Panchayati Raj

KALONDA

GAUTAM BUDDH NAGAR

50+ EXCELLENCE
APEEJAY EDUCATION SOCIETY

Apeejay Institute of Technology
Apeejay School of Architecture & Planning

under the aegis of

Dr APJ Abdul Kalam Technical University, UP

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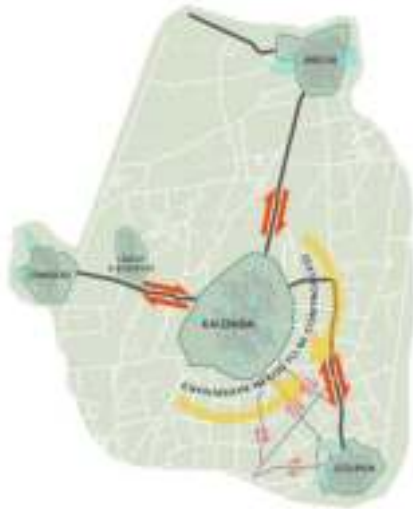
Need

Modern life is **economy centric** and the secondary and tertiary sectors of the economy have risen above the primary, considering the primary to belong only to the primordial man. Agriculture till date is the process of feeding the millions and the easiest connection of natural resource in soil, rain, and seasons to spring the economy of the secondary and tertiary sectors. **Agriculture cannot be practiced in cities**. It needs a **natural-connect** and large uninhabited belts with an optimal ratio of **1:15** (as can be seen in the case of Kalonda) of human habitation to the green fields. The fields of villages remain interconnected while the settlements remain interspersed with fields.

The governance of the villages in modern India is through the MoPR (Ministry of Panchayati Raj), while rural centers which fall out of the list of agriculture or rise to a **human population above 10,000**, get listed **under the Nagar**. The structure of panchayat with a gram Pradhan does not apply anymore and is linked to the nearest Development Authority.

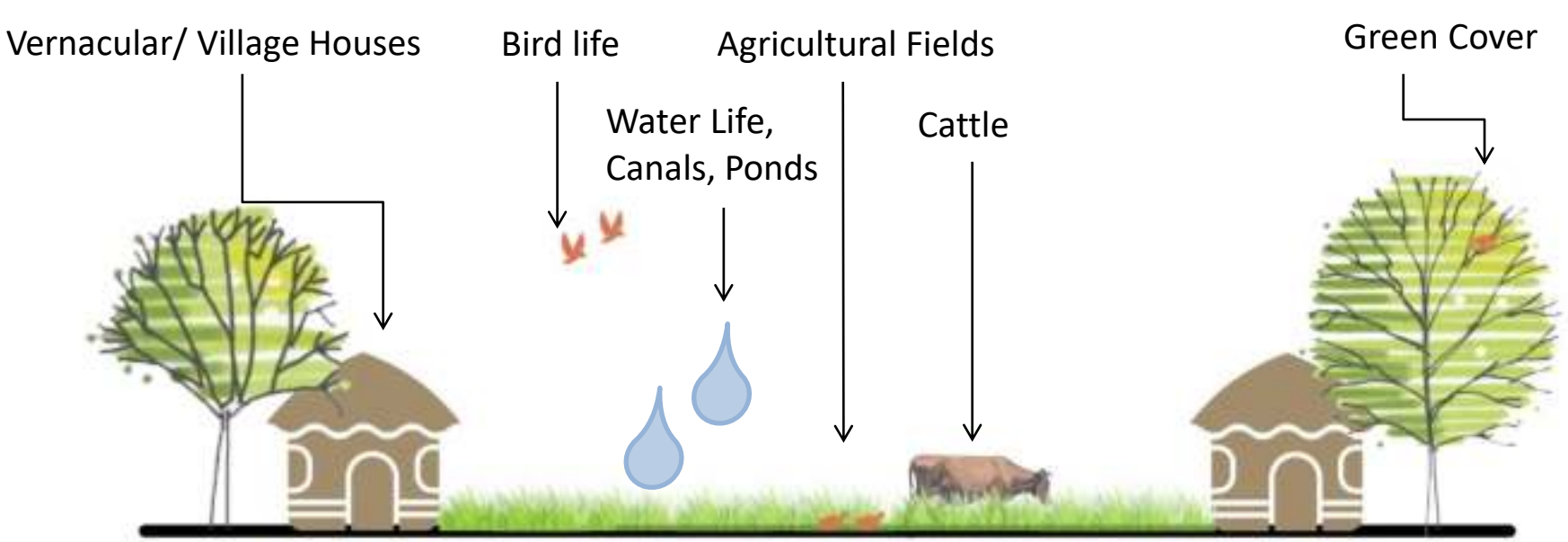
The **Development authorities** find dealing with the village Aabadi areas and **rural confusion challenging** and neither prepared to understand nor to administer and improve the conditions of these areas. The result is that most of the **rural, peri-urban, and urban villages lie unattended** while the newer developments on fields and **lands taken over from agriculture** and planned by the Development Authorities with automobile invasive roads and with registered allocations of land as against the human-invasive-automobile restrictive construction of villages over self-selection of land plots and design processes.

With the crumbling sanity and orderliness of urban centers due to **unchecked expansion** and the **mass migration** of the people from villages to the urban, the disbelief on agriculture to be a value worth path of life to pursue and with the **lack of employment and opportunities for the people** who have continued to live in villages, it becomes important to help villages develop. With foresight, I may also wish to say that this is important to bring stability to the nation, economy, and society at large. When we see the villages and urban villages of developed nations, we have hope that there is a direction. The development of Modern India as we see it today, cannot comprise only of the metro centers. **It must have the strength of villages, the rural belts with the agenda of holistic, sustainable, environment inclusive, and ecological urbanism.**



Character Of Village

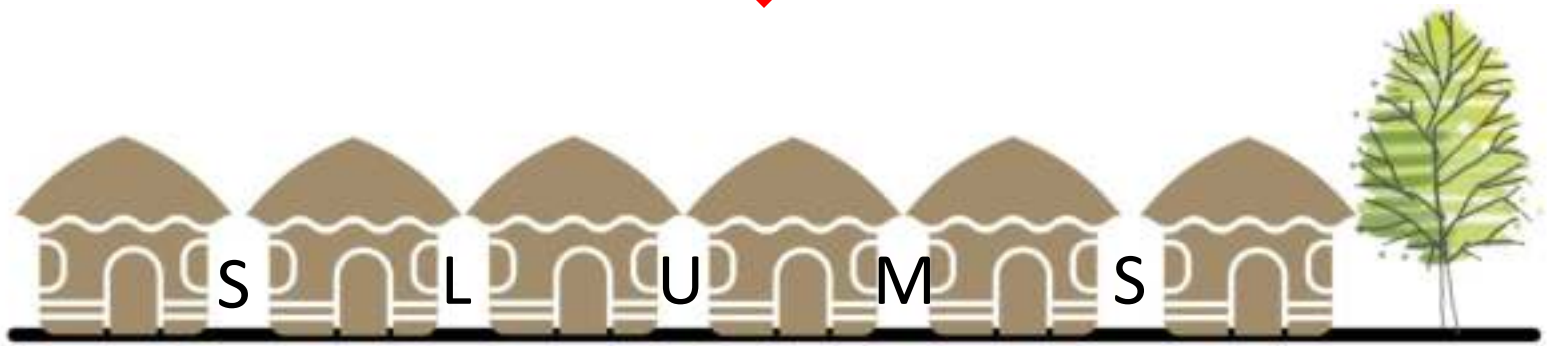
Character of the Village



Unchecked growth of the village causes it to transform into a RURBAN area

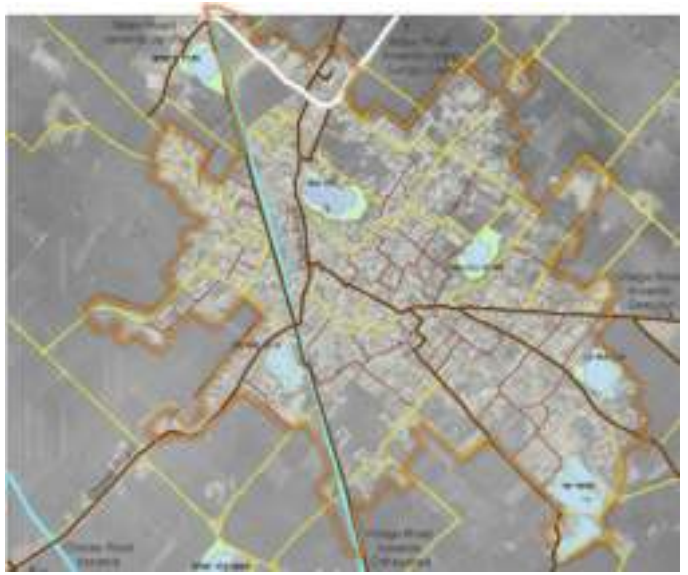
Rapid Urban sprawl from Abadi area leads to the death of Rural.

Loss of Cattle life, birds and green cover. Neither Rural nor Urban.



Kalonda At A Glance

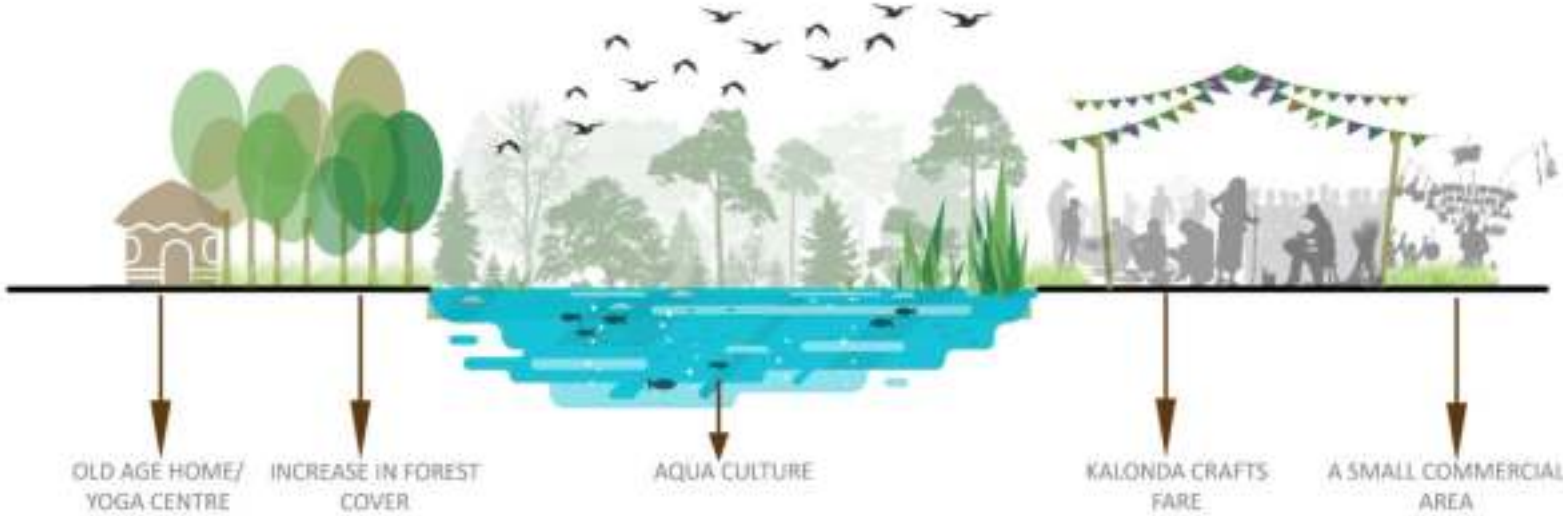
क्या किसान का बेटा किसान बनना चाहता है ?
खेत को शहर में बदलना तो आसान है लेकिन क्या हम शहर को खेत में बदल सकते हैं ?
गाँव के घरों के बारे में शहर के घरों सा नियोजन क्यों नहीं है ?
क्या बिना गाँव के बिना खेती के शहर संभव हैं ?
गाँव निवासी पर हुए सरकारी खर्चे और नगर विकास में करीब ५०० गुना का अंतर क्यों ?



Names of Lakes:

Mata Vala Talab
Pokhar Jatav Valmiki
Bagha vala Pokhar
Naya Talab
Peer Vala Talab
Chayyasa Mod Talab
Kudkana Talab

Area of Panchayat Boundary : 913.76 HA
Aabadi area : 56.56 HA
Area of Agriculture Land : 853.02 HA
Area of Water Body : 4.49 HA
No of households : 1474
Population : 12326



Statement Of Vision

To uphold the village of **Kalonda** and all other Indian villages as a repository of

- Social,
- Cultural and
- Aesthetic values

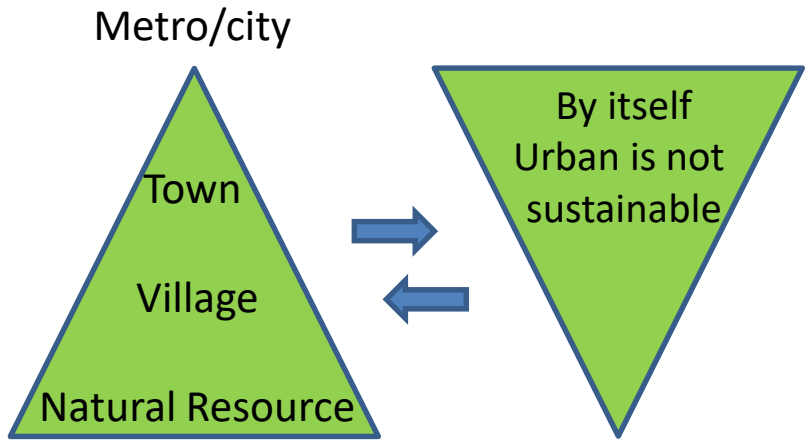
while maintaining them as a resource for the agendas of

- Economy
- Capacity Building
- Education & health
- Environment and
- Sustainability

by way of agriculture, horticulture, forests, orchards, animal husbandry, aquaculture and promoting self reliant rural economy and the reverse flow of urban economy to villages by uses compatible to the pace of rural life through **modification in POLICY & PARICIPATORY DECENTRALIZED DEVELOPMENT as an aid to** entrust Indian growth to its villages and uplifting the Indians living an impoverished life in villages.

Statement Of Vision

- Independence, **Development** and the **growth** of our country in the new age **has overlooked the villages**.
- Our primary sector of economy, our cultural roots and the large percentage of our **countrymen living in villages are at a threat** and so is our wild life and natural resource.
- The agnostic focus on the metropolitan centres and towns and the mistaken association of success to luxury to economics has led to the rise of new a social ambition that now is driving every able bodied and educated individual from the village to the anonymity of city life and from the city to the metro and so on. There is a **mass migration to nowhere and to no end.**
- It is **impossible to keep up with the city without the village**. The pyramid of growth where the metros of our country sit at the top, only because the village or the rural lies at the base, could get inverted, **making the metro a centre of discontentment, crime and hunger, if not supported by a balance in the rural.**



- Urban which is the most developed form of human existence is now seen as blight and this is primarily because of an uncared rural. Also the movement from rural to urban is seen as an ascension. **With a richer, more content and happier rural the urban experience will also be more fulfilling.** The development driven by the governance of India must also take care of the villages and the rural.

Statement Of Vision

- The new vision of development must be driven through the agenda of villages for a better and more sustainable urban.

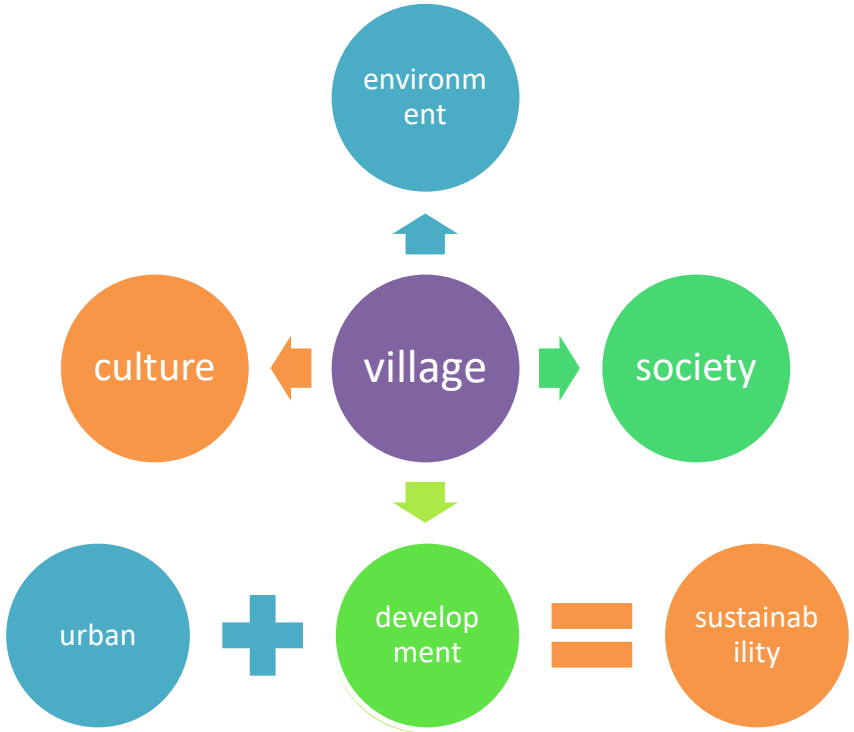


Table explaining the needed shift of development to rurban/ villages

- With the boundaries of the world shrinking through connectivity and technology, it is now possible to **reposition the villages to become the new centres of sustainability, peace and growth**. The ever-interconnected world uses the metaphor of a global-village and not a global-city to address the new-age cohesiveness in life.
- The **economic model of accumulation of resource towards the centre**, i.e. driving economics to towns and metros was a very colonial model where the metros had become centres of sapping the resource. This model was never followed in the first world nations. With the emergence of a country with better vision **India must also focus on preserving its environment, culture, dialects, languages and the diversity of life while protecting its villages.**
- Villages have been a sapient resource for the social values which are a **better outlay towards a fitter administration and a safer society.** These are better than the economic values persistent in the cities and hence must be adopted and nurtured.

Aim For Rural Planning: Kalonda

- **Glory of villages** - After the extreme aggrandization of luxury and conservation of life through a reluctance and increased reduction of the use of the body into processes of life, the new age humanity believes in principles of wellness, cure, balances, aesthetics and cultural-rootedness for a disease free, normal, healthy living. Green net zero and bio-philic are the new development aims. Countries of Europe, Japan, UK, USA, have followed this model. **A better quality of life** was thus possible at a national level only when they saved their villages, through their society, culture and the housing character and the agricultural connect of lives. A similar effort in Kalonda is needed in the rules underlying planning to recognize the underlying values for which it has stood through the ages. The correct balance of life embedded in village life should be highlighted. **A more united effort at all levels (small scale industry/ investors/ stakeholders/village communities) is aimed in the proposal for the village of Kalonda in the proximity of unchained urban pressures of the NCR**.

- **Green** – Villages of Kalonda and others in GB Nagar must develop as the new destination for the green living. Rural tourism, ageing and special need communities, therapy, yoga etc. offer possible cues for use-planning. A reverse flow of economy from metros to villages is possible. Integration of strategies will give a framework for achievements.
- **Conservation of Agricultural Land** – Strict enforcements must be made to prevent the active conversion of land from agriculture to others and **rational use of land**.

Aim For Rural Planning: Kalonda

- **Planning** – The measure of planning as understood and adopted by the world in the international agendas taken up in the Charter for New Urbanism offers the vision of "Design-first" to the world. **Formulation of Rural specific planning norms**, through a case specific agenda per village, will be taken up to find a comprehensive, multifaceted, multidisciplinary, non-centred solution for saving the village of Kalonda as a village and a repository of agriculture , nature and environment lest we lose them to the concrete desert of cities and mindless stretches of expressways.

- **Economy, Environment and Education** – Agriculture is till date the most economic and beneficent human activity that **sustains environmental balance**. An educated approach to agriculture, with more crops and reduced unpredictability and human struggle will give better economics & hence reasons to maintain it. **Planning by Design must aim at upholding the resource of land & social inclination to agriculture. Changes in policy accompanied by institutional partnering must be adopted.**

Aim For Rural Planning: Kalonda

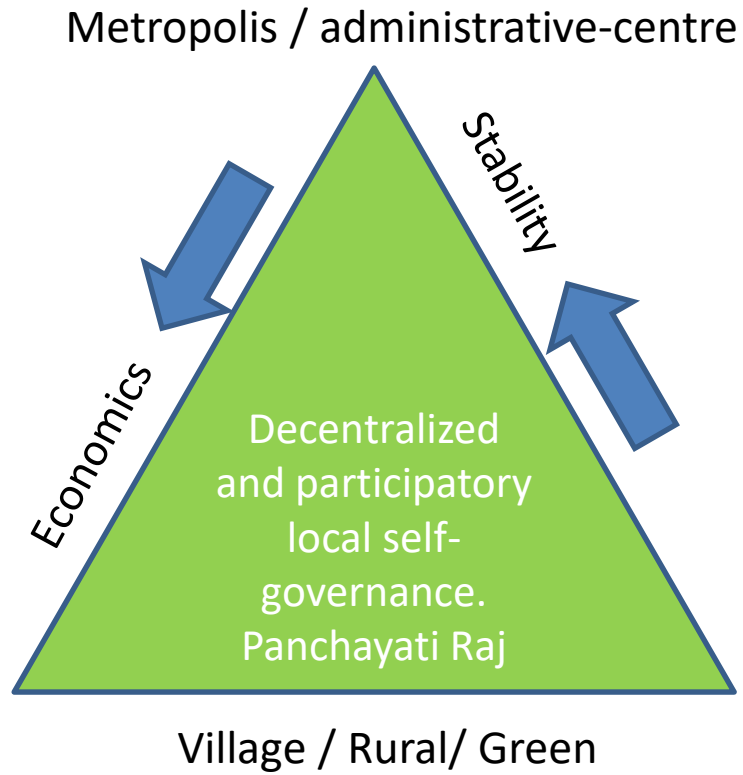
- **Equality –** the Indians living in the villages have not yet received the beneficence of the modern, global, interconnectedness and are **deprived of basic nutrition, education, health, gender-justice, shelter and employment .** They thus migrate and lose their connections with their roots.

- **Natural features in geomorphology –** lakes in Kalonda form the reason for the existence of life. They are the reason for the growth of the villages. The dumping of grey water and polluting of lakes is polluting the ground water resource and bringing in life threatening diseases. **They must be used for aquaculture and as a setting.**

Aim For Rural Planning: Kalonda

- **Perspectives –** Planning, adapted to the setting of Kalonda must focus on a SLWM and LULC plan that creates better opportunities through creating partnerships with SEZ and NEPZ in Noida and Surajpur for providing trained labour from this village for employment.
- **Arts** – Local arts and crafts of Kalonda must be cultivated, promoted and developed through people's participation.

- **Decentralization of power done through participatory local planning** for a more stable centre.



- **Population Control** – rural must become the centre for control of population growth.

Methodology

Step 1:- Preliminary Survey → To understand the existing village people and agriculture. → Meetings with District block and state Panchayati Raj Officer. Village meetings with key resource people and Pradhan.

Step 2:- Household Surveys → Village surveys to understand the housing typologies, lake side and infrastructure. → Survey outcomes (Information)

- ✓ Demographic
- ✓ Economy
- ✓ Household
- ✓ Health
- ✓ Education
- ✓ Beneficiaries suggestions.

Approximately 340 household surveys successfully conducted by the team members with the help of community support.

Step 3:- Community participation → Beneficiaries interview and community meetings were conducted from different users group. → Our team members explained them about the vision of the Panchayati Raj or spatial plan project.

Step 4:- Documents referred for the preparation of project framework

1. District census handbook Gautam Buddha Nagar.
2. Guidelines for preparation of Gram Panchayat Development Plans.
3. Manual for Integrated District Planning.
4. Government of India, Ministry of Panchayati Raj.
5. MEME Report, Development Institute.
6. District brochure of Gautam Budh Nagar.
7. Town and country planning act
8. U.P Urban Planning and Development Act, 1973
9. U.P Industrial Development Act, 1976

Methodology

Step 5:- Village Documentation → Government of India Reports and documents. + Study of Acts and Laws + Meetings with Local residents and Gram Pradhan and interviews.

1. GIS Mapping.
2. Household profile.
3. Aspirations

- New Agriculture /farming/ crops
- Infrastructure
- Healthcare
- Sanitation
- Education
- Hydrology
- Transportation and Conveyance
- Self Help Groups
- Water Supply
- A healthy settlement morphology
- Sports and leisure
- Landscape and Community Spaces
- Rural Tourism
- Market integration
- Waste Management
- Banks and Fiscal institutions
- Women Empowerment
- New Economies and more…

Settlement Information;
01. Topography.
02. Water Courses.
03. Road Hierarchy.
04. Land use.
05. Morphology.
06. Urban Fabric.
07. Infrastructure.
08. Household Profile.
09. Activities.
10. Natural Vegetation.

With the help of collected data, final presentation and report of kalonda spatial plan will be prepared for the future development of the village.

1-Introduction to Kalonda
2. Regional Settings
3. Environment and resource management - Kalonda
4. Economic opportunities and Livelihood - Kalonda
5. Infrastructure and Development - Kalonda
6. Education, Awareness and Capacity Building Human Resource -
7. Identification of thrust areas
8-Vision of the Gram Panchayat for Kalonda as seen through the 25 years GPDP

Kalonda and it’s Region

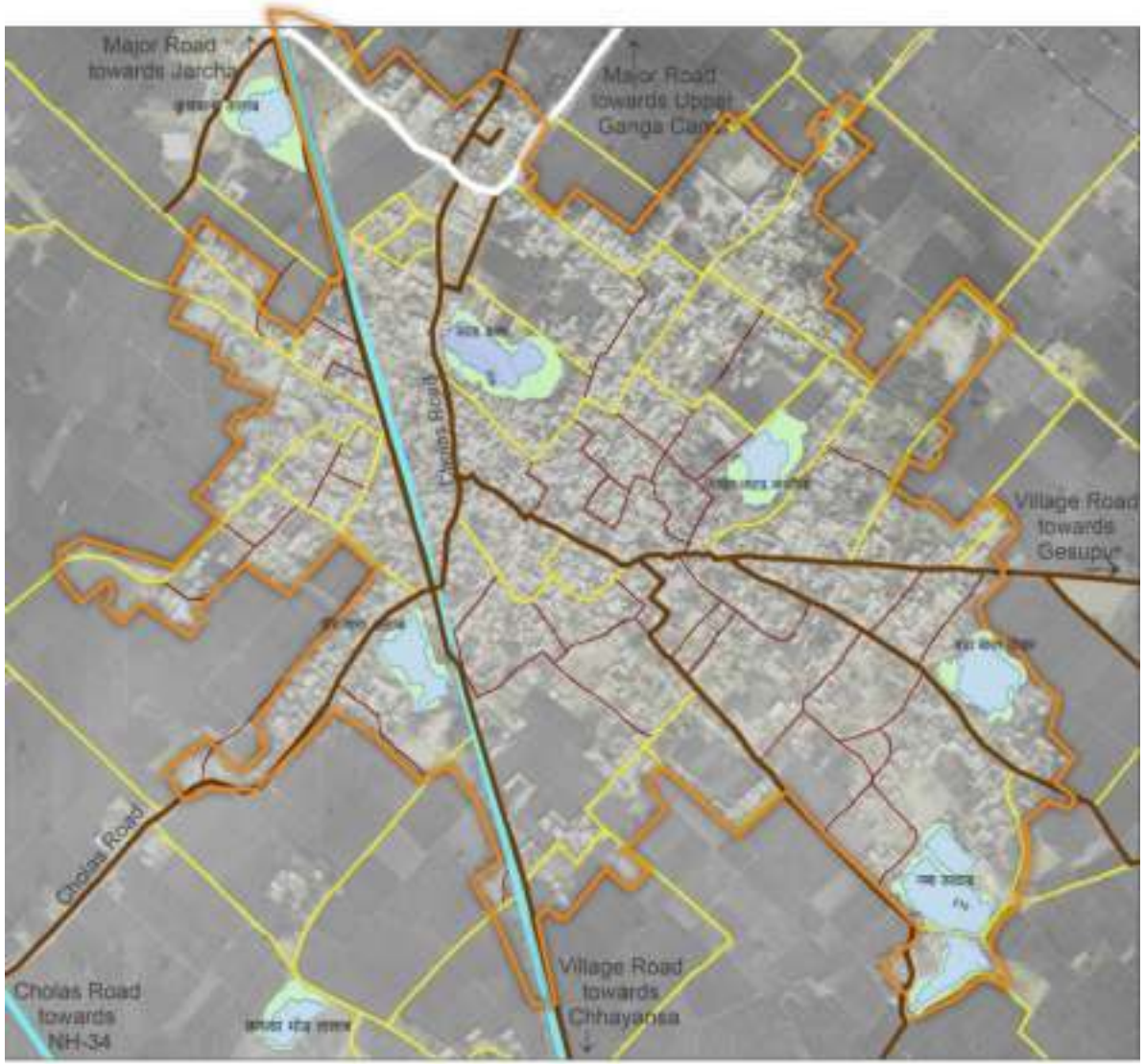
Kalonda is village in Block Dadri, District GB Nagar, Uttar Pradesh, well connected with the surrounding villages. Village has five talabs and a canal within the settlement.

There are various Agricultural activities, farming of crops (Wheat, rice, maze, jawar, bajra etc.). The village is located at a distance of 5km from highway NH-34. At present, entire settlement is divided into two parts and the division along the canal.

While the majority of people living in this area are from Muslim community and the rest from Hindu community, they maintain similar surnames as they are descendants of Rajputs.

With the rise in population and reduction in agricultural land, population is in a fix. There are evidences of social unrest, social injustice, migration and rural poverty.

	Census 1991	Census 1991	Census 2011
Total Area (Ha)	**719**	**750**	**489**
Total Population	**5567**	**7494**	**9910**
No. of Households	**795**	**990**	**1317**



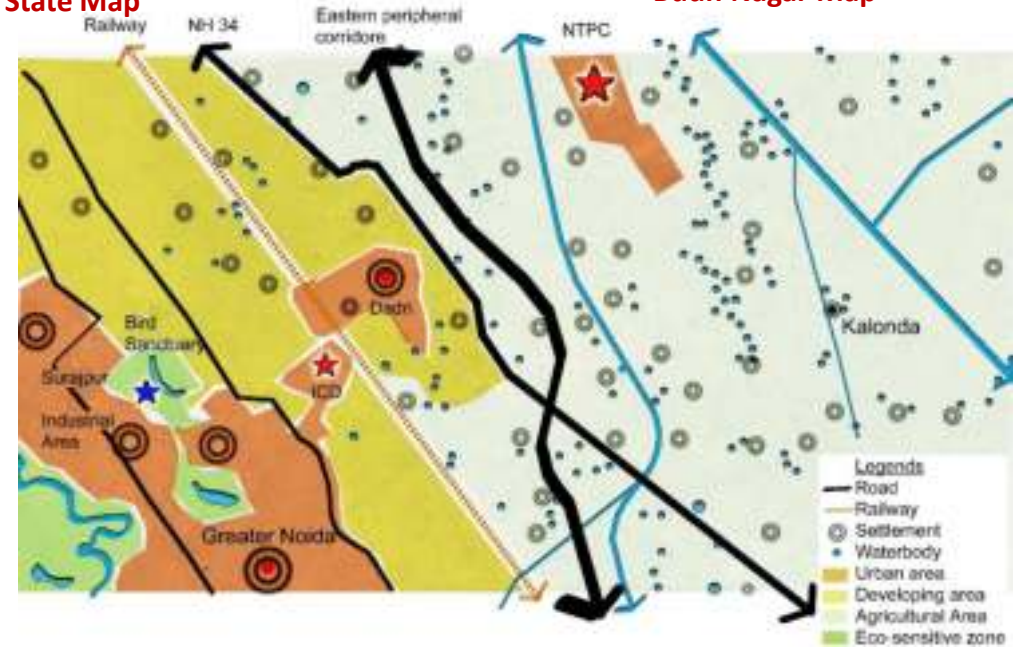
Panchayati Raj

Location of Uttar Pradesh in Map of India

Location of Gautam Budh Nagar in Uttar Pradesh State Map

Location of Kalonda Village in Gautam Budh Nagar Map

Surrounding settlements of kalonda Village



Location of towns nearby Kalonda

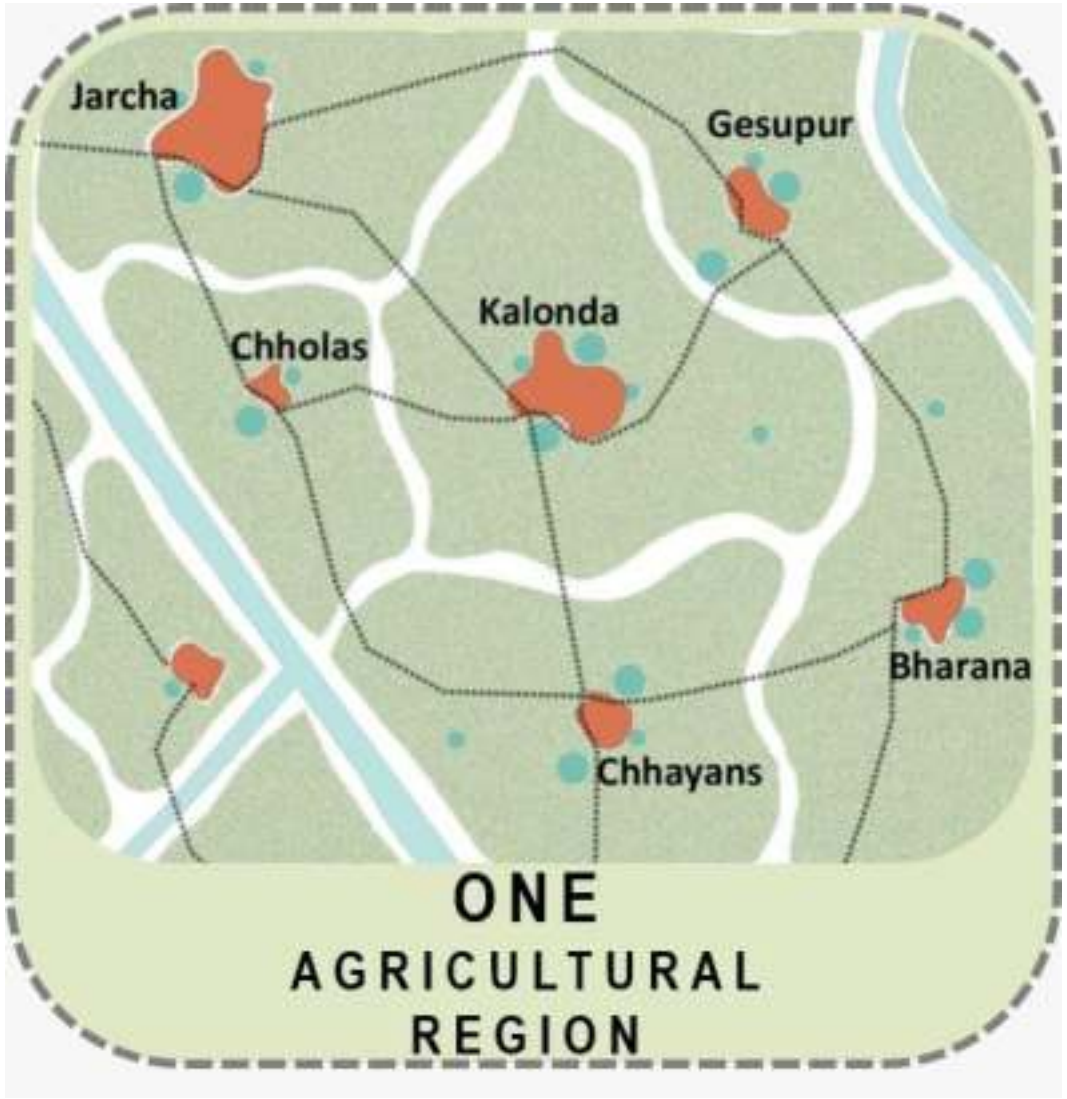
Regional Setting: Connectivity Of Villages

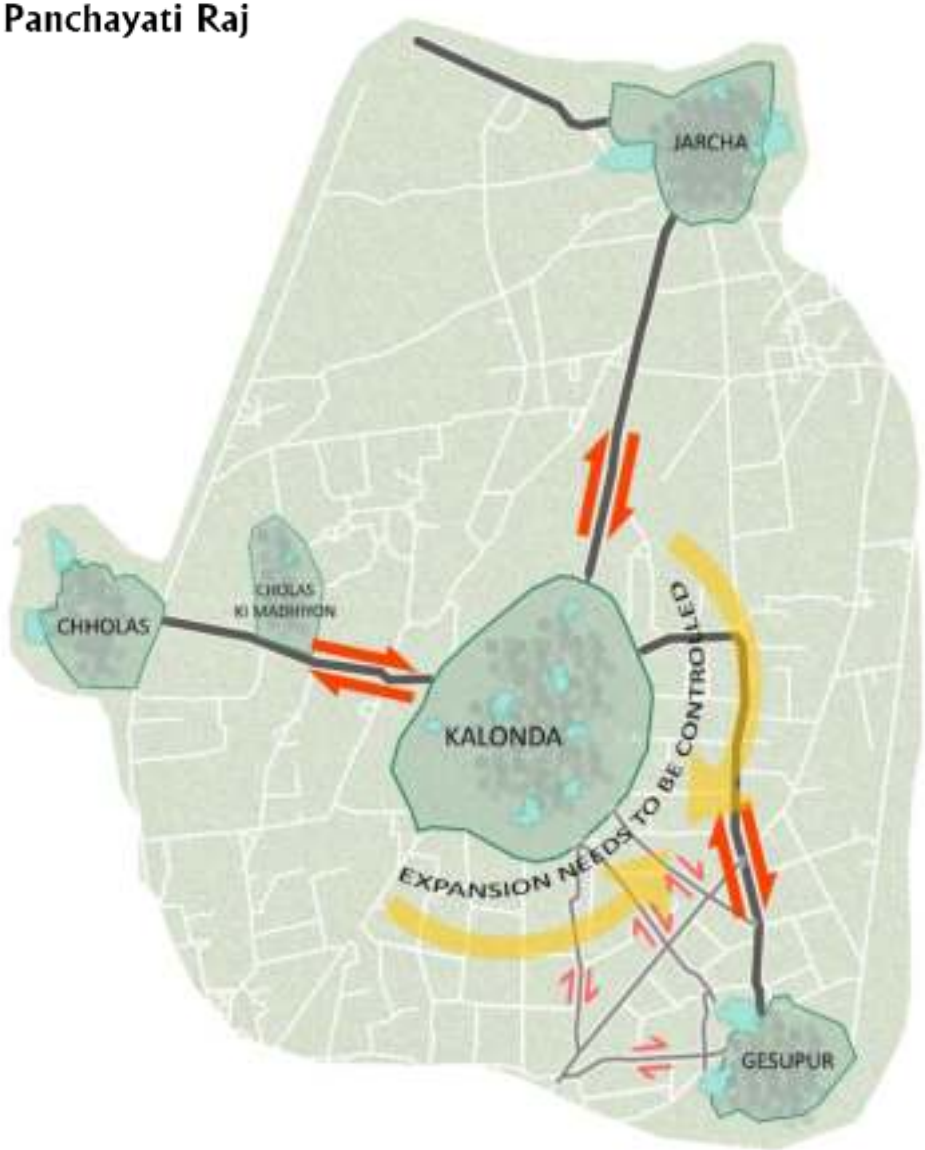
Each village bears acute interdependence with surrounding villages for socio-cultural, economic and agricultural purposes.

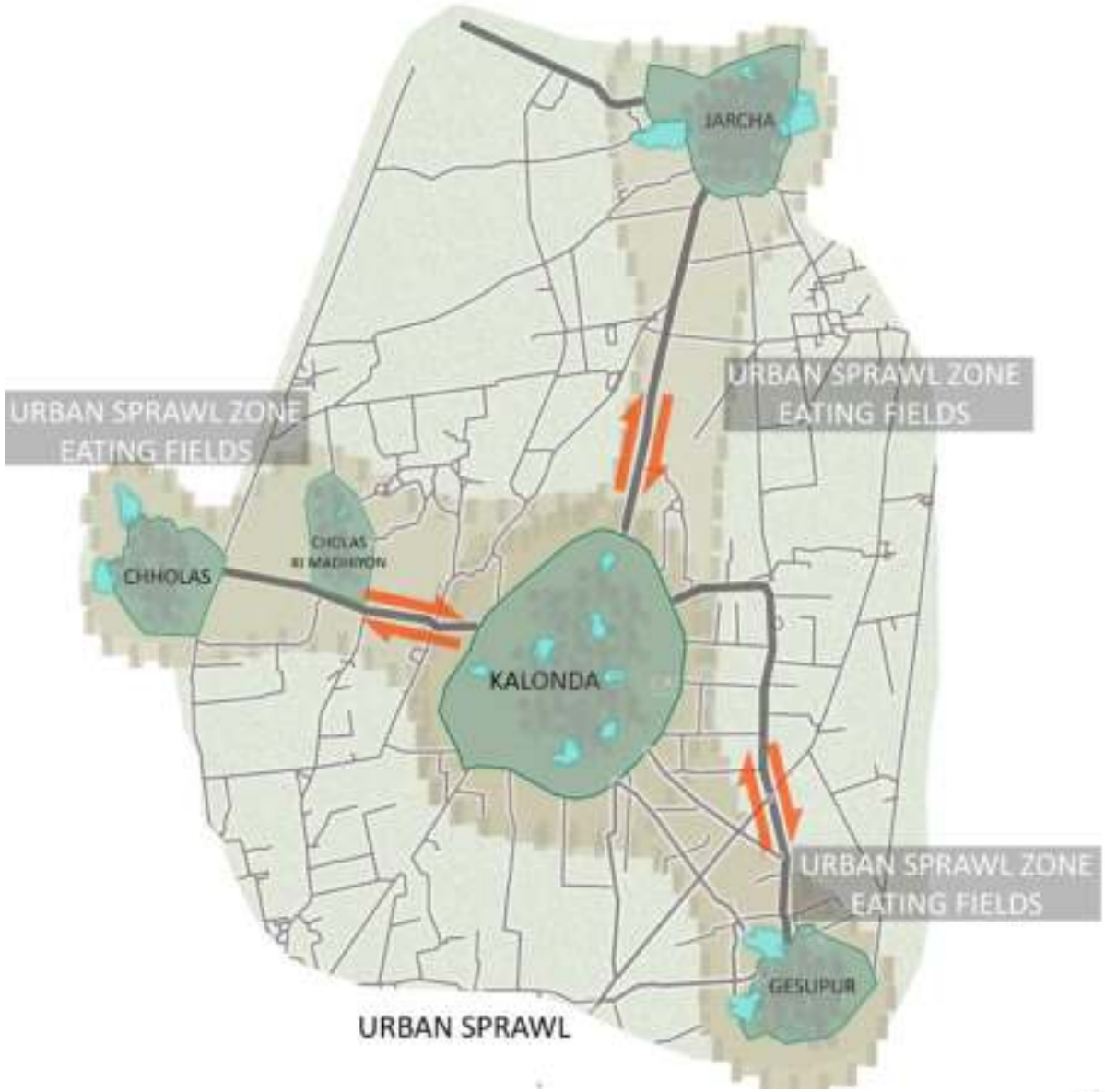
The four villages of Kalonda, Jarcha, Gesupur, and Chollas work like a network and are interdependent on each other. The Abadi areas are separated by a distance of 3-5kms, but the agricultural fields meet and hence agricultural equipment, processes and practices are shared.

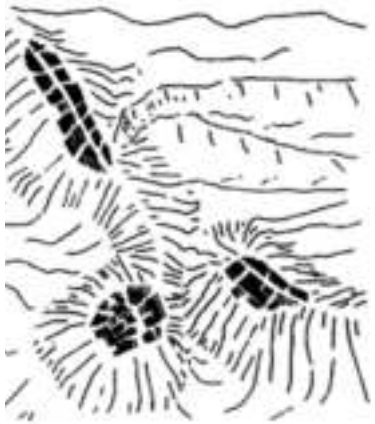
They have same administration and same geography and hence their problems and the ways to handle them are similar. This shared life is casting immense pressure on the agricultural fields and they are undergoing rapid conversion to smaller fields and then to housing sprawl.

Settlements which are culturally, socially, economically, geographically and administratively united tend to grow towards each other. There is no check on the growth of their Abadi areas. This is the reason when we look at giant urban villages where growth has been unchecked for the last 75 years of independence that they have huge internal open spaces and overcrowding, high FAR construction and tall buildings along the roads.




JARCHA
CHHOLAS
CHOLAS KI MADHYON
KALONDA
EXPANSION NEEDS TO BE CONTROLLED
GESUPUR


URBAN SPRAWL ZONE EATING FIELDS
URBAN SPRAWL ZONE EATING FIELDS
JARCHA
CHHOLAS
CHOLAS KI MADHYON
KALONDA
URBAN SPRAWL ZONE EATING FIELDS
GESUPUR
URBAN SPRAWL



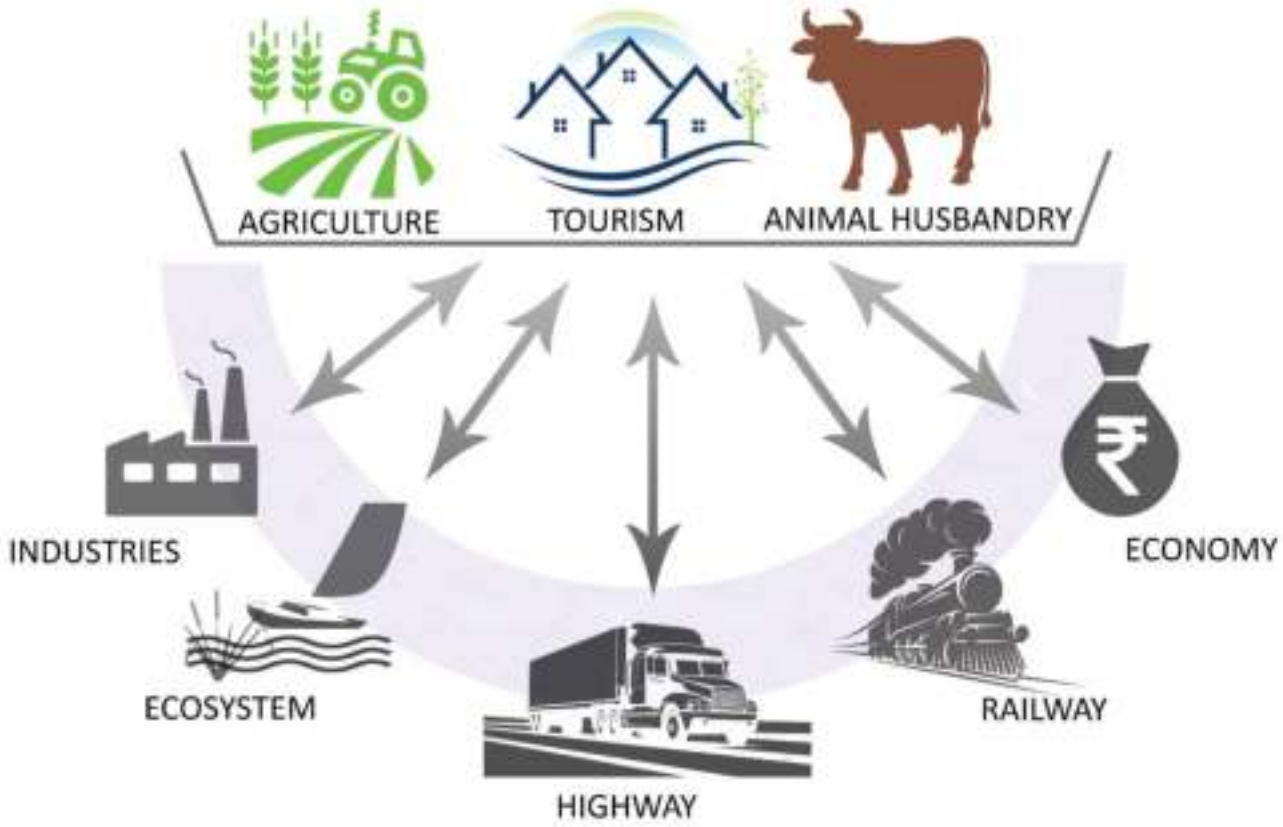
Opportunities

The presence of strong contextual forces poses innumerable opportunities for Agro based production, processing, manufacturing and trade.

The village is connected through high speed Eastern Peripheral Expressway to other towns and cities in National Capital Region. National Highway 24 and 34 enable connectivity to further north and southern towns and cities.

Existing Surajpur Industrial Area, National Thermal Power Corporation Township near Dadri and ICD Between Surajpur and Dadri, are sources of secondary and tertiary employment for part of the village population.

Further regional opportunities in near future are upcoming Delhi-Mumbai Industrial Dedicated Corridor and Integrated Industrial Township at Greater Noida, a model transport hub and a multi-modal logistic hub at Bukadi railway station shall give a boom to village community.



Panchayati Raj

Regional forces and future opportuniti

MMLH &MMTH
Metro Connectivity
Airport at Jewar

5 Years

- Multi Modal Transport Hub (MMTH) & Multi-modal Logistic hub at Boraki in Greater Noida
- Extension of Metro-aqua line from Gaur city to Greater Noida Extension with 9 new station
- Asia's Largest Airport at Jewar on a land of 5000 Hectare by 2024

IIT, Greater Noida
Patanjali food Park

10 Years

- 302.63ha of Integrated Industrial Township
- Food park at Yamuna Expressway on a land area of 455 acre by Patanjali Group

DMIC (1500 km long)
Film City (1000 acre)
Data Center (200 acre)

15 Years

- Completion of Delhi – Mumbai Industrial Corridor by 2032
- Improved connectivity and access to states of Haryana, Rajasthan, Gujrat and Maharashtra

Dadri Noida Ghaziabad
Investment Region

20 years

- 50 KMs of region - The Dadri – Noida and Ghaziabad belt is home to some of the largest companies in India, engaged in the manufacturing

Collective Regional
Development

25 years

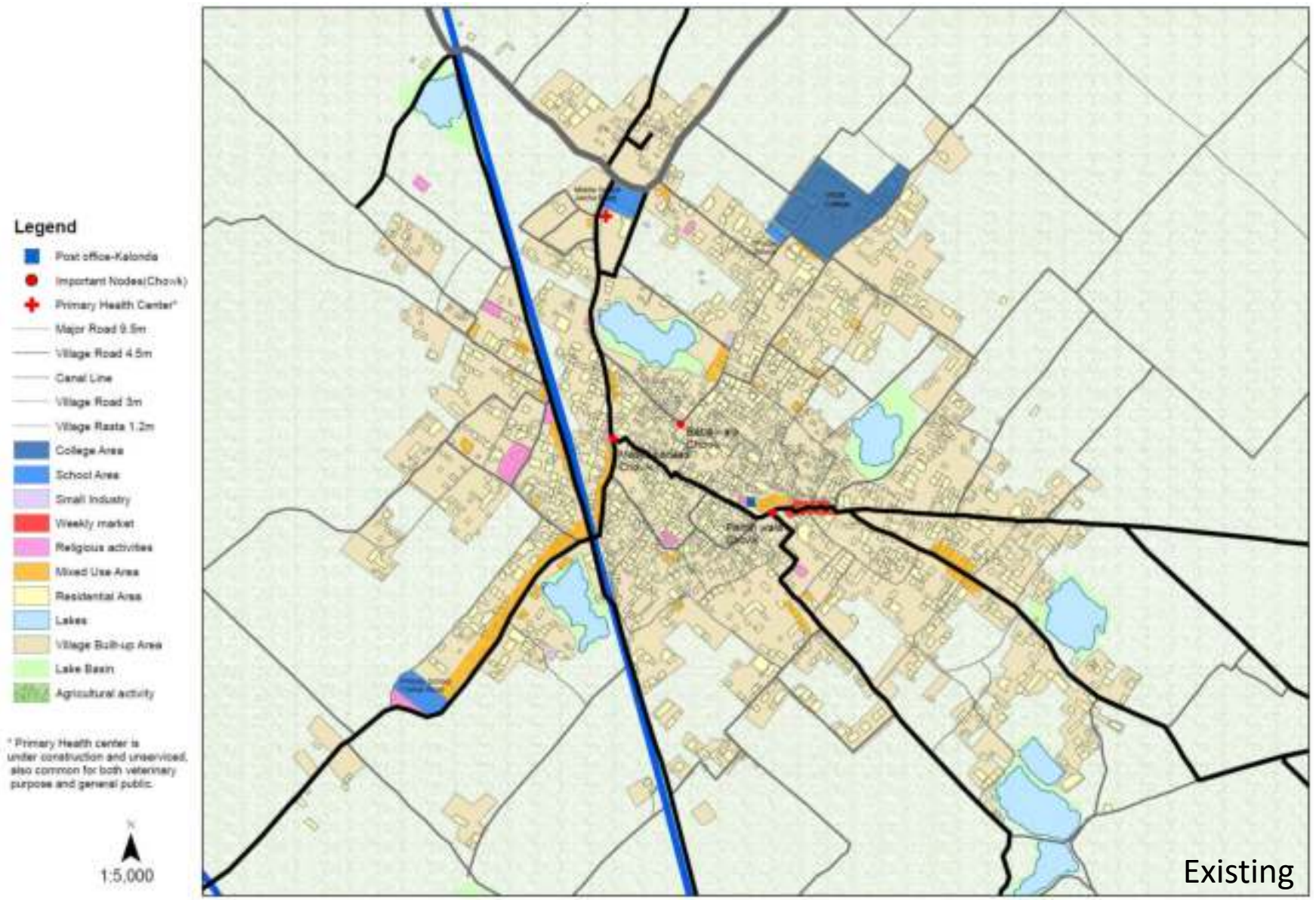
- Regional influence on Local growth and Development of Kalonda as a 'RURBAN' pocket- Conservative and Futuristic

Villages At The Junction Of Urban

Urbanization, backed by the economy, backed by the government will and social aspirations is not easy to control. The general tool adopted by planners was to construct a ring road, to circumscribe the growth and to limit it. This has been time and again tried and tested in different situations. The result always has been unauthorized growth on the other side- allowed as development and later recognized as legal. The village thus must be limited by peripheral land uses which do not allow further growth. The development of institutions with a back to the green fields and with controlled access to the fields is the only method to do this. The diagram illustrates the development of such institutions along the periphery of the village and especially towards the side where the village is racing to merge with Gesupur.

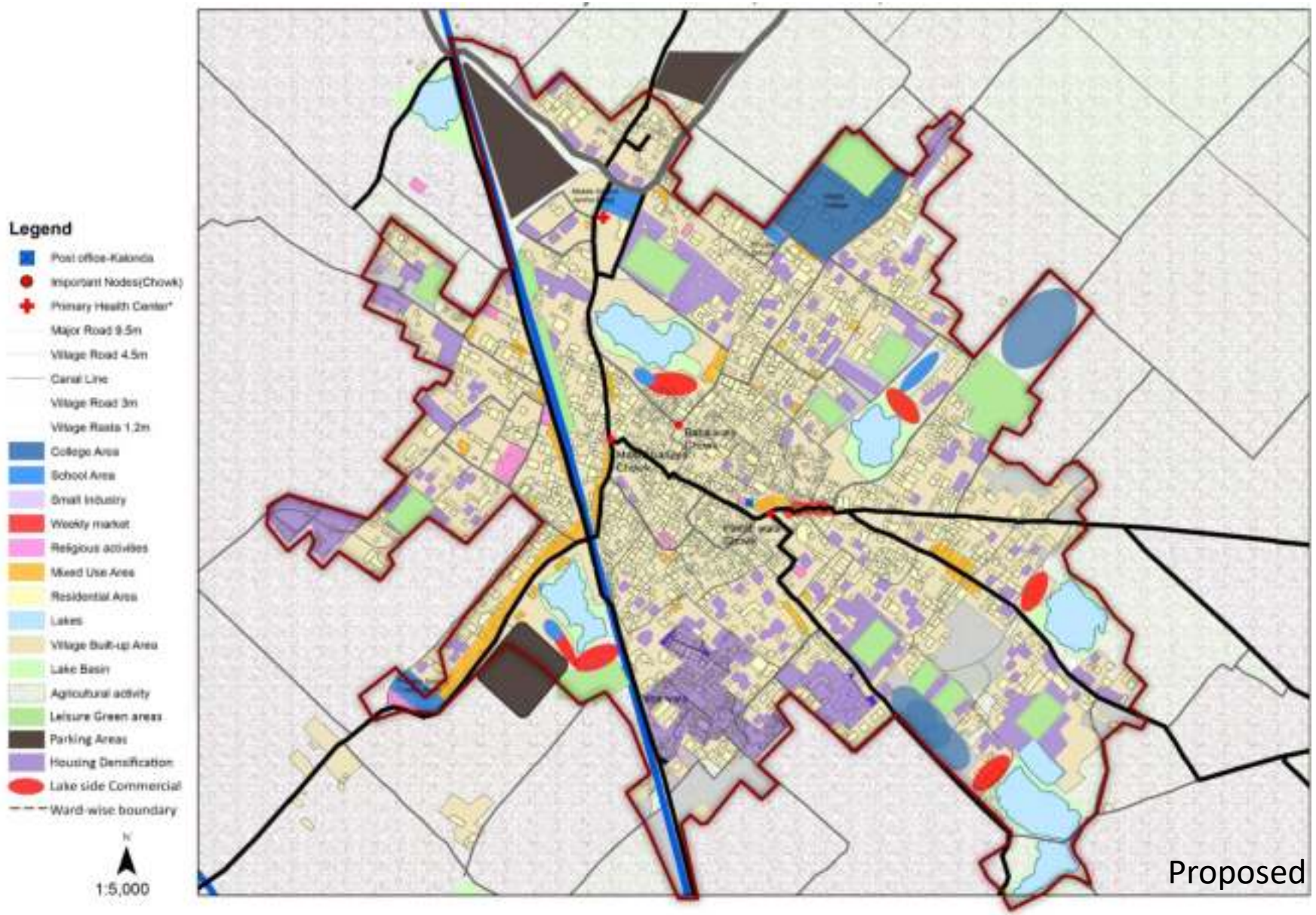
Land Use And Land Management

In the existing mapping of the LULM, a disconnect between the water bodies and settlements is observed. Commercial land use is limited to a few chowks and squares and is not evenly distributed. Almost all houses are mixed land use and are in indigenous typologies (discussed separately in the housing policy chapter). The Proposed Land area of the village is clearly divided into agriculture and Aabadi area. It is felt by us that the scope of the LULM for villages must be restricted to the Aabadi area. In the present LULM, the density of the population is close to 220 pph(as projected through census data and understood through household inventories), which would rise to 450 pph in the next 25 years.



Land Use And Land Management

The increase in the density is demonstrated through a densification plan of indigenous housing typologies recognized as need-based self-designed agricultural connect typologies. To manage the increase in the need for commercial and institutional, the model of Lake Centric Development has been used.

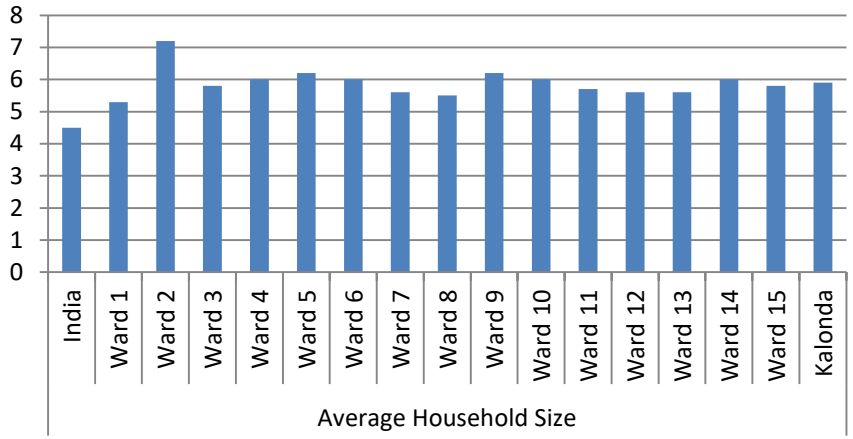


Land Use And Land Management

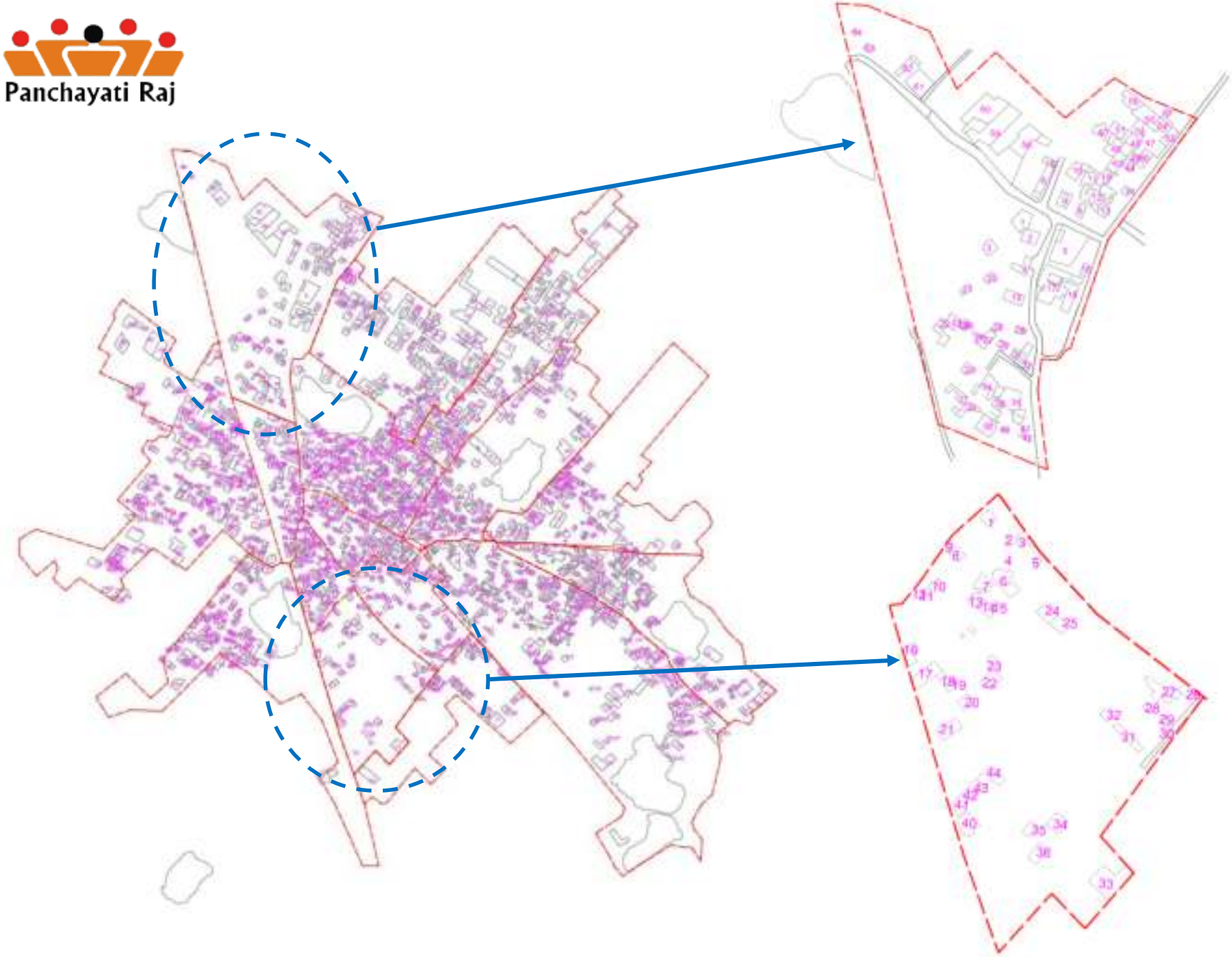
Lake Centric Development **LCD** -
Each lake is a resource for:
a) fish farming
b) water resource - hydrological recharge area (rain shed drainage)
c)SLWM greywater from the housing area
d)A pleasant site for the development of lakeside and leisure activities and hence must serve as the
e)Connecting point of the village and the new economies suggested in the village example old age home, Kalonda crafts and exhibition areas, etc.
With the LCD approach, the different wards of the village can get balanced growth and this approach can be used for the conservation of lakes and ponds as opposed to the current urbanization and development trends where unrecognized lakes and pods are encroached by land mafia and sold as a commodity for development. While as a part of the plan the lakes of Kalonda may be interconnected for better hydrology through swales and covered drains to help the runoff and avoid flooding of one pond in monsoon. This connection as reported in Kalonda, existed in the past, but has now been lost due to lack of thought in road building.

Land Use And Land Management

As a part of the LULM, it is proposed that the agricultural areas must be retained as a National resource - green fields. There must be an effort to develop trees, orchards, and associated green typologies in the village areas. It has been observed that although the village area is surrounded by green fields, the village roads are deprived of green cover.



Panchayati Raj



WARD	HOUSEHOLDS
1	64
2	101
3	79
4	90
5	176
6	121
7	106
8	200
9	44
10	37
11	117
12	22
13	65
14	76
15	176
TOTAL	**1474**

Land Use And Land Management

A plan itself is toothless to bring about a change in the area. It must be supported by public policy and development practices akin to the local population, history and geomorphology:

1. Neighbourhoods should be diverse in use and population. Interdependence between areas must be there.
2. Communities should be designed for the pedestrian and transit as well as cars, as in the case of Kalonda today.
3. Settlement should be defined by physically defined and accessible public spaces around lakes.
4. The urban place must celebrate the local history and agriculture.5. Efforts must be made to make people aware of the importance of ponds in the urban area model.

Infrastructure And Development

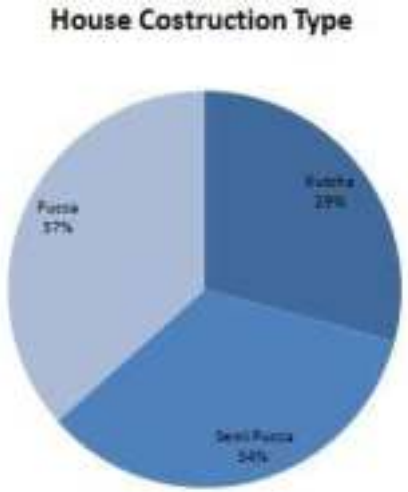
The infrastructure needed for a Village is clearly divided into three parts :

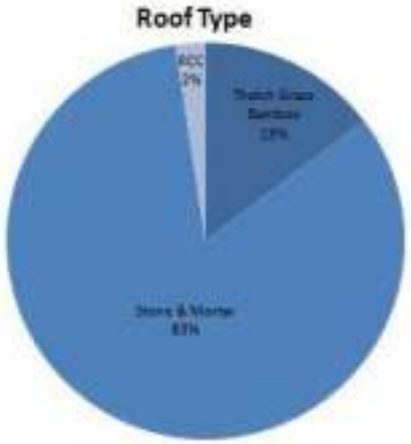
- Agricultural Infrastructure
- Water Bodies and
- Housing and Aabadi area

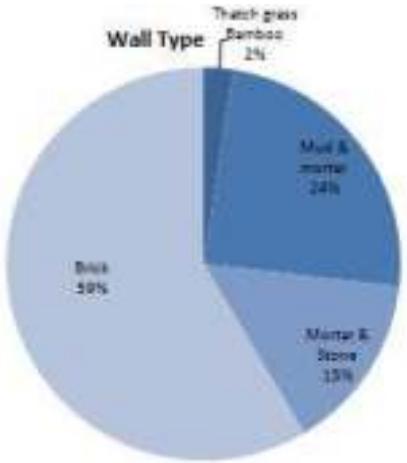
An integrated development program where the densification of Housing areas with typological semblance to agro-vernacular house typologies, Densification of nodes, lakeside developments, freezing of the Aabadi area, development of entry exists, parking, traffic plans, aid the development economics and cultural stabilization of the village is the theme for the development of Infrastructure in Kalonda. There is a very clear thought on freezing the agricultural outlines of the village.

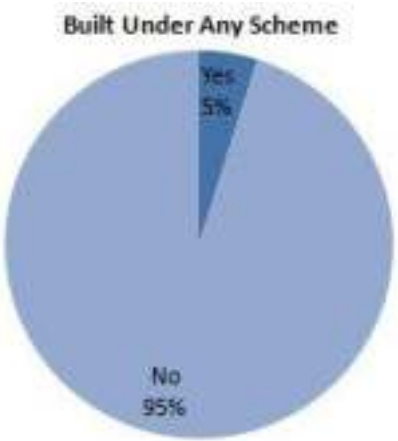
For the future citizens of India, to conserve our agro-cultural society, to conserve our forests and environment, the fields and farms must be protected. A suggestion of declaring agricultural fields as to be of National Importance and to adopt densification of Housing in place of its sprwal has been considered.

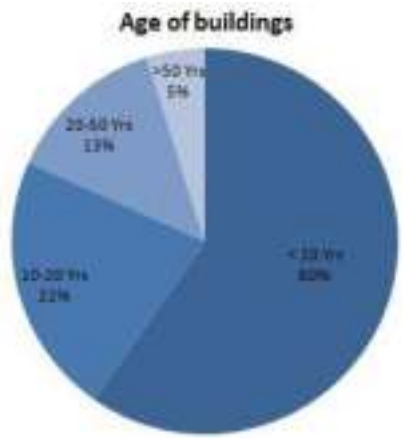
A stepwise densification plan and an outline to connect Lakes to Leisure, Cultural, Commerce, and Economics are also made.





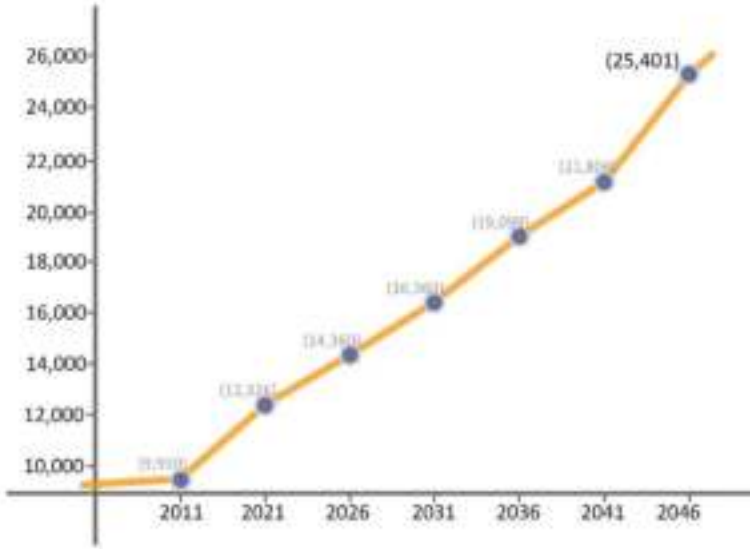




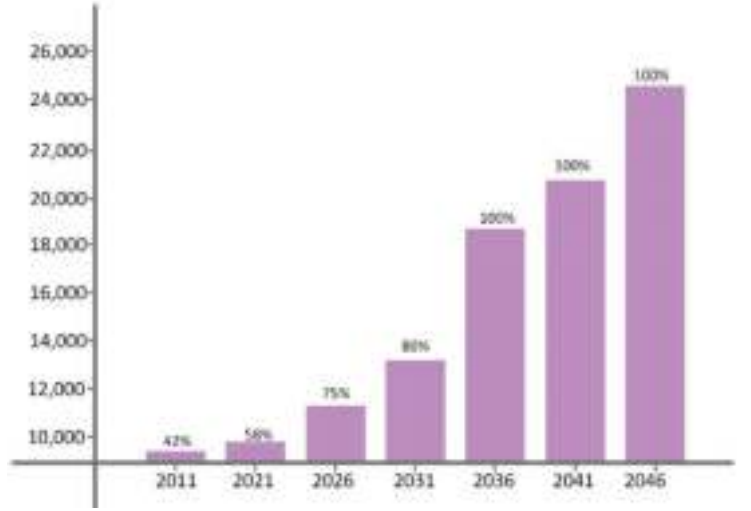


Growth Projections

	2011	2021	2026	2031	2036	2041	2046
Population	9910	12326	14360	16394	19099	21804	25401
No. of household	1317	1699	1944	2192	2509	2827	3238
Population Density (/HA)	176.1	219.1	255.2	291.37	339.45	387.53	451.45
Family size	7.2	7.25	7.4	7.5	7.6	7.7	7.8
Education	42%	58%	75%	80%	100%	100%	100%



POPULATION

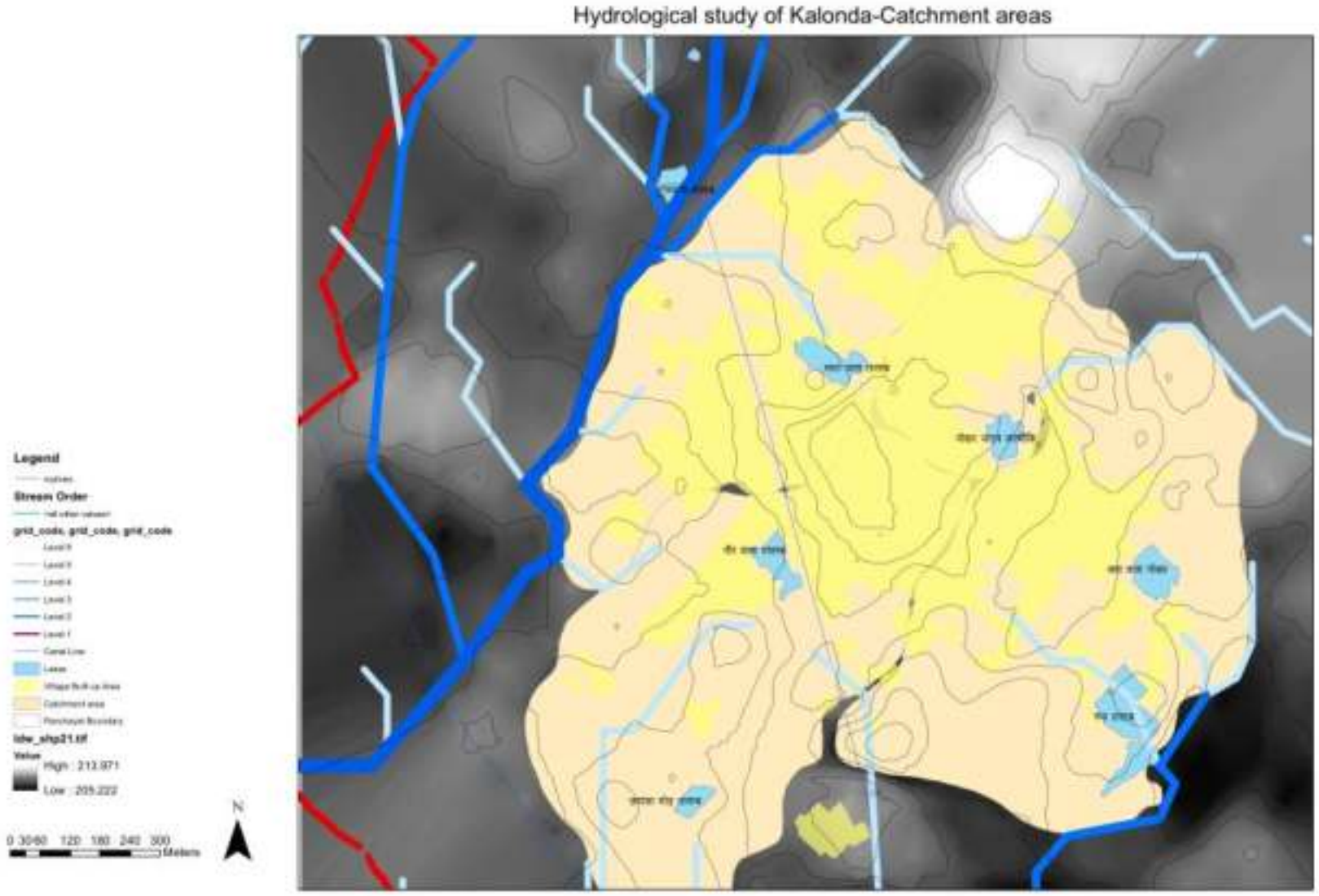


EDUCATION

Hydrology Study Of Kalonda Using GIS

Run-off Estimation for Settlement

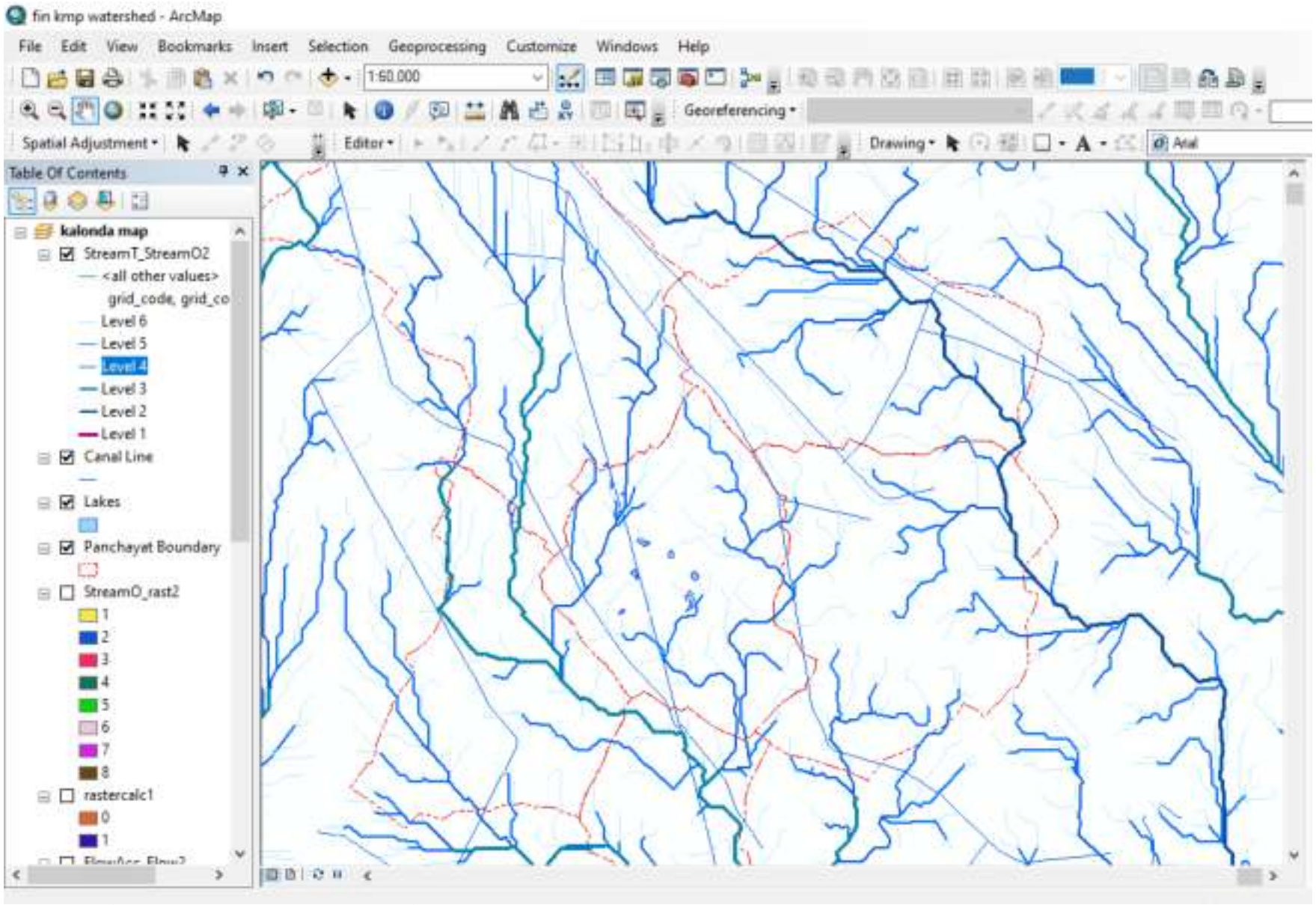
- Catchment total area=37.13Ha
- Assuming average annual rainfall as 600mm as per meteorological data of Sikandrabad
- Estimated surface runoff within settlement area=37.13*(0.65*0.8+0.82*0.15+ 0.24*0.05)*600*10= 144,807cu.m.



Hydrology Study Of Kalonda Using GIS

Run-off Estimation for Settlement

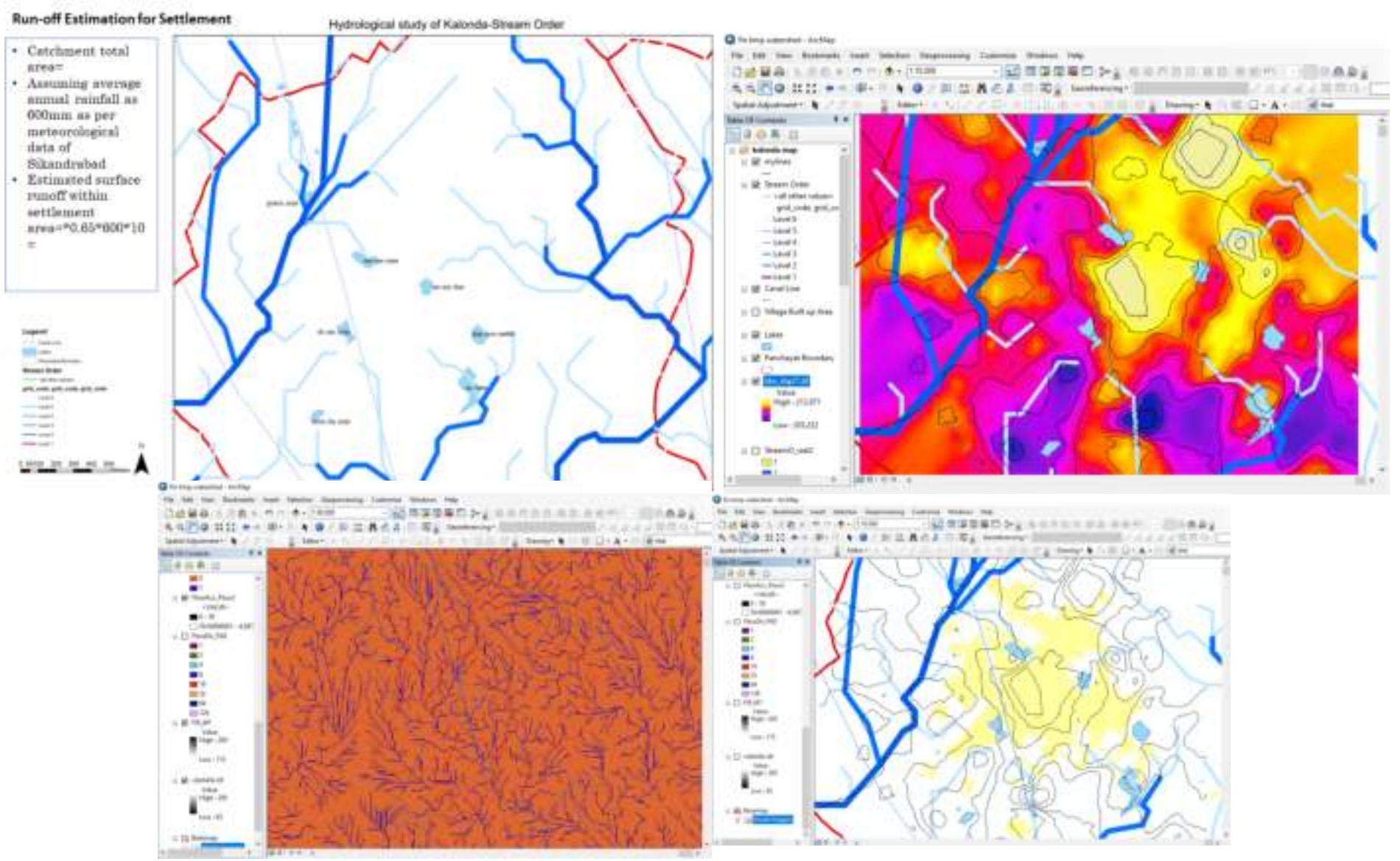
Hydrological study was undertaken using GIS. Flow accumulation, direction, stream order, catchment, etc were determined



Hydrology Study Of Kalonda Using GIS

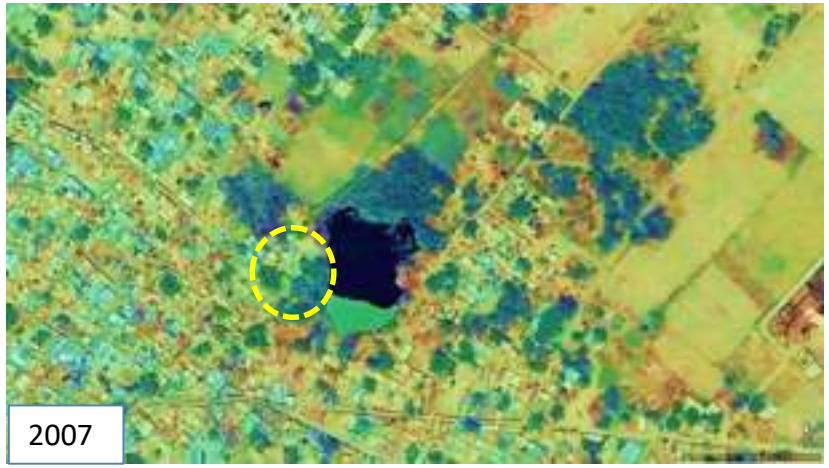
Hydrological study was undertaken using GIS. Changes in lake area, Flow accumulation, direction, stream order, catchment, etc were determined.

Six categories (Level 1- primary to Level 6- tertiary) of natural streams identified which drain into the lakes of Kalonda, as per the DEM.



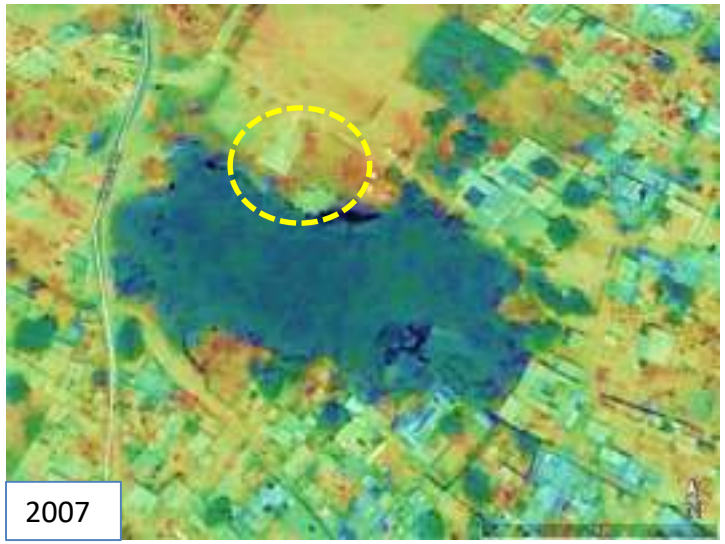
Hydrology Study Of Kalonda Using GIS

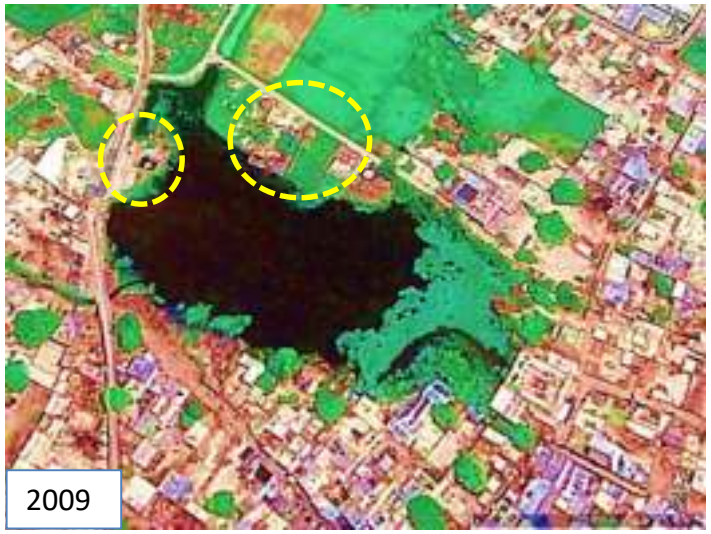
Change in Lake boundary- Pokhar Jatav Valmiki

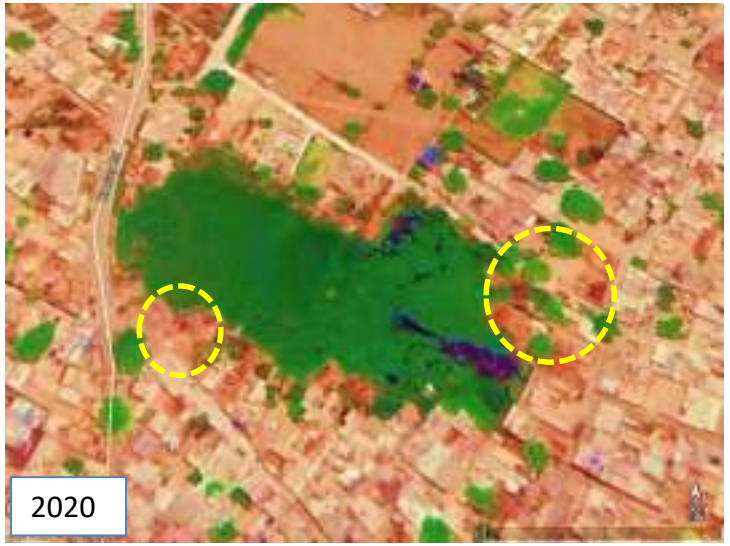


Hydrology Study Of Kalonda Using GIS

Change in Lake boundary- Mata wala talab

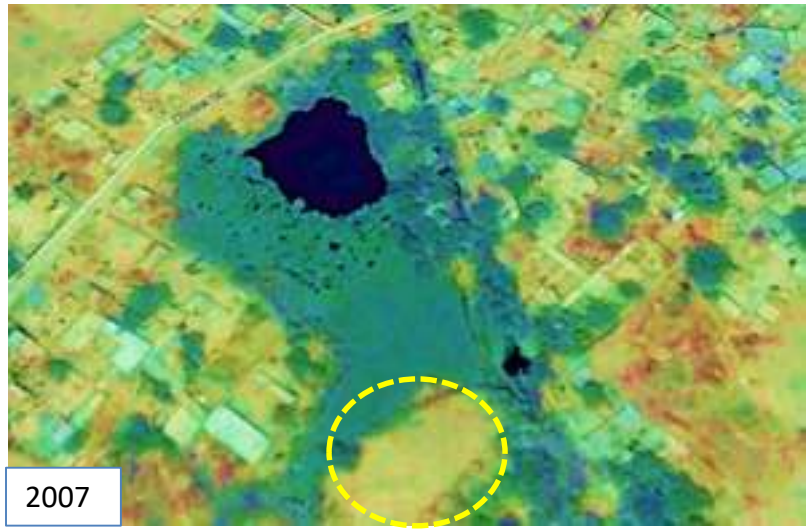


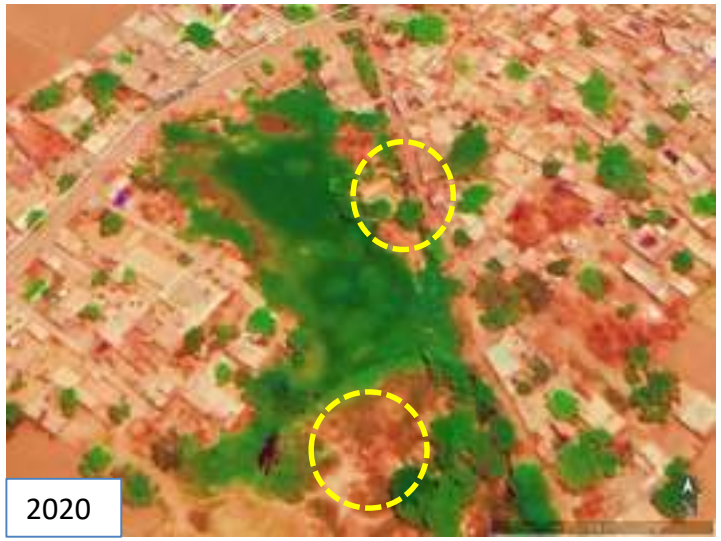




Hydrology Study Of Kalonda Using GIS

Change in Lake boundary- Peer wala talab





Water Test Results : Kalonda

Water Test Results : Kalonda Village, Dadri,

G.B. Nagar, UP.

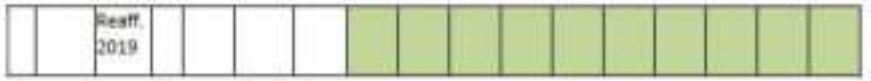
The water testing samples were collected on site on 16th September 2020. The testing agency was , Shri Om Testing and Research Laboratory, Noida, UP.

The test was conducted as per IS-10500-2012, under 17 parameters including, Color, Odour, Taste, Turbidity, pH, Total dissolved solids, total hardness, iron, Chlorides, fluorides, calcium, Magnesium, Copper, Nitrates, Arsenic, Manganese and Sulphates

S. No.	Parameters	Test Method	Units	Limits as per IS:10500-2012)		WHO Standards	Testing Results									
				Desirable Limit	Permissible Limit		Location No.1	Location No.2	Location No.3	Location No.4	Location No.5	Location No.6	Location No.7	Location No.8	Location No.9	Location No.10
1	Color	IS:3025(Pt-4) 1983, Reaff. 2017	Hazen	5	15		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2	Odour	IS:3025(Pt-5) 1983, Reaff. 2018	-	Agreeable	Agreeable		Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
3	Taste	IS:3025(Pt-8) 1984, Reaff. 2017	-	Agreeable	Agreeable		Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
4	Turbidity	IS:3025(Pt-10) 1984, Reaff. 2017	NTU	1	5		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
5	pH	IS:3025(Pt-11) 1983, Reaff. 2017	-	6.5-8.5	No Relaxation	6.5 to 8.5	6.84	7.08	7.13	7.31	7.23	7.61	7.02	6.83	7.04	7.43
6	TDS	IS:3025(Pt-16) 1984, Reaff. 2017	Mg/l	500	2000	300	853	603	536	730	622	507	744	1034	730	575
7	Total Hardness (as CaCO3)	IS:3025(Pt-21) 2002, Reaff. 2019	Mg/l	200	600	0–75 #	604	360	356	368	364	320	484	648	508	312
8	Iron (as Fe)	IS:3025(Pt-53) 2003, Reaff. 2019	Mg/l	0.3	No Relaxation	0.2 *	0.18	<0.01	<0.01	0.18	0.09	0.09	0.08	0.18	<0.01	0.1
9	Chlorides (as Cl)	IS:3025(Pt-32) 1988, Reaff. 2019	Mg/l	250	1000	250 *	152.3	269.8	10.2	173.7	110	85.2	173.9	347.9	205.9	106.5
10	Fluoride (as F)	APHA 22nd Ed., 4500F (D)	Mg/l	1	1.5	1.5	0.11	0.13	0.12	0.11	0.07	0.11	0.11	0.1	0.11	0.13
11	Calcium (as Ca2+)	IS:3025(Pt-40) 1991,	Mg/l	75	200	200 #	70.4	72	32.8	78.4	31.2	32.2	43.2	56.7	47.9	26.7

Water Test Results : Kalonda

		Reaff. 2019														
12	Magnesium (as Mg2+)	APHA 22nd Ed., 3500-Mg(B)	Mg/l	30	100	50.0 #	104	43.7	66.9	42	69.8	58.6	90	103	94.7	59.8
13	Nitrates (as NO3)	IS:3025(Pt-34) 1988, Reaff. 2014	Mg/l	45	No Relaxation	50	18.6	16.8	14.9	13.4	15.1	11.2	16.5	18.7	16.3	14.6
14	Copper (as Cu)	APHA 22nd Ed., 3120 B/3111 B (AAS)	Mg/l	0.05	1.5	2.0 *	<0.01	<0.01	<0.01	<0.01	<0.01	0.18	0.12	0.11	0.17	<0.01
15	Arsenic (as As)	APHA 22nd Ed., 3120 B/3114, AAS-VGA	Mg/l	0.01	0.05	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
16	Manganese (as Mn)	APHA 22nd Ed., 3120 B)/3111 B (AAS)	Mg/l	0.1	0.3	0.05 *	0.02	0.02	0.02	0.02	0.02	≤0.01	0.02	0.02	0.01	0.02
17	Sulphate (as SO4)	IS:3025(Pt-24) 1986,	Mg/l	200	400		53.7	56.8	51.1	48.5	54.9	56	54.8	56.3	49.2	54.8



Parameter

1. Color

- Within Safe Limit
- Beyond Safe Limit
- Beyond Dangerous Limit

If the water has any coloration whatsoever, it attracts a disgusted reaction from the consumer.

Parameter

2. Odour

- Within Safe Limit
- Beyond Safe Limit
- Beyond Dangerous Limit

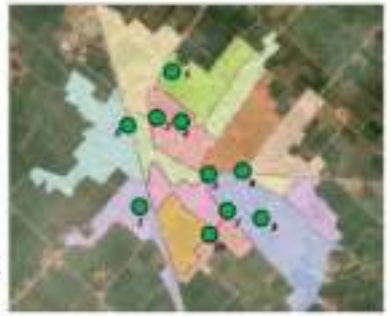
If the water has any odour, it renders the consumer abhorrent.

Parameter

3. Taste

- Within Safe Limit
- Beyond Safe Limit
- Beyond Dangerous Limit

If the water has any taste beyond the permissible limit, it makes it non-potable, as well as repulsive.

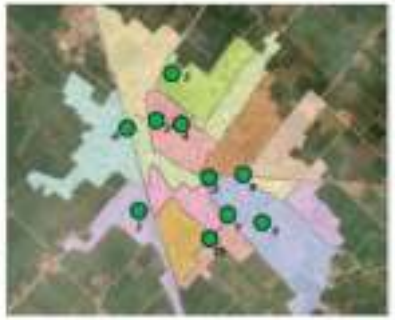


Water Test Results : Kalonda

Parameter

4. Turbidity

- Within Safe Limit
- Beyond Safe Limit
- Beyond Dangerous Limit



High turbidity in drinking water can shield bacteria or other organisms so that chlorine cannot disinfect the water as effectively. Some organisms found in water with high turbidity can cause symptoms such as nausea, cramps, and headaches.

Parameter

5. pH Value

- Within Safe Limit
- Beyond Safe Limit
- Beyond Dangerous Limit

When the PH of water becomes greater than 8.5, water taste can become more bitter. This elevated pH can also lead to calcium and magnesium carbonate building up in your pipes. While this higher pH doesn't pose any health risks, it can cause skin to become dry, itchy and irritated.

Parameter

6. TDS

- Within Safe Limit
- Beyond Safe Limit
- Beyond Dangerous Limit

While these solids may not affect human health, they can cause technical damage to plumbing and surfaces. Elevated TDS levels can indicate corrosive water. If drinking water has high corrosivity, it will often contain high amounts of chloride, iron, copper, manganese, or zinc.

Parameter

7. Total Hardness (as CaCO3)

- Within Safe Limit
- Beyond Safe Limit
- Beyond Dangerous Limit

Among them a good percentage consumes hard water, which is considered to be a significant etiological factor around the globe causing many diseases such as cardiovascular problems, diabetes, reproductive failure, neural diseases, and renal dysfunction and so on.

Parameter

8. Iron (as Fe)

- Within Safe Limit
- Beyond Safe Limit
- Beyond Dangerous Limit

A dose of 1500 mg/l has poisoning effect on a child as it can damage blood tissue.

Digestive disorders, skin diseases and dental problems.

Parameter

9. Chlorides

- Within Safe Limit
- Beyond Safe Limit
- Beyond Dangerous Limit

Although excessive intake of drinking-water containing sodium chloride at concentrations above 2.5 g/litre has been reported to produce hypertension (12), this effect is believed to be related to the sodium ion concentration. A normal adult human body contains approximately 81.7 g chloride.

Water Test Results : Kalonda

Parameter

10. Fluoride

- Within Safe Limit
- Beyond Safe Limit
- Beyond Dangerous Limit

Immediate symptoms include digestive disorders skin diseases, dental fluorosis

Parameter

11. Calcium (as Ca2+)

- Within Safe Limit
- Beyond Safe Limit
- Beyond Dangerous Limit

The Health Effects of Hard Water

Studies have generally found hard water to have positive effects on the health of its drinkers. Several studies have reported that calcium and magnesium in drinking water have a dose-dependent protective effect when it comes to cardiovascular disease.

Parameter

12. Magnesium (as Mg2+)

- Within Safe Limit
- Beyond Safe Limit
- Beyond Dangerous Limit

Increased intake of magnesium salts may cause a change in bowel habits (diarrhea). Drinking-water in which both magnesium and sulfate are present in high concentrations (~250 mg/l each) can have a laxative effect.

Parameter

13. Nitrates (as NO3)

- Within Safe Limit
- Beyond Safe Limit
- Beyond Dangerous Limit

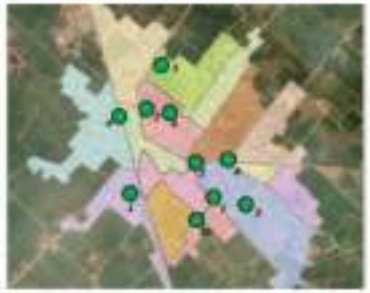
Causes methaemoglobinemia (Blue baby diseases) where the skin of infant becomes blue due to decreased efficiency of hemoglobin to combine with oxygen. It may also increase risk of cancer.

Parameter

14. Copper (as Cu)

- Within Safe Limit
- Beyond Safe Limit
- Beyond Dangerous Limit

Eating or drinking too much copper can cause vomiting, diarrhea, stomach cramps, nausea, liver damage, and kidney disease.



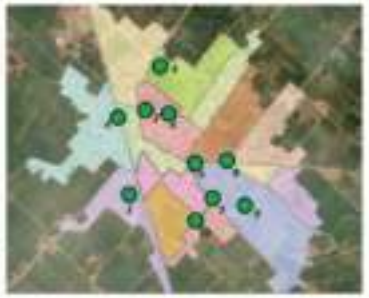
Parameter

15. Arsenic (as As)

- Within Safe Limit
- Beyond Safe Limit
- Beyond Dangerous Limit

Immediate symptoms of acute poisoning typically include vomiting, esophageal and abdominal pain and bloody 'rice water' diarrhea.

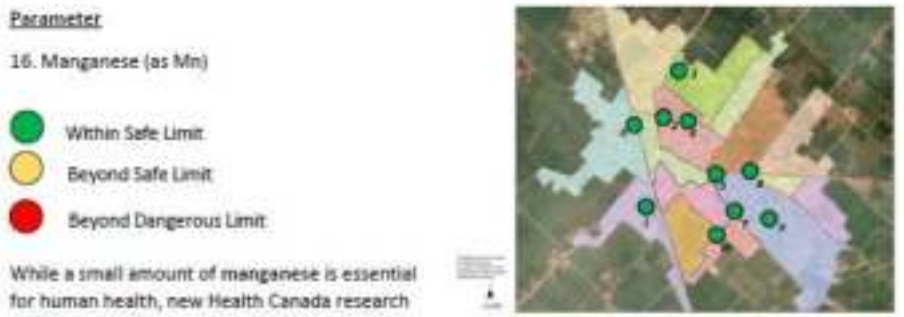
Long term exposure to arsenic causes cancer of the skin, lungs urinary bladder and kidney.



Water Test Results : Kalonda

Parameter

16. Manganese (as Mn)



While a small amount of manganese is essential for human health, new Health Canada research has shown drinking water with too much manganese can be a risk to health. Manganese can also cause discolouration and an unpleasant taste in drinking water. It can also stain laundry.

Parameter

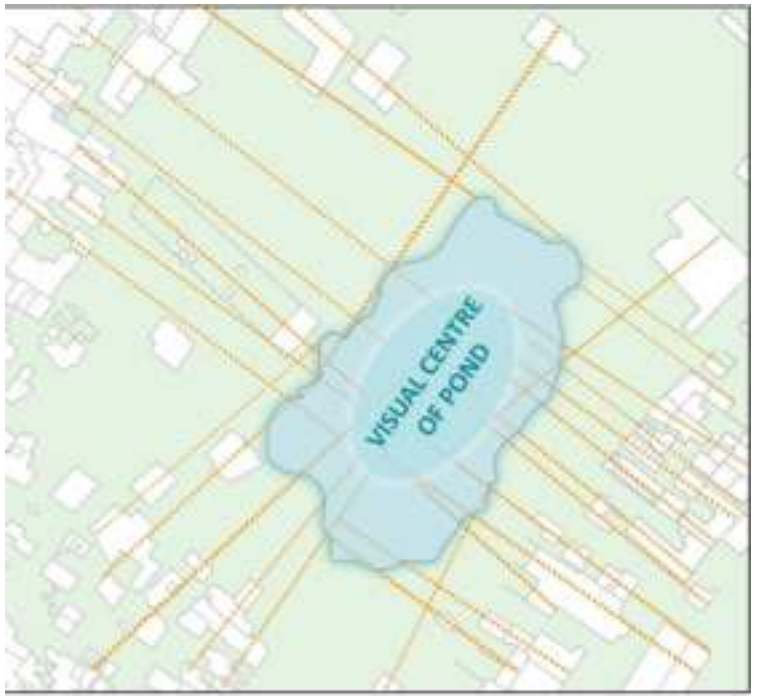
17. Sulphate (as SO4)

Sulphate minerals can cause scale buildup in water pipes similar to other minerals and may be associated with a bitter taste in water that can have a laxative effect on humans and young livestock. Elevated sulphate levels in combination with chlorine bleach can make cleaning clothes difficult.

Conservation Of Lakes

The Soil type of the region of GB Nagar aids in the development of Lakes and Ponds. Ponds and small lakes are spread throughout Surajpur Aviflora and in Noida and in all the villages in the Block Dadri. Their formation and their connection to the aquifer that recharges groundwater is a system that is there since time immemorial, built into the predicament the "given" of the land on which we live. Efforts of landfills and encroachment into these low lying areas by land mafias or by authorities and of overlooking their need in our terrain, of not cleaning them and making them dumping grounds leads to not just a loss of visual or aesthetic but also a possible imbalance in the habitat.

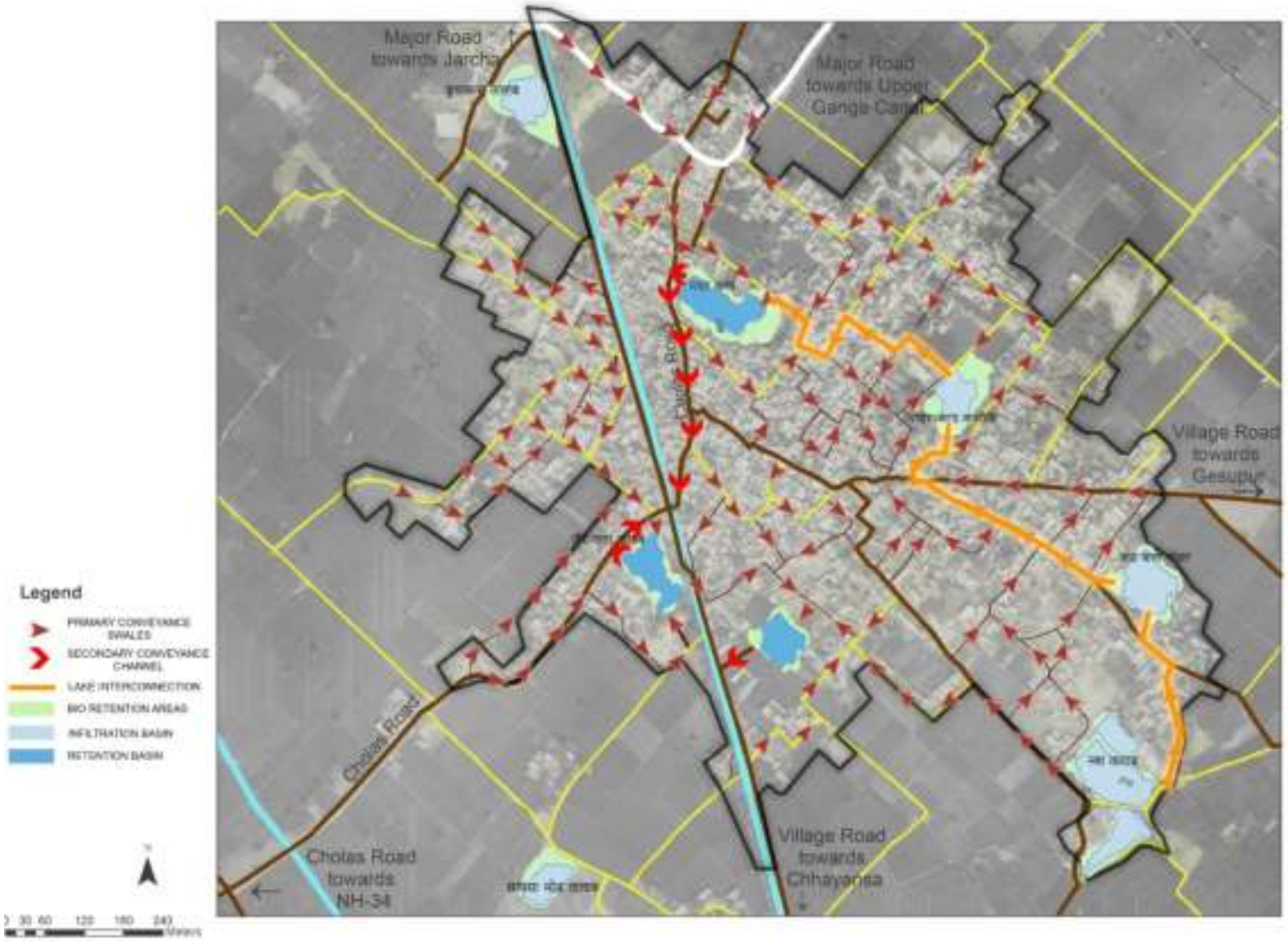
The Aqua Connect of human settlements has been since time immemorial a bond that gives an assurance to life. Ponds, Lakes, and Rivers all have stories to tell. They have a festival that connects and aids the growth of cattle and supports us in our functions of life. With groundwater becoming a potential supply of potable water and for our daily needs, there is still a psychological connection that is there. A village interspersed with ponds is a dynamic landscape and offers high imageability to the settlement. If left unattended the village lakes will get encroached and they will be landfill sites, used at best by villagers to make houses. This should be avoided. At no cost should this element be lost.



Interlinking Of Lakes

Interlinking of lakes is a necessity that is evident in the geomorphology of the area in which this settlement has come up and thus follows a natural phenomenon. Naturally the lakes are either connected via confined or unconfined aquifers. In urban areas due to rapid urbanization and increase in impervious areas, the natural groundwater recharge is hindered and thus affects the natural linkage, forcing the lakes to function independently and thus causing flooding. A clean SLWM in place before every pond can also aid in the improvement of the condition of groundwater, thus improving the health of people. Therefore interlinking the lakes using alternate techniques will transform the lake system into one functional system, giving purpose identity and imageability to Kalonda.

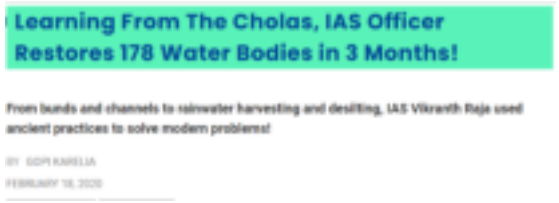
The interlinking is proposed to be done via connecting swales and channels. The swales and channels will also help in the purification process of water, before the water enters the lakes (which further act as infiltration and retention basins).



Solid Liquid Waste Management

The village lacks any structures measures and systems for waste management. In the absence of any viable treatment process, Grey water generated from Rural Households are disposed of into Open drain, Streets, Vacant land or into Water Bodies resulting in surface water contamination, land contamination and aggravated water borne diseases. Lack of suitable technological options, was the greatest challenge.

Since, there are no industries in the village there is no hazardous waste to be managed. Neither there are any industrial chemical being disposed of in the village. However, the agricultural runoff carrying fertilizers is on the concern areas. The paper, plastic waste generated from the households and their disposal in open areas, drains and near water bodies is slowly degenerating the village environment and causing the pollution of soil and water bodies.

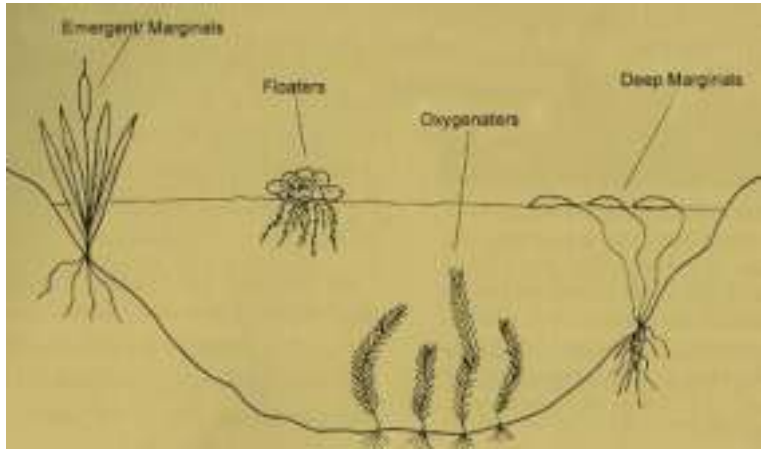


Treated Grey Water Into Lakes: Sustainable SLWM

•Use the area of the storm-drain itself for improving waste-water quality and if possible providing recreational use of the space as well.
•DSTs should be zero-energy natural systems or low-energy-consuming solutions, requiring very low capital cost and minimal maintenance.

The 4 types of plants:

- Deep Marginal
- Floater
- Fully Submerged/ Oxygenators
- Emergent /Marginal
- Algae



COMPARISON OF OUR PURIFICATION SYSYTEM WITH STP

Conservation Of Agricultural Area

Land area used for agriculture in a village and the population of the village have a relationship. The amount of crop cultivated in the fields should be able to feed the people living in the Aabadi area of the village.

Area of Panchayat Boundary = 913.7693 Ha

Area of Waterbodies = 4.4893 Ha

Area of Village Built up = 56.2646 Ha

Total Agriculture area = {913.7693- (56.264+4.4893)}
= 853.0154 Ha

Conservation Of Agricultural Area

Kalonda today is at the critical edge where the fields produce only as much as the people need. Beyond this point where the relationship is in complete balance, efforts to make agriculture worthwhile and to identify new farming techniques or to identify related economic measures. The image of a village is incomplete without agriculture. Where a village cannot be thought of without agriculture, the latter cannot be practiced as an economic activity in the heart of cities. Green fields have to be connected to green fields and the complete conglomerate of green fields to forests, hills, rivers, water channels, and mountains. A village gets destroyed when the Aabadi area eats into the agricultural area and land is looked at on as a resource to be protected, but as a commodity to be sold for profit. Our agriculture has to be protected from the commodification of land, it must be looked as a National Resource, the heritage of not just the present, but also of future citizens of the country.

Education

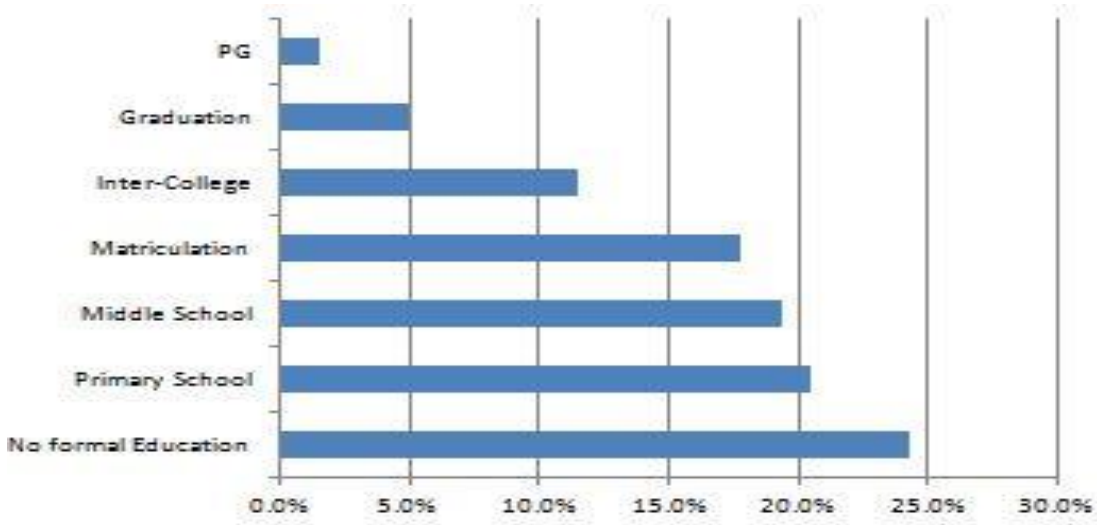
The village has a 70 year old intercollege which indicates that Kalonda had great popularity and was the centre of education n this catchment. Kalonda did not grow beyond this.

It has three primary schools and most of the affluent class send their children to Jarcha public schools. The residents have to move out to Dadri for education beyond 10+2.

As per the URDPFI, the village which would have a population of about 12,500 (by 2021), should have the following –

Sr. No.	Category	Student Strength	Population Served per unit	Area Requirement	Other Controls
1.	Pre Primary, Nursery School	--	2500	0.08 ha	To be located near a park
2.	Primary School (class I to V)	500	5000 (NBC, 2005)	Area per School = 0.40 Ha a) School building area = 0.20 Ha b) Playfield Area = 0.20 Ha	Playfield area with a minimum of 18 m x 36 m to be ensured for effective play
3.	Senior Secondary School (VI to XII)	1000	7500	Area per School = 1.80 Ha (NBC, 2005) a) School building area = 0.60 Ha b) Playfield Area = 1.00 Ha c) Parking Area = 0.20 Ha	Playfield area with a minimum of 68 m x 126 m to be ensured for effective play

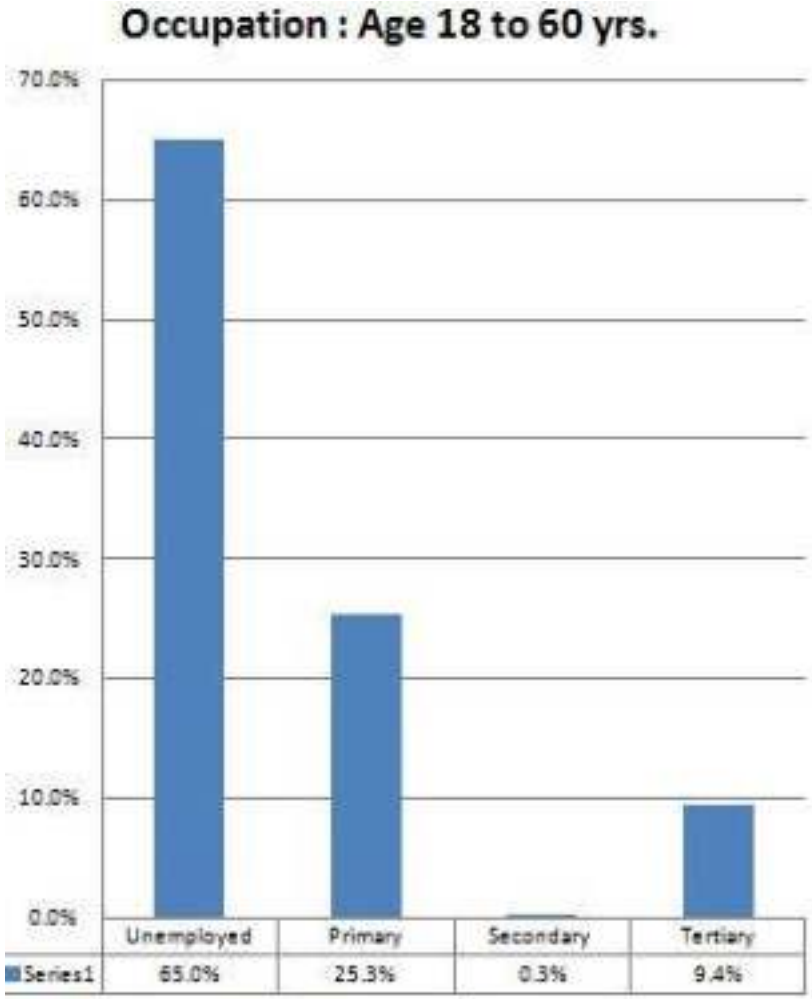
The economic immobility and the lack of improvisation in agriculture and the inability to understand and appreciate their own fabric is the natural outcome of education a measure of awareness and life.

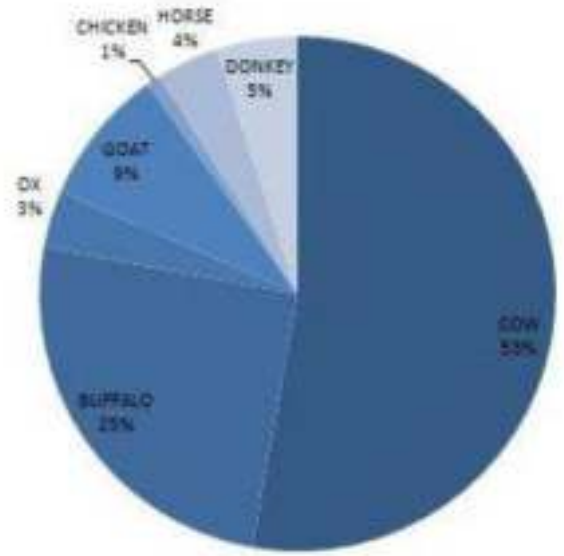


Economic Opportunities And Livelihood

The villages of India do not offer opportunities beyond the engagement of people as a workforce. With the average harshness of life and the readiness of the village dweller by their engagements with the agricultural setting, the workforce is profiled to be productive. They find ample opportunities as daily wage agricultural, construction, and factory labor. They travel to opportunities, but with the need to make villages sustainable, opportunities must travel to them.

An average villager trains the self to eat once a day and to resist cold. Development of resistance to hunger and change of seasons is a personal asset built into their value systems. It is important for us to understand that while he pledges to take up the challenges, a farmer or a rural poor, does not want his children to repeat the cycle. This is the primary reason for the rapid disintegration of our rural habitat, our vernacular, and our agriculture.

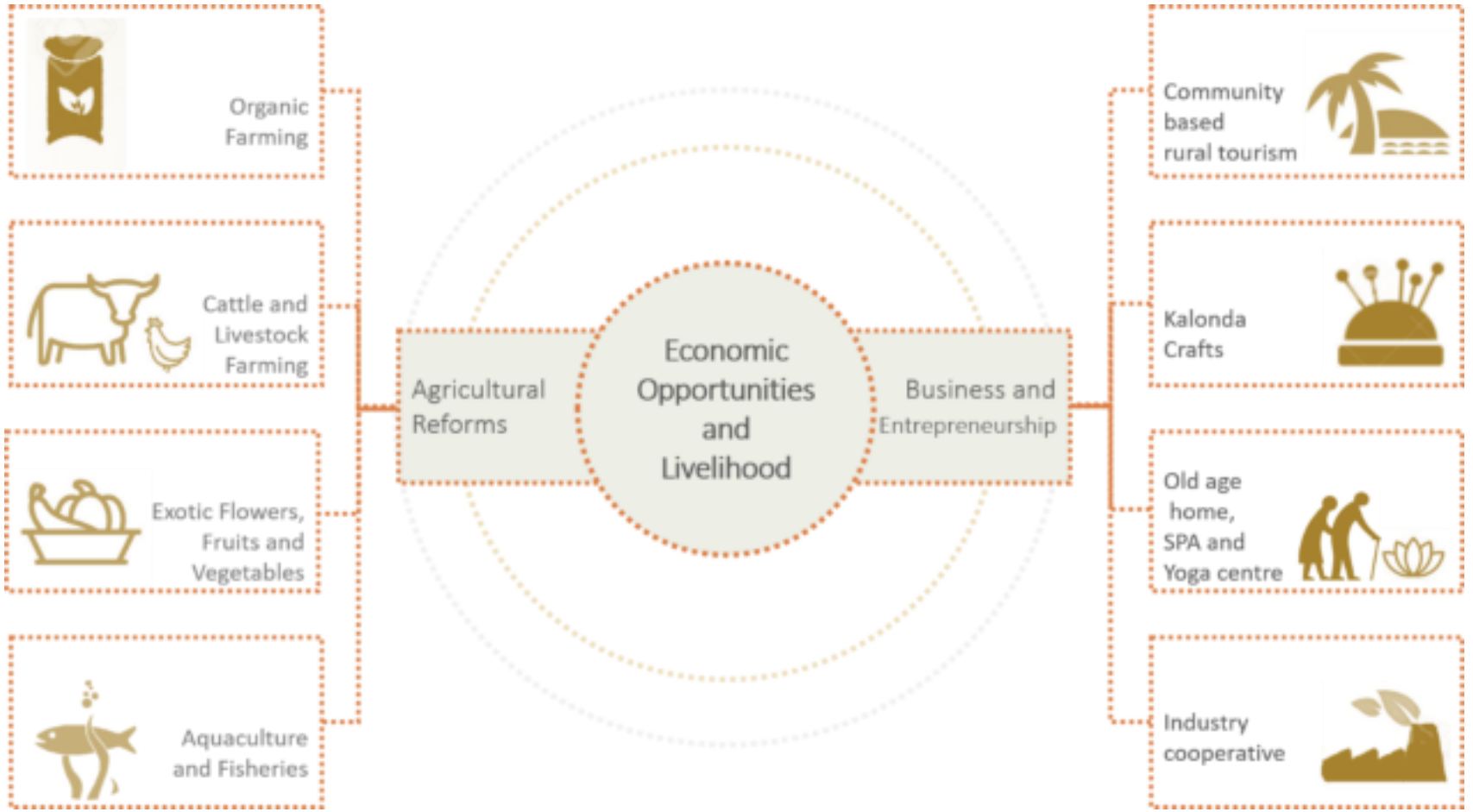




Economic Opportunities And Livelihood

Economic opportunity in Kalonda must increase. They must rise from agriculture to associated activities like herb cultivation, three crops, special cultivations, pickles, milk, and it's associated economies. Kalonda with its proximity to the urban must also explore organic agriculture and organic milk production of organic poultry. People's co-operatives go a long way to help. Amul is one big example.

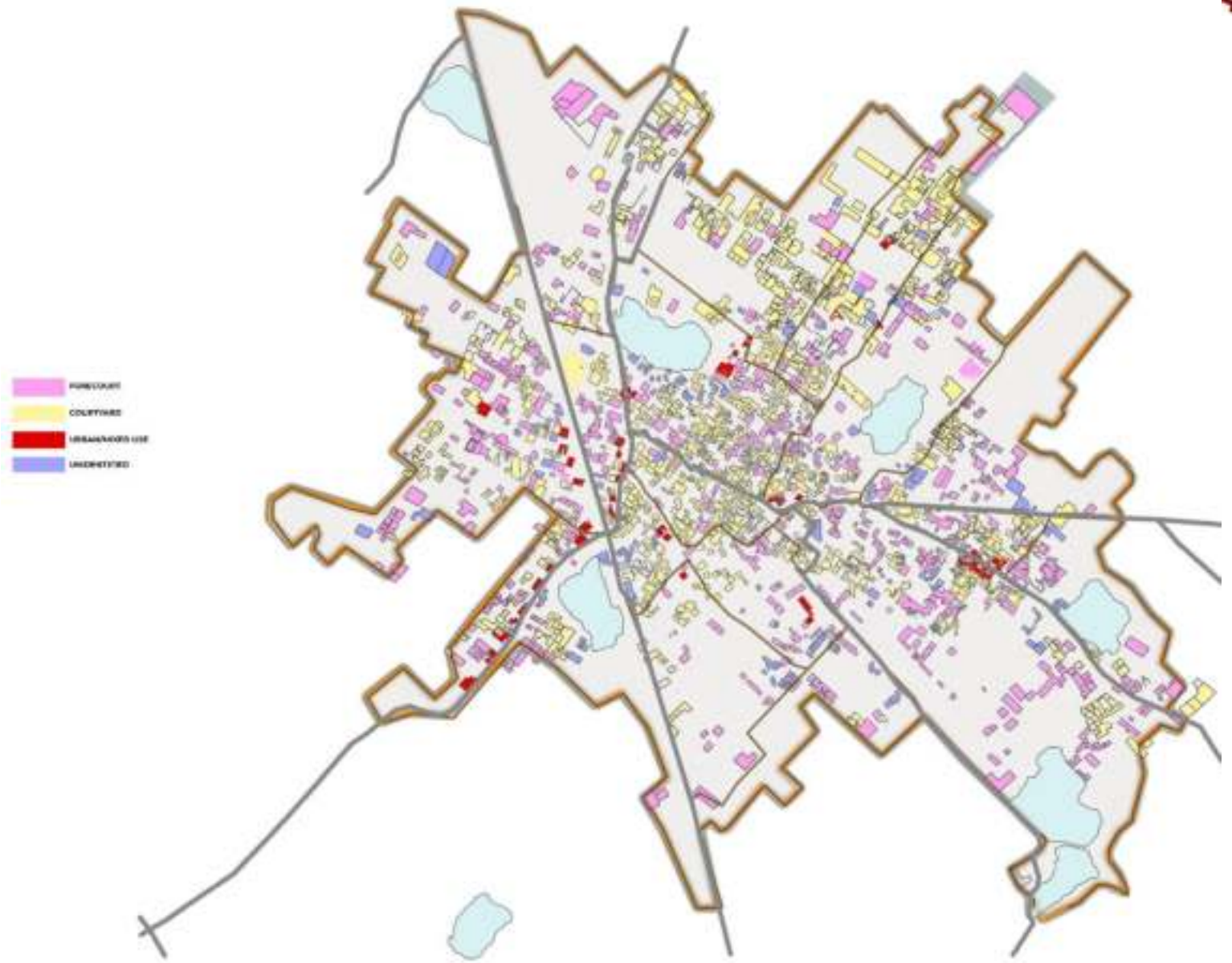
Although economics is not a direct part of life, the direction of evolution of the world taking shape is such that economics is inevitable and inseparable from life. The evolution of structured economics in rural areas is the only hope of releasing the development pressure on urban centres and depopulating them.



Housing Typologies

The plan developed out of a mix of physical surveys and dronography, shows the typologies of houses marked in the village. The diagram is successful at exhibiting the following -

1. The largest number of house types are the forecourt house types, as these are the most suitable for agriculture.
2. The maximum number of forecourt houses are there in the outskirts and it is evident that as we reach the densified core of the village, these get converted to courtyard types.
3. The induction of the modern house typology of the village is the sign of a disconnect between agriculture and rural living.



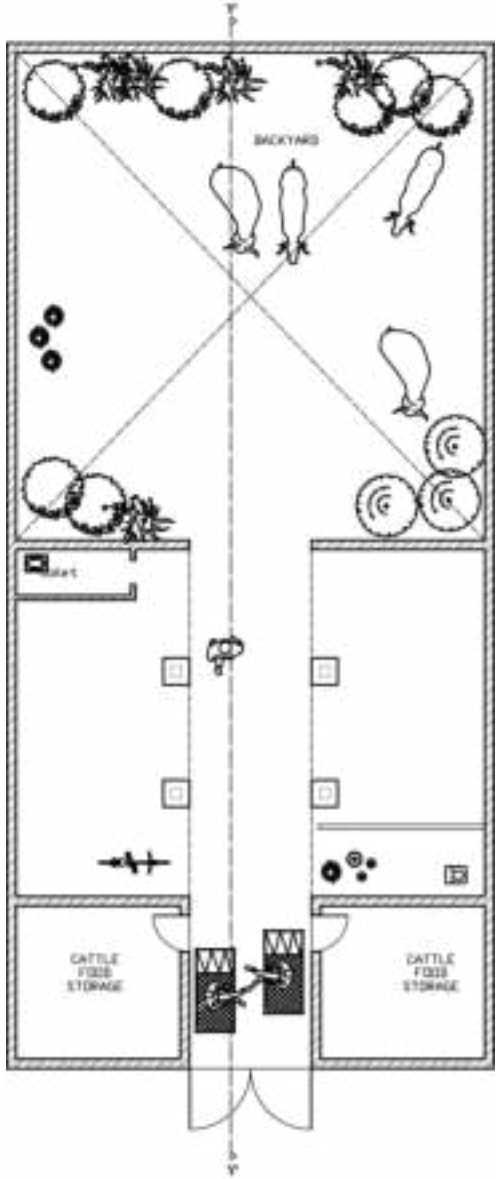
Housing Densification

LOCATION :
28°32'56.0"N 77°40'21.1"E
GMXF+H2 Kalonda, Uttar Pradesh
https://goo.gl/maps/LzRa9jmLWbwdjEv67

HOUSE TYPOLOGY : Courtyard
NO. OF PEOPLE : 5
NO. OF FLOORS : Ground

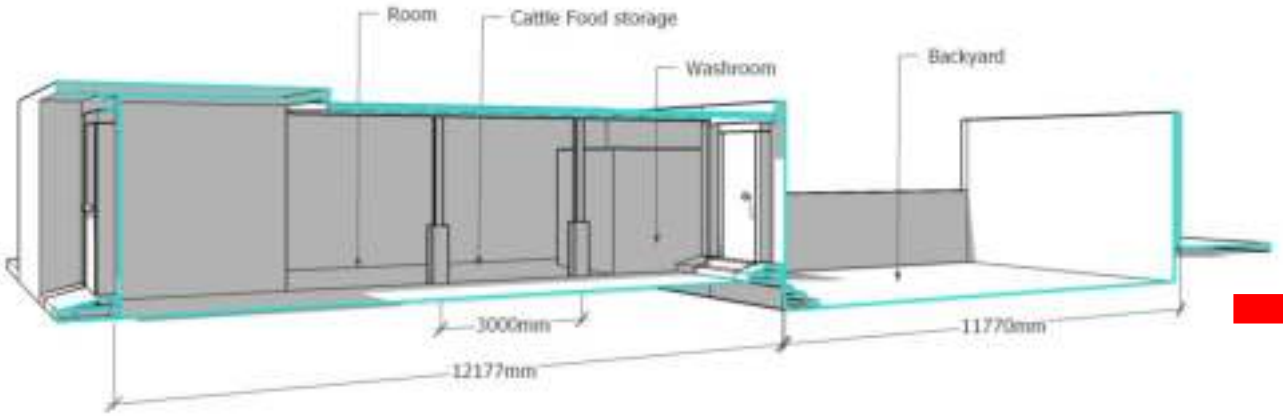
EXPANSION :
Plot Area = 300 SQM
Ground Coverage = 36 SQM
Built up = 36SQM
FAR achieved = 0.12
Scope of expansion = 0.98.

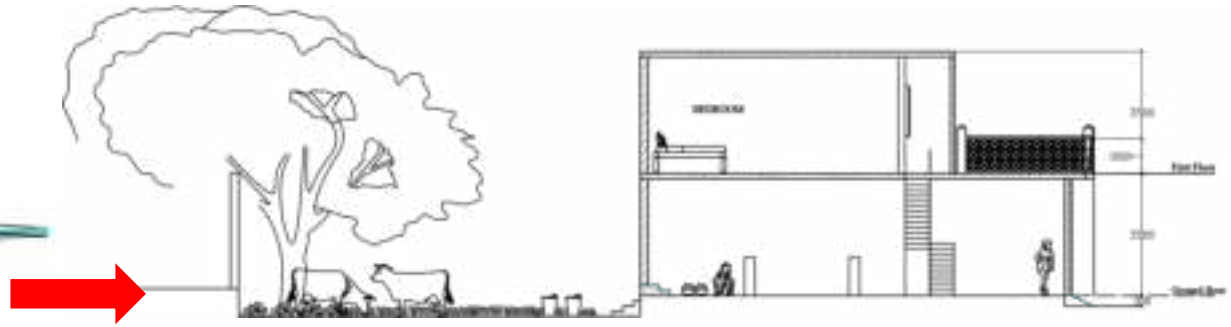
- There's a scope for an additional floor
- Space for more rooms on ground floor is available
- Number of toilets (one) is less for 5 people.



STAGE WISE DEVELOPMENT OF HOUSE

Section

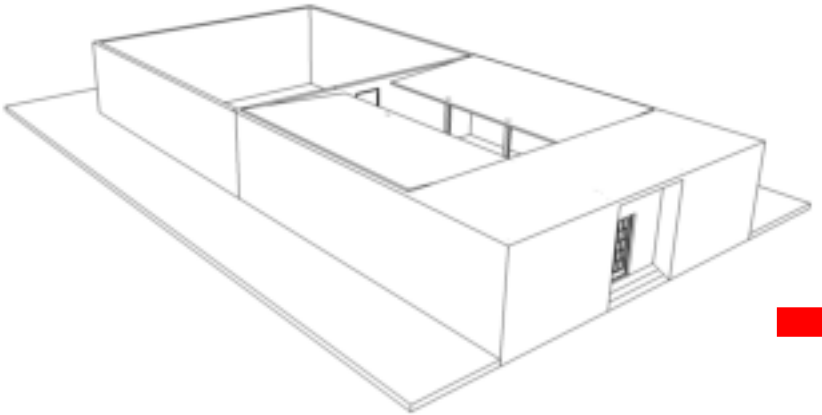


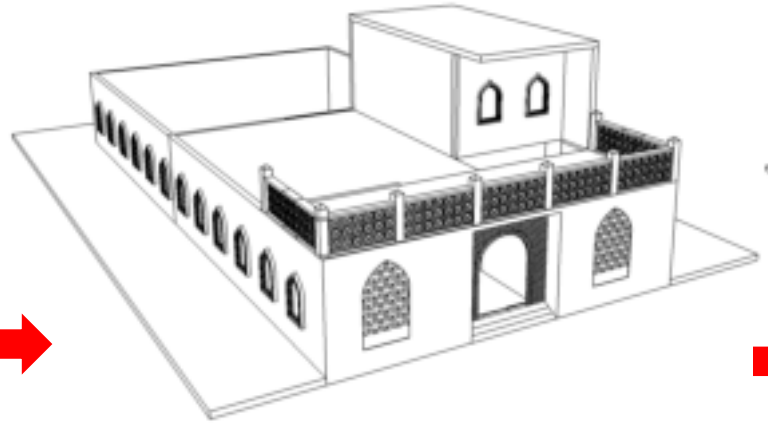


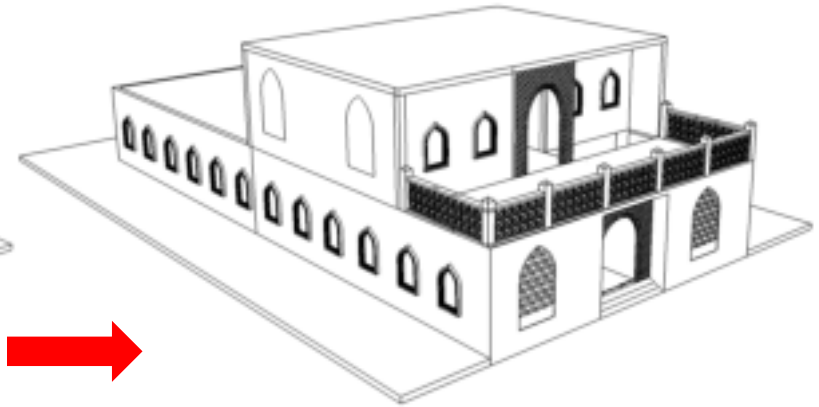
FAR : 0.12

FAR : 01

Views







FAR : 0.12

FAR : 0.40

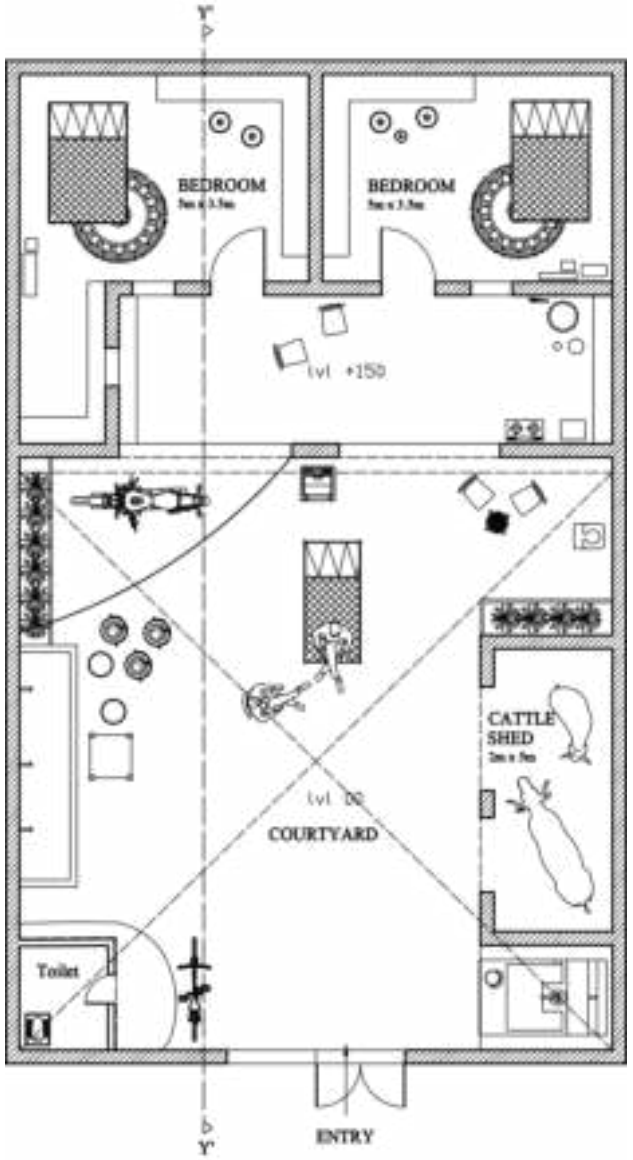
FAR : 01

Housing Densification

LOCATION :
28°32'58.3"N 77°40'22.3"E
GMXF+R4 Kalonda, Uttar Pradesh
https://goo.gl/maps/1KG4fNUQbwGEigTx6

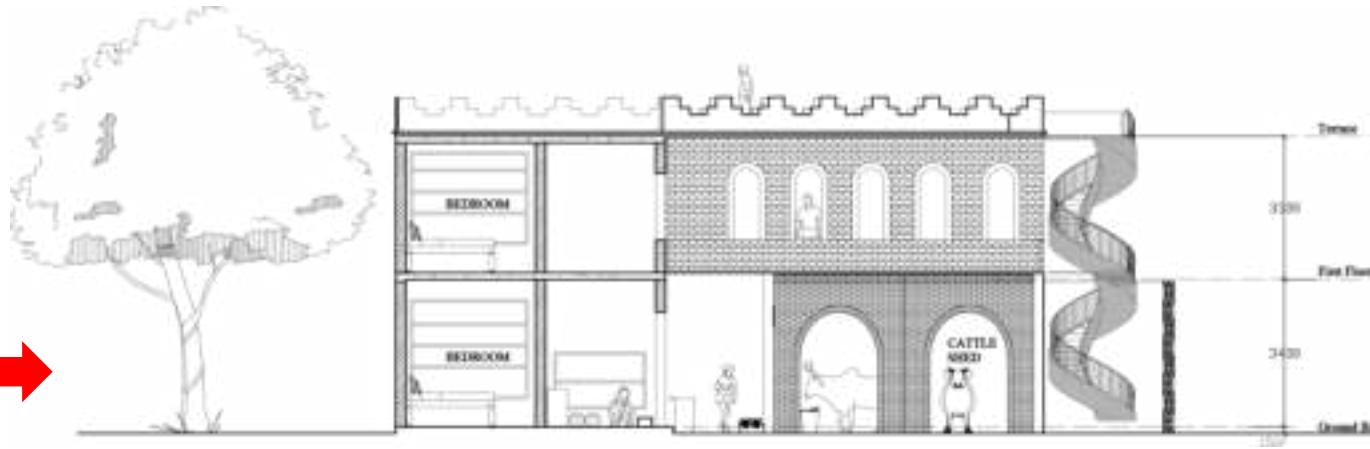
HOUSE TYPOLOGY : Courtyard
NO. OF PEOPLE : 7
NO. OF FLOORS : Ground

EXPANSION :
Plot Area = 160 SQM
Ground Coverage = 60.15 SQM
Built Up = 60.15SQM
FAR achieved = 0.4
Scope of expansion = 0.6.
There's a scope for an additional floor



STAGE WISE DEVELOPMENT OF HOUSE

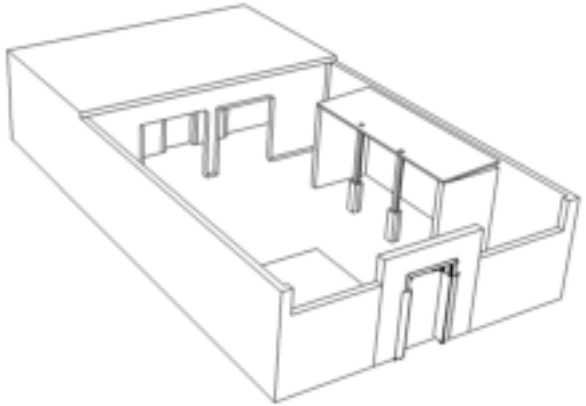
Section

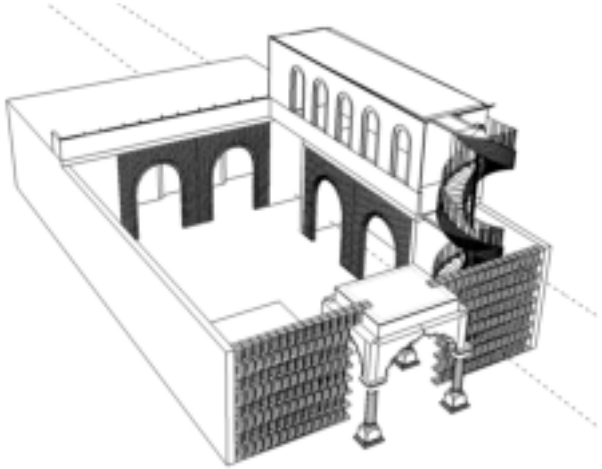


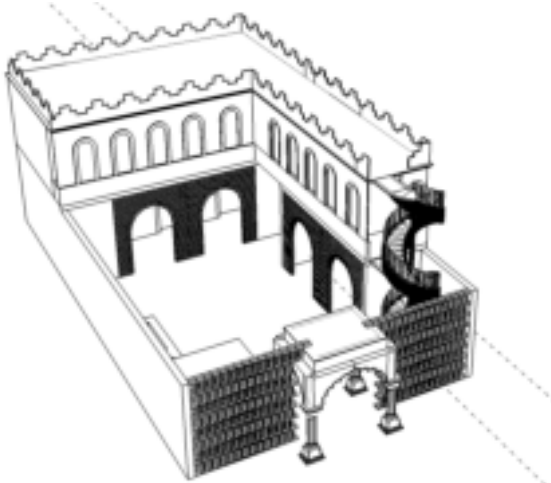
FAR : 0.40

FAR : 01

Viev







FAR : 0.40

FAR : 0.50

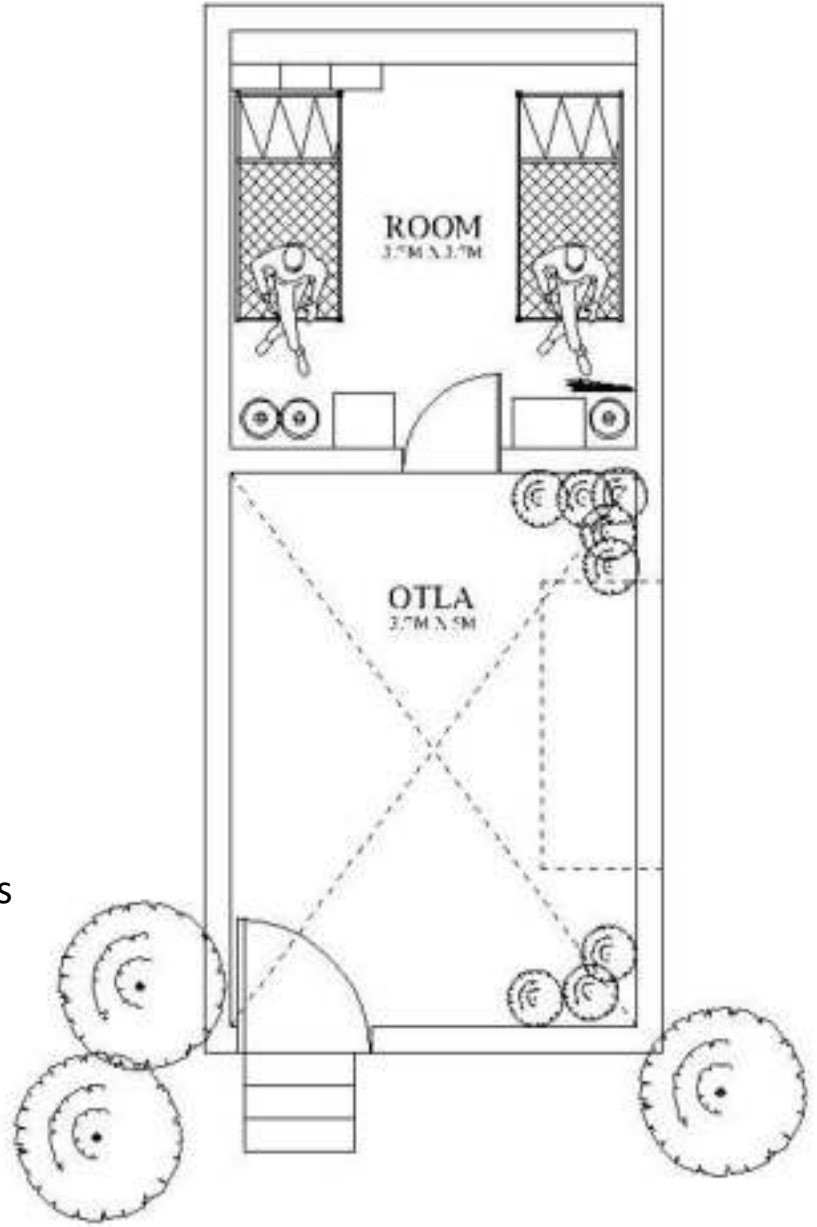
FAR : 01

Housing Densification

LOCATION:
28°32'58.8"N 77°40'22.0"E
GMXF+V4 Kalonda, Uttar Pradesh
https://goo.gl/maps/gZJNGz8ZUitZwhNt5

HOUSE TYPOLOGY: Single room
NO. OF PEOPLE: 2
NO. OF FLOORS: Ground

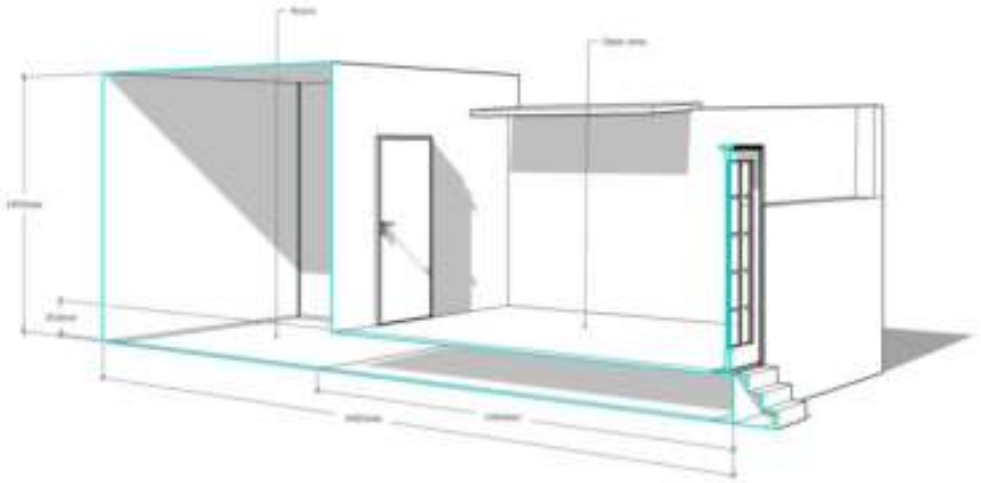
EXPANSION:
PLOT AREA= 28 SQM
GROUND COVERAGE= 10.5 SQM
BUILT UP = 10.5 SQM
FAR achieved is 0.3, so scope of expansion is 0.7.
There's a scope for an additional floor
No electric point, no toilet, no kitchen was given



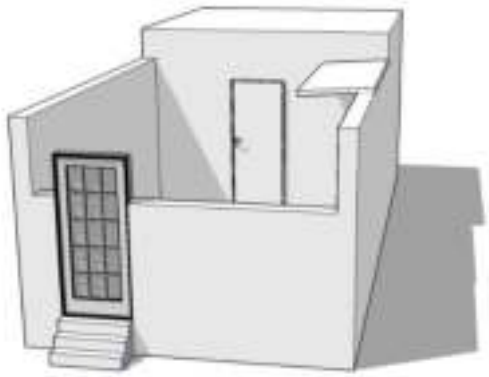
Panchayati Raj

STAGE WISE DEVELOPMENT OF HOUSE

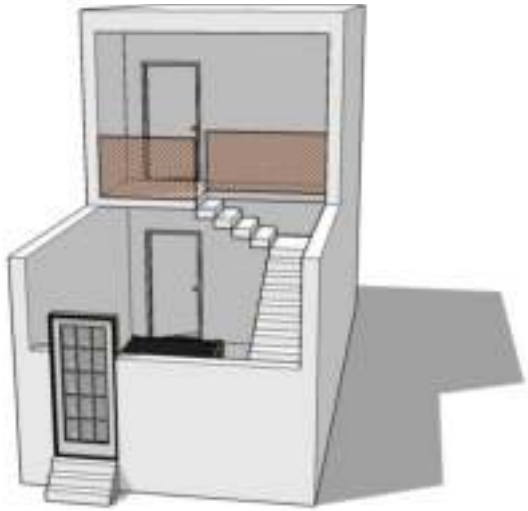
Section



Views



FAR : 0.40



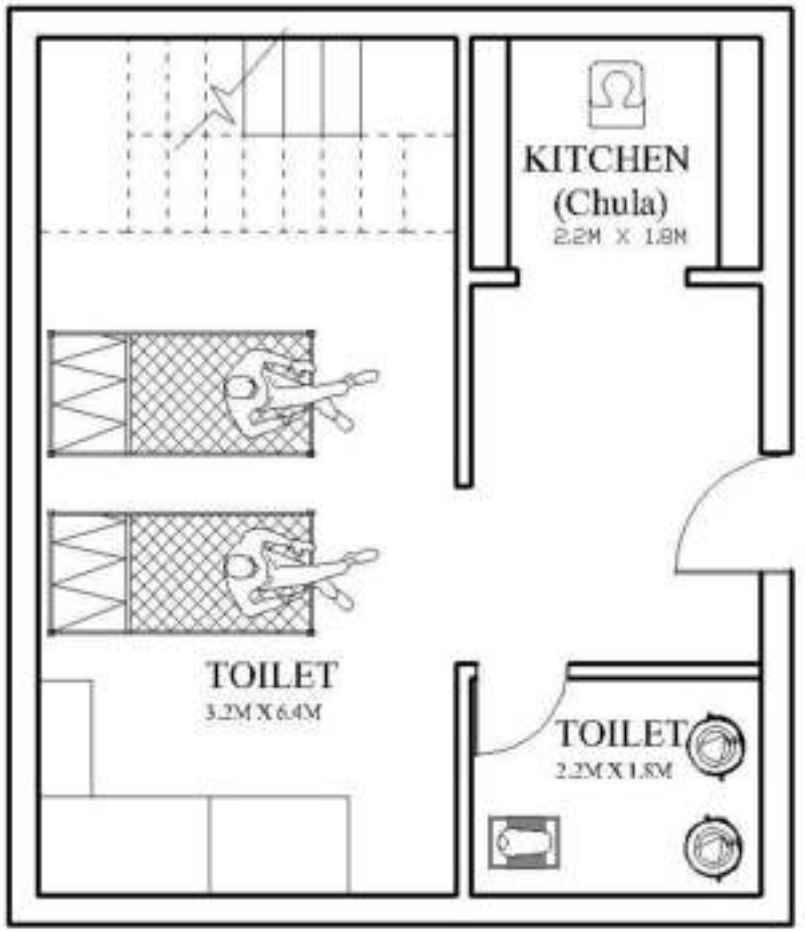
FAR : 0.50

FAR : 01

Housing Densification

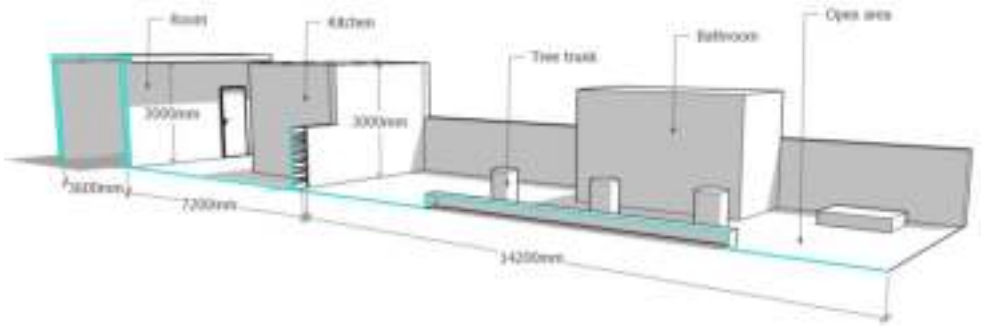
LOCATION:
28°32'42.5"N 77°40'13.0"E
GMWC+34 Kalonda, Uttar Pradesh
https://goo.gl/maps/D7BT8UfgoTVphNp98

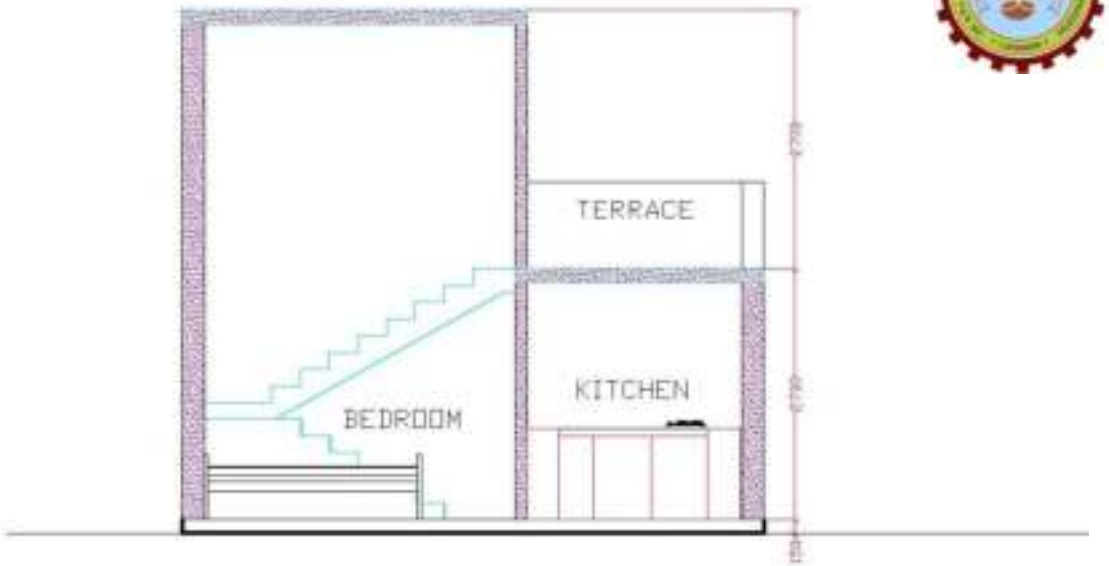
HOUSE TYPOLOGY:
NO. OF PEOPLE: 5
NO. OF FLOORS: Ground
EXPANSION:
There's a scope for an additional floor
Lack of teachers at Madarsa
House got demolished due to heavy rains, due to which people were living at the Madarsa
Better mud construction techniques could be adopted



STAGE WISE DEVELOPMENT OF HOUSE

Section





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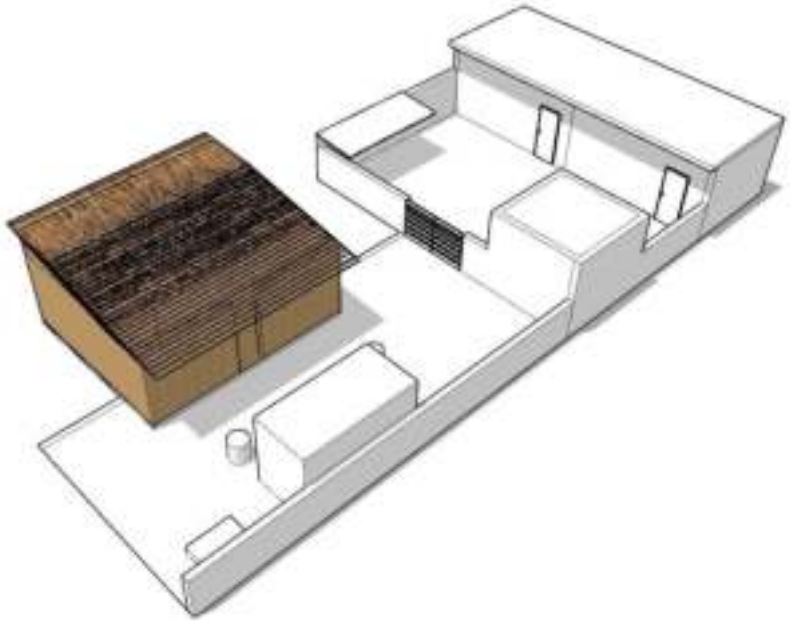
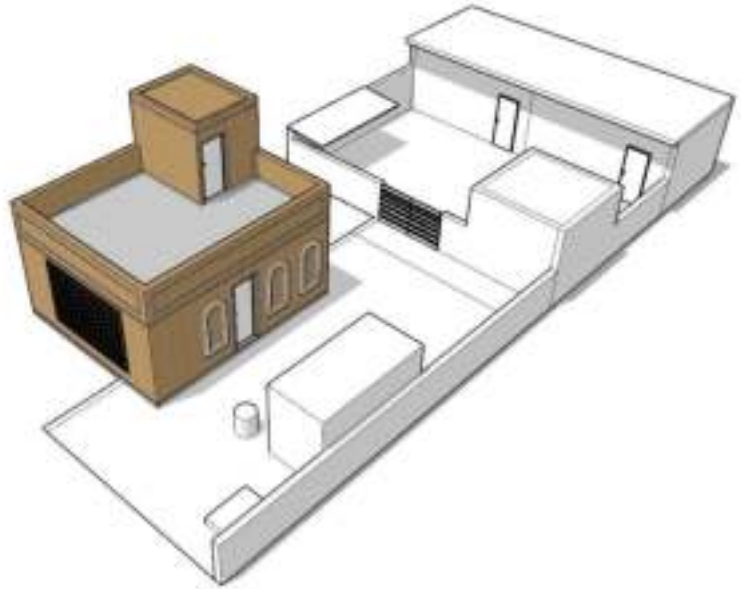




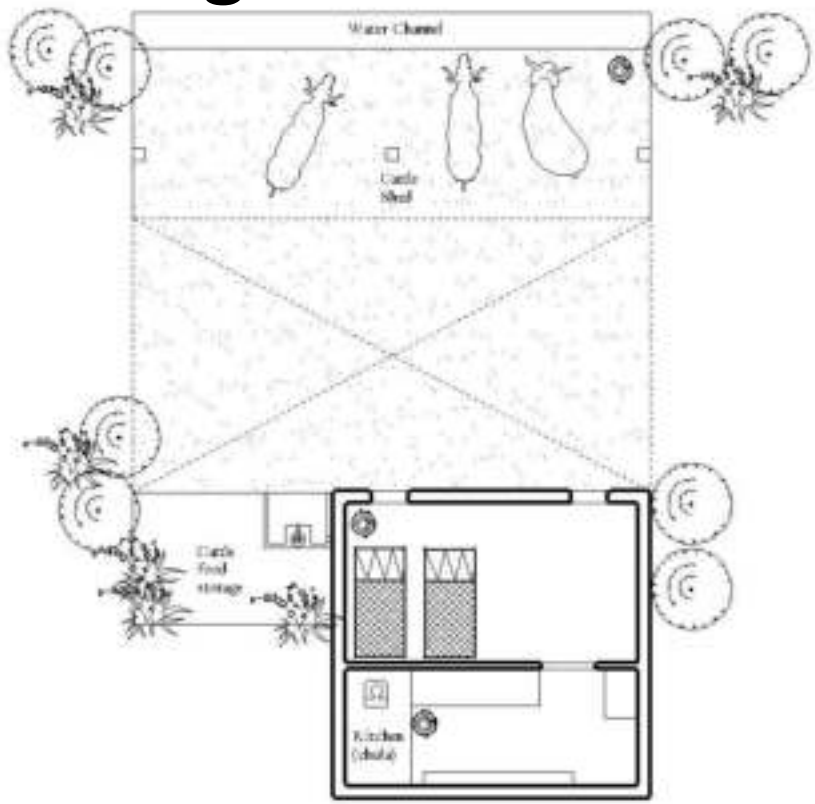
FAR : 0.40

FAR : 01

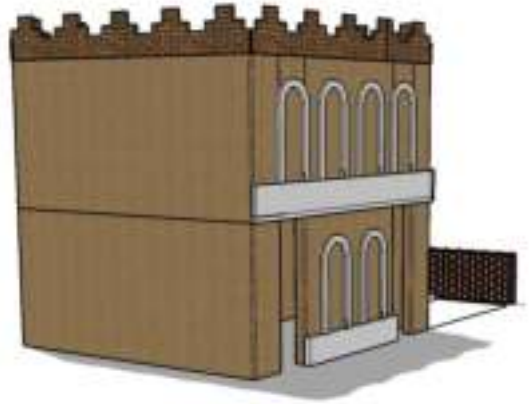
Housing Densification

LOCATION:
28°32'43.4"N 77°40'11.0"E
GMW9+5V Kalonda, Uttar Pradesh
https://goo.gl/maps/8tbCJSNsqd28WnXr9

HOUSE TYPOLOGY: Mud House
NO. OF PEOPLE: 10
NO. OF FLOORS: Ground



STAGE WISE DEVELOPMENT OF HOUSE



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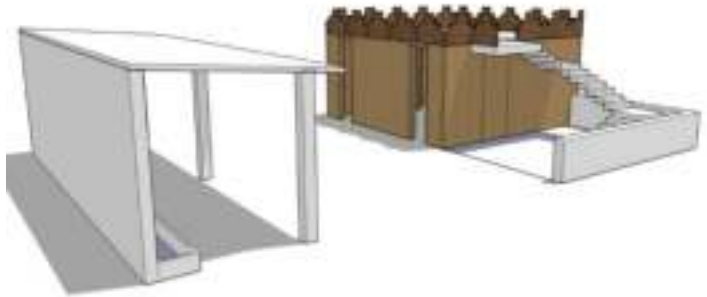
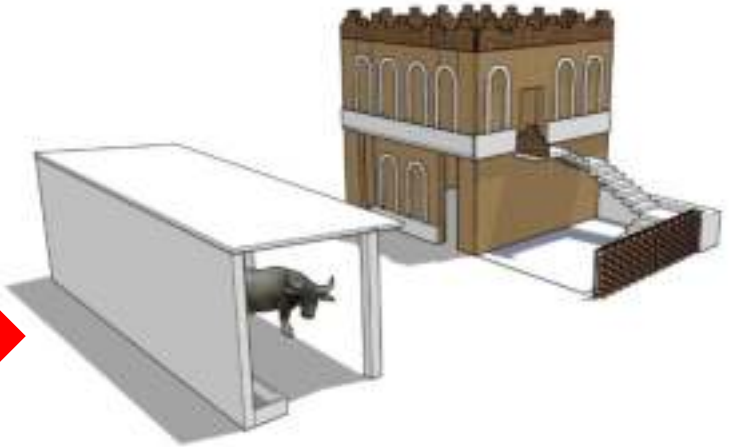




FAR : 0.40

FAR : 0.50

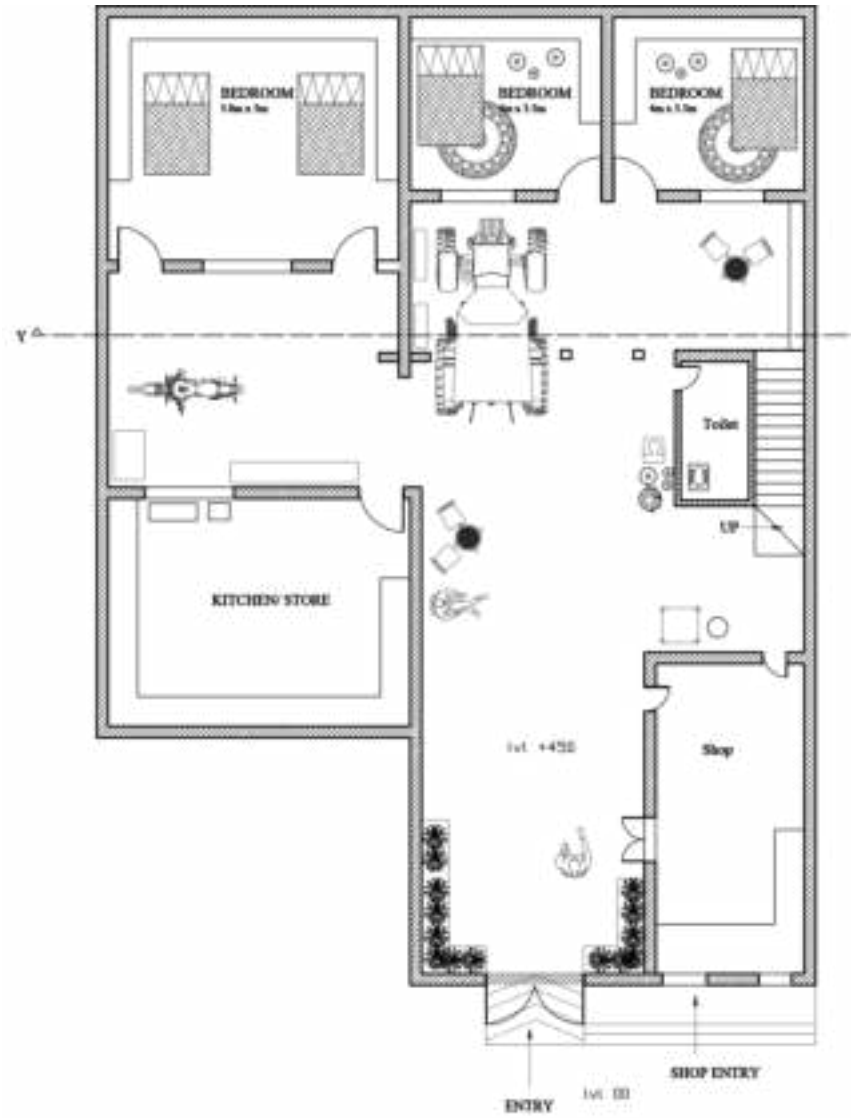
FAR : 01

Housing Densification

LOCATION :
28°32'45.2"N 77°40'20.5"E
GMWC+9W Kalonda, Uttar Pradesh
https://goo.gl/maps/3GpZpd364GBwDbEV9

HOUSE TYPOLOGY : Courtyard
NO. OF PEOPLE : 12
NO. OF FLOORS : G+1

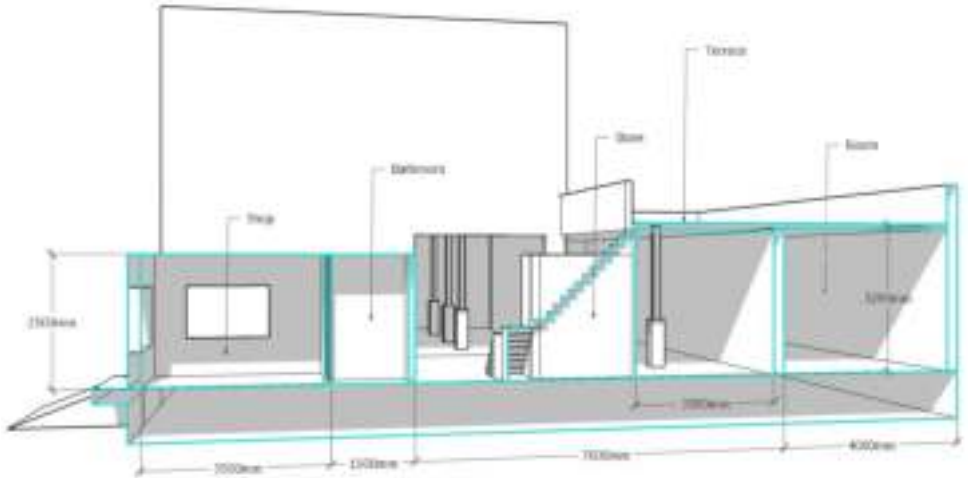
EXPANSION :
PLOT AREA = 164.29 SQM
GROUND COVERAGE = 90.8 SQM
BUILT UP = 116.12
FAR achieved is 0.7, so scope of expansion is 0.3



Panchayati Raj

STAGE WISE DEVELOPMENT OF HOUSE

Section



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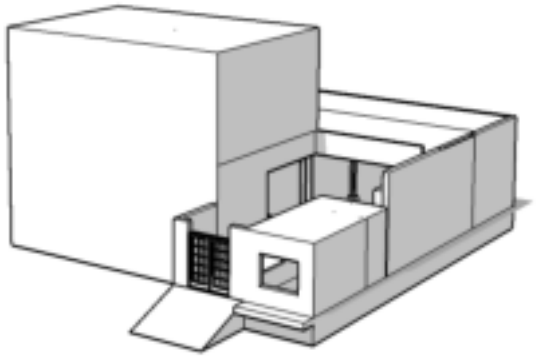
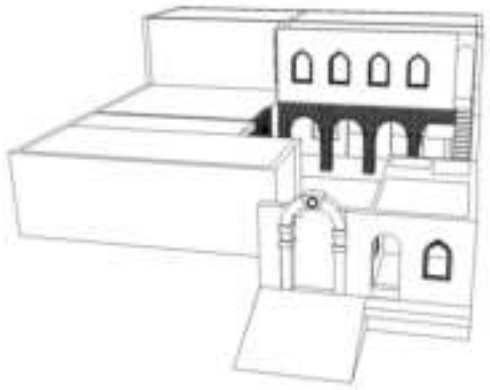


FAR : 0.40



FAR : 0.80

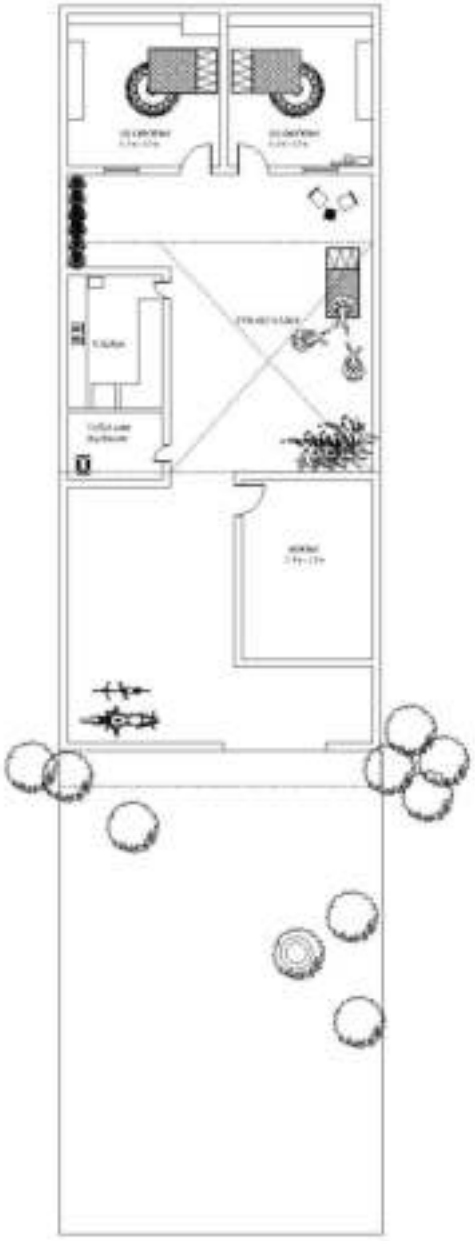
FAR : 01

Housing Densification

LOCATION:
28°32'35.7"N 77°40'44.5"E
GMVH+7J Kalonda, Uttar Pradesh
https://goo.gl/maps/MvbTnr38VXA8vkwo7

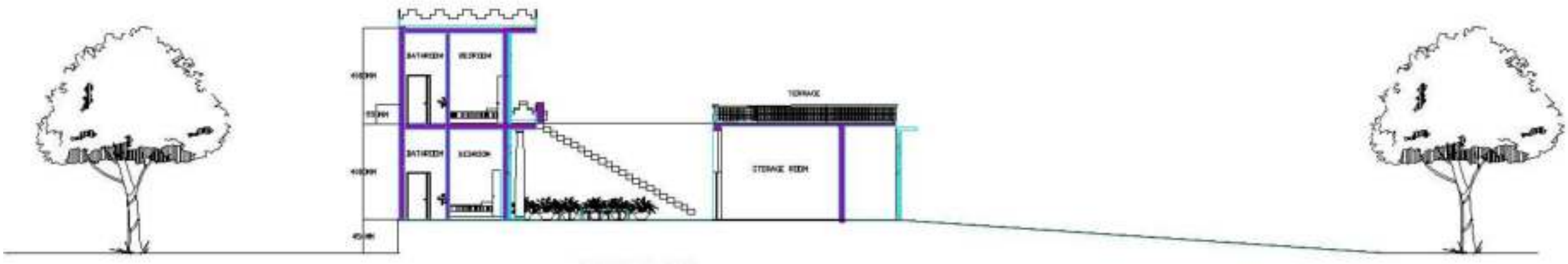
HOUSE TYPOLOGY: Courtyard
NO. OF PEOPLE:
NO. OF FLOORS: G+1

EXPANSION:
PLOT AREA = 195.3 SQM
GROUND COVERAGE = 155.3 SQM
BUILT UP = 153.3 SQM
FAR achieved is 0.7, so scope of expansion is 0.3.



STAGE WISE DEVELOPMENT OF HOUSE

Section



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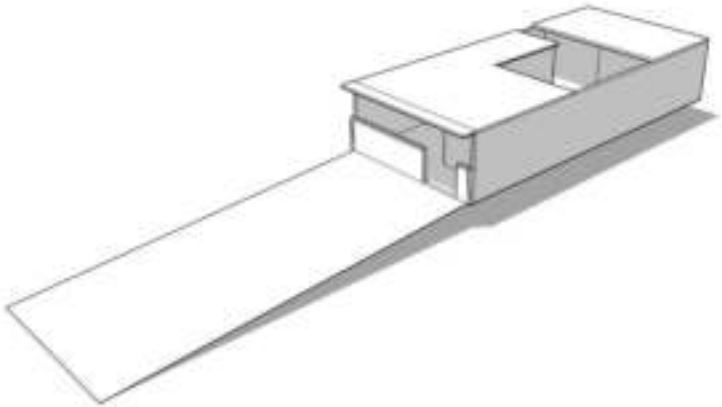
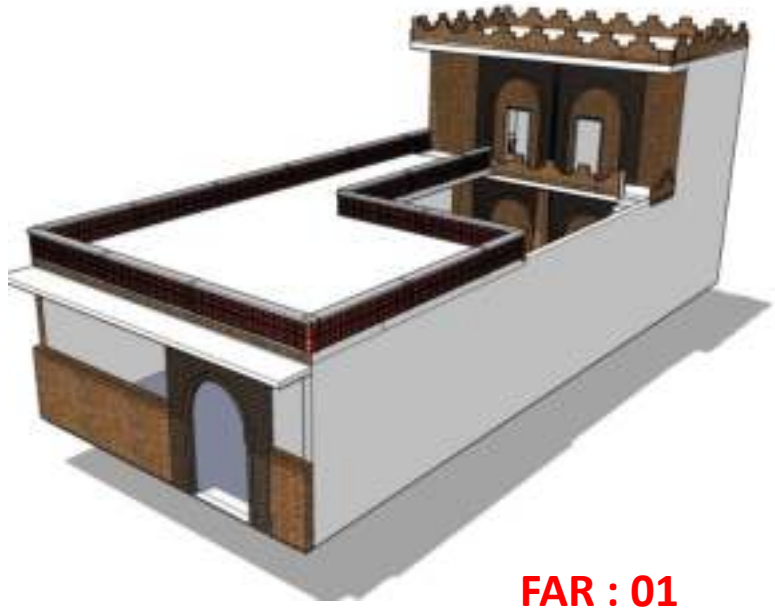


FAR : 0.40

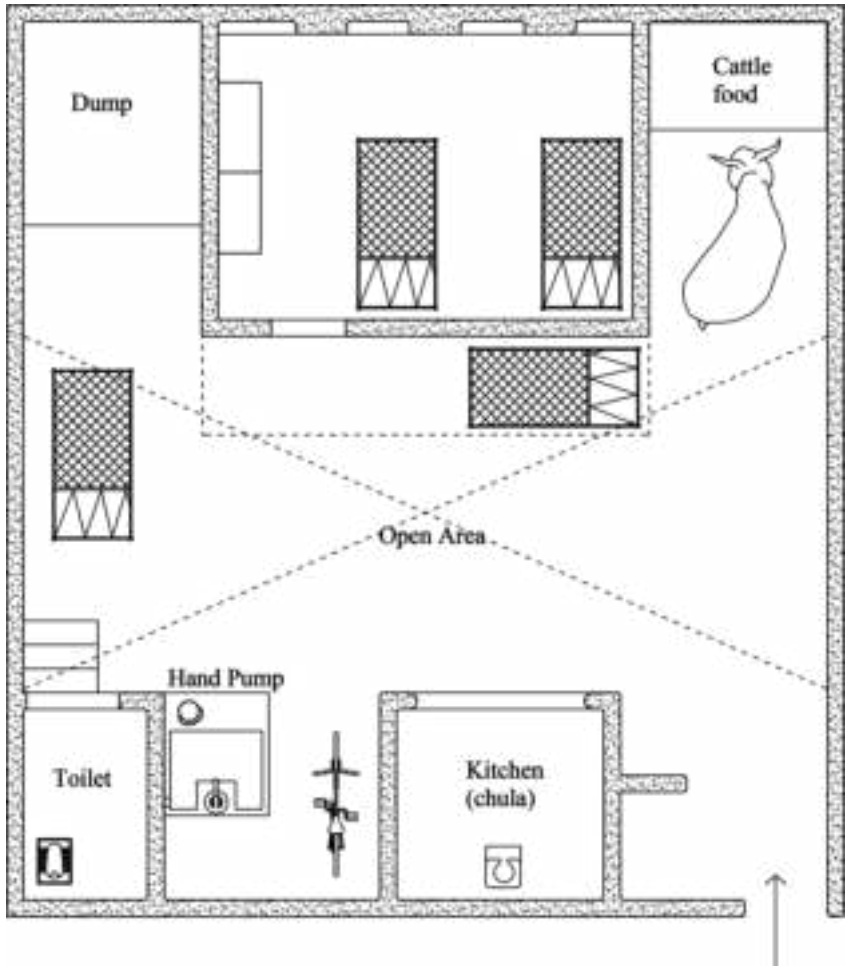


FAR : 01

Housing Densification

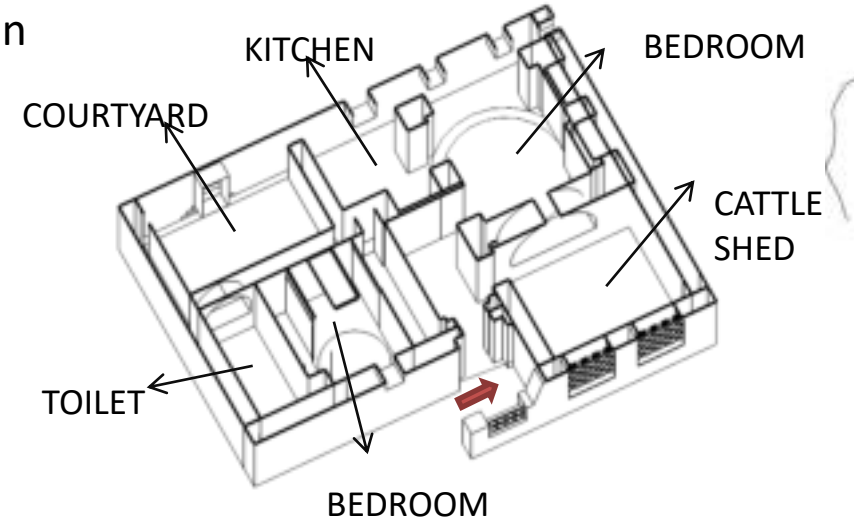
LOCATION:
28°32'32.5"N 77°40'38.2"E
GMRG+WW Kalonda, Uttar Pradesh
https://goo.gl/maps/it7oJ99RVAoDMZ676
HOUSE TYPOLOGY: Mud House
NO. OF PEOPLE:
NO. OF FLOORS: Ground

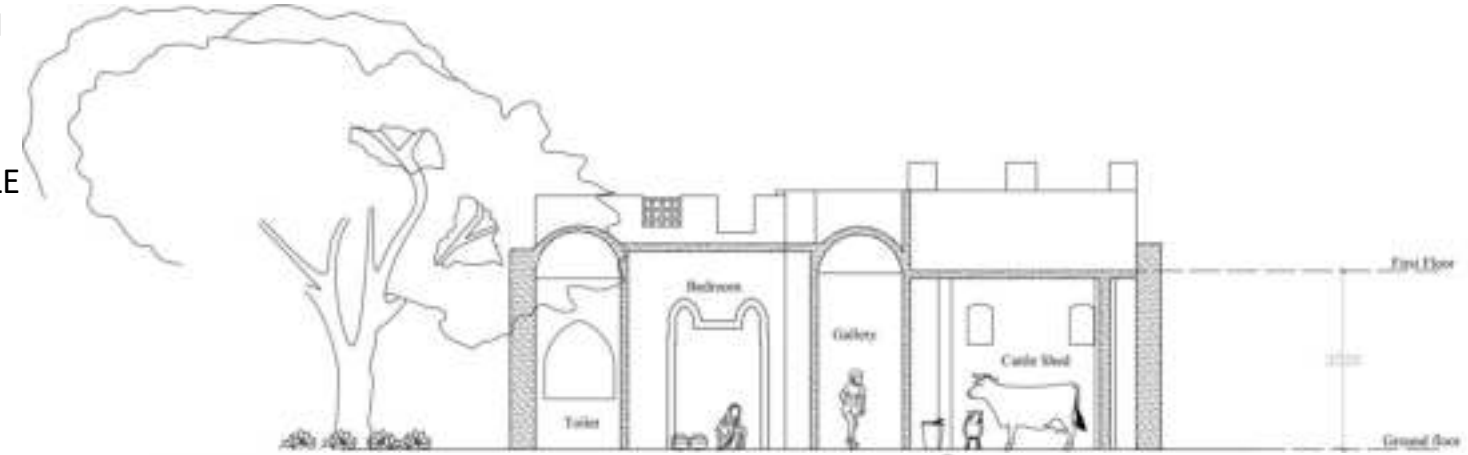
PLOT AREA = 108QM
GROUND COVERAGE = 33 SQM
BUILT UP = 33 SQM
FAR achieved is 0.3, so scope of expansion is 0.7.



STAGE WISE DEVELOPMENT OF HOUSE

Section





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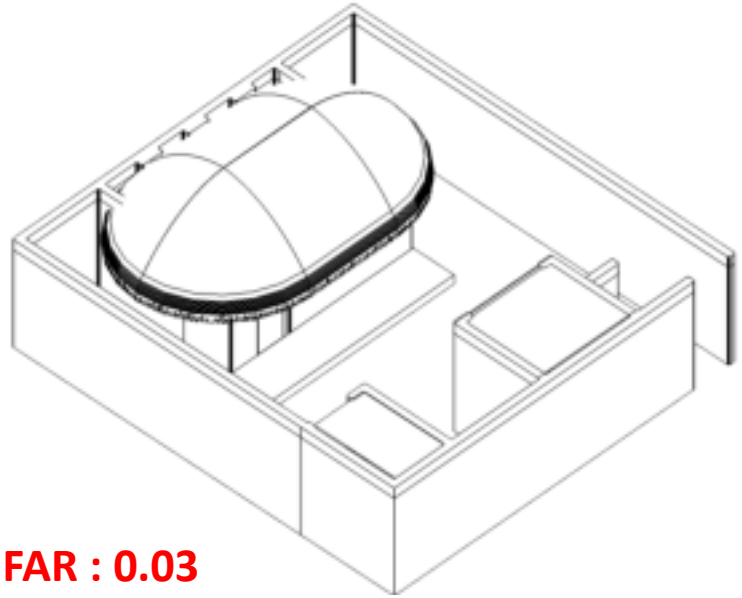
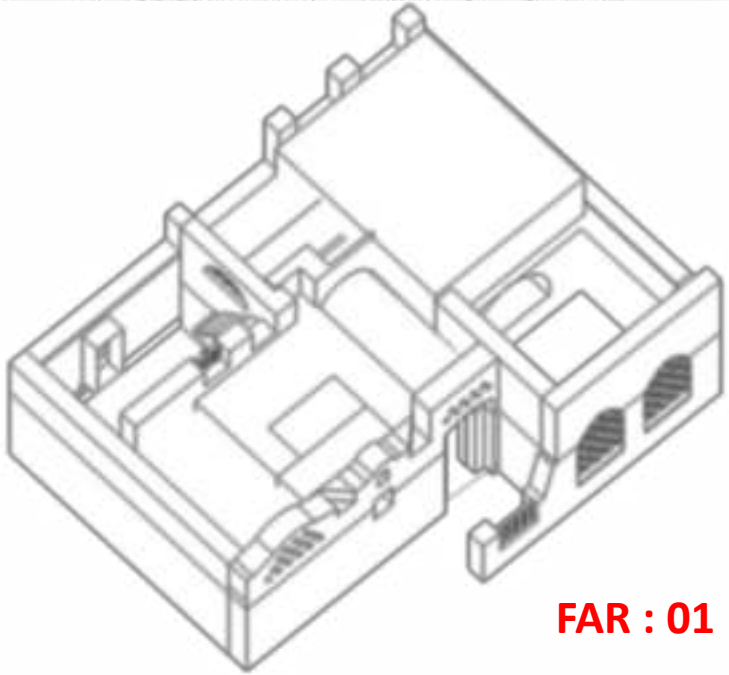
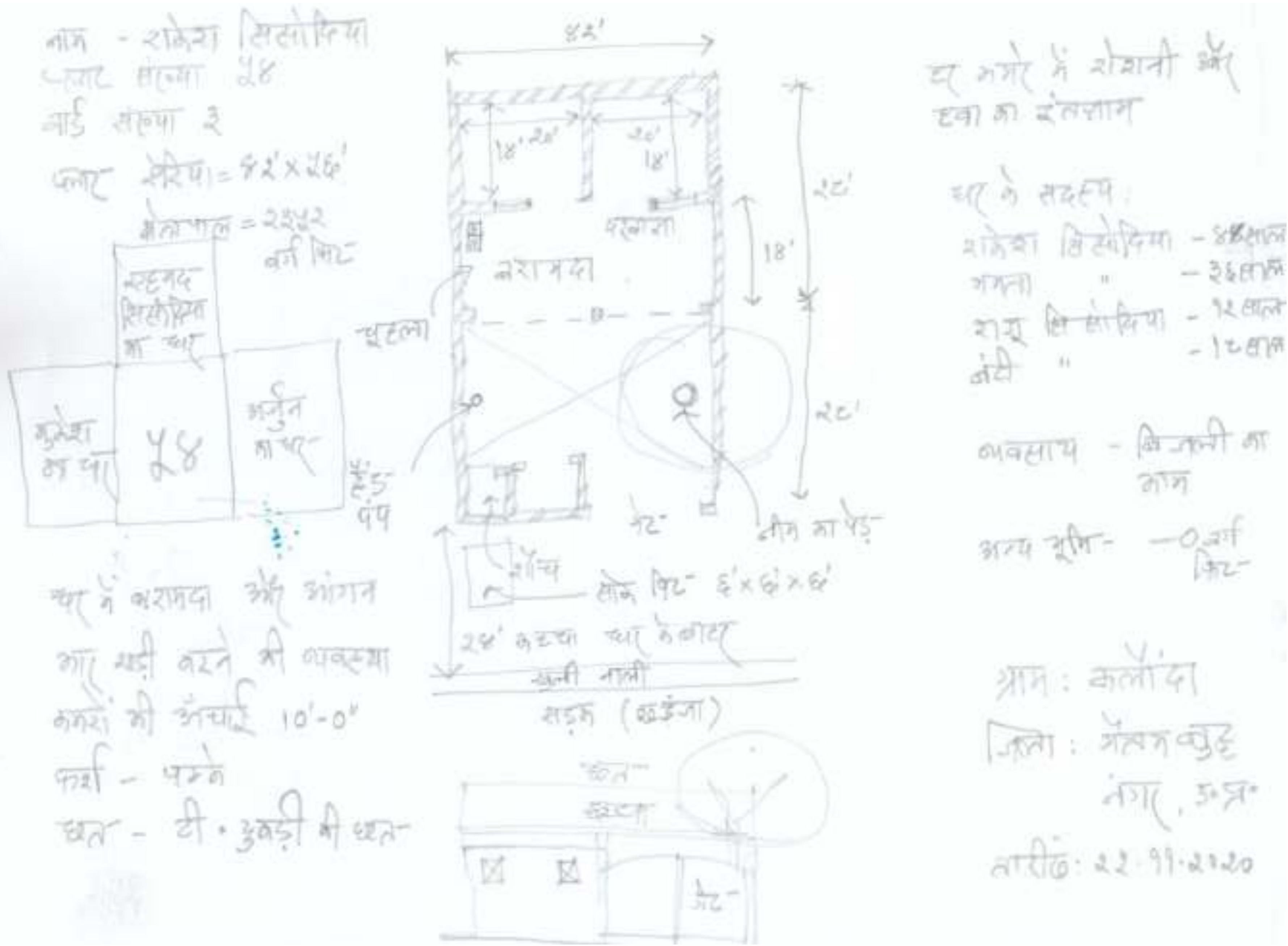


FAR : 0.03



FAR : 01

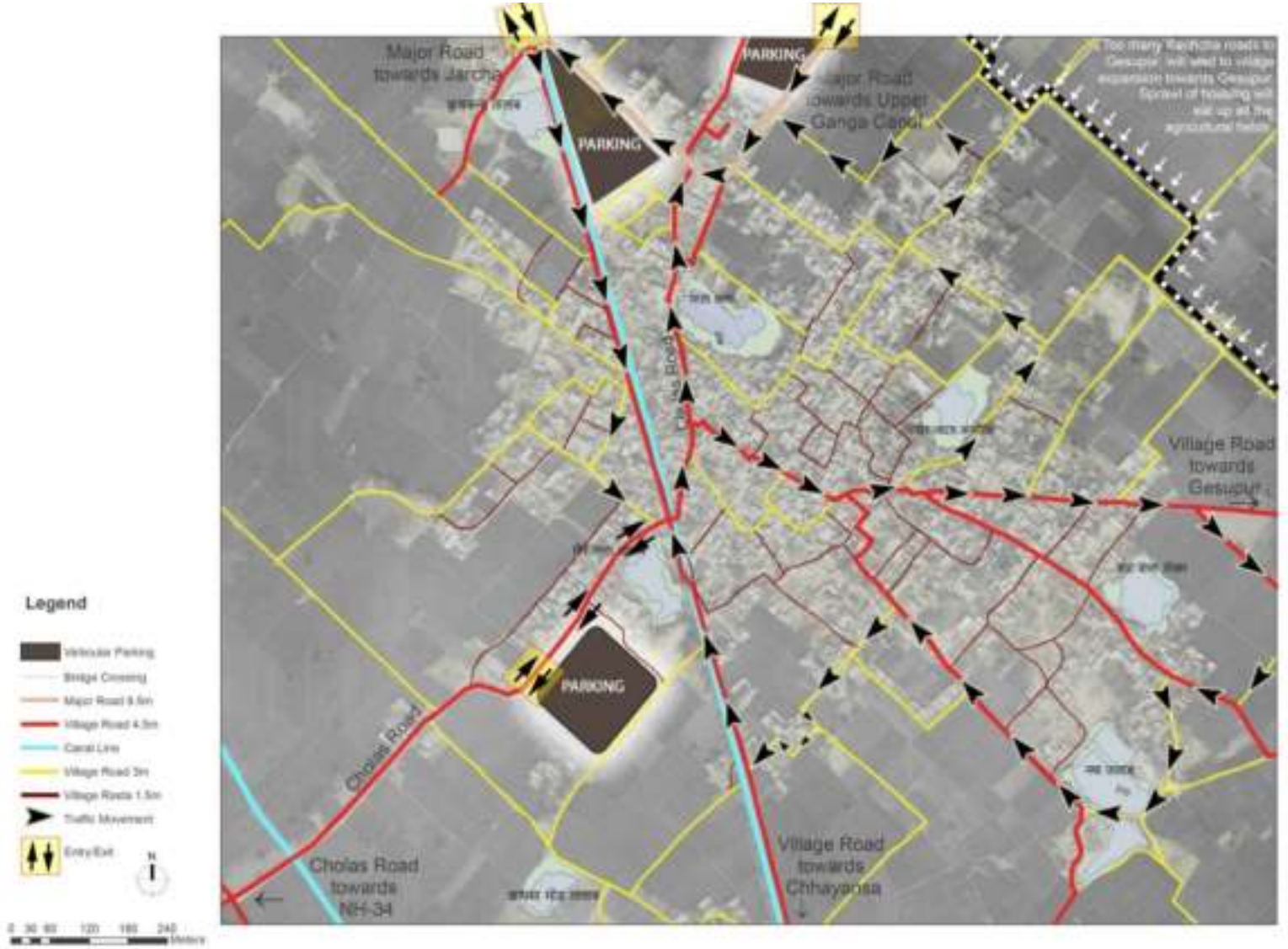

नाम - राकेश सिसोदिया
प्लाट संख्या 54
वार्ड संख्या 2
प्लाट एरिया = 42' x 56'
क्षेत्रफल = 2352 वर्ग फिट
महावीर सिसोदिया का घर
मुकेश का घर
54
अर्जुन का घर
हैंड पंप
चूल्हा
42'
18'
दालान
बरामदा
28'
गेट
नीम का पेड़
शौच
सोक पिट 6'x6'x6'
24' कच्चा घर के बाहर
खुली नाली
सड़क (खड़ंजा)
छत
छज्जा
घर में बरामदा और आंगन
गाड़ी खड़ी करने की व्यवस्था
कमरों की ऊँचाई 10'-0"
फर्श - पक्के
छत - टी • कुकड़ी की छत
हवा का इंतजाम
घर के सदस्य:
राकेश सिसोदिया - 48 साल
ममता " - 36 साल
राजू सिसोदिया - 12 साल
बंटी " - 10 साल
व्यवसाय - बिजली का काम
अन्य भूमि - 0 वर्ग फिट
ग्राम : कलौंदा
जिला : गौतम बुद्ध नगर, उ.प्र.
तारीख: 22.11.2020

Traffic Planning Of Aabadi Area

The traffic planning plan has been developed with the intention of showing that the densified village within the existing boundary and with the expected increase in traffic volumes can function. Since the core area roads are all an average with a minimum of 4mts space and may allow only slow-moving traffic and with just a car or four-wheeler at a time, the proposal for increased in vehicular density in Kalonda cannot work without a one way.

There are three main village connections that Kalonda has - Gesupur, Jarcha, and Cholas. With the restriction of the outline boundary, three gates and three parking lots are created. This will facilitate the definition of the village. Movement is proposed through four one-way loops which allow the traffic to move from one part of the city to the other.

Application of this traffic and parking plan is necessary to keep the inner / core / aabadi area function, lest development with an agenda of vehicular access, declares them derelict and defines them as a slum.



Node Densification

This set of drawings is an example of the suggested densification a node should undergo in Kalonda. It is important that before the obvious forces make a change to the urban settings in Kalonda, they should be predicted through design and experience and then converted into codes of planning and development. These practices discussed under the head of Design based Planning is the internationally accepted new norm for planning.

Node Densification

The outcome would be similar to the FAR and the plot outlines sold by the development authorities, but they will be having a vision backing their rise into the dimension of space. Once followed, the codes will amplify the village - urban - natural - aspirational relationships

EXISTING

15 YEARS

5 YEARS

20 YEARS

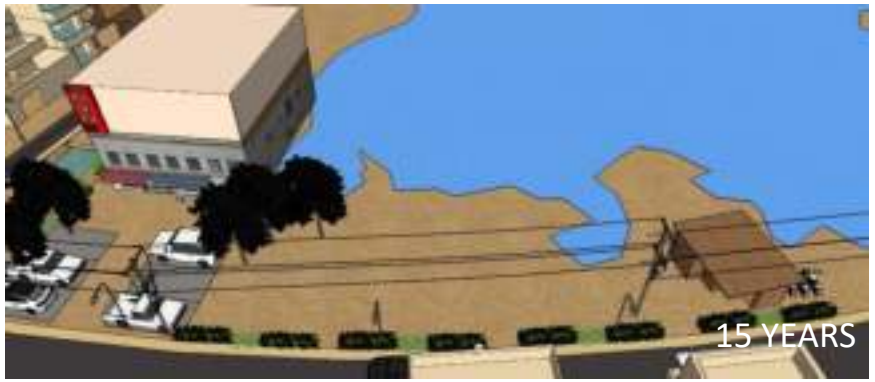
10 YEARS

25 YEARS

Node Densification

Care has been exercised in this design based planning demonstration that the relationship of water - Ponds and the node and the informal gatherings of the people around such areas is maintained. The physicality of structures and buildings shapes human activities and leaves casts for future generations to follow. This physicality has to be addressed.

The Design-based codes should be developed in a stage-wise manner and must change over time. The 25-year GPDP has thus been broken according to the growth in population and densification into parts and uses that build one over the other.



Human Resource

Kalonda has a large population which is in their under 18 age and in the next 5 years most of them will be in the employable age where their physical energy and mind can be cultivated to be of use to the Regional opportunities. As understood in the regional context of the village of Kalonda, there are mega projects that are being expected to boost the economy of this region. With its high population and the constraint in the opportunities, the village of Kalonda can become a great human resource. It can cater to the manpower needs of the district.

The VRSB Inter College in Kalonda has a huge campus (approx area 6 acre) and can offer vocational training in - Carpentry , Agriculture, Hospitality, Naturopathy, Medical Assistantship, Tooling and Machinery, Electronics, Civil and Draftsmanship. While we are keeping the land area for agriculture protected, there may be a lot of employment for the villagers in the field of agriculture and related activities . The rest of the population can keep living in Kalonda and work in areas of the economic catchment of the GB Nagar.

The limiting possibility that is an impediment today can be elevated to be an opportunity.

CNU

The CNU believes that the metropolis has a fragile relationship to its agrarian hinterland and natural landscapes. The relationship is environmental, economic and cultural. Farmlands and nature are important to the metropolis. Congress for the New Urbanism, a diverse, multidisciplinary, action-oriented group stands for the restoration of existing urban centres and towns within coherent metropolitan regions, the reconfiguration of sprawling suburbs into communities of real neighbourhoods and diverse districts, the conservation of natural environments, and the preservation of our built legacy.

New Urbanism is a planning and development approach, based on the principles of how cities and towns had been built for the last several centuries: walkable blocks and streets, housing and shopping in close proximity, and accessible public spaces. In other words: New Urbanism focuses on human-scaled urban design. The idea is to work towards achieving three key goals: to diversify neighbourhoods, to design for climate change, and to legalize walkable places.

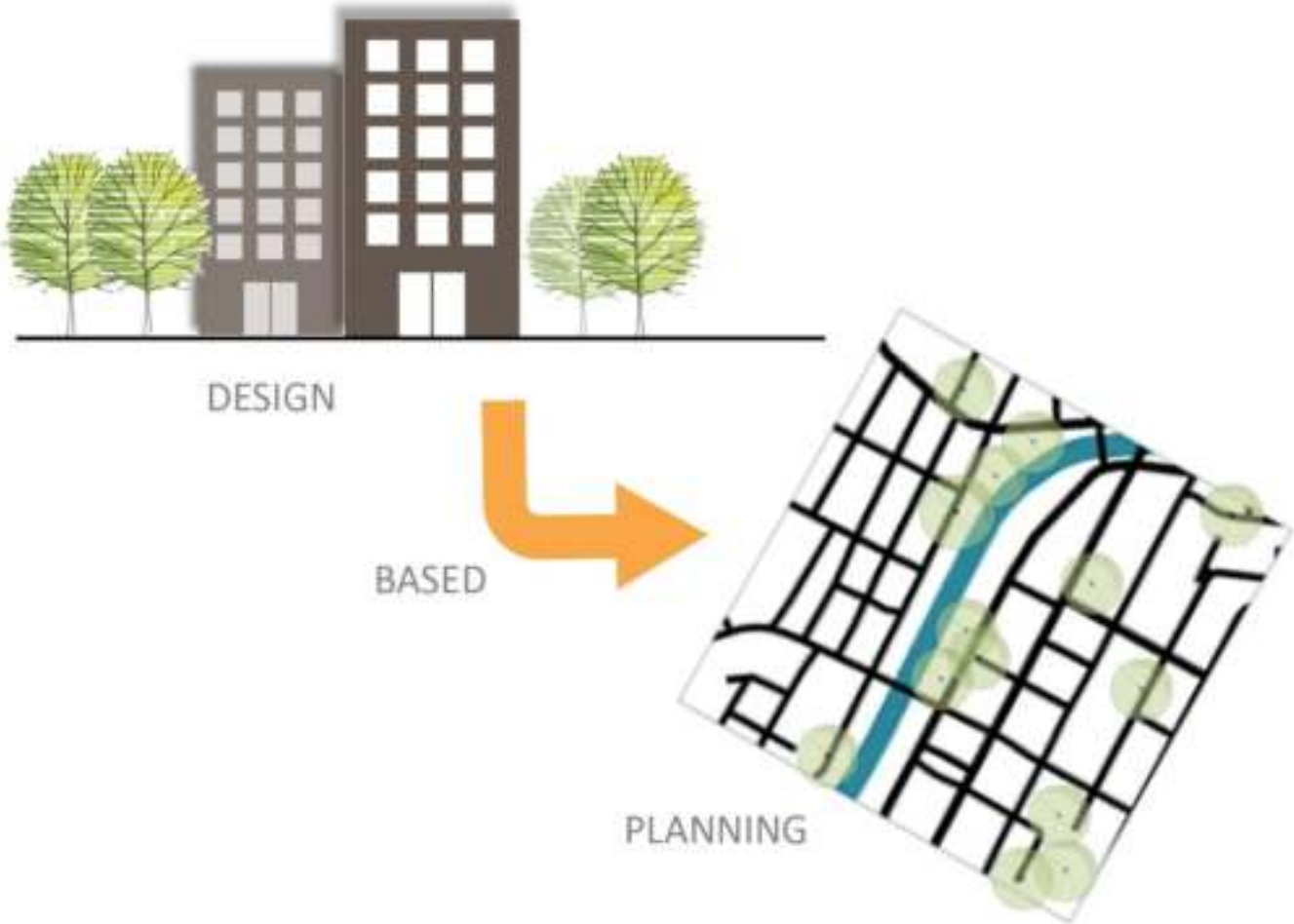
They are responsible for the restructuring of public policy and development practices to support the principles like neighbourhoods should be diverse in use and population; communities should be designed for the pedestrian and transit as well as the car; cities and towns should be shaped by physically defined and universally accessible public spaces and community institutions; urban places should be framed by architecture and landscape design that celebrate local history, climate, ecology, and building practice. Also they believe that the relationship between the art of building and the making of community, through citizen-based participatory planning and design should be re-established and homes, blocks, streets, parks, neighbourhoods, districts, towns, cities, regions, and environment must be reclaimed.

Design Based Planning

Design based Planning an approach to Rural Development in India-

Indian villages have a very large variety of house types. The difference in the geography and climatic challenges make housing types very diverse and a lot changes in between districts and states and through agricultural practices. There are changes in building materials and also in the social associations, making the pattern of development very unpredictable.

The urbanization trend in the world is very inviting, as it is synonymous to comfort and economic progress. The village in its heart wants to be the city, with and without a car. The automobile invasion into the human settlements has invaded and eroded all character from the human areas, to the extent that all guidelines see this association of the human race with the automobiles as a partnership and hence feel it imperative to aid their presence in the planning processes.

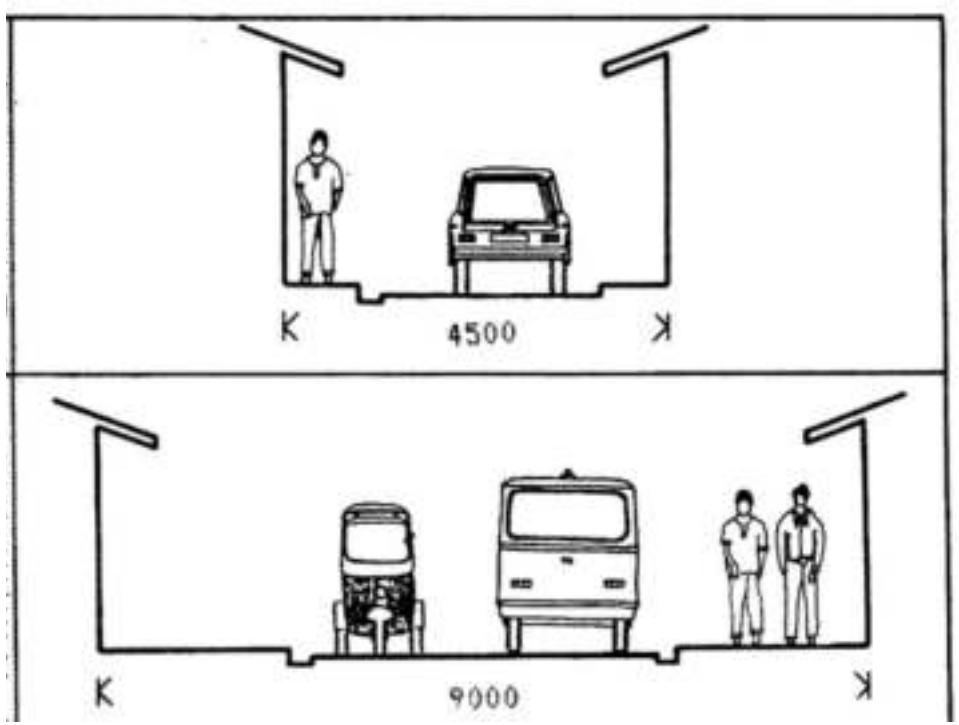


Design Based Planning

A city as per development guidelines is thus not possible without adequate car space, yet all examples of our ancient civilization and cores of all modern cities are areas where ingress of cars is almost always not possible or prohibited to conserve their character.

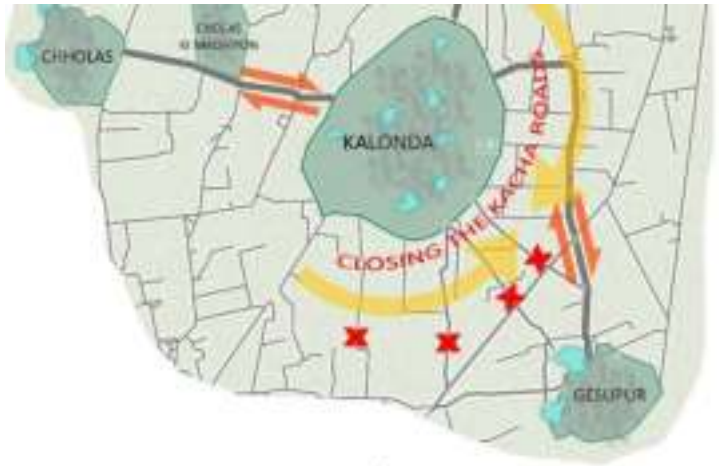
With self run and self designed typologies of houses, there has to be a design centric approach through an architecture who understands the village and at the same time has the ability to after the design based development work on guidelines of the area for a minimum period of 25 years for all the villages in a region, village wise. This when done keeping in mind the development of the existing rural character will have a positive bearing on the intensity and character of the area.

All urban spaces and all design examples illustrated in the books of the world, all monuments of significance are ones which have a human connection to the city. their scale almost always is akin to pedestrians. So are our villages, still struggling to keep up the connection of the scale of life , of the living with the space in the urban. Their roads and sections are a mix of the motorized and the pedestrian urban pattern. These must be kept intact through a design based planning approach, where first the design is done and then the same could be codified into a plan.



Vision 2021

1. Densification of agricultural fields. Removal of sprawl and wide roads from fields to restore their density .



2. Step 2- Street lighting and clearing of drainage issues from all main roads.

3. Geomorphology & Hydrology – Lakes
   - Clearing the encroached land near the lakes.
   - De silting the lakes
   - Planting of orchards
   - Beginning of Kalonda crafts

Present condition

After Clearing the encroached area

After de silting

Planting of orchards, introduction of Aquaculture and Kalonda crafts

Vision 2021

4. Identification of all housing typologies and all documentations of existing - PLUS initiation of a proto call for future "pre-expansion of house approval" processes.

5. Introduce technical courses in the VRSB college like-

- Carpentry
- Agriculture
- Hospitality
- Naturopathy
- Medical Assistantship
- Tooling and Machinery
- Electronics
- Civil and Draftsmanship.

Carpentry

Agriculture

Naturopathy

Electronics

Civil and Draftsmanship

Tooling and Machinery

Vision 2021

6. Initiation of garbage collection in Kalonda

7. Milk cooperative in the village to supply fresh organic milk for residents of Greater Noida and Noida.

8. A systematic process of treating grey water by building a series of oxidation tanks with weirs, floating fountains, fishes and aquatic plants to treat water before it becomes suitable to be used for aquaculture.

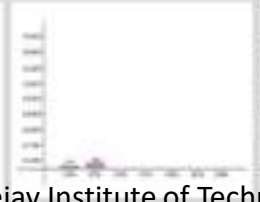
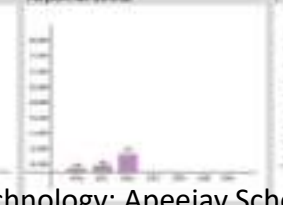
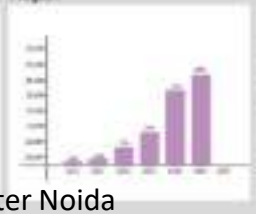
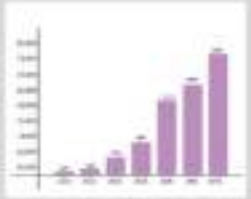
9. Addition of an ATM, Local bank, Police check post and dispensary to be made functional.

Panchayati Raj

25 YEARS VISION

Panchayati Raj

25 YEARS VISION

NODE DENSIFICATION						
ENTRY/EXITS						
ECONOMY						
INTEGRATED DEVELOPMENT						
REGIONAL FORCES AND FUTURE OPORTUNITIES		 MMLH & MMTH Metro connectivity Airport at Jewar	 IIT, Greater Noida, Patanjali Food Park	 DMIC, Film City, Data Centre	 Delhi Noida Ghaziabad Investment Region	 Collective Regional Development
EDUCATION						

Community Interviews






Section A,B & C

DATE__/__/__	HOUSEHOLD SURVEY 2021							Form No. CP/001 / 17	
	Gram Panchayat - Kalonda, G.B. Nagar, UP.								
	A.1.Name of Head of the Family							Surveyor Code: CP	
	A.2. Caste			A.3. Religion					
A.	A.4.Time Period of Residence		A.5.Ownership of House		A.6.Rent			(for office use only)	
	B. Family Details								
S.No.	B.1. Name	B.2. Age (Yrs)	B.3. Sex (M/F)	B.4. Married (Y/N)	B.5. Qualification	B.6. Occupation	B.7. Location	B.8. Mode of Transport	B.9 Digital Literacy
1									
2									

C. OCCUPATION DETAILS			
C.A. Change in Occupation (Y/N)		C.B. Occupation before:	C.C. Occupation Now:
C.D. Since When and Reason:			

Breaking Section C into 3 parts

C. 1. AGRICULTURE	C.2. LABOUR	C .3. SERVICE

C.1.A. Land Owner	(yes / No)	C.1.G. Source of Irrigation		C.2.A. Agro /Construc./Ind./ Others		C.3.A.Type	
C.1.B. No. of Persons Involved		C.1.H. Seeds Availability		C.2.B. Location		C.3.B.Location	
C.1.C. Area		C.1.I.Cropping Patterns		C.2.C.Mode of Transport		C.3.C.Mode of Transport	
C.1.D. Location		C.1.J. Produce P.A.		C.2.D.Time Period during the year	Marginal / Full Year	C.3.D.Salary	
C.1.E. Crop?		C.1.K. Store Location		C.2.E.Wage		C.4. BUSINESS/TRADE	
C.1.F. Soil Fertility		C.1.L. Store Distance				C.4.A.Type	
						C.4.B.Location	
						C.4.C.NO. of Persons Involved	
						C.4.D.Monthly Earnings	

SECTION D:LAND AND HOUSING &BREAKING SECTION D INTO 2 PARTS

		D.C.Cultivable Land			
D.B.Time period of Ownership of Land		D.D.Fallow Land			
		D.E.Residential Land			

D.2. CONSTRUCTION TYPE					D.1.C. Courtyard
D.2.A. Type	kutcha	Semi-Pucca	Pucca		D.1.D. Dalan
D.2.B. Roof	Thatch / Grass / Bamboo	Mud	Stone/Mortar	RCC	D.1.E. Street
D.2.C.Wall	Thatch / Grass / Bamboo	Mud	Stone/Mortar	Brick	D.1.F. Chabutra
D.2.D. Floors	One	Two	Three	Four	D.1.G. Chowk
D.2.E.1. Built under any Scheme/ Program/ Policy? (Y / N)		D.2.E.2. Which scheme?			D.1.H. Maidan
D.2.F. Age of House	Less than 10 Yrs	10 to 20 Yrs.	20 to 50 Yrs.	More than 50 Yrs	D.1.I. No. of Rooms

SECTION E:SERVICES & SECTION F :MONTHLY EXPENDITURE

	E. SERVICES						
	Service	E.A. Availability	E.B. Frequency / Duration / Coverage	E.C. Source			
E.1	Water Supply			Well / Hand Pump / Bore Well / Private tap / Public Tap			
E.2	Solid Waste			Open Dumping / Compost / Collection Cart			
E.3	Electricity			Household / Irrigation			
E.4	Transport			Bus / Tempo / Tractor / Bullock Cart / 2 W / 4W / Cycle			
E.5	Is there a Toilet?	Y / N		E.6. If No, Then what do they use?	Public /Private / Community / Open Def.		
E.7.	Amount Received Under Such Scheme?			If Yes, Then	E.8. Under Scheme / Own Construction		

F. Monthly Expenditure						
Type	Food	Education	Transport	Health	Rent	Leisure
Ranking						
Lump- Sum Monthly Expenditure						
If Paying Interest Then How Much	F.3.	Time Period of Interest	F.4	Loan - Bank/ Private	F.5	

SECTION G:HEALTH, SECTION H:ANIMAL HUSBANDARY & SECTION H:ANIMAL HUSBANDARY

G. Health		
G.1.Vaccination? Y / N	G.2. Prominent Disease	G.3. Nearest Hospital
G.4 Mode of Transport	G.5 Fees paid for 1 time visit:	

H. ANIMAL HUSBANDARY			
	H.1. Nos.	H.2. Problem / Disease	H.3. Commercial Use (Y / N)
Cow			
Buffalo			
Ox			
Goat			
Chicken			
Horse			
Donkey			
Others			

I. Tools / Implements		
	I.1 Farming	I.2 Others
I.A. Mechanical		
I.B. Motorised		

SECTION J:Energy Source, SECTION K:Other Assets&SECTION L:ISSUES, EXPECTATIONS AND SUGGESTIONS

	J.1.	J.2.
LPG		Under any Scheme (Y / N)
Kerosene		
Wood/ Coal		
Biogas		
Cow Dung Cake		
Others		

K. Other Assets	
Radio	
Telephone / Mobile	
Solar	
Stove	
T.V.	
Computer	
Internet	
Motorcycle	
Car	

L.				
Issues	L.1.			
Expectations	L.2.			
Suggestions	L.3.			

Evolution Of Town And Country Planning Act

- The history of contemporary planning practice in India dates back to the enactment of the Bombay Improvement Trust Act 1920.
- Subsequently, similar Acts were enacted in other Presidencies.
- The visit of Sir Patrick Geddes to India and his propagation of the work - home place theory laid the foundation for the setting up of Improvement Trusts and subsequently thinking process for enactment of Town and Country Planning Acts in various States and the establishment of State T&CP Departments.
- Following this, Urban Development Authorities were set up under Development Authority Acts for addressing the problems of fast growing towns and cities and formulating Master Plans which apart from having strong spatial connotations also have both social and economic aims.
- Statutory process of master plan formulation in India was inspired by the erstwhile comprehensive planning system envisaged under the **Town and Country Planning Act, 1947** of United Kingdom.
- As most of the Town Improvement Trust Acts then in force in various states did not contain provisions for preparation of Master Plans, a need was felt to have a Comprehensive Town and Country Planning Act on the lines of U.K.
- Accordingly, Central Town and Country Planning Organization or TCPO drafted the **Model Town and Regional Planning and Development Law in 1962**, which formed the basis for various States to enact Town and Country Planning Acts, with modifications to suit local conditions.
- This model Law was revised by TCPO in year 1985 as “Model Regional and Town Planning and Development Law” to enact a comprehensive urban and regional planning legislation in all the States and UT’s.
- Based on the Model Regional and Town Planning and Development Law,1985 ,many states enacted their Town and Country Acts.
- First UDPFI Guidelines were prepared in 1996 in consonance with the provisions of 74th CAA . .
- However, most of the State Governments did not incorporate the provisions in the Town and Country Planning Acts as suggested by UDPFI Guidelines,1996.
- Following the international practices, guidelines and policy cannot dictate the reality at the LOCAL level and hence we must work on reality of the villages through Local Studies rather than following guidelines blindly.

U.P. Urban Planning And Development Act, 1973

- It should be added in the objectives of this act to conserve agricultural belt of equitable amount of farm produced to feed the number of people housed by the state.
- Under development and planning any development authority should not be allowed to occupy land more than the nutritional security share of the villagers.
- In lewd of Acquisition of industries act it must be binding for the development authority to provide for the employment and economic continuity in villages and to invest in municipal housing, SLWM and educational reforms for Aabadi areas.
- Under the definitions, the definition of development must change. The definition of development stands only for building, engineering and mining. Agriculture, green, infrastructure and water bodies must be made an inseparable part of the definition.
- Within a district it must be binding for 70% of village s to remain under rural/Gram Panchayats. While a maximum of 30% may be acquired/transferred into nagar for the agendas of orthodox development.
- With extensive urbanization the Town and country Planning act has got into self conflict with absence of any focus on country planning while the intention of the act by the virtue of the agenda is of equal focus, the act itself has evolved as a threat to country.
- The acts, U.P. (Regulations Of Building Operations) ACT, 1958 and U.P. Urban Planning And Development Act, 1973 exist, but they fail to talk about Rural Development, Rural Planning, agricultural, water bodies or green.
- Rural housing is a very important aspect of Panchayati Raj and so is agriculture. More funds should be created for Panchayati Raj for taking up its duties.
- WILL OF THE STATE – can help bring changes in the act to save villages in each district.

- A more detailed Policy discussion is needed. (We are in process)

Dronography Video

Dronography Video

Prof Anand Khatri (Team Leader Research Cell)

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