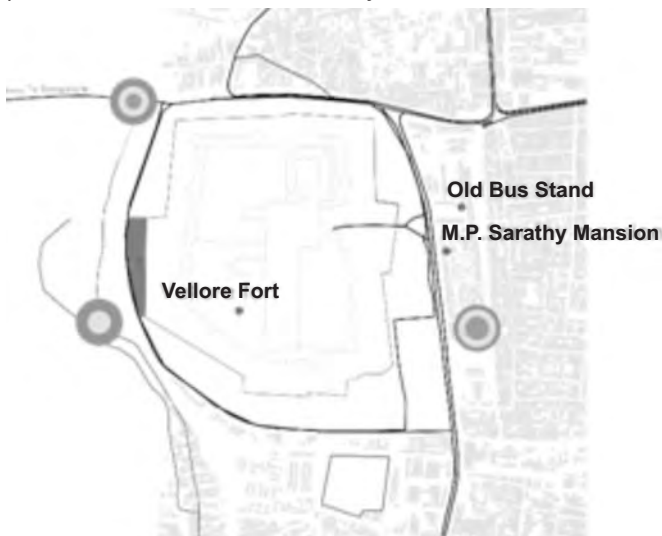


PRECINCT MAP
Vellore, Tamil Nadu



Proposed Nodal Development

A node is fundamentally a place where human activities and routes are highly concentrated. These areas are strategic spots in a city where an observer enters and learns about the culture and street life of the city. These nodes could be primary junctions, a moment of a shift from one transport to another, with intense physical characters and elements like squares or plazas. The site has three nodes adjacent to it.



Proposed Nodal Development w.r.t. the Site

FORT DEVELOPMENT :

1. Park improvement
2. Moat desilting
3. Floodlight Systems for Vellore Fort
4. Boating in fort moat
5. Urban Forestry and Landscaping

Smart City Proposals for Recreational Facilities in Vellore

Initial Phase : Finalized for Implementation

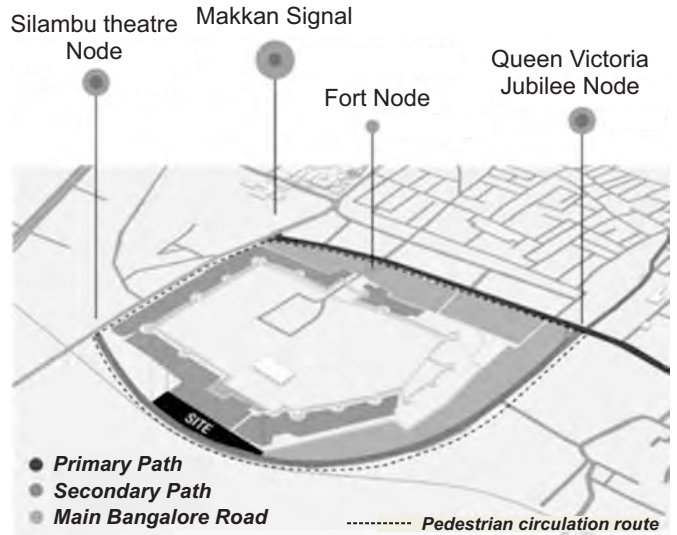
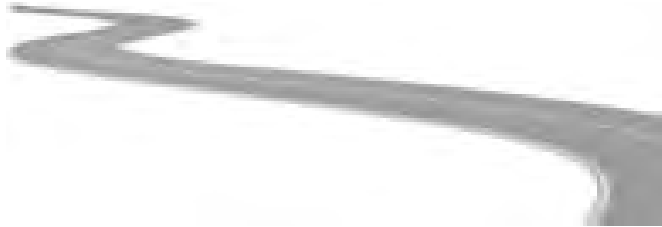
Smart Parks

Smart parks were one of the first proposals made for the initial phase of Vellore smart city project. A sum of 15 new smart parks will be established all around Vellore.



Smart Roads

Smart roads were also proposed in the initial phase in which a total of 32 km Smart Roads will be laid in different parts of Vellore. Roads from CMC to Collectorate, Thirupathi Devasthanam Board to Thorapadi, Green Circle to Old Bypass Road, [02] The backside of Vellore Fort Road and few other roads.



The author has selected the site around Vellore Fort to propose the following :



Initial Phase : Introducing "GREEN MUSEUM + Pollinator corridor" in Fort park.

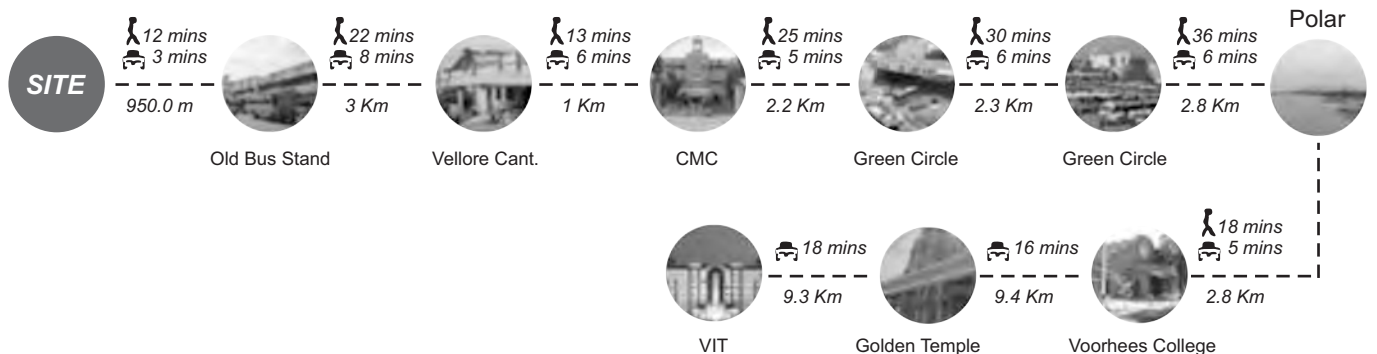
Second Phase : Series of such corridors to enhance pollinator movement. This primarily reduces the travel distance for pollinators.

GOAL : Connecting isolated fragments by newly established corridors may restore pollinator communities and pollination services. Complementary to large-scale conservation strategies (i.e. formally protected areas), small-scale improvements in landscape connectivity (via dull corridors) represent low-cost-big-gain tools to conserve biodiversity and ecosystem processes in tropical landscapes.

The above site can be primarily accessed through the fort round road where the traffic is relatively lower than the main road. There is a circulation route for pedestrians as well. The strategic intervention can enhance the routes and reduce the crime rate in these areas by increasing the people density.

LOCATION : 12.9170° N, 79.1313° E

Landmark Analysis :



Human Activity Analysis around the site :



Praying



Cycling



Heavy goods vehicles



Dog walking



Chatting



Train



Passing by

SWOT Analysis

STRENGTH

- Adjacent to an iconic tourist and heritage spot in the city.
- Accessible by all modes of transport.
- Highly informative and spreads awareness about the importance of having pollinator corridor.

WEAKNESS

- Lack of street lamps.
- Lack of parking spaces.
- Lack of Human density. This zone is reasonably isolated.
- As it is close to cantonment station, noise disturbance has also been a problem.

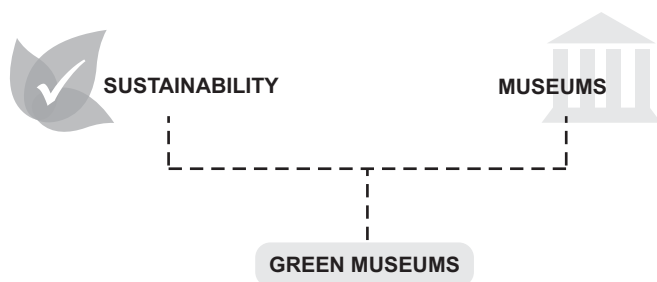
OPPORTUNITIES

- Future development neighbourhood after this zone gets recognized, and as the level of usage increases.
- High exposure to the public will eventually result in better maintenance by the local authority.

THREATS

- Safety and security issues.
- Existing crime rates in the zone
- Badly maintained access roads.
- People from all walks of life are allowed here.

Conceptual Framework

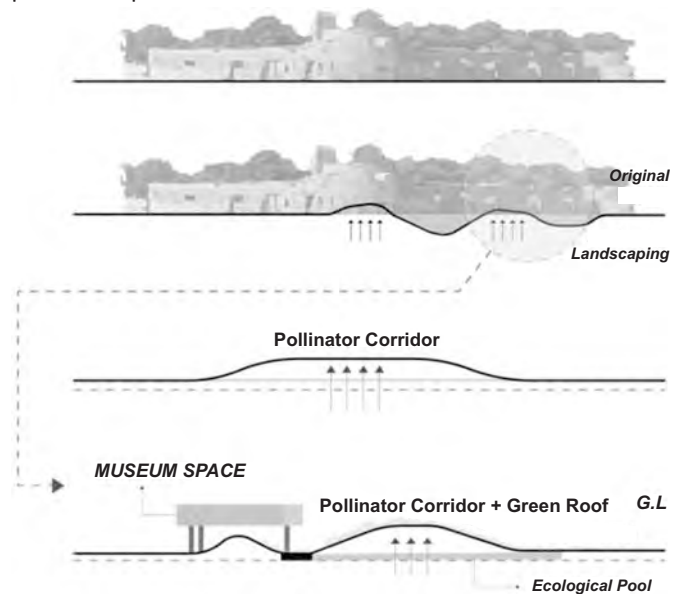


Initial Strategy Of Form

Ecological Pool is an ecological system with a variety of live plants and fish living in them. The water is filtered and maintained well as per their requirements, but no additive chemicals are added to purify it. The avoidance of such chemicals helps to preserve the environment and the organisms living in it.

Conclusion :

This study provides a compelling example of how a landscape feature built for humans in the chosen site of Vellore Fort can help not only conserving variety of plants and other species but also serve as corridors for pollinators. In addition, conservation managers may want to consider ways to improve habitat along different viable corridors within Vellore city with pollinator species in mind.



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Design of the City Library : Studying the Process



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ABSTRACT : *Most of the cities in India do not have a City Library of its own. Pune city is known as the Oxford of East, but still it does not have a city library of its own. This is probably because nowadays everything is available on the internet and people don't find it important to visit a library to gain information. But they fail to realize that the in-depth and authentic information can be gained from the books. Library these days, also serves as a platform for socializing and exchanging ideas. Thus, it becomes necessary to study the requirements of a public library in the present context of cities. It becomes necessary for the architect to understand the evolving nature of the library and the expectations of the current readers from a library building.*

1. INTRODUCTION

India has a long tradition of libraries, their evolution and development running parallel to that of the culture & society. The first libraries consisted of archives of the earliest form of writing, which mainly consisted of the records of commercial transactions or inventories, marking the end of pre-history and start of history. In the classical period, the library in Egypt was the largest and the most significant library of the ancient world. In the late Antiquity period four different types of libraries were established: imperial, private monastic and patriarchal, each having its own purpose. The increase in secular literature in the 19th century encouraged the spread of lending libraries. In the 20th century, many public libraries were built in modernist architecture styles where the quality of the interior spaces, their lighting and atmosphere, was becoming more significant. Digital libraries started coming up in the 21st century. A library without books, now it seems almost inevitable. We are in that stage of evolution, where paper books as well as digital books form an important part of our lives. If digital books are available on the internet, then people won't find a need to visit libraries anymore. This makes us change the definition of a library completely in the present context. Apart from lending and reading books, the public libraries in today's context have much more to it. It has

become a place of socialising for the busy life of the citizens. It has become a place of relief for them.

With a view to sustain continuous growth and development of the cities, evaluation of a library through the user's point of view becomes important. Re-defining the definition of the public library according to the expectations and needs of the users has become crucial. For changing the program of public libraries and improving the spaces and architecture, we need to understand the requirements of the users, new technology coming up, ideal interior layouts and lighting for libraries. This would help in comforting the user and also encouraging the citizens to visit a library regularly.

2. METHODOLOGY

To understand the changing requirements of a public library, a survey in the form of a questionnaire was given to the readers in the library in Pune and Goa. This questionnaire had questions regarding areas the readers need in a library, the seating arrangements and general facilities required by the readers in a public library. Random sampling with respect to the age group was done so as to understand the requirements & needs of the readers from all the age groups. 20 samples were collected from each library.

3. DATA ANALYSIS

- Which of these spaces would you like to add in a library building ?

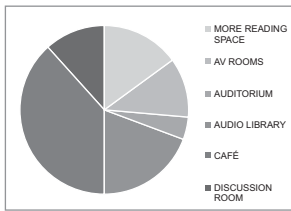


Fig. 1 : Goa Central Library

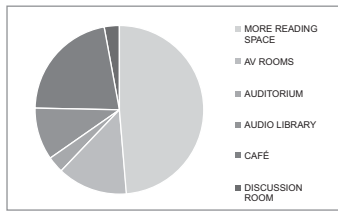


Fig. 2 : British Library Pune

The Central Library of Goa felt the need to add lecture halls and discussion rooms which can be rented out to small groups.

- Prioritise these spaces on the scale of 1-5 with 1 being the least important and 5 being the most important.

From this we will know the spaces to be designed carefully in a library.

In both the libraries, apart from reading rooms, discussion rooms and lecture halls are at a highest priority and audio library is at a lowest priority.

GOA	Reading area	AV Rooms	Auditorium	Audio Library	Café	Discussion Rooms	Lecture Halls	Kids Area
G1	5	1	1	2	2	3	4	1
G2	4	4	3	3	3	4	4	4
G3	5	3	3	2	1	2	2	3
G4	5	3	4	4	4	3	2	3
G5	5	1	1	1	2	4	1	2
G6	5	3	4	2	4	4	5	3
G7	5	3	3	3	1	2	2	1
G8	5	4	2	2	2	3	3	2
G9	5	3	3	2	1	2	3	5
G10	5	2	2	2	2	3	3	3
G11	5	3	3	2	4	3	2	2
G12	5	3	3	2	3	4	4	3
G13	5	3	3	2	2	4	3	4
G14	5	4	2	3	3	4	3	4
G15	5	1	1	1	2	2	2	3
G16	5	4	4	2	2	3	3	3
G17	5	2	2	3	3	3	5	2
G18	5	3	3	2	4	3	2	2
G19	5	1	1	4	2	4	4	2
G20	5	3	2	3	2	2	3	3
MODE	5	3	3	2	2	3	3	3
MEAN		2.7	2.5	2.35	2.45	3.1	3.1	2.75

PUNE	Reading area	AV Rooms	Auditorium	Audio Library	Café	Discussion Rooms	Lecture Halls	Kids Area
P1	5	3	1	4	2	4	3	2
P2	5	3	2	3	3	4	4	5
P3	5	5	3	4	5	4	4	5
P4	5	2	1	3	4	4	3	3
P5	5	2	1	2	3	3	2	3
P6	5	3	2	3	4	4	3	4
P7	5	1	1	3	2	4	2	1
P8	5	5	3	1	2	2	1	4
P9	5	2	2	1	3	2	3	4
P10	5	3	4	4	3	4	3	5
P11	5	2	3	2	3	4	4	3
P12	5	3	2	5	5	3	2	4
P13	5	3	1	4	3	4	3	4
P14	5	2	2	3	2	5	3	1
P15	5	3	4	5	4	3	4	4
P16	5	3	3	4	4	5	3	5
P17	5	3	2	3	4	4	3	3
P18	4	3	2	4	3	5	3	4
P19	3	2	1	3	2	2	3	2
P20	5	3	3	3	3	3	2	4
P21	3	2	1	3	2	2	2	2
MODE	5	3	1	3	3	4	3	4
MEAN		2.76	2.14	3.19	3.14	3.57	2.86	3.43

- In a reading area, what kind of a seating do you prefer: linear seating, collective seating or comfortable seating?

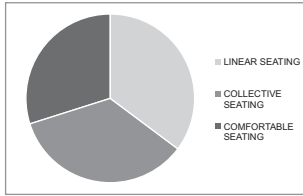


Fig. 3 : Goa Central Library

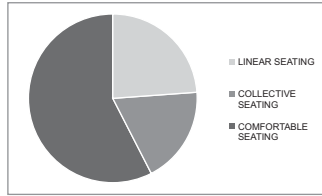


Fig. 4 : British Library Pune

From the above pie-charts it is clear that the readers prefer a combination of linear, collective and comfortable seating.

- Which facility did you like the most in the library?

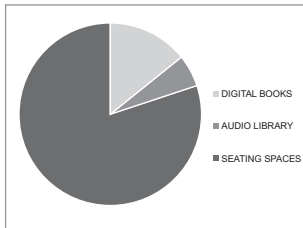


Fig. 5 : Goa Central Library

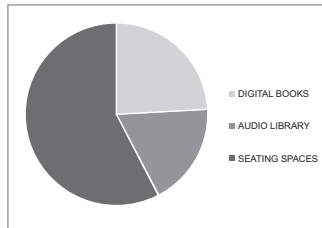


Fig. 6 : British Library Pune

- What do you prefer : traditional paper books or digital books?

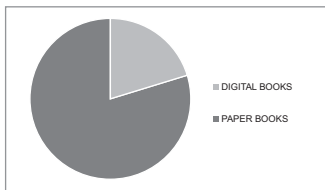


Fig. 7 : Goa Central Library

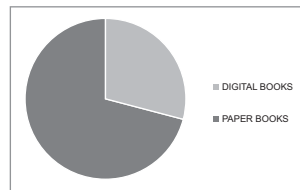


Fig. 8 : British Library Pune

Most of the readers still prefer traditional paper books over digital books, which gives us an idea about designing storage for books in a library. This also tells us that the use of digital books needs to be promoted and make the readers aware of the new technology.

Other than borrowing and reading books, which other activities do you enjoy in a library?

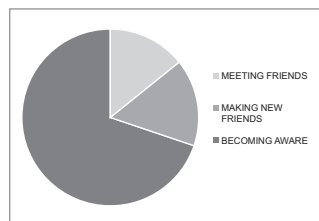


Fig. 9 : Goa Central Library

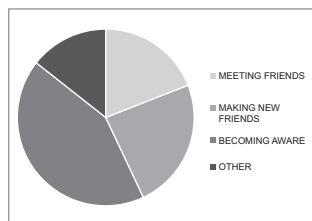


Fig. 10 : British Library Pune

Apart from reading books, readers also visit the library for becoming aware about things and also for making friends; which hence changes the definition of a public library and hence changes the program of a library building completely.

4. AIM

To design a public library in Pune catering to the current requirements of the citizens.

5. OBJECTIVES

- To provide facility of reading and book lending for the citizens of Pune.
- To provide an urban platform for the citizens to socialise and exchange ideas and knowledge.
- To provide renting facilities of the ancillary public spaces.
- To design welcoming and interesting interior layouts.

6. SCOPE

To design a public library in Pune catering to the current requirements of the citizens.

7. PROGRAM FORMULATION

Total number of books = 2,00,000

8. SITE SELECTION

The site located is in Pune, on Ganesh khind road, diagonally opposite to the Pune Central mall.

Why Pune?

Pune city is considered as cultural and educational capital of Maharashtra. It includes number of universities, colleges and other institutes. Due to its wide range of educational institutions, it has been called the Oxford of the East. Also, it is one of the major cities in Maharashtra, still it does not have a large-scale city library of its own. There are numerous small-scale libraries in the city but a city like Pune, needs a library which will also serve as a place of gathering and enhance the culture of the city, and will also form an icon for the city.



COMPARATIVE ANALYSIS OF LIVE CASE STUDIES				
	SEATTLE PUBLIC LIBRARY (A)	GOA STATE CENTRAL LIBRARY (B)	BRITISH COUNCIL LIBRARY, PUNE (C)	REMARKS
ENTRY	From 4th and 5th avenue, play of surfaces in different angles, giving a modern look to the facade	Grand entrance with large steps taking toward the raised main lobby, Goa's blue tile cladding with sloped roof above thus responding to the context	Located on the third floor of a commercial building, hence entry not properly defined	(A) has the most ideal location and entry. Located in the heart of the city, is accessible to everyone with bus stops in the next block, universally accessible from both the sides, having no raised platform and steps
NO. OF FLOORS	11	6	1	In (C) all the functions are scooped on a single floor, thus not fulfilling the requirements
VENTILATION	Fully air conditioned to maintain steady temperature and humidity and keeping the dust particles away thus providing comfortable atmosphere for occupants	Fully air conditioned to maintain steady temperature and humidity and keeping the dust particles away, 2 open terraces on 5th floor provided for natural ventilation and view	Fully air conditioned to maintain steady temperature and humidity and keeping the dust particles away, open terraces provided for natural ventilation	(B) has air conditioned reading rooms as well as open terraces, giving options to the readers for comfortable reading
ACOUSTICS	Sound domes provided for listening music without disturbing others, the entire structure itself is sound proof helping to cut off the noise from the avenues	No noise pollution as it is located in the quiet lanes of Patto area, atrium walls have curtain wall, thus not allowing noise to enter from one floor to another	Cut off from noise of traffic as it is located on the third floor and the glass walls further help in this	The best way of sound proofing for a city library is implementing measures in the structure, helping to cut off noise, which (A) has implemented in its design.
LIGHTING	Seattle is gloomy throughout the year, it is necessary to bring in as much light as possible, hence the entire structure is of glass in different angles and diamond shaped giving an ideal glare free light in the building. The south side facade has aluminium mesh in between 2 glasses, thus cutting off the heat and glare.	Continuous glass facade except on the south side, thus getting ideal glare free natural light, glass pyramid in the central atrium helps up to light up the central space giving indirect glare free light to each floor	Plenty of natural light as the external facade is completely of glass and free from any obstructions as located on the third floor, artificial lights used when dark, ceiling painted white so as to reflect as much natural light as possible	The facade of (A) has an interesting, slanting glass which not only makes it attractive from outside but helps in providing natural diffused light into the structure and cutting of rays by using mesh in between glasses.
STRUCTURE	Entire structure of steel and glass minimizing the number of columns, slanting columns used, floor to floor height trusses used, diamond shaped steel glass structure transferring the load to concrete base, thus getting a column free huge space inside	R.C.C. structure with a continuous glass facade on north, west and east side, sloping hipped roof making rainfall water easy to seep away in this high rainfall area	R.C.C. structure with a glass facade on all three sides	As the library is a public space, it needs large column free spaces which has been attained in (A) by using a glass and steel structure taking all the load and using a few slanting columns.
MATERIALS	Covered by striking glass and steel structure, aluminium floors, concrete floors with polyurethane finish, recycled wood pieces, metal structure painted baby blue, escalators lit on sides with fluorescent colours, rcc core, children's area with bright colours	Glass and aluminium sections used for the facade, one part of facade with rcc wall, blue tile inlay used on the front facade, grey Kota tiled flooring for the entire structure	Walls of the library painted white with wooden bookshelves, light grey tiled flooring, colourful upholstered seating	The library in Goa is modern but maintaining the essence of the surroundings. Materials such as Mangalore tiles for sloping roof and use of blue tiles on the facade maintains the character of the place in which it is located
CIRCULATION	Functions in the library vertically segregated making circulation easy and efficient	Functions in the library are vertically segregated making circulation easy and efficient	Linearly segregated functions	All the libraries are well segregated with a proper and clear circulation pattern.
SEATING	Level 1 which is a public space has a collective seating area with circular tables for socializing, reading room has linear as well as comfortable seating	Central space left for shelving with a combination of formal and informal seating near the external facade and near the atrium glass facade inside, thus getting proper light for reading	Combination of linear, collective and comfortable seating with bright colours	A combination of a linear, collective and comfortable seating forms the base of an ideal library

COMPARATIVE ANALYSIS OF BOOK CASE STUDIES				
	CAEN LIBRARY, FRANCE (A)	STUTT GART PUBLIC LIBRARY (B)	VIIPURI LIBRARY, RUSSIA (C)	REMARKS
ENTRY	Entire library has a glass façade, thus visually connecting the adjacent park, pedestrian pathway & waterfront plaza to the interior, two large ground floor entrances at both sides allow fluid interaction of the library with its surroundings thus forming an urban space	Square construction of library can be accessed from all four sides, entry level includes central open space which represents the spatial and meditative center point of the entire building	Diagonal entrance door bracings make the entrance interesting and inviting, direct access from the park to the children's library section, which is at the opposite end of the main entrance	Caen library is centrally located along a waterbody, making an entrance convenient to every citizen and also making it interesting, whereas (B) has 4 entries making it accessible from all sides of the block
NO. OF FLOORS	4	9	3	The no. of floors in (C) are less, as it is an old library with comparatively less functions than the other two
VENTILATION	Fully air conditioned to maintain steady temperature and humidity and keeping the dust particles away thus providing comfortable atmosphere for occupants, part of the restaurant on ground floor is open air connecting to the waterfront	Fully air conditioned to maintain steady temperature and humidity and keeping the dust particles away thus providing comfortable atmosphere for occupants	Piping hot grill to heat the water room located inside the plaster soffit looking like sun providing heat and light, thick side walls of central space without fenestrations, consisting diffusers on top expelling clean air along the soffit where it is heated by the heater and down where the mouths of return are located	Special system for inlet of clean air which is required for people as well as books has been taken in (C)
ACOUSTICS	Entire structure of sound proof glass, aluminium perforated ceiling for acoustical treatment	Reading room in the center of the building with no external wall, thus is cut off from noise and maintaining the decorum of a reading room	Acoustics in the conference room are solved with the ripples in the roof made of wooden slats Karelian pine, helping in the best sound propagation, walls with textile lining, wood floor and curved seats	In (A), sound proof glass is used for the entire structure whereas in (B) the planning is done in such a way that the reading room is free from outside noise
LIGHTING	Entire structure of glass façade hence providing adequate natural light, artificially lit at night highlighting the glass facade	Stepped 5-storey reading room naturally lit from above with a glass ceiling (oculus), workplaces of administrative areas lit with natural and anti-glare light, entire structure lit with blue light when dark	Lighting with perforated conical round skylights, no direct sunlight enters due to its conical shape, thus without diffusers, diffused shadow less light enters the structure	In (C), diffused and shadow less light enters the reading room by using conical round skylights
STRUCTURE	200 feet long truss on the above floors form a continuous column free space, glazed panels without mullions span the entire height of the floor, 2 panes of glass inner one flat and outer one concave thus carrying the load	Building in the form of cube with an edge length of 45 meters, constructed of pale grey concrete framing an array of 9x9 frosted glass bricks, shell designed as a double façade including glass brick level and inner mullion/transom façade as a thermal building shell	Structure made of pillars and reinforced concrete slabs built in-situ, metal pillar structure in the conference room, coated bricks for interior partition walls	Floor to floor height trusses have been used in (A) so as to form a column free space, with the façade glass taking the load of the structure
MATERIALS	Concave glass panes for façade, slick perforated metal ceiling adding drama and concealing acoustic insulation, movable book cases of resin translucent casing, large metal perforated concave partition also acting as comfortable seating area with cushions, wooden floors contrasting the white and glass walls	Constructed out of pale grey fair-faced 80mm thick concrete wall framing an array of 9x9 frosted glass bricks, glass roof with photovoltaic roof panels, terrazzo flooring in the entrance lobby, outlying spaces on each story coated in pale grey floors and furniture, balustrades in reading room made of steel flats	Building is completely white outside with various elements retaining natural colour, some metal elements painted white, black or grey, roof of conference room made of wood slats Karelian pine helping for sound propagation	Interesting, appropriate and a wide spread of materials used in (A), thus making this library more interesting and lively
CIRCULATION	"X" shaped library horizontally segregated into four parts according to the different subjects, also vertically segregated by keeping social areas on the ground floor and private spaces such as offices and conference rooms on the top most floor	Pyramid shaped reading room has spiral circulation with stairways connecting two floors, reading room takes the central space while all other functions are located around it	Library's massing consists of 2 rectangular blocks offset horizontally from one another, what is three floor in plan is six to seven floors in section thus showing a unity between vertical and horizontal construction	The private and public spaces in all 3 libraries are properly segregated
SEATING	Along with couches and linear seating, it has a large metal perforated partition also acting as a seating space with cushions around it	Mostly consists of linear seating with a few single couches in between	Alvar Aalto designed special stacking stools and seats with backs made of curved wood helping in acoustics in the conference room	In (A), there is a combination of linear, collective and comfortable seating with interesting design of seating areas, thus making it comfortable for all to read

PROGRAM FORMULATION

Total number of books = 2,00,000

REQUIREMENTS	QUANTITY	AREA (IN SQ.M.)
Entrance lobby : - Reception and enquiry desk - Waiting / Seating area - Display of new arrivals - Baggage deposit	1	230
Book Shop : - Stacks - Seating - Billing counter	1	180
Cataloguing section : - Digital - Stacks	1	30
Adult lending : - Stacks - Seating - Help desks - Study carrels - Group seating	3	2490
Adult referencing : - Stacks - Seating - Digital access	1	420
Periodicals' section : - Stacks - Digital access - Seating - Help desk	1	610
Children's section : - Stacks - Seating - Electronic workstations - Study carrels - Help desk - Storytelling/activity room (55sq.m.)	1	500
Young adults / teens' section : - Stacks - Seating - Digital access - Help desk	1	440
Digital section : - Electronic workstations - Seating - Help desk	1	275
Music section : - Stacks - Music platforms - Seating - Digital access - Help desk	1	365

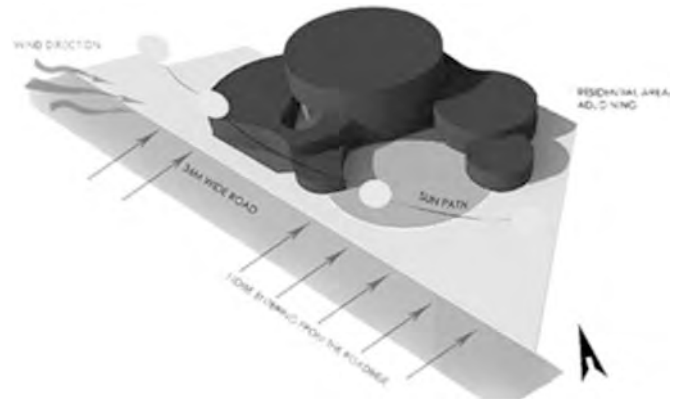
REQUIREMENTS	QUANTITY	AREA (IN SQ.M.)
Rare books and maps section : - Stacks - Map drawers - Digital access - Seating - Help desk	1	295
Painting section : - Painting display - Stacks - Digital access - Seating - Help desk	1	200
Cafeteria : - Seating - Open pantry - Book stacks	1	250
Auditorium : (can be rented out)	1	190
- Entrance lobby	1	
- V.I.P. lobby	1	
- Main hall with stage	1	
- Green rooms	2	
- Control room	1	
- Cry room	1	
- A.H.U. room	1	
- Store	1	
- Ticketing room	1	
- Toilets		340
Conference room : (can be rented out)	1	100
Multipurpose room : (can be rented out)	1	120
Admin area : - Common office/ back office - Chief librarian's office - Deputy librarian's office	1	50 30 30 110
Staff area : - Staff resting room (male and female separate) - Locker room - Staff canteen - Toilets		135
Service area : - Receipt and dispatch - Cataloguing, binding and tagging - Photocopying - Post and telex - Store room		325
TOTAL AREA		7415 + 25% Service Area= 9270 SQ.M.

Why the site?

The main concern while selecting the site for this project was that it has to be accessible to all the citizens and ideally should be centrally located. This site is easily accessible to the citizens living in Aundh-Baner area, Peth areas Deccan area, Camp, Kalyani Nagar and other areas nearby, thus covering major parts of the city. Pune University and many educational institutes are located nearby the site which makes it easier and convenient for the students to access the library. Road adjoining the site, 36m, is wide enough, to cater to the people visiting the library building, thus managing the traffic in the area. Also, the road being wide enough, is hardly ever blocked and hence would give a noise-free environment for the library. The site is also located near the Shivajinagar railway station and near the proposed metro station, making the citizens from any part of the city to access it easily.

9. SITE ANALYSIS

- Existing land use : the land is barren
 - Topography : the site has a flat terrain with only two trees on the south side of the site
 - Climatic Context : moderate climate with an average temperature ranging between 22-37 degree Celsius
 - Accessibility : the site can be accessed from 36m wide road adjoining it
 - Total site area: 17,101 sq.m. = 4.23 acres
- Permissible FSI : 1
 Thus, permissible built-up = 17,101 sq.m.



10. BROADZONING

READING AREA

This is the main area of the library and is located away from the road side to cut off the traffic noise. It is located to the north of the site so as to gain ideal diffused light for reading. The position is also decided by taking massing into consideration.

CHILDREN'S SECTION & CAFE

Children's section is located near cafe so that the parents can watch their children over a cup of coffee. Cafe is located in such a way that is opens out in to the plaza and also has a separate entry from the back side.

AUDITORIUM

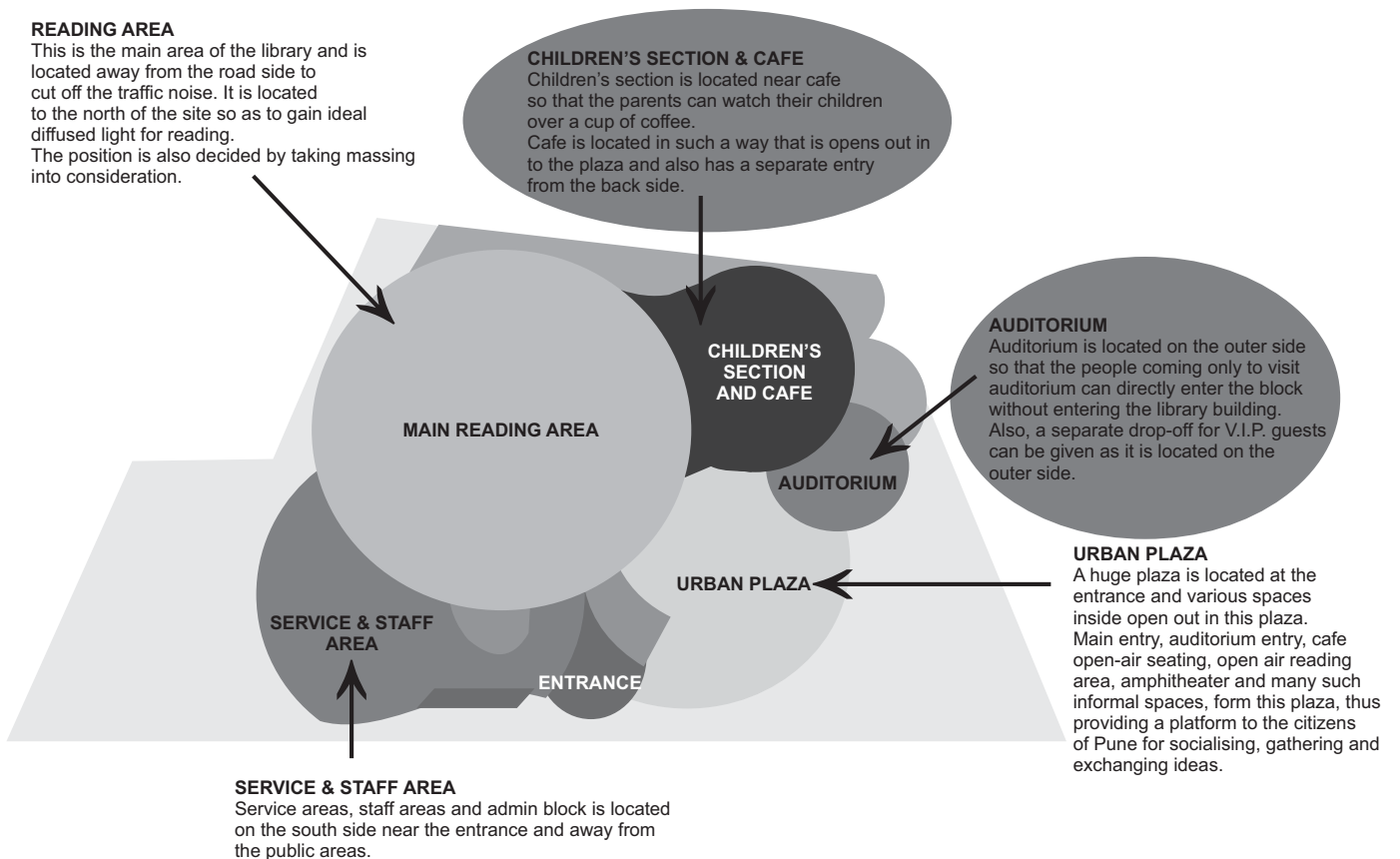
Auditorium is located on the outer side so that the people coming only to visit auditorium can directly enter the block without entering the library building. Also, a separate drop-off for V.I.P. guests can be given as it is located on the outer side.

URBAN PLAZA

A huge plaza is located at the entrance and various spaces inside open out in this plaza. Main entry, auditorium entry, cafe open-air seating, open air reading area, amphitheater and many such informal spaces, form this plaza, thus providing a platform to the citizens of Pune for socialising, gathering and exchanging ideas.

SERVICE & STAFF AREA

Service areas, staff areas and admin block is located on the south side near the entrance and away from the public areas.



11. S.W.O.T. ANALYSIS

Strengths

- The site is centrally located in the city, thus easy to access from areas like Baner, Aundh area, JM road and FC road, Prabhat road, Peth areas, camp and Koregaon Park, thus covering major parts of the Pune city.
- It is located on the main road, hence public transport is easily available, also Shivajinagar train station is nearby and a metro station is proposed near the site.
- The road adjoining the site is 36m wide hence the site can be accessed easily without any traffic issues.

Weaknesses

- Slums are located at a certain distance from one side of the site, which may cause nuisance.

Opportunities and threats

- The total site area is 8 acres out of which only 4.23 acres is used. The rest is kept for the future development, according to the changing requirements of the readers in the city.

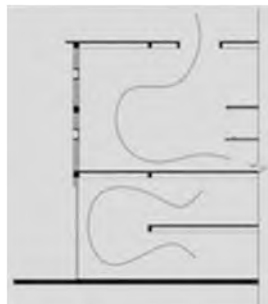
12. DESIGN CONCEPT

“Library is an open landscape of spaces that flow into one another.”

The main function of a library is to provide knowledge. Knowledge is unrestricted and is always growing. This free-flowing and unrestricted nature of knowledge is metaphorically applied in designing a library building.



The form being free flowing, would itself guide the users to different spaces in a library. With no partitions inside and it being a free-flowing space, layout inside helps in circulation and for defining the spaces. Here, the free flowing nature is implemented in sections also, forming double & triple height spaces, thus keeping transparency throughout the building.



Courtyards enhancing the experience

The courtyards in between reading areas are used for group reading, open air reading, open air exhibitions and story telling sessions, also acting as a breather space in between the large floor plate.



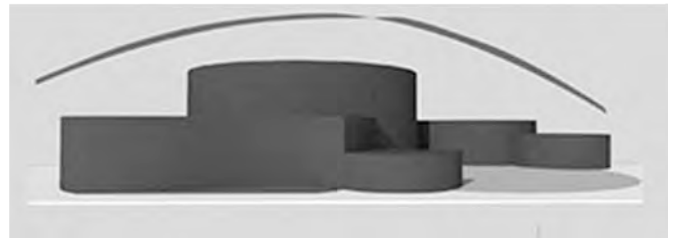
Light : An Important Factor In Libraries

Light plays an important role in a library building. For reading, it is very important to have ideal lighting conditions.



Use of shelving devices, help the light to reach a longer distance inside the building. It also helps in breaking the monotony of the continuous curtain wall and forms the feature of the external façade.

Building as an icon



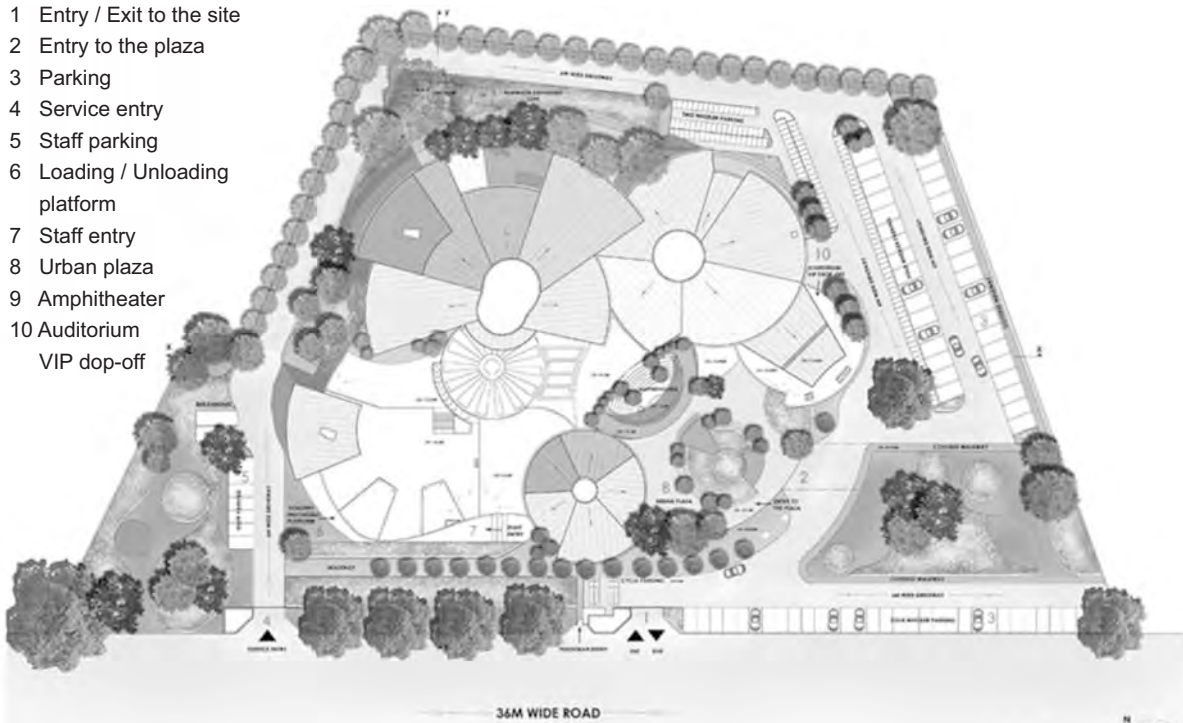
A city library is a building which represents the city and forms a landmark in the city. Hence, the aim was to make the building an icon.

Interesting interior spaces

The library interiors are interesting with interactive spaces like stepped seating looking over the library, group discussion areas and also courtyards for open air reading. The furniture inside the building guides the user to different spaces, in this free flowing form.



- 1 Entry / Exit to the site
- 2 Entry to the plaza
- 3 Parking
- 4 Service entry
- 5 Staff parking
- 6 Loading / Unloading platform
- 7 Staff entry
- 8 Urban plaza
- 9 Amphitheater
- 10 Auditorium
VIP dop-off



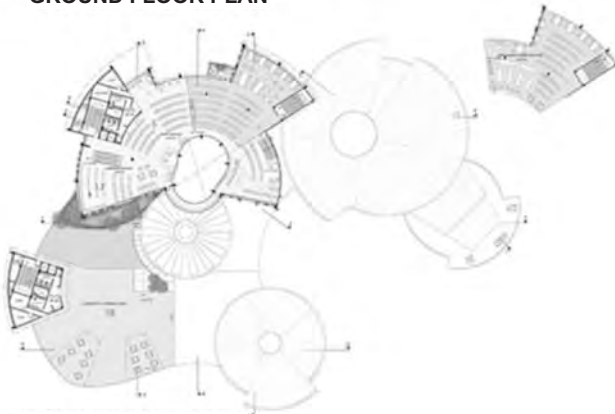
SITE PLAN



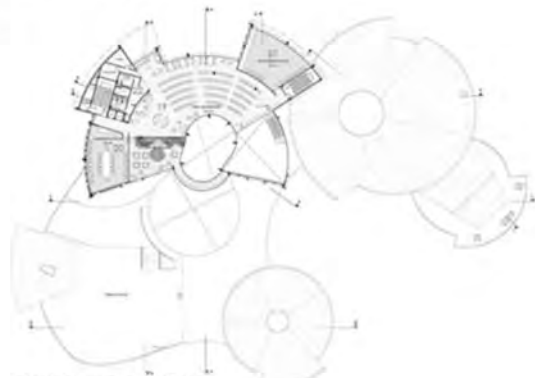
GROUND FLOOR PLAN



FIRST FLOOR PLAN



SECOND FLOOR PLAN



THIRD FLOOR PLAN

- | | | | | |
|-------------------------|-----------------------|--------------------------|--------------------------------------|--|
| 1 Entrance lobby | 6 Periodicals section | 11 Amphitheater | 16 Digital library and Music section | 19 Adult referencing section |
| 2 Book shop | 7 Children's section | 12 Open air reading | 17 Painting section | 20 Conference room |
| 3 Admin & staff area | 8 Cafeteria | 13 Group reading area | 18 Community gathering space | 21 Multipurpose room |
| 4 Service area | 9 Auditorium | 14 Exhibition space | | 22 Core: Staircase, lift and service rooms |
| 5 Adult lending section | 10 Urban plaza | 15 Young adult's section | | |



Section AA



Section GG



Section BB



Section HH



South Side Elevation



North Side Elevation



REFERENCES :

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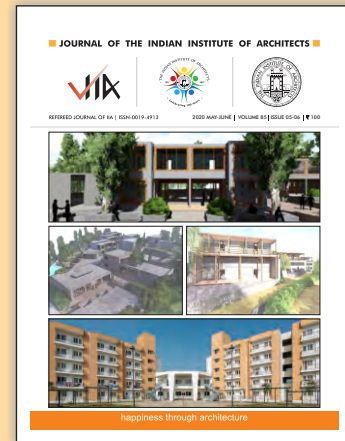
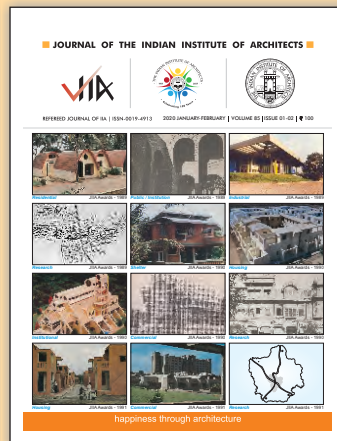
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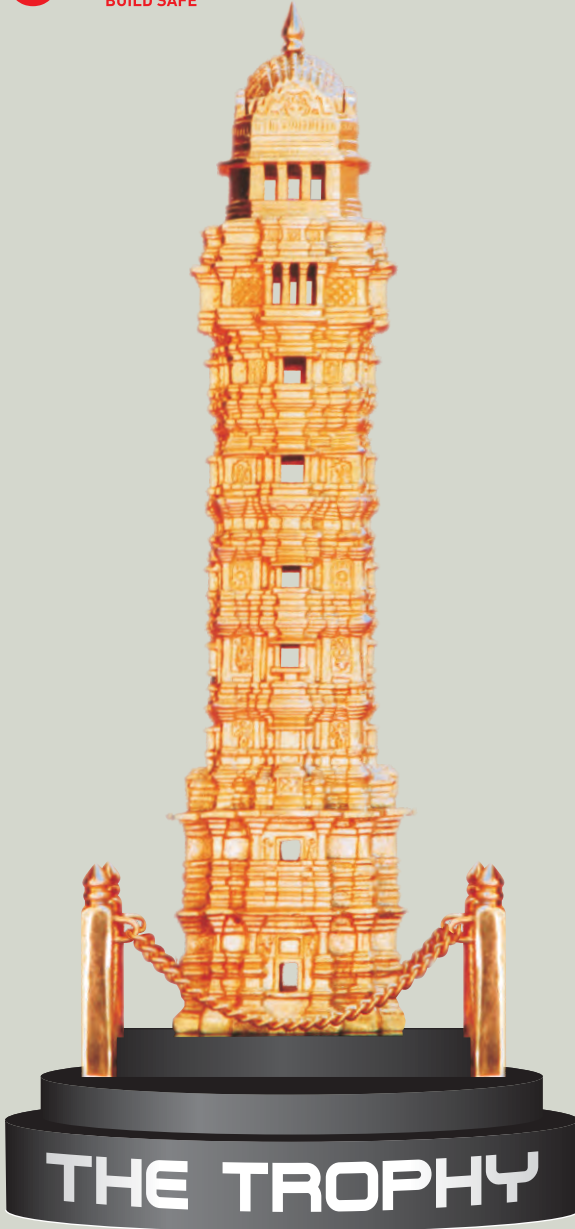
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