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Urban Villages in developing Industrial Towns: Casestudy Bhangel

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ABSTRACT

While Urbanism is predominantly the process by which towns and cities are formed and become larger as more people begin living and working in central areas,[1] urbanization, if left on its own, goes against the concept of sustainability. Urbanization by nature is growing and changing continuously [2]. It leaves behind, footprints of obsolete spaces which interfere with Urbanism, which is in itself dynamic. To ensure growth the impact of this dynamism is taken up by the urban villages. The organized life in towns and cities, as we see today, came unannounced for humanity. The change from small towns with large agricultural belts around and the horse-cart, to urbanization, industrialization and automobiles was a change necessary to house population, growth in life expectancy, and economy. This has not been completely absorbed by planning and a lot has been overlooked in its agendas. The areas resultant of this change, the urban areas, developed by the development authority has fed on the malleable patches of lal-dora, aabadi, slums, and urban villages. These areas are open to unchartered growth and are kept outside the administrative boundary of the development bodies and hence provide cushion for the necessities and economics missed out by the development authority, that have to be met, to further the cause of urban growth. While they exhibit symbiotic support to the urban areas under the development authority, they are still using the Indian organic architectural morphology to grow. This can be understood in the study of pattern in commercialization on the fringe of the urban village of Bhangel, as a sample of changes happening in the eighty-one villages that fall under Noida. Bhangel is one of the oldest urban villages in Noida and lies on the historic trade

route connecting villages that lie in Dadri and Meerut to the city of Delhi and Shahadra in the past. It played its role during the mutiny of 1857. The agricultural lands of eighty-one urban villages along with Bhangel were acquired in the process of formulation of Noida. The Urban Villages of Noida have continued to play a vital role in the Urbanization of Noida and hence are catalysts for its Sustainable Urbanism. With the overexploitation of the urban villages, Noida would lose its Urban vitality, and to save itself, it will have to save the Urban Villages. Immediate surgical intervention is imperative. This paper establishes the Urban Villages of Noida as key role players to cushion the blindfold development at the hands of planners and also establishes them as a promulgator of Sustainable Urbanism, while they have preserved Indian architectural morphology.

1. Introduction

The villages of Noida were completely based on agriculture and have sustained through the ages away from the river on areas with ponds and pokhars. These lands are of mythological significance. Indraprastha was located in the city of Delhi and with its proximity to Indraprastha and the other cities of Delhi; it is bound to be the agricultural catchment or a settlement extension. It was followed by huge Jain and Hindu settlements. The village Bistrakh now in Noida is the village of the father of Ravana. In the recorded history, the only mention of the land now under Noida is of 1803, where a battle was won by the British and a memorial built a few years later in the memory of the victor Gen Gerard Lake who led the British forces in the Anglo-Maratha war in the Battle of Delhi. The location of this battle is on the vast tracts of lands in between the two barrages. The areas around the villages of Bhangel were also a part of the sepoy mutiny of 1857. They came from Meerut and after the siege of Delhi; they fled into the fields in the lands where Noida now lies and were soon followed by the British army. The names of the village Gadarpur (Mutiny village) and Sadarpur (Cantonment village) signify this happening. Six barrages for irrigation and canal navigation from Delhi to Agra via Mathura were planned by the British in 1870s. This 230 km long canal named Agra Canal, began near the barrage at the Okhla forest and was fed by the river Yamuna. The lands of Noida with many small water bodies, ponds and lakes, the aviflora of Surajpur and the river bed of Yamuna had villages evenly spread and each at a walkable distance of 3-5 km, interspersed with agricultural fields which were bought by the Noida development authority for developing the industrial township.

As demonstrated in the Fig.1 shows the outline of villages interspersed through the developed area of this new industrial township and the two rivers in between which Noida is situated. A careful look at the plan will indicate that there existed a rural cohesion in the area, where the Development Authority claims to develop this industrial town. The urban village also served as a manpower resource for Noida's industries. Studies that follow also illustrate that the fringes of the urban villages developed commercial activity that are either hazardous or are not listed in the master plan of Noida or are needed by the industries in surrounding sectors.

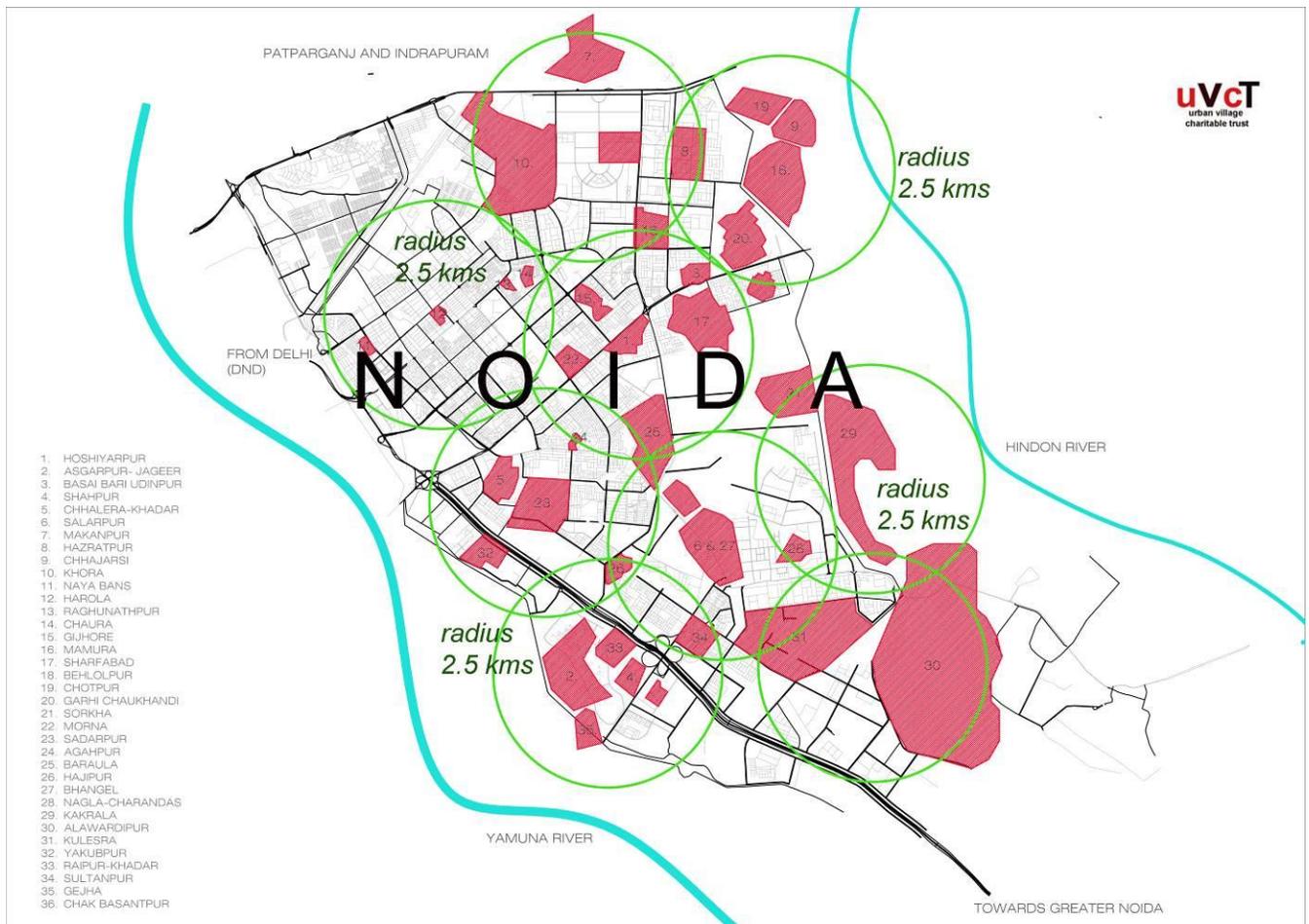


Fig.1 . An outline of urban villages in noida. The 2.5 kms circle demonstrates the network existing on the fabric.

2. BHANGEL

A. Growth of Bhangel since 1800s

Bhangel is one of the villages acquired during the formation of Noida. The main road that passes through the village has existed as a potential connection to Delhi through the Okhla barrage since 1800s. Bhangel was a small settlement on the old trade route connecting the Okhla barrage and the precincts of the Yamuna to the village of Dadri. The construction of Okhla barrage got completed in 1874. In recent years the road has been widened with the development pressure and the reaction of the fabric to the road can be seen. Two open drains closely guard the road width.

B. Bhangel Today

Of what we see Bhangel today is a market street. It is the face of economic reaction to the development and construction activity around. It's a village without any development authority or planners and architects to support and yet it has been offering solutions to a planned city for meeting its economic compulsions.

Like a third world country trying to keep pace with modernization in the first world, Bhangel has been trying to adapt to the pressures of the planning-lacuna in Noida.

The initial village grew from its stupor after the agricultural lands of the original settlers was acquired plotted and sold by NOIDA. It has just a few shacks and cottages and a Maharishi Mahesh yogi Ashram.

The fabric around Bhangel today, is almost a homogeneous mix of development authority land comprising of developing and developed industrial and residential sectors and many urban villages in close proximity. In the adjoining map (Fig.1), it is evident that the urban villages and the developed sectors in the zone of NOIDA form chess-board pattern. A chess-game in between the villages and the developed is in progress.

In continuum with Bhangel, there is Salarpur towards the North, Kakrala to the East, Yakubpur and Illahabas to the South-East, Sultanpur and Shahpur to the South-West, Sadarpur and Gadarpur to the West and Baraula to the North-West. There is a dense congregation of villages where agricultural fields have now become sectors of Noida. Of all these villages that serve as a labour catchment for the industries that surround the urban village area of Bhangel, Salarpur and Baraula lie on the old road, connecting Delhi through the Okhla Barrage and the road on the Shahdra canal bund to Dadri.



Fig.2 .the landuse map of bhangel

NOIDA planned the NSEZ (Noida Special Economic Zone) and the industrial sectors of 82, 80, 81, 83, 85, 87, 90, Hosiery Complex, Phase-2 and the residential sectors of 100, 101, 105, 108, 93, 92, 41, 42, 48, 47 around Bhangel and the above mentioned urban village areas. While planning and selling the

plots, there was no support to help, aid or to develop these sectors. Building and Construction activity was always looked down upon, material suppliers, labour, workers; warehouses and fabrication units till date have no place in the city. The load of housing the machinery for the development of these sectors and running the supplies of the industries was taken up by Bhangel, Baraula and Salarpur.

C. Understanding the growth and commercialization of Bhangel

The map (Fig.2) illustrates the land use map of Bhangel. The main road running from NW to SE has developed a strong market that caters to the sectors around. Open spaces needed by the urban village have been internalized and are used by the village and its residences inside. This is not a planned process, but it is driven by economics.

Bhangel is like a lineal city on a highway. The speeding cars and the travelers stop briefly for a few minutes transact, purchase, shop and move on. It is a drive in. A close look at the land use and activity plan of Bhangel reveals that there are six banks with eight ATMs to support the commerce. Electrical, Furniture, Construction and Hardware shops are aligned along with retailers, cloth merchants, repair shops and medical stores on the main road. There are packaging shops, hazardous chemicals, gas cylinders, thread suppliers, electrical/electronic shops and other suppliers for the industrial sector that are adjoining it.

A step inside the settlement and the visitor can feel roads buildings and walls all closing down, before spaces open up into the residential areas. Residences have open spaces, festival spaces, green trees ponds and a social infrastructure that corresponds to that of a village.

The urban commercial and the mixed use on the outer face, transforms as we move deep into the residential areas and in about a horizontal span of fifty meters into the fabric and Bhangel becomes a rural village. From the face of our plans and surveys, it appears that the economic opportunity has been utilized. Plans show that the road face is only commercial or institutional and provides immense trade and economic opportunity, but at the same time, it can be seen that the proportion of the road width from the main arterial road to the secondary road is 8:1. The commercial area acts as an exoskeleton to protect the soft residential core. It prohibits visitors and acts as community wall.

This pattern that we see is similar to the pattern in Shahjahanabad in Delhi, Thandi Sadak - Chowk in Lucknow, Birahna Road and Meston Road in Kanpur and other trading streets which have developed over time. While the other examples have developed over time, functioned as a core in the years that followed and have aged well in the books and cases studies of architectural enthusiasts, Bhangel is young and malleable. It with the help of architects and planners can age better.

D. Urban Morphology of Bhangel

The development of planned sectors of Noida is on a grid pattern, while the urban villages have organic roads and house/plot shapes which are neither parallel nor perpendicular to each other. While this settlement is more for “the people” and creates an alien environment for the outsider, the straight line settlements in developed areas are more permeable and offer external control and thus do not support the creation of a community. A distinct advantage for the, grid-plan town under certain political conditions is that of military control. [3] This would apply in the case of subject towns to be held under control; for it has been clearly recognized, not only by the Spaniards in the New World but by Romans and early Greeks before them.[4]. The grid plan has many management advantages as it can be extended indefinitely without altering the fundamental pattern or the



Fig.3 .THE ACTIVITY MAP OF BHANGEL

organic unity of the city. Property can be apportioned in rectangular plots fitting neatly into a predetermined scheme of streets and plazas. It can be sketched on the drawing board and, within certain obvious limitations, made serviceable. It is also far the easiest plan to lay out with crude instruments of measurement. [3].

The discussion on urban morphology in the case of Bhangel can be brought up, because this urban village functions like an organism. An understanding of the plans and the unmonitored spatial management of change in Bhangel through the solid void diagram (Fig.5) explains that the dense looking structure behaves consistently all along the commercial spine and the sections through its fabric.

The pressures of the urban development of Noida, consistently distributed all along, gives consistency to it as one village and hence it behaves as a complete entity. While it has lent its core area through which the now commercial market road passes, to the city of developed Noida, the influence of the architectural vocabulary of the organic settlement can be seen in the urban morphology of Bhangel.

These are listed as under in the Fig.4 and 6

1. Crenelated margins of the commercial face
2. Gates and gated communities
3. Cul-de-sacs
4. Courtyards and bagichis enclosed inside huge courtyards.
5. Dalan and Baithak
6. Variable street sections giving identity to every corner, every edge of the street
7. Windows and balconies projecting on the street, along with chabutras
8. Stark difference between the scales of the commercial street and the inner sanctum of the settlement.
9. Diurnal multiuse spaces and clusters
10. Community use integrated chowks and internal open spaces.

The consistent use of these elements in the vocabulary of organically evolving settlements, villages, urban villages of Noida, organic settlements, slums and rururban areas go to speak of an indigenous, climatically congruent, urban architectural vocabulary overlooked not just in town development and planning but also by calling these spaces as confused, chaotic and labelling them as slums.

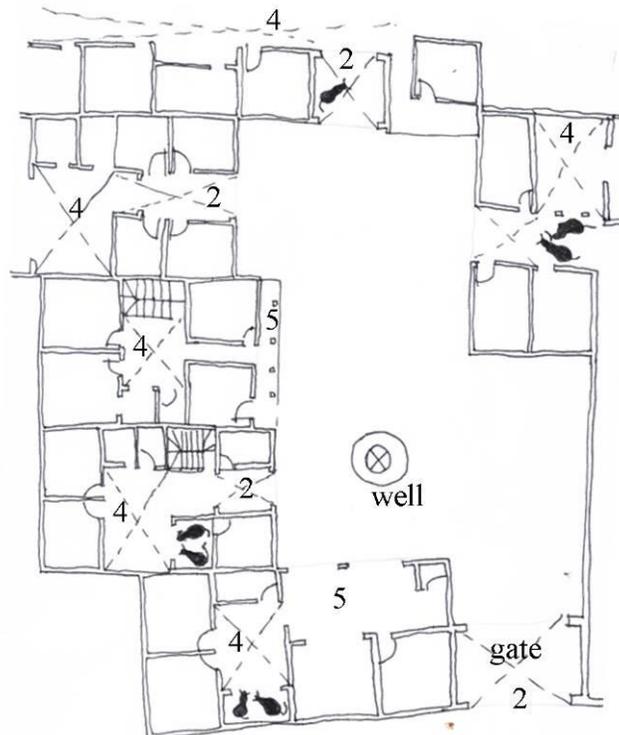


Fig.4. HOUSING CLUSTER SHOWING A CUL-DE-SAC



Fig.5 .SOLID VOID DIAGRAM FOR BHANGEL

3. TRADITIONAL INDIAN PLANNING

The Traditional Indian planning could never evolve. The academia was always busy copying the professional and western model. No books on Traditional Indian Town planning were written and discourses if any were held only in selected groups. Menon believes things could be different if a historic understanding of Indian Town Planning was developed. The British were never In the early 1960s, policies mainly centered on slowing down the rate of urbanization through controls on the growth of large metropolitan cities. By the 1980s policy makers had begun to accept the inevitability of the growth of the largest cities in the urban system. [5] It seems that the town planners vision did not have time to develop and got discerned derived from Le Corbusier plan for Chandigarh and the Master Plan for Delhi, prepared with the assistance of Ford Foundation experts in 1962 and again in the development of Calcutta in 1970. [6]. This coupled with the application Daniel Burnham's City Beautiful movement by our town planners is what A. G.K Menon calls as "the inadequacy of cross-cultural translation of idea" he goes on to say that in the face of massive urbanization which began with the partition of the country, the town planner resorted to 'beautifying' the city by evicting its slum-dwellers. This was wish-fulfilment, pure and simple, and through it one begins to glimpse another dimension of the shallowness of the town planner's conception of the city: not only anti-urban, but possessing an out-of-sight-out-of-mind approach to solving urban problems. [6]

The Indian planner has not yet been able to look beyond the western intelligencia. They tried their utmost to do away with the features of traditional Indian urbanism. The core of Indian cities and urban villages has been an

abominable evil. There was thus a conflict in the urban evolving by the people and the urban enforced on people by the will of the government. This constant consistent split in the head and the heart of Indian planning results in a wasted effort. Urbanization could not root itself in the energy of the common knowledge. Development and Urbanization shaping our country belonged only to the elite, the educated and the urban privileged class and have thus caused a differentiation in not just the society and health but also the economic energy and growth of the people.

The Urban village of Bhangel thus remained un-impregnated and untouched from any remote systematic effort and represented all that was Indian.

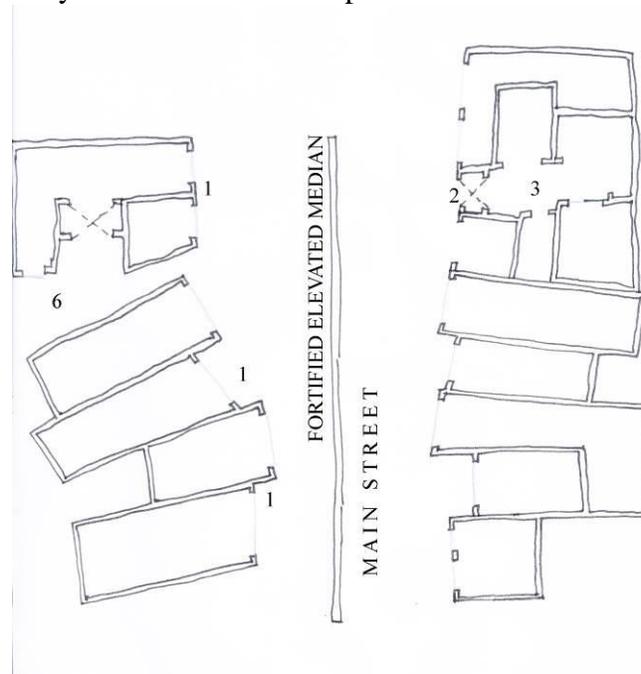


Fig.6. CRENELATED MARGINS, FORTIFIED MEDIANS AND ANGLES AT WHICH BUILDINGS ARE ALIGNED ON THE MAIN ROAD.

4. analysis of commercialization on the commercial street of bhangel

The commercial face of Bhangel in 1996 comprises of a few dhabas and eateries along with the wood and coal yards, an arms ammunition agency and two grocery stores. There were long rows of trucks which were parked here before entering into Delhi or Noida. This was followed by the development of a few warehouses and building material stores which were catering to the upcoming NSEZ (Noida special economic zone) and the Hosiery Garment Export Complex. The road was curvaceous and narrow and hence the agricultural yards and boundaries perpendicular exhibit obtuse and acute inclinations with the straightening. These stores and supplies grew in numbers and sizes till new economies of markets, banks, small shopping malls, a huge number of hardware and electrical, grocery, packaging, thread supplies, tools and implement stores replaced them and pushed the wood working and building construction shops to the villages of Salarpur and Barola. This is

indicative of the fact that the energy in the urbanization and the development of the commercial spine on the face of the urban villages of Bhangel, Salarpur and Barola are the industrial and the other residential sectors as listed in this paper. The learnings from this analysis are as under:

1. Bhangel in itself has risen to evolve its own commerce. About 75% shops in these areas cater to Bhangel and the developed sectors around.
2. Many hazardous and uses not permitted in the bye law of Noida or viable by development economics are housed in these markets.
3. The growth of banks and ATMs in this commercial stretch speaks of the commercial volumes. These are now being supported offices of lawyers and consultants.
4. There is more commerce on the road, while going towards the industrial sectors, indicating their dependence on Bhangel for supplies.
5. Most of the complexes and clusters are gated cul-de-sac or huge gated courtyards. Bhangel exhibits the fact that tradition Indian architectural morphology can be an urbanization tool.
6. As compared to its population, Bhangel has less medical facilities and few schools. It is thus dependent on developed Noida for many such facilities.

The energy in the commercialization of Bhangel is so high that an organized mall is being constructed at its edge. This is now nearing completion and will be the same mistake that Noida authority committed in the development of its malls of Great India Place, Mall of India etc on the successful commerce of Atta.

5. TOWARDS SUSTAINABLE URBANISM IN NOIDA

Sustainable urbanism is not just about building but also about practices. A multipronged approach towards a multi layered process which connects the layers of identity, geography, history, social groups, ecological, equity and eliminates the waste-harmful factors brings in more interdependence and reasons for the urban and thus economics loses its singular control. What we see today in the pandemic where a reverse migration to villages is in progress, illustrates this. Dependence just on modern economics and industrial economy isolates the urban from the more permanent form of catchments in the rural and hence does not ensure sustainability. The rural catchment must form a strong relationship with the urban. Local festivities, people, rural-connect a population that belongs to the place, memory and a sense of ownership all become factors that are important to construct a sustainable urbanism. The first factor threatening urbanism is the migration of people from urban villages and villages, leaving the growth of the area under nourished and also leading to the reduction in the agriculture and rural areas. For a better urban resilience, local resources must replace the global supply chain in case of any major disruption, it is thus important to keep the urban villages and its rural catchments alive.

An architect, planner cannot overlook history. For a sustained growth of Noida it is important that the factors that have contributed to its growth must be nurtured and kept intact so that the growth is sustained. It is thus important to keep the urban villages that have contributed to the growth of Noida in shape. Thus urban villages and the rural catchment around must be conceived under

the scheme of urban sustainability. If the urban villages with the boundaries of Noida, collapse due to extended misuse and over construction, the symbiotic relationship gets disturbed and hence sustainability is in question. Figures attached in Appendix1-4 illustrate this. Like all urban villages, a schematic planning for Bhangel is necessary to save the industrial and residential sectors. New Urbanism aims to alter the ways people understand and build the places where they live and work, superceding modernist concepts of separated single use zone areas, buildings isolated in open space and an environment dominated by the automobile.[15] These agendas of the Charter for New Urbanism (published in1999) give strong indication of approaches which can be adopted.

6. CONCLUSIONS

The paper successfully establishes that Bhangel has survived the lack of focus from organized planning and development. It has commercially supported urban growth by housing commerce, not viable in the economics generated by development of Noida. Urbanism in Bhangel has rooted in by catering to needs not listed in the straight line grid planning and often by uses not permissible in the byelaws or economically viable in the planned areas of Noida.

The rift in the socio-cultural knowledge, the common knowledge of the people due to enforced development of the 19th century, Indian urbanism today is dependent only on modern economics. We understand that urban is born along through it, but if it does not seep into a broader foundation, by itself it is too insufficient to sustain urbanism. It must incorporate history, ecology, geography, society, memory, ownerships, religion and culture. It shall remain unsustainable and shall fluctuate if dependent only on one factor or depend only on migrant population. Sustainable urbanism needs a wider set of reasons.

The opportunity of directing the human energy in Bhangel, a representative of the list of many such cases in Noida must be utilized and not left un-sapped. It has supported industrial and urban growth in Noida while using preserving the architectural morphology of traditional Indian settlements. This gives a que to pursue studies and through an organized effort and design based planning, give the right blend of Sustainable urbanism in Noida.

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