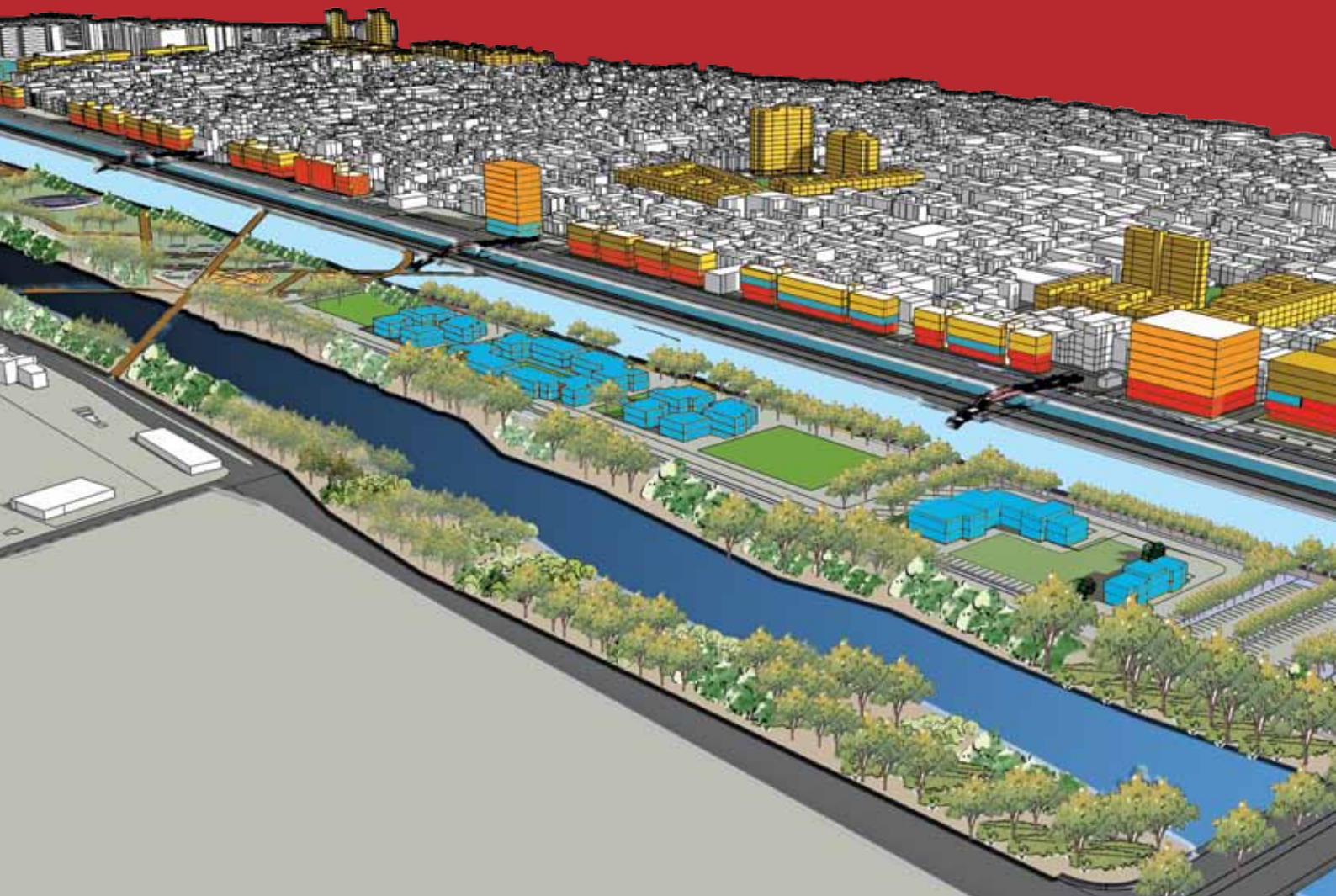




CITY LEVEL PROJECTS

NEW ASHOK NAGAR

Site Specific Design for Ward Number 212





Delhi Urban Art Commission

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Acknowledgements

It is said that for an artist to join establishment is a kiss of death. I was fully aware of this aphorism when the Minister of Urban Development, Mr. Kamal Nath, asked me to be the Chairman of the Delhi Urban Art Commission. I had three conditions before accepting the assignment and one of these was that DUAC should be allowed to carry out site specific studies for improving slums and unauthorized colonies. Subsequently, the Minister along with the then Lieutenant Governor of Delhi, Mr. Tejendra Khanna, and Secretary, Ministry of Urban Development, Dr. Sudhir Krishna, approved the proposal to carry out three dimensional studies for improving slums and unauthorized colonies. I am grateful for their support.

I would like to thank other members of the Commission, Eric P.Mall, Satish Khanna, Sonali Bhagwati and D. Diptivilasa for helping to make success of problematic urban design exercises and charting new paths.

I take this opportunity to thank senior consultants, architects, urbanists and planners as well as younger colleagues who have been working full time. DUAC Secretary, Vinod Kumar, and other permanent staff have enthusiastically supported us and guided us through government procedures. Many thanks to all of them.

Raj Rewal

Chairman

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Ministry of Urban Development

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New Delhi Municipal Council

Geospatial Delhi Limited

Delhi Metro Rail Corporation

Delhi Urban Shelter Improvement Board

BSES Rajdhani Power Limited

BSES Yamuna Power Limited

RWA's and Area Councillors

Preface

Half of Delhi lives in ramshackle slums and shabby unauthorized colonies. This state of affairs is a serious blot on the face of the city which has great historical monuments and aspires to be a world class city. The centre of New Delhi is lined with leafy trees and can boast of superb example of contemporary architecture but its growth under exploding population has disintegrated into shanty towns.

My first memory of Delhi is that of a child going in a tonga from the railway station to our government quarter in New Delhi around a square which became our home for several years. The squares were built near Birla temple and when my father was promoted in the government hierarchy, he was offered an independent house with a larger area but my mother refused to move as she had developed kinship with families around the square. This was my first lesson in neighbourhood "mohalla" as an urban phenomenon.

In fact the word 'urb' in Latin stands for neighbourhood space. It was a period when Connaught Place was the leisurely centre for social, shopping and cultural activities and the Old Delhi was lively and still gracious, dominated by Jama Masjid and Red Fort. Delhi's monuments like Humayun's Tomb, Qutab Minar and Lodhi Garden were favourite places for picnics.

Seventy years have passed since the tonga ride, Delhi has dramatically changed as the population of Delhi has exploded from under a million before partition in 1947 to about twenty million today.

As a Professor in the School of Planning and Architecture in Delhi, I had ample scope of studying typology of Indian cities which helped me to design Asian Games Village in my mid-career around 1980 as a series of clusters (mohalla neighbourhood) woven around pedestrian pathways, segregated from road networks. This was a low rise high density housing built within the framework of 150 FAR (FSI 1.5).

Delhi has changed even more drastically during the last thirty years since the Asian Games Village was built, but the idea of a city as a series of sympathetic, humane interconnected neighbourhood building blocks interspersed with social, cultural and educational facilities has remained embedded in my mind.

Delhi Urban Art Commission was established to preserve, develop and maintain the aesthetic quality of urban and environmental design within Delhi. During the last 40 years of its existence, DUAC has not received any three dimensional exercises which visualizes neighbourhoods, wards etc. The emphasis has often been only appraising individual

buildings and complexes submitted through local municipal agencies. After taking over the direction of DUAC in 2011, members of the Commission arranged meetings with wide spectrum of advisors and formulated principles on which a building can be automatically and speedily approved and decided to take over the job of visualization and three dimensional planning for various aspects of the site specific designs which need to be urgently developed if Delhi has to maintain standard as a world capital city.

A large part of Delhi lives in unauthorized colonies and slums and even the Master Plan of Delhi had suggested a detailed design proposal to augment the Master Plan based on ground realities.

In order to fulfil the requirements of neighbourhoods, wards, the DUAC has undertaken a few pilot projects which can be eventually developed in a manner that the local municipal agencies can implement them. In order to carry out these studies, DUAC developed in its own office a core group of architects and urban planners. This was done on the basis of DUAC mandate that "the Commission may suo motu promote and secure the development, re-development of which no proposals in that behalf have been received from any local body".

The studies involve the visual tools for ground studies combined with extra assistance of Google images. It is hoped that the proposals and their conclusions would be evolved to such an extent that a process can be worked out with the resident welfare associations to make meaningful designs for the neighbourhood upgradation for the different kind of wards.

The DUAC's site specific designs are the seeds which can grow and it is hoped that economic principles would be evolved to implement the meaningful neighbourhood upgradation for the different kind of slums and wards. India cannot remain shabby and ramshackle forever and solutions have to be found for shanty towns.



Raj Rewal
Chairman, DUAC

January 2014

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Summary

In developing countries, more than half of the urban population lives in unplanned settlements where their quality of life is substandard and at times inhuman. Delhi, the capital of India, is a prime example as more than half of its population resides in unplanned settlements despite planning interventions since the inception of its first Master Plan in 1962. It is estimated that over 4 million people reside in unauthorized colonies.

Such unauthorized colonies generally suffer from lack of civic and social infrastructures. The local bodies have also played marginal roles in improving the situation due to a host of administrative and legal and sociopolitical roadblocks.

Presently there are about 1639 unauthorized colonies in Delhi, out of these 895 such colonies have been provisionally regularized by the government to enable them to be an integral part of the planned development of the city and help improve the plight of the citizens living in these areas under extremely unhygienic and inhuman conditions.

One such unauthorized but 'provisionally regularized' settlement is New Ashok Nagar, located on the eastern bank of the Yamuna and bordering Noida. This unauthorized colony today houses nearly 60,000 people and is home to a native migrant population from all parts of the country with different socioeconomic background. The area is plagued by issues that are generic to such areas, such as high population densities, nonexistent sewerage and solid-waste management, inefficient social infrastructure, poor housing conditions. This area presents numerous opportunities for improvement which can act as an example for other such settlements.

This study is an outcome of extensive on-site survey and continuous dialogue with residents and all the stakeholders. It is not limited to addressing the common problems faced by all such unauthorized colonies, but also identifies and makes suitable proposals to deal with the specific problems of New Ashok Nagar within the common framework of Local Area Plan as suggested in MPD 2021.

1.1 City Level Location

The New Ashok Nagar ward lies on the eastern periphery of the city of Delhi.

The ward lies in the Shahdara South Zone of the Municipal Corporation of Delhi (MCD), and is under the jurisdiction of East Delhi Municipal Corporation after the recent trifurcation of the MCD in the year 2012.

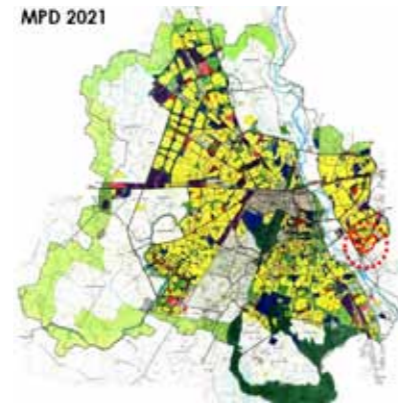
This ward lies in the planning Zone -E of the Master Plan Delhi (MPD), known as the Trans Yamuna Area.

1.2 Development History

Till the early 1960s a very small part of this ward was inhabited. Few urban villages existed in the midst of vast agricultural lands, owned by the villagers, along the floodplains of the Yamuna River. Even the land use of this area in the first Master Plan of Delhi, which came out in 1962, was mainly for agricultural and recreational uses. Post 1962 and till the early 1980s, as a new transport network was established through this zone to facilitate better connections to Central Delhi, a number of unauthorized colonies developed in this area,

To counter this scenario, the Delhi Development Authority (DDA) came up with provision of sites for cooperative group housing societies and DDA housings. The scenario that has emerged is a mix of planned and unauthorized development in competition with each other.

One such unauthorized colony is New Ashok Nagar, which started as a settlement in and around the year 1972, on agricultural lands of farmers of Chilla Village and Dallupura. The planned residential areas which are a part of Mayur Vihar came up after the 1980s. But within the course of further development, the colony further grew in size and the connectivity to the area improved with the Delhi-Noida (DND) flyway. The colony was granted provisional regularization along with several other unauthorized colonies of Delhi, by the Delhi government in the year 2007. The existing Residents Welfare Associations (RWA) of these areas were asked to submit detailed and



By the time the MPD 2021 was in place, the unauthorized colony grew manifold in size and in terms of population. It was granted provisional regularization in 2007, while Delhi Metro reached the area in 2009.

surveyed layout plans of these areas, in order to obtain mainstream status like other planned areas.

But after the allotment of provisional regularization, better connectivity to the city and with the Delhi Metro line coming to this area in the year 2009, the private development and population densities within this area have seen a rapid rise.



MCD Zone Map



According to the MPD 1962, the entire area was agricultural lands, floodplains of River Yamuna and existing urban villages. Till the early 1970s the land use remained more or less the same.

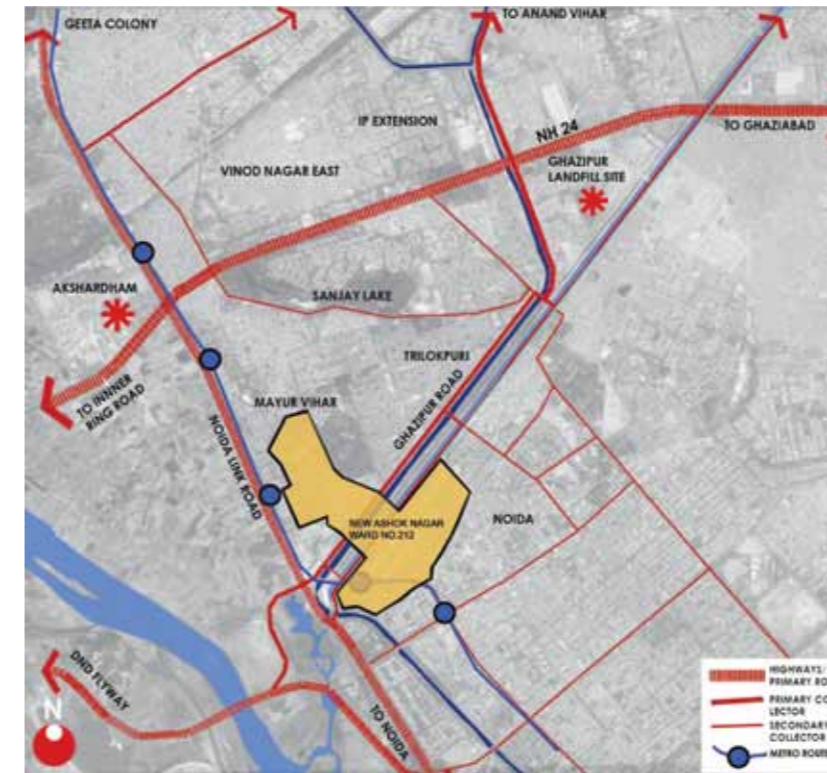
The location of this area has become very important because of its proximity to Akshardham temple, city level and arterial roads like the NH-24, Noida Link Road, Ghazipur Road and DND flyway.

This area has become a thoroughfare for people travelling from East Delhi, Ghaziabad to South and Central Delhi and Faridabad.

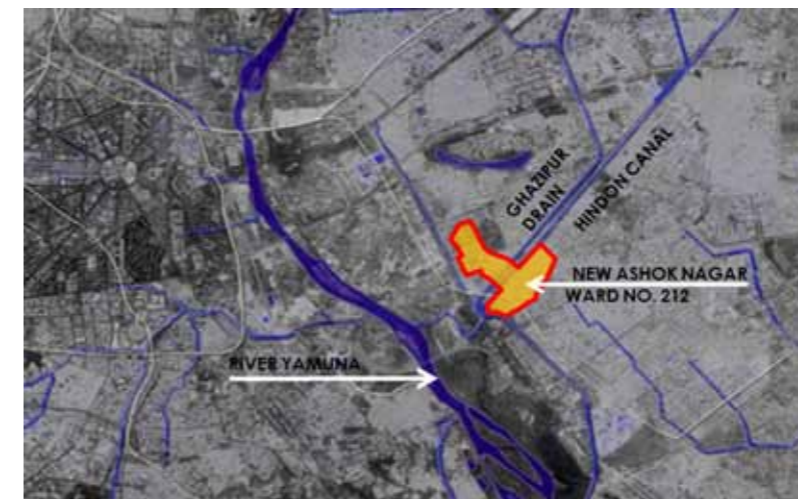


Transport connectivity of ward wrt to the city

1.3 Water Systems



The ward in relation to city level arterial roads



Water systems of the area with relation to the city level systems



The built edge of New Ashok Nagar overlooking the Hindon Canal & Ghazipur Drain

The water bodies that form a major component of the ward in terms of its area are also important at the city level. While one is the Ghazipur Drain, which is a city level drain, the other is the Hindon Canal, which originates from the Hindon River and flow towards the Yamuna River

The third water body is the Ganga Water Channel, which is a fresh water supply channel.

The water bodies, leave a considerable amount of open space, in this otherwise densely populated and built-up area. Though these are presently disjointed to the rest of the ward by connections as well as function, they are the lungs of this ward.

A sewage treatment plant is currently under construction for the purpose of treatment of the discharge from Ghazipur Drain before entering the Yamuna River.

1.4 Functional Role in the City

The large percentage of the ward comprises unplanned residential areas, which acts as an affordable housing option for new migrants to the city as well as the middle class strata of the city.

Large numbers of student population studying in institutions in Noida, daily-wage labourers, drivers, rickshaw pullers and house maids find relatively cheaper accommodation here.

One of the major sources of income of residents in New Ashok Nagar Unauthorized Colony is through rentals.

After the Commonwealth Games 2010, East Delhi's connectivity with Central Delhi and satellite towns, like Noida, Gaziabad and Faridabad, improved. This development has made New Ashok Nagar a favourable and affordable residential option for all sections of the society.



Planned cooperative housing



Rental housing



Mixed-use developments



Rampant new builder activity



Hindon Canal



Ghazipur Drain



Water Systems of the Area

1.5 Area Details



Location of Ward 212 in Shahdara South Zone

The ward lies in the electoral constituency of Tirolokpuri. The sitting Member of Legislative assembly of this area is Mr. Sunil Kumar while the sitting ward councillor is Mrs. Nikki Singh

Area of Ward = 177.23 ha
Population Density = 525/ha

- AREA UNDER PLANNED SETTLEMENTS = **56.13 ha**
- UNAUTHORIZED COLONY AREA = **71.9 ha**
- URBAN VILLAGE AREA = **19.50 ha**
- AREA UNDER NATURAL FEATURES = **29.70 ha**

Though the major part of the ward has high population densities, the area occupied by the Hindon Canal, Ganga Water Channel and the Ghazipur Drain provide much needed relief and an opportunity for creative design intervention.



Edge of unauthorized colony with Noida



Chilla Village



Housing in planned areas



Schools in planned area



Central green & water bodies

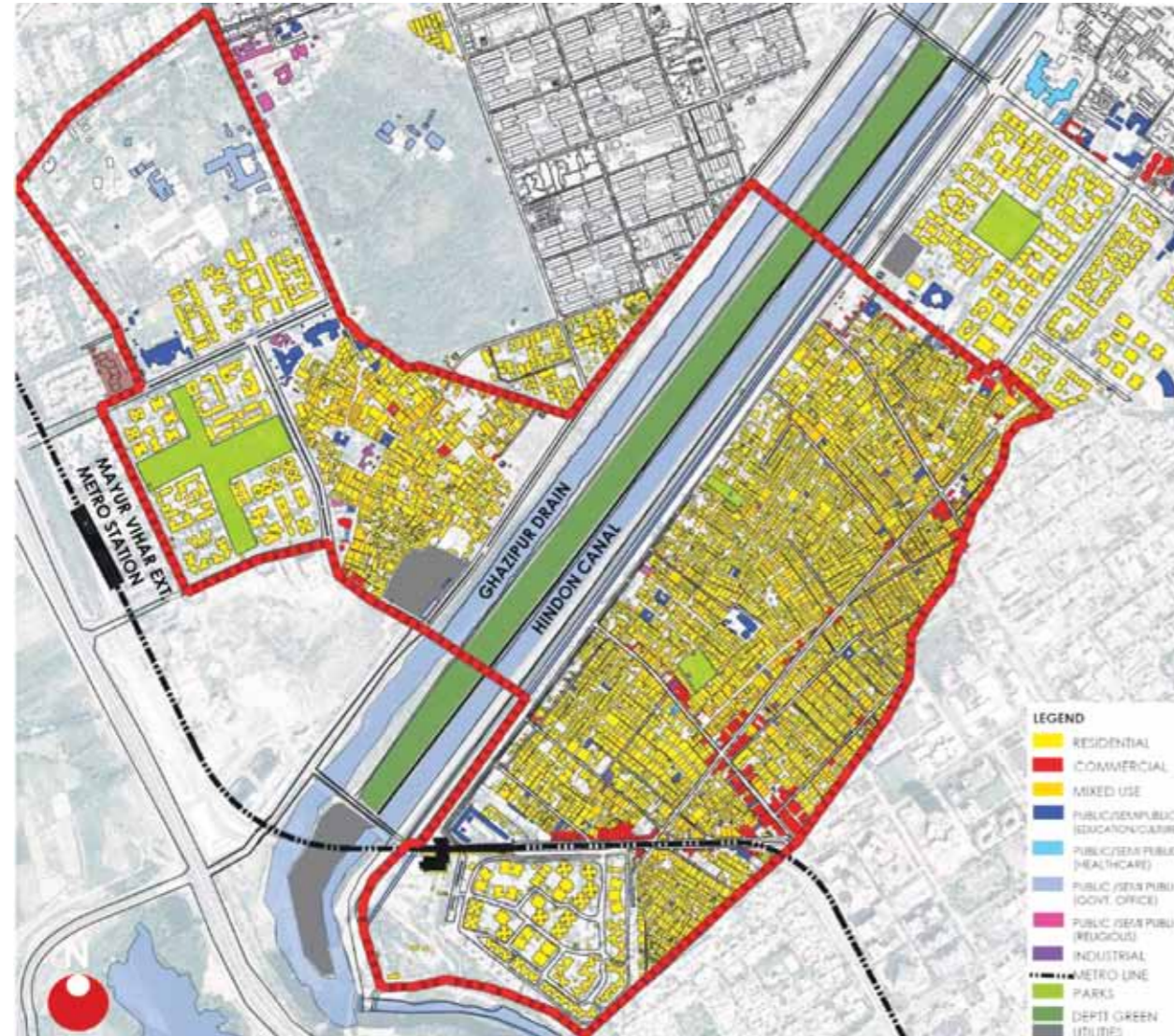
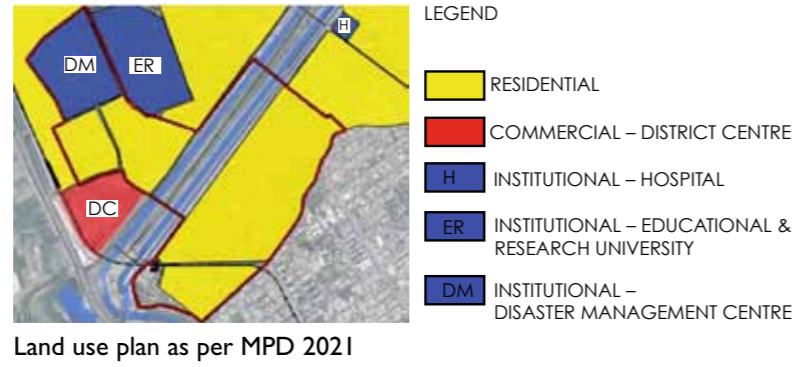


Housing condition in unauthorized area



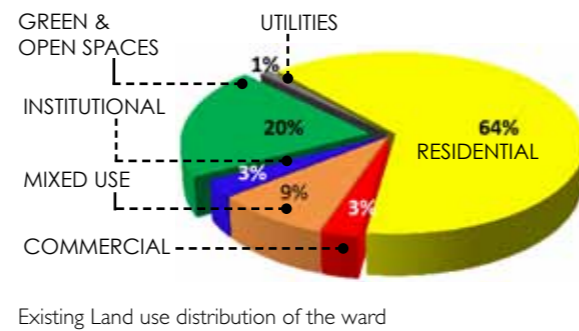
1.6 Land Use Details

As per the Master Plan the Land use of the area is mainly residential with negligible commercial and social infrastructure. The entire area has developed into mixed land use unplanned settlement.

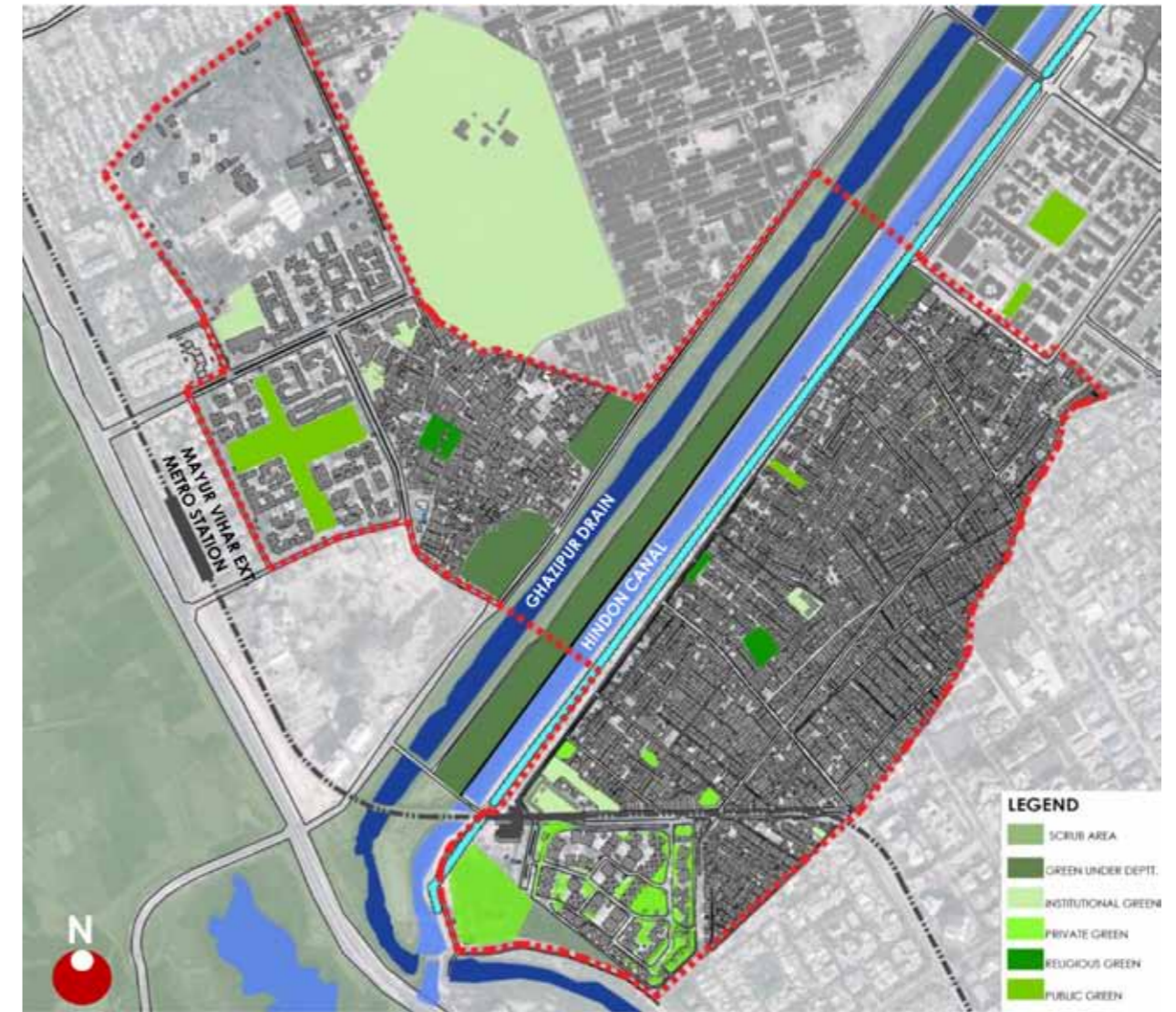


Existing building use plan of entire New Ashok Nagar ward

The social infrastructure such as schools, healthcare facilities etc is in major deficit when unplanned areas are considered. Also, if only the water bodies and central verge is considered, green and open space percentages look high, but in reality none of these spaces are accessible to the residents.



1.7 Open Space Structure



Ghazipur Drain & scrub area



Hindon Canal



DDA Park Mayur Vihar



Dargah open space

This ward being very close to the banks of Yamuna and its proximity to the drain and canal, green and open spaces are seen in the form of natural areas.

The open spaces within settlements (apart from planned areas) are in deficit. Only few around religious structures or schools exist. The allocated spaces for greens or parks in the unauthorized colony have been encroached upon for parking.

The only public park is the DDA park in the planned area of Mayur Vihar Ext.

Precinct Details

For the purpose of the study the ward has been divided into two precincts:

1. New Ashok Nagar Precinct – On the left bank of the Hindon Canal, comprising:

- New Ashok Nagar Unauthorized Colony
- East End Apartments
- Ghazipur Drain, central Open Land between the Drain & Hindon Canal, Hindon Canal

2. Chilla Village precinct – On the right bank of the Ghazipur Drain, comprising:

- Village Chilla Saroda Bangar
- Residential Apartment Societies
- Research & Analysis Wing (RAW Campus)

For the purpose of the report, detailed studies have been made for Precinct 1. However the proposals have been made on the basis of the statistics of the entire Ward no. 212.

The statistics have been analyzed under the following heads:

- Precinct Details
- Building Use Details
- Transportation & Movement
- Physical Environment
- Physical Infrastructure
- Social Infrastructure



Ward layout showing both preceints



Block division within New Ashok Nagar Unauthorized Colony

Total Area of Precinct 1 = **71.9 ha**
 (excluding open space, water bodies)
 Electoral Population = **41,548** (Source: www.ceodelhi.gov.in data of 2013)
 Non Voting Population = 43.5 % of Voting Population = **18,073**
 Total Population = **59,621**
 Density = **828 ppl/ ha**

2.1 Population and Density Study

The major components of the precinct is the Unauthorized Colony of New Ashok Nagar, which is largely unplanned, and unserved by the Municipal Corporation of Delhi; the other part is the Planned Housing of East End Apartments. Out of the the total population of approximately 60,000 people, the East End Apartments is only about 5,000 persons.

The unauthorized colony has high population density of about 800 persons per hectare. The colony is termed as unplanned area because it has come up on private agricultural land which is not according to provisions of the Master Plan of Delhi. The East End Apartments, on the other hand, is a planned cooperative housing society, well serviced with all municipality functions. However, sanitation, water supply, and sewage are major areas of concern in the unauthorized colony.

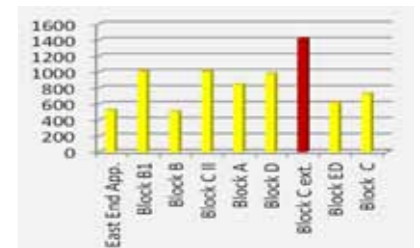
The unauthorized colony has a fairly working hierarchy of roads, planned by the original colonizers.

Dense housing and commercial areas have mushroomed along these and over the years, this has also increased vertically, as family sizes have multiplied and rental components have become highly profitable due to its location.

The major roads divide the colony into a system of blocks, each having its own RWA with elected representatives.

Blocks	Area sq.m.	Popul ation	Density P/hec.
East End App	83,900	4410	525
Block B1	37800	3810	1008
Block B	1,92,800	9800	508
Block E	64,778	6593	1019
Block C (II)	50,625	5100	1008
Block A	1,35,742	11425	842
Block D	64,135	6285	981
Block C ext.	12,042	1700	1416
Block ED	18,691	1151	619
Block C	1,29,546	9445	730

Comparitive blockwise population densities



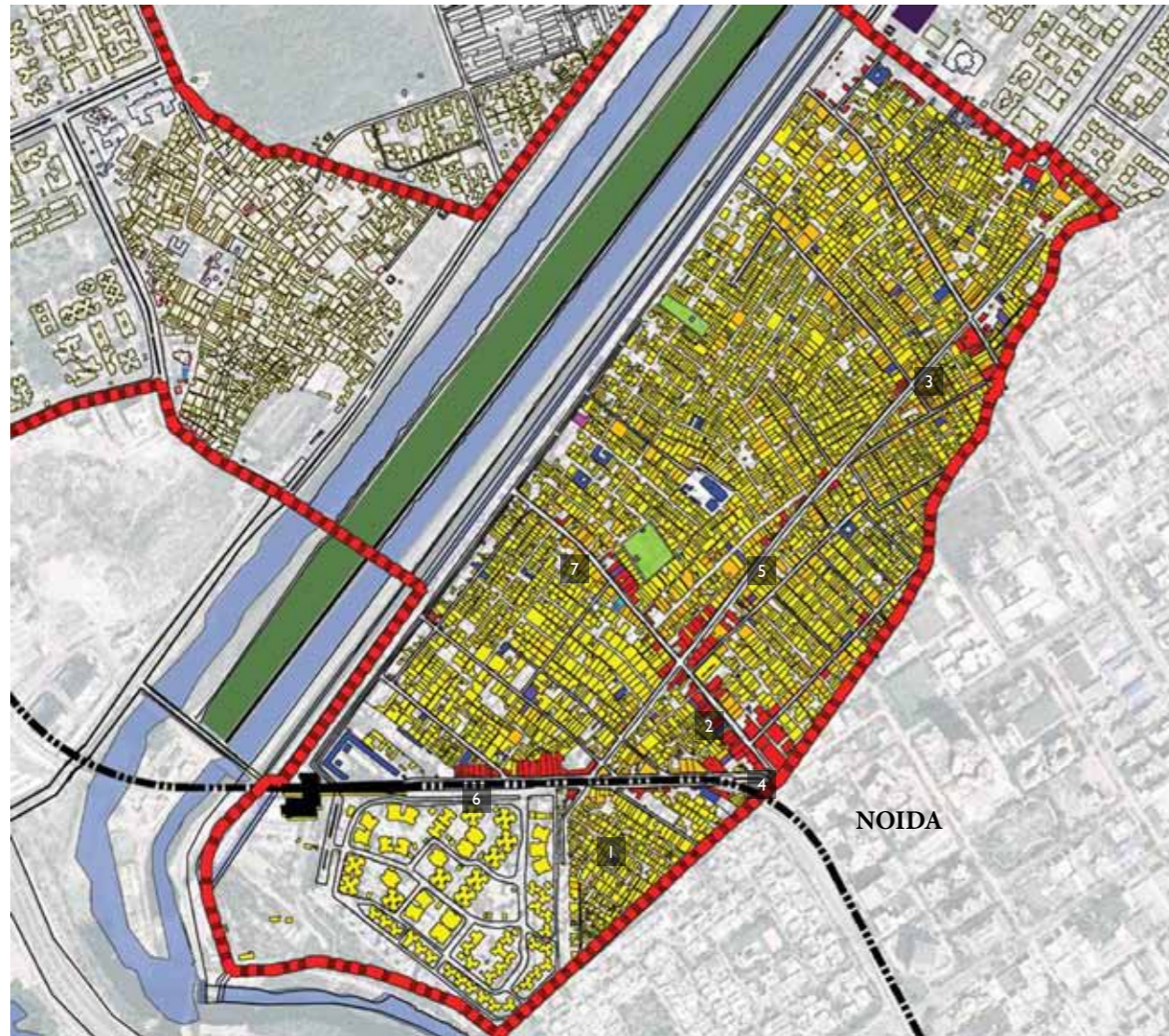
* (SOURCE: www.ceodelhi.gov.in data of 2013)

2.2 Building Use Details

The unauthorized colony has come up mainly as a residential settlement, but over a period of time has developed into a mixed use comprising commercial activity, small scale household industries, warehouses etc. Dense housing and commercial areas have mushroomed and resulted in vertical development as family sizes have increased and rental components have become highly profitable due to its location.

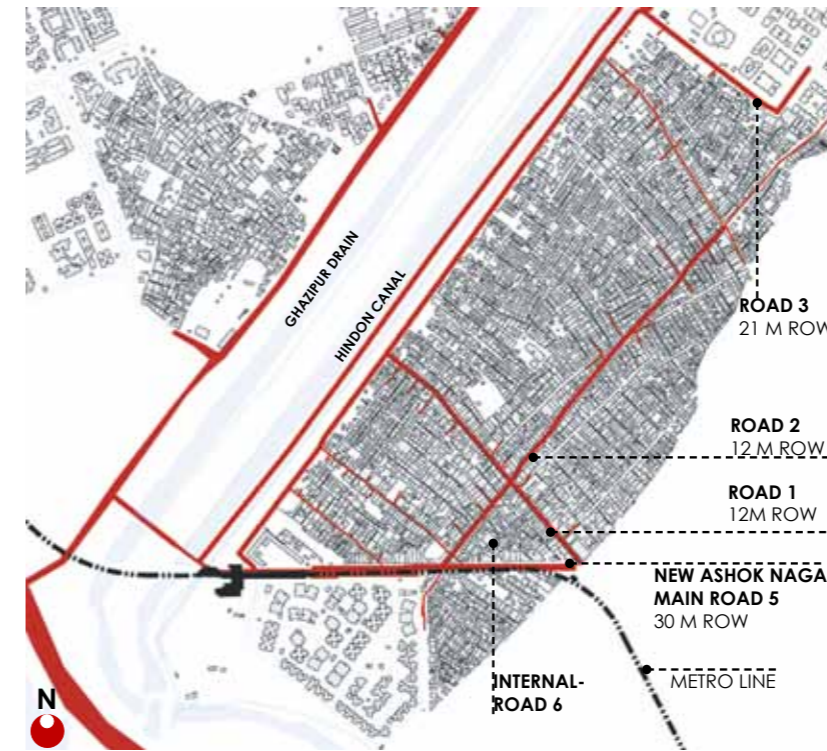
High density commerce has developed along the main roads of the settlement. This commercial component not only caters for the needs of the unplanned area, but also for residents of the East End Apartments, as well as nearby areas of Noida. This commerce is mainly of household nature.





Building Use Plan at Ground Floor Level of Precinct I

2.3 Transportation



Main Road Network Map of Precinct I

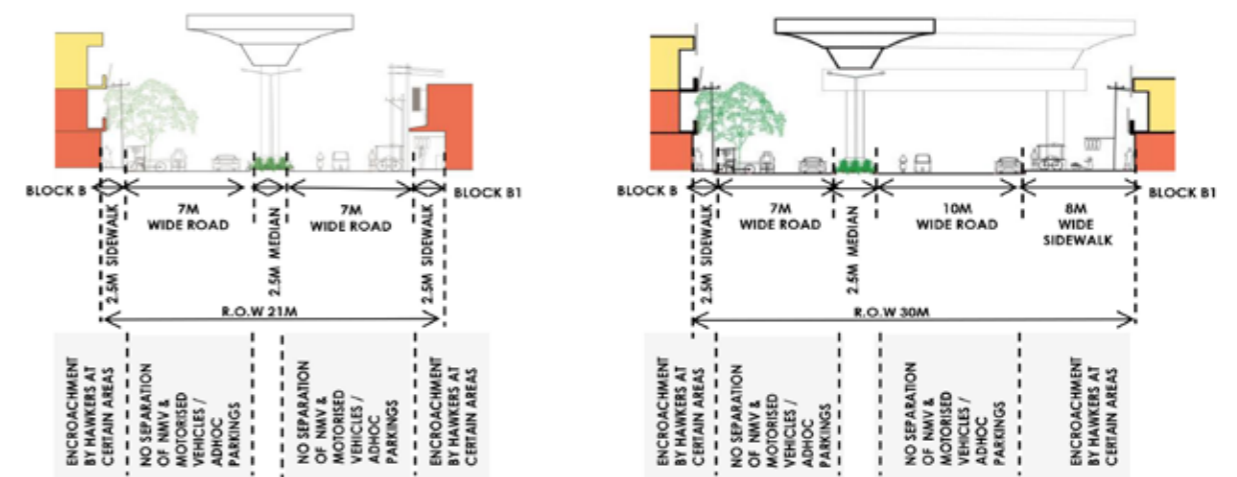
Although not as per the planning standards, the layout of New Ashok Nagar has a fairly well planned system of hierarchy of roads.

The main road along which the Metro line has also come up is the major access road to the area. Commercial development has flourished along the main roads and streets of the colony.

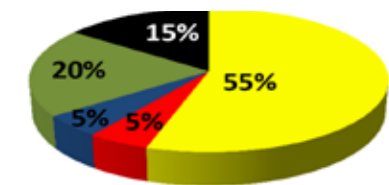
Being an unauthorized area, with no municipal controls, the civic infrastructure is highly insufficient and is in a very poor state of maintainance.

There are issues of congestion on the major commercial roads due to encroachments by shopkeepers, unauthorized parkings, stray animals, unplanned street sections, unplanned weekly markets etc.

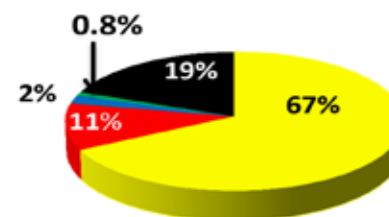
Sections of Main Road 5



The road mainly has mixed use developments along both sides, making parking an important issue



MPD 2021 LANDUSE DISTRIBUTION
(SOURCE : MASTER PLAN FOR DELHI 2021)



EXISTING LANDUSE DISTRIBUTION
(EXCLUDING THE WATER BODIES & CENTRAL GREEN AREA)



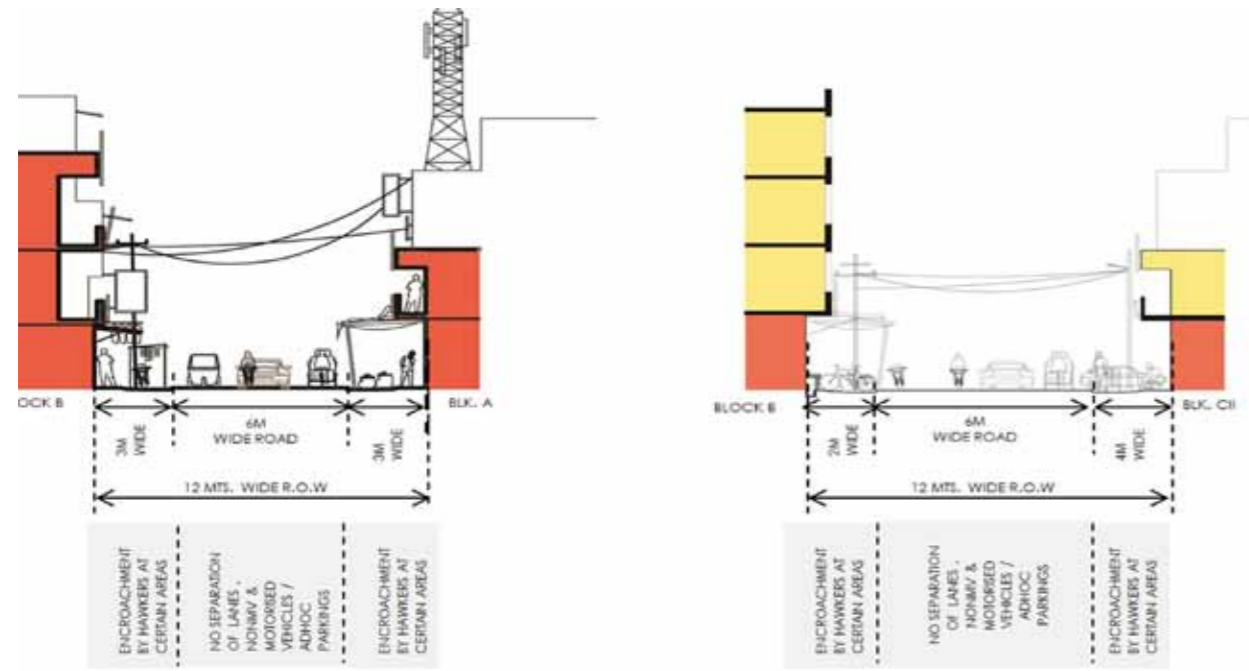
The major issue of the main road is its irregular Right of Way (ROW). Though it is only below the Metro station, it is 30 m in front of the East End Apartments and further down it, reduces to 21 m.

This road being a major connection to Noida also, is full of traffic throughout the day. The lack of public transport, lanes for pedestrians and non-motorized vehicles adds to the problems.

Excessive commercial activity traffic and unauthorized parking encroachments by hawkers, need to be addressed for efficient functioning of this artery.



Section of Road 1 (12 m)

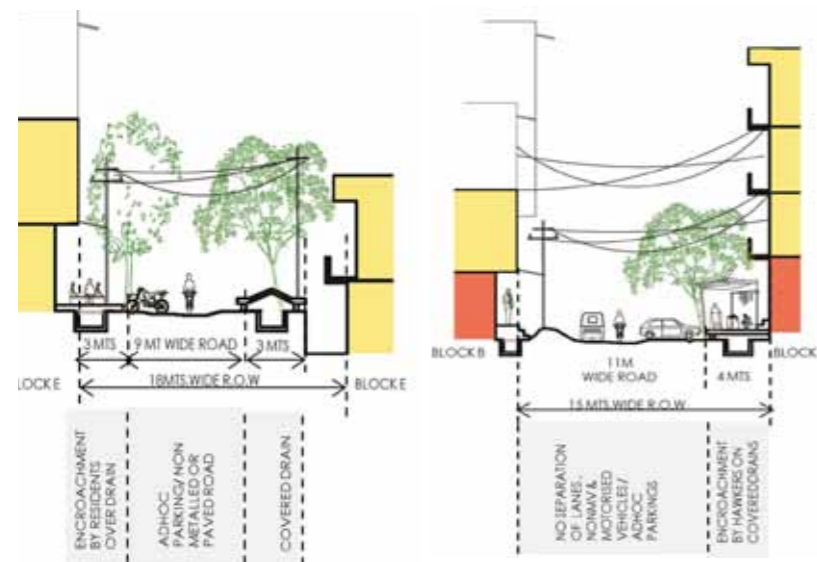


As per the plans submitted by the RWA, this is a 15 m ROW road, however due to encroachments & extensive unauthorized parking it has been actually reduced to 12 m ROW. Issues of unauthorized parking, pedestrian movement & clear demarcation of NMV & hawking zones need to be addressed.

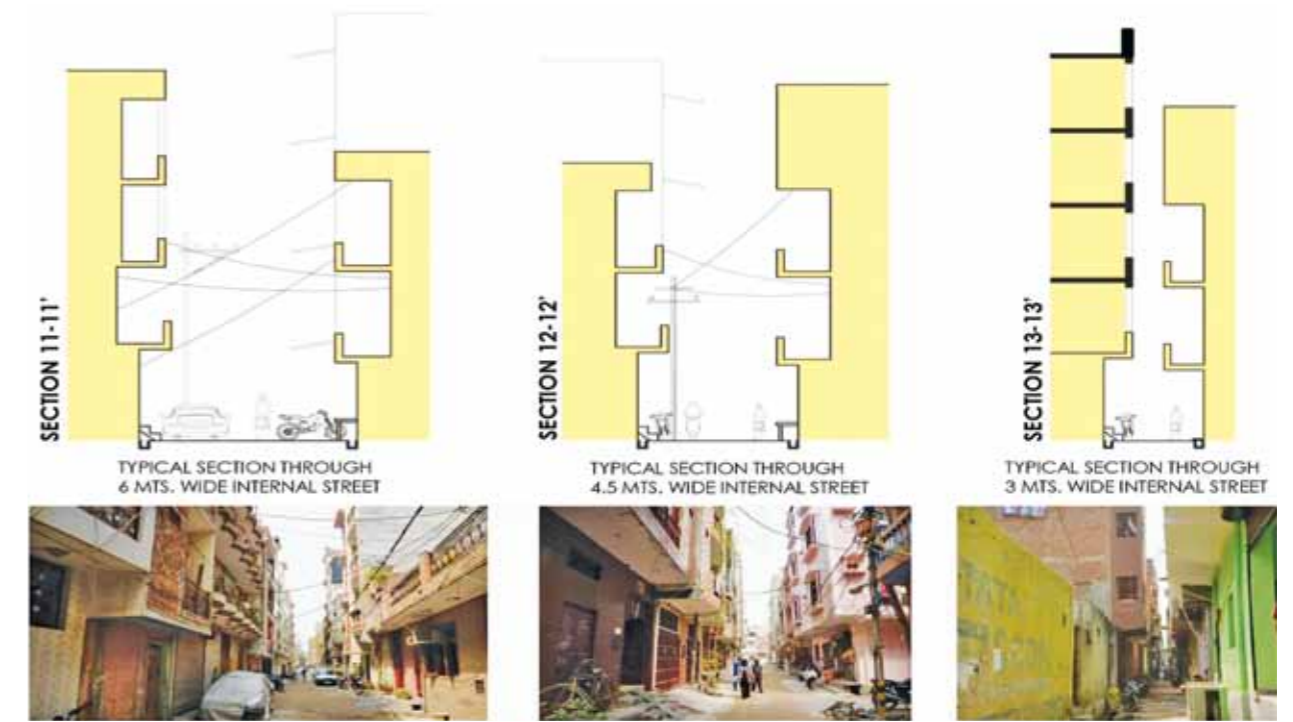


Section of Road 2 (12 m)

As per the plan submitted by the R.W.A, this is also a 15 m ROW road. The covered drains on either side of the road effectively reduces the ROW to less than 12 m. Pedestrian movement, maintenance of roads, hanging electrical lines are some of the major issues which need immediate attention.

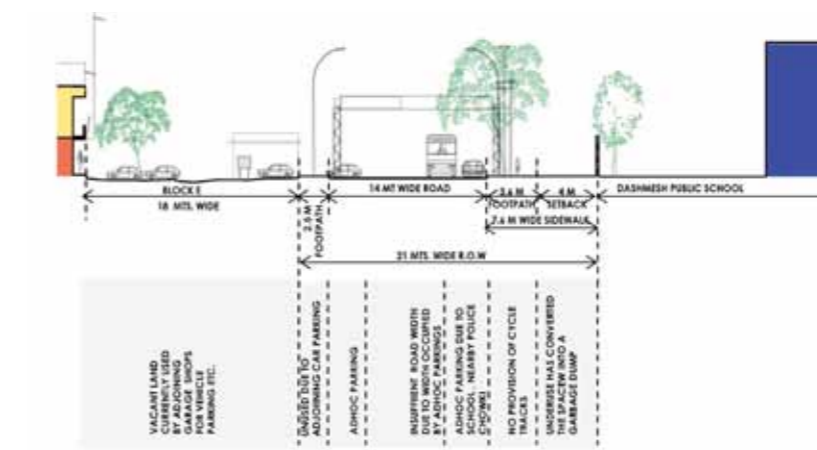


Internal Roads of the Area



Roads of all widths are generally in a poor state of maintenance. The actual ROW is considerably reduced due to encroachments & unauthorized parkings by residents & visitors alike. Extension of balconies & chajjas at upper floors has considerably reduced ingress of natural light & adversely effects ventilation. Movement of fire tenders & ambulances during emergencies is virtually impossible due to narrow lanes which are further encroached. upon

Section of Road 3 (21 m)



This road is the physical boundary of the ward. With a nearly uniform ROW of 21 m, this road has many commercial establishments, in form of retail, garages, involving vehicular movement and parkings. Presence of Dashmesh School, police station also increases the parking demand.

This road forms the edge of the unauthorized colony along the Ganga Water Channel. As per the ZDP, it has been proposed to be widened to 45 m.

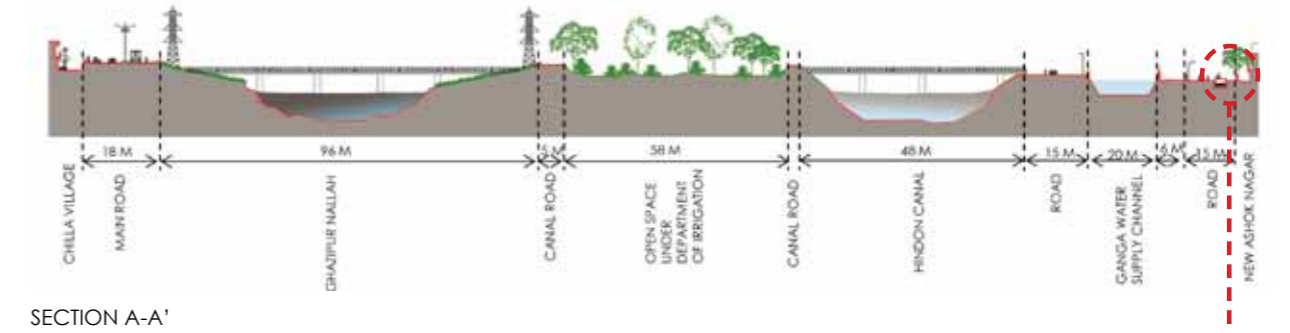
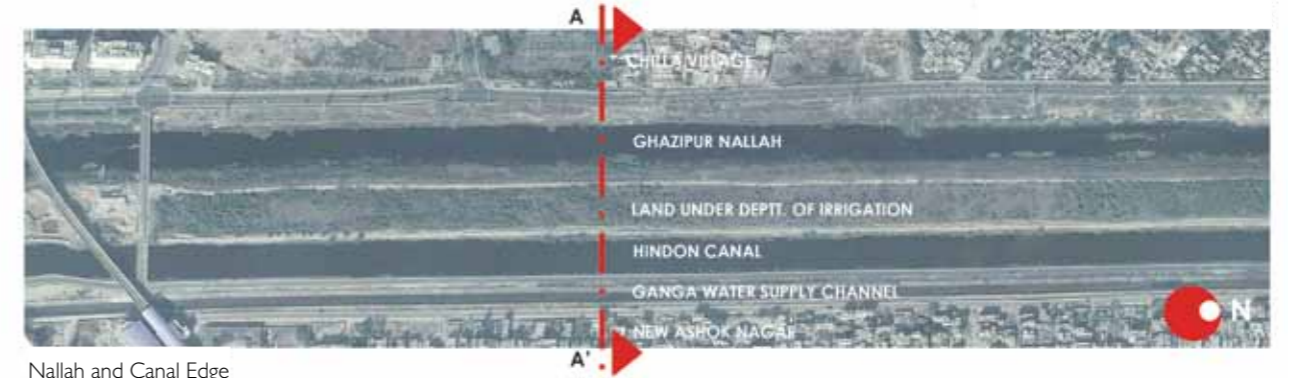
The Right of Way of the road is 15 m, while another 6 m along the Ganga Water Channel is being used as a garbage dump. The main trunk sewer line also passes through this road.



2.4 Physical Environment



Hindon Canal & Ghazipur Drain along with the strip of green sandwiched between the two are the lungs for New Ashok Nagar, which provide much needed breathing space & huge opportunity for creating recreational facilities & other social infrastructure like schools & community centre etc. In order to be able to utilize this tract of green space for such a gainful purpose, the quality of the flowing water & banks of the canal and drain will have to be significantly improved.

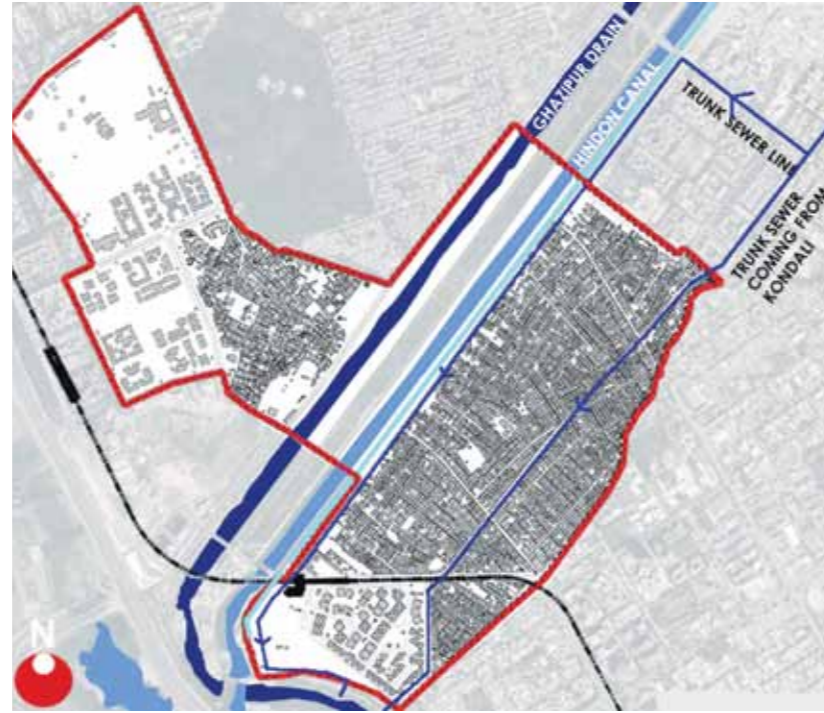


2.5 Physical Infrastructure

Since a major part is unauthorized, it lacks in availability of basic services like sewerage lines, drainage and garbage disposal systems, maintenance of roads etc.

Sewerage

Every house has its own septic tank & untreated sewerage is allowed to flow into open drains to finally join the treated sewage water drains coming from Kondli Sewage treatment plant, which finally flows into the Yamuna River. This not only creates unsanitary conditions in New Ashok Nagar and its surroundings, but also adds to the pollution of the River Yamuna.



Map showing a sewer lines passing through Precinct - I



Internal streets with drains



Condition of open drains carrying household sewerage

Water Supply

After provisional regularization, borewell water is being supplied through pipelines. However, since the quality of the water is very poor, the residents still largely depend upon tankers for their supply.



Water supply by tankers



Condition of roads



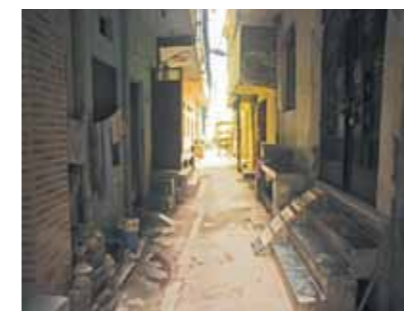
Condition of vacant plots



Disposing waste along edges



Dangling electric wires



Conditions of roads



Drainage

There is absence of proper drainage system in the ward and the roads are flooded during the rainy season. Open drains which carry sewage get mixed up with the rainwater and lead to extremely unhygienic conditions.

Solid-Waste Disposal

The major concern of the area is garbage and solid-waste disposal. Garbage dumps have come up along the left bank of the canal on vacant plots, and in gullies. Although recently collection of garbage from gullies has been arranged, but a proper system of dhalaos and segregation of garbage needs to be introduced.

Electric Cables

The electrical cables and wires dangerously crisscross & hang over the streets & roads and have often been the cause of fatal accidents & fire.

Condition of Roads & Streets

The roads & streets, particularly in the interior parts of the ward, are in a very poor state of maintenance. Most of them are unmetalled & under encroachment & occupied by unauthorized parking.

Conclusions

It may be concluded that the entire area of New Ashok Nagar suffers from lack of basic amenities in terms of sanitation, water supply, drainage, road maintenance, garbage disposal & waste management besides adequate social infrastructure like schools and colleges, community facilities and hospitals.

2.6 Social Infrastructure

The population of New Ashok Nagar Ward is around 1 lakh, and the existing social infrastructure fails to cater for the same.

Education

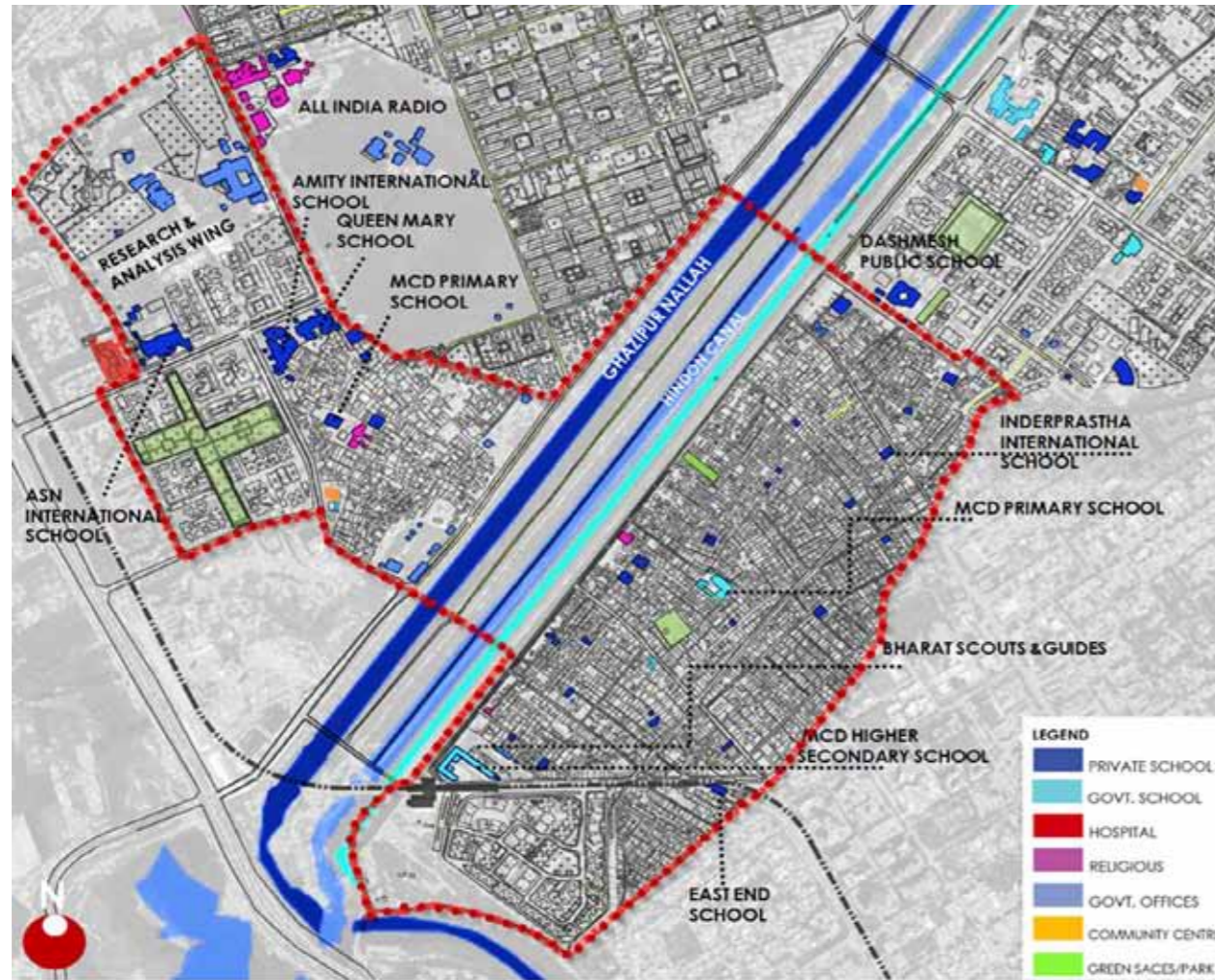
As per the Master Plan 2021 and zonal requirement for the ward area, the educational infrastructure sufficiently caters to all levels of social strata within.



MCD senior secondary school

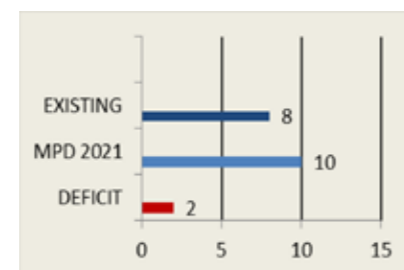


MCD primary school

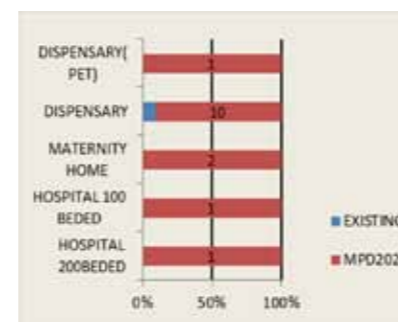


Plan showing location of existing schools in New Ashok Nagar Ward

There is a total of three primary and five senior secondary schools existing in New Ashok Nagar Ward. Out of the eight schools, five are private schools and three are government schools. Schools though running in double shifts are still insufficient. Private facilities cater to the deficit but insufficiently. There is a requirement for two senior secondary schools specially in unplanned area.

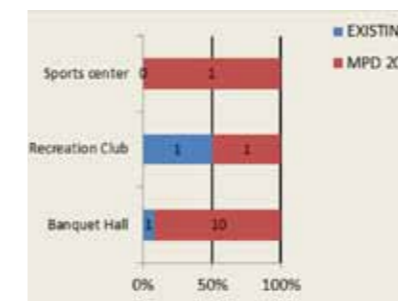
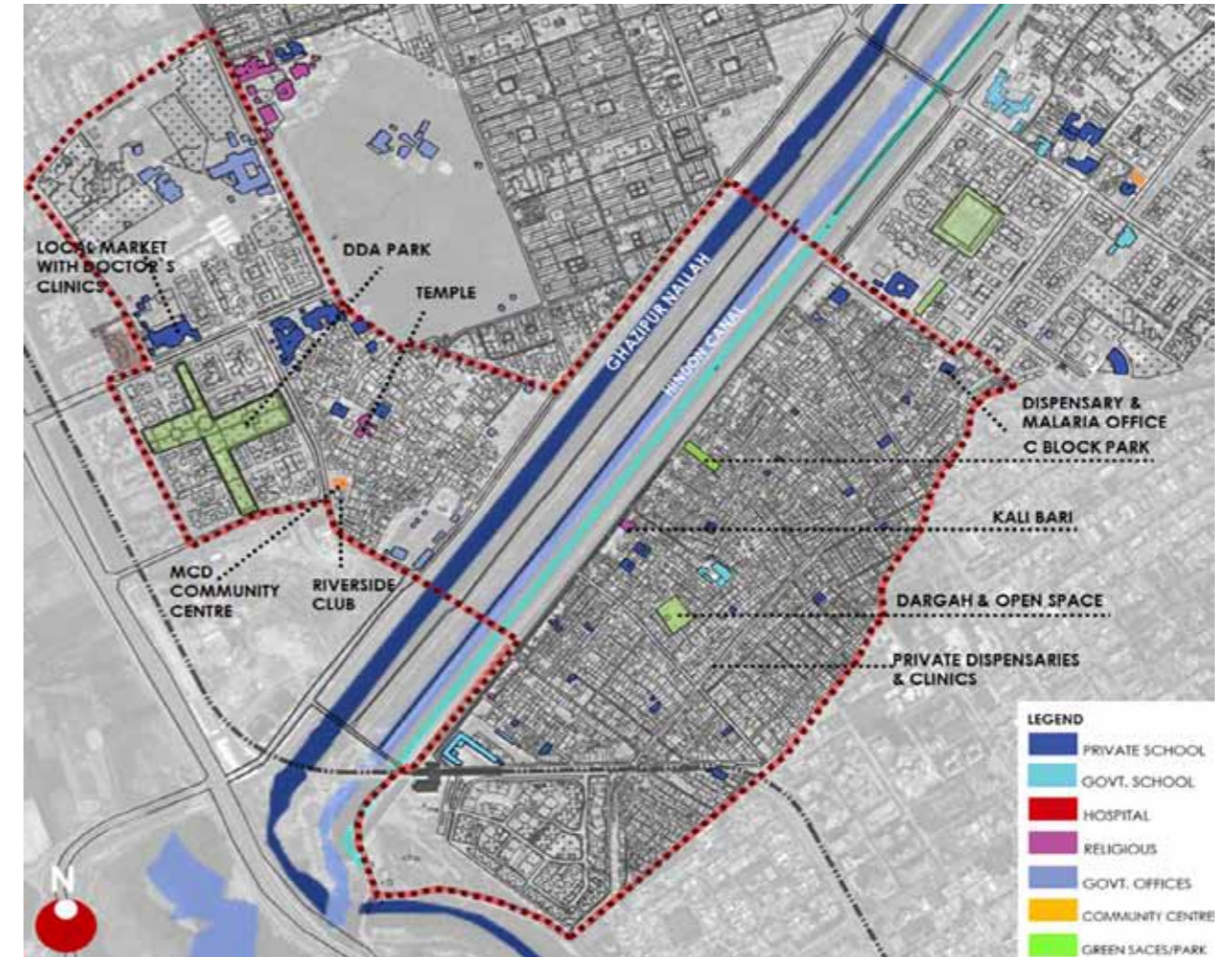


Bar chart showing education deficit



Bar chart showing health deficit

Health and Community Recreation Facilities



Bar chart showing recreation deficit

Health

The ward's main lack is in the health sector: There is no health infrastructure and in time of emergencies, residents rush to Noida and MayurVihar. There is a requirement of two C & D Category hospitals, two maternity homes and nine dispensaries.

Other facilities like dispensary for pet animals is nonexistent

As per zonal plan, there are already many C&D category hospitals existing in near-by areas. Proposals should be made for one C Category hospital, two maternity homes and three dispensaries



Dargah at Block-C

Recreational

As per zonal plan, all efforts shall be made to increase the green area in this zone where ever possible.

There is no park or green existing in the unplanned area and people for walks or recreation use the infrastructure of Noida. There are no public parks, grounds and maidans in the area.

Barat Ghars and community centres are in huge deficit and the residents have to depend on Noida for such facilities.

There is a major requirement for one sports centre at area level, few banquet halls of various sizes and a park with different play and walking zones.

2.7 The Issues

The major issues of the area can be summed up under the following heads:

Housing

Housing in the unauthorized area is mainly private plotted residences. The most important and pressing issue is uncontrolled and unchecked construction activity in this area. After provisional regularization was granted in the year 2007, the rate of construction in this area has increased manifold. A major income of many residents comes from rentals which not only comes from families but also students studying in institutions in Noida, due to which again rapid reconstruction of existing dwelling is prevalent.

These new and existing buildings flout not only all building byelaws, but also, are structurally unsafe. Streets have been encroached upon at both ground level by plinth steps and upper levels by balconies and projections, blocking any kind of sunlight or ventilation in residences. Threat of fire due to accident or electrocution caused by dangling electrical wires is a constant threat to the residential areas. The ground level encroachments further prevents movement of emergency vehicles like ambulances and fire tenders.

A complete or partial redevelopment of certain pockets along with the strict enforcement of building bye laws and guidelines on new as well as existing construction becomes an extremely important aspect for the betterment of the area. The only hindrance in the process of redevelopment schemes is the multiplicity of ownerships and profit aspect associated with the scheme.

The redevelopment scheme should not only concentrate on keeping intact the social structure of such a settlement, but also produce models of options and profitable financial models, which help in the implementation of the scheme.

Physical Infrastructure

The main concern of all such unplanned areas is the abysmal state of the physical infrastructure, whether it is the nonexistence of sewage lines, no solid-waste management systems etc. It becomes an issue of primary importance to have localized solutions rather than depending on the city's already overloaded infrastructure for the same. Empowering the local citizens and NGOs and creating associated financial mechanisms can create a self-sustainable system of waste management in the area.

The condition of roads and transport is the area need to be addressed. Narrow lanes, encroachments, unplanned road sections lead to congestion in the internal areas. No provision of parkings in commercial and residential areas, variety of transport modes add to the issue.

The major objective should be to try and decongest the internal lanes, provision of new organized commercial areas along the main roads, provision of multilevel parkings, proper lane divisioning on the existing road network, segregation of transport modes etc.

Social Infrastructure

As a primary step in the direction of improvement of this area is the provision of the health and education infrastructure. Presently the area is in major deficit of both of these facilities and has to depend on nearby private options for the same. As an urgent requirement, dispensaries, and hospitals should be provided.

The schools, even while running in double shifts, are already unable to cope with the demand of space and infrastructure requirements of the students. The other social facilities like public parks, maidans, banquet halls, Barat Ghars, etc. are in major deficit and should be provided.



3.1 Dialogue with Stakeholders

The local area planning procedure is based on the approach of decentralization and devolution of Urban Local governance according to the 73rd & 74th amendments in the Constitution of India. These amendments give greater power to the Urban Local bodies such as the Municipal Corporations, as well as the Municipal Councillors, Residents Welfare Associations (RWAs) of the area, NGOs functioning in the area and the residents of the area.

Public interaction during site studies with stakeholders, Ward Councillor and RWA heads were spread over many discussions and meetings during the preparation of this Local Area Plan for the ward. The Ward Councillor Mrs. Nikki Singh, not only gave a holistic overview of the area, but also of the problems at large and suggested possible solutions. While the RWAs suggested ways of improvement of services and infrastructure, the residents were majorly helpful in bringing forward the day-to-day issues of the area.

The stakeholder meetings were held with the

- Ward Councillor
- Resident Welfare Associations
- Residents

3.2 Stakeholder Suggestions

- Zonal Plan Proposal of the 45-m-road on the canal edge is a concern as it will cause massive demolition as well as will not be feasible as it will bring the settlement right next to a major city level artery.
- Proposal for a public transport like a local bus service for the area.
- Proposals for improvement of sanitation and grabage disposal by provision of sewer lines and space for dhalaos.
- Provision of social infrastructure such as a larger space for school. Also the allocation of space for Barat Ghars, community halls, dispensaries and vocational training centres, was stressed as immediate needs.
- Removal of encroachments, improvement of existing road sections.
- Total redevelopment is ruled out as a possibility as the ownerships and rental income from properties are complex issues to be dealt with. Proper incentives in terms of financial gains can guide the way for part-by-part redevelopments.
- Provision of green & open spaces for children to play.
- Provision of parking.



Ward Councillor's representative



Heads of Residents Welfare Associations



Heads of Residents Welfare Associations

4.1 Recommendations

Improvement & Provision of Social Infrastructure

I. Developing of green space between Hindon Canal & Ghazipur Drain

- Improvement of Ghazipur Drain
- Development of banks of Ghazipur Drain & Hindon Canal
- Development of this area as a pedestrian route & stopover for annual events like Kavad processions during Shivratri & Chatt Puja

II. Provision of space for educational and recreational use along the green space between Hindon Canal and Ghazipur Drain

- Integrated MCD school
- Banquet hall/ Barat Ghar
- Fruit and vegetable market
- Multipurpose ground / playfield
- Public park
- Sports facility centre
- Vocational training centre

III. Healthcare Facility Proposals

- 300-bedded hospital
- Maternity home
- Dispensaries at multiple locations in settlement

Redevelopment Proposals

I. Proposals along the canal edge

- Community centre
- Multilevel car parkings
- Banquets halls

II. Redevelopment of housing pockets by plot amalgamation

- Retail shopping
- Housing

Proposals for Improvement of Transportation and Connectivity

I. Widening of main New Ashok Nagar road

In order to make the ROW of the road uniform along the entire stretch and allocation of separate space for pedestrians, non-motorized vehicles and buses.

II. Redesigning the road section along Ganga Water Canal edge

III. Proposals for improvement of internal streets

IV. Pedestrian linkages of the settlement to the green space between Hindon Canal and Ghazipur Drain

In order to make the social infrastructure usable by the settlement and people, it is important to provide linkages to the same.

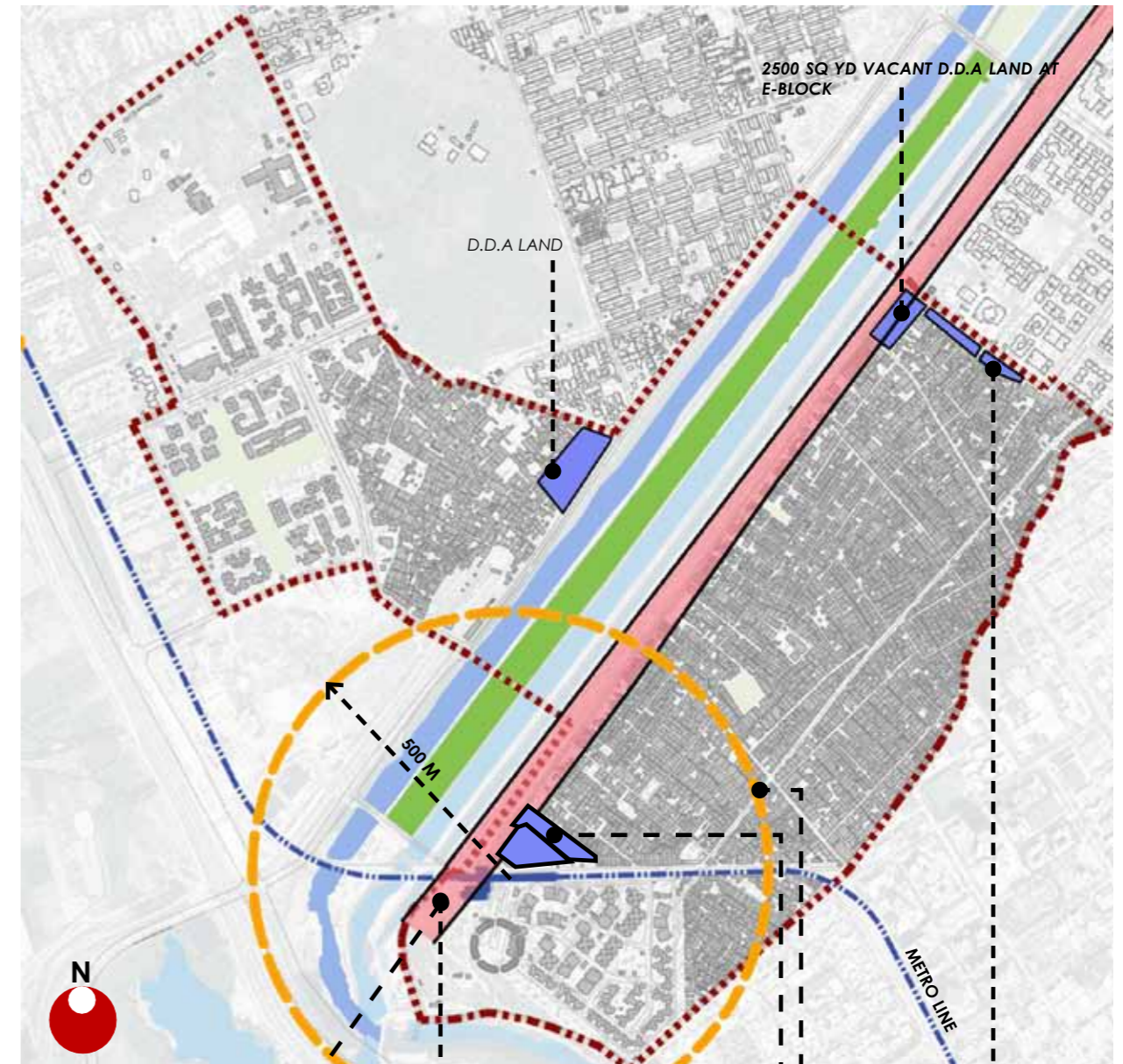
Proposals for Improvement of Physical Infrastructure

I. Proposal of solid-waste management of the area

II. Proposal for localized sewage treatment through DEWAT systems for the unauthorized colony

III. Proposal for treatment of nallah through root zone treatment method

4.2 Spaces of Opportunity



45-Mts.-wide space abutting canal edge for proposed city level road

The Zonal Development Plan has proposed Zone E to be the area for the widening of the existing road to 45 m. Demolition has already been carried out by the DDA, but the complete road link will cause demolition of areas beyond the unauthorized colony and will make this area lie on a city level artery. Objections have been filed against the same by the residents of the colony stating that not only will houses be razed, but also religious structures like Kali Bari, social institutions like the MCD school, Bharat Scouts & Guides etc, and most importantly, the new Metro station.

Also, though another canal road exists, it is proposed that this is converted to the link road to Ghaziabad, and that the existing road remains an area level artery rather than a city level one. The demolished area can be used for building a new edge to the settlement. (Refer Annexure)



Site of MCD school & Bharat Scouts & Guide

Vacant space in front E-Block market

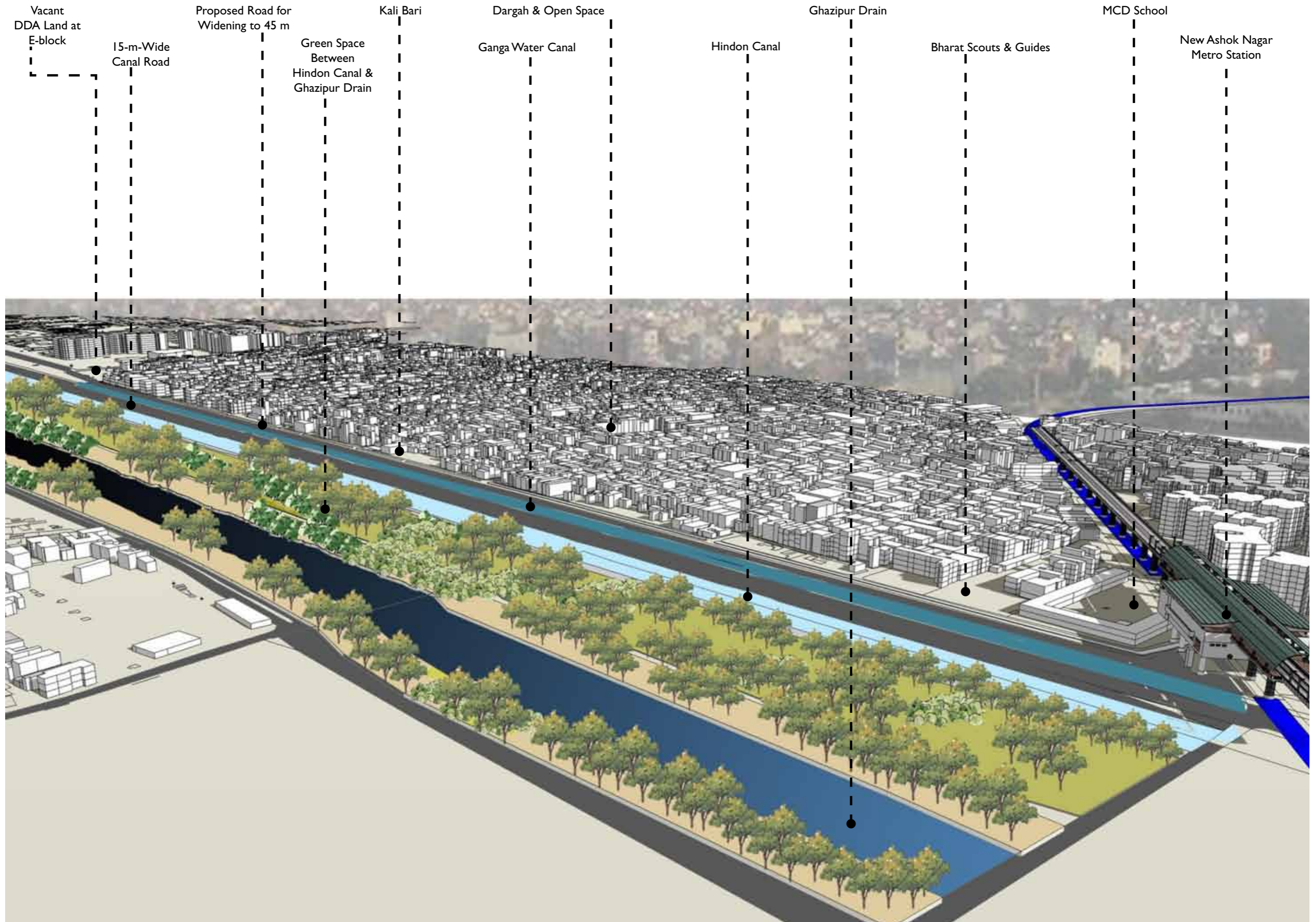
MRTS Influence Zone

Maximum up to 500 m wide belt on both sides of centre of MRTS line would be dedicated as influence zones with provision of higher FAR, which can be 1.5 times the existing FAR.

These are the only sites under current institutional use which are under jurisdiction of governmental bodies; these can be relocated from here because currently the MCD school is running short of space and requires larger areas to accommodate the students. Also its present location is on the main road, causing not only congestion at times of opening and closing of school, but is also an unsafe walking environment for the students.

The Bharat Scouts & Guides land can also be relocated to a location near the Metro line which is the major concern for the land owning agency.

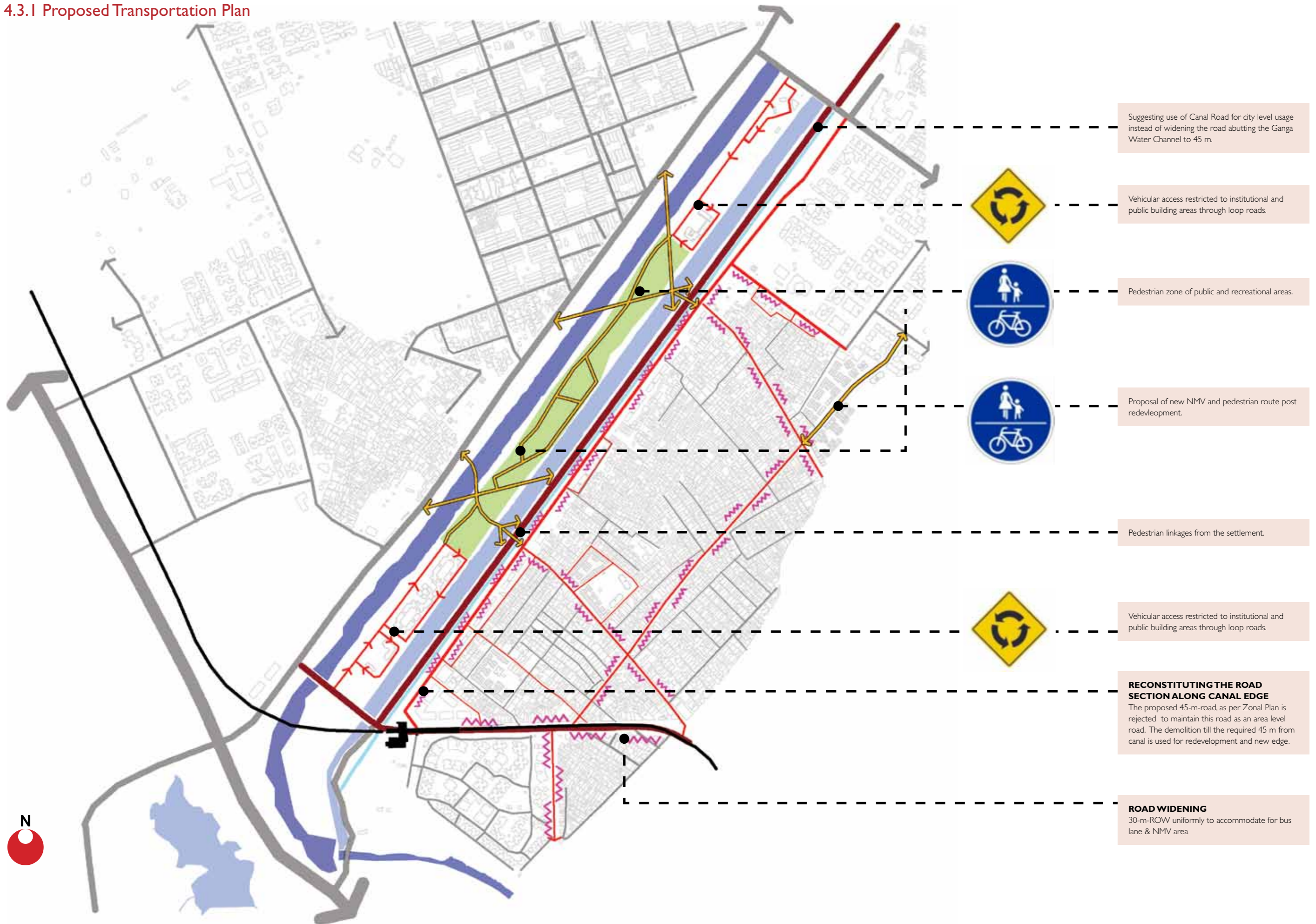
Both these lands can be relocated to the central green space between the drain and the canal as it offers an opportunity for larger space, proximity to Metro line and main roads, quieter surroundings, preferable for such functions.



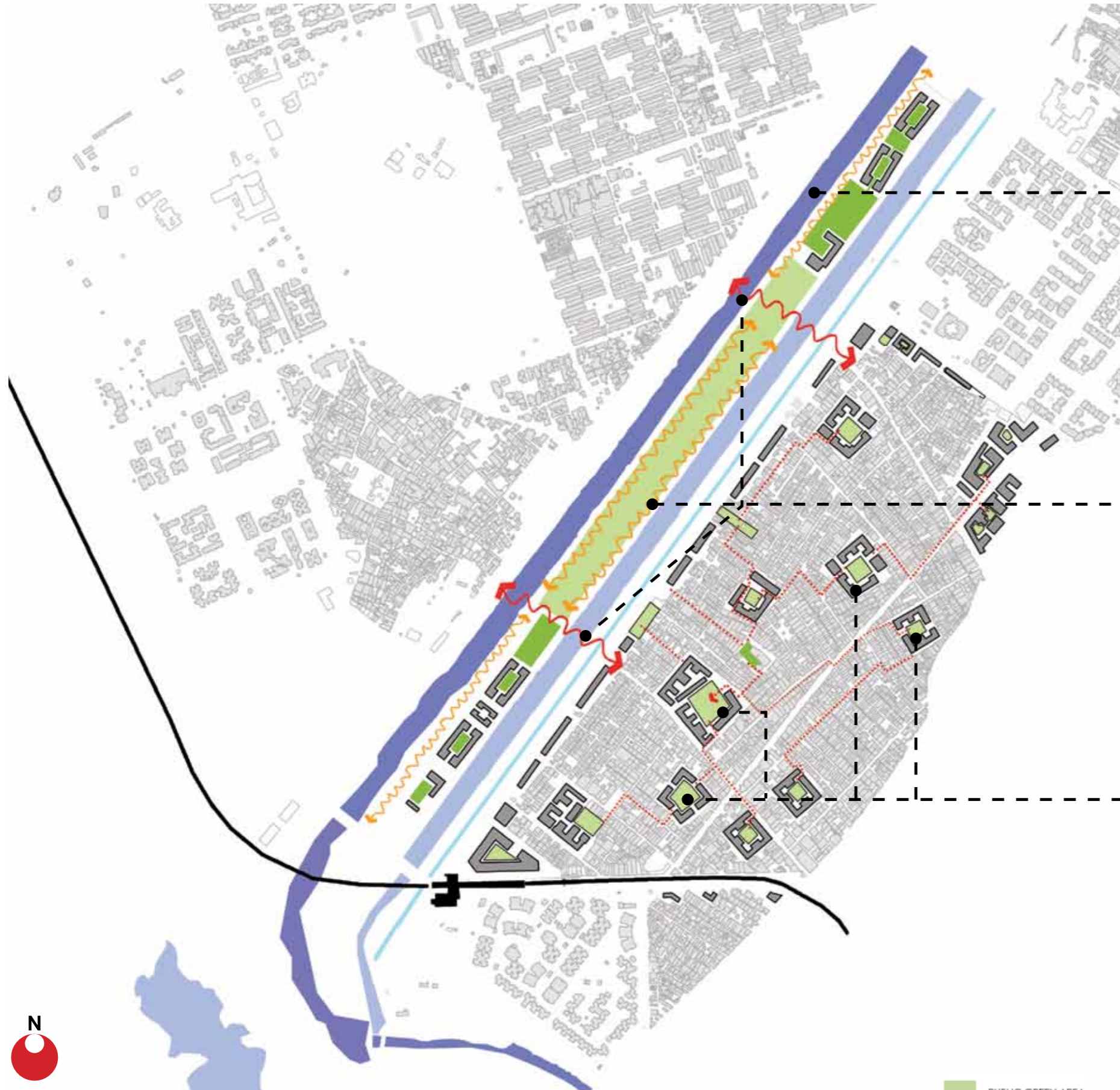
Bird's-eye view of the existing area

4.3 Design Strategies

4.3.1 Proposed Transportation Plan



4.3.2 Proposed Open Space Plan



- PUBLIC GREEN AREA
- INSTITUTIONAL GREEN AREA
- PEDESTRIAN CONNECTIONS



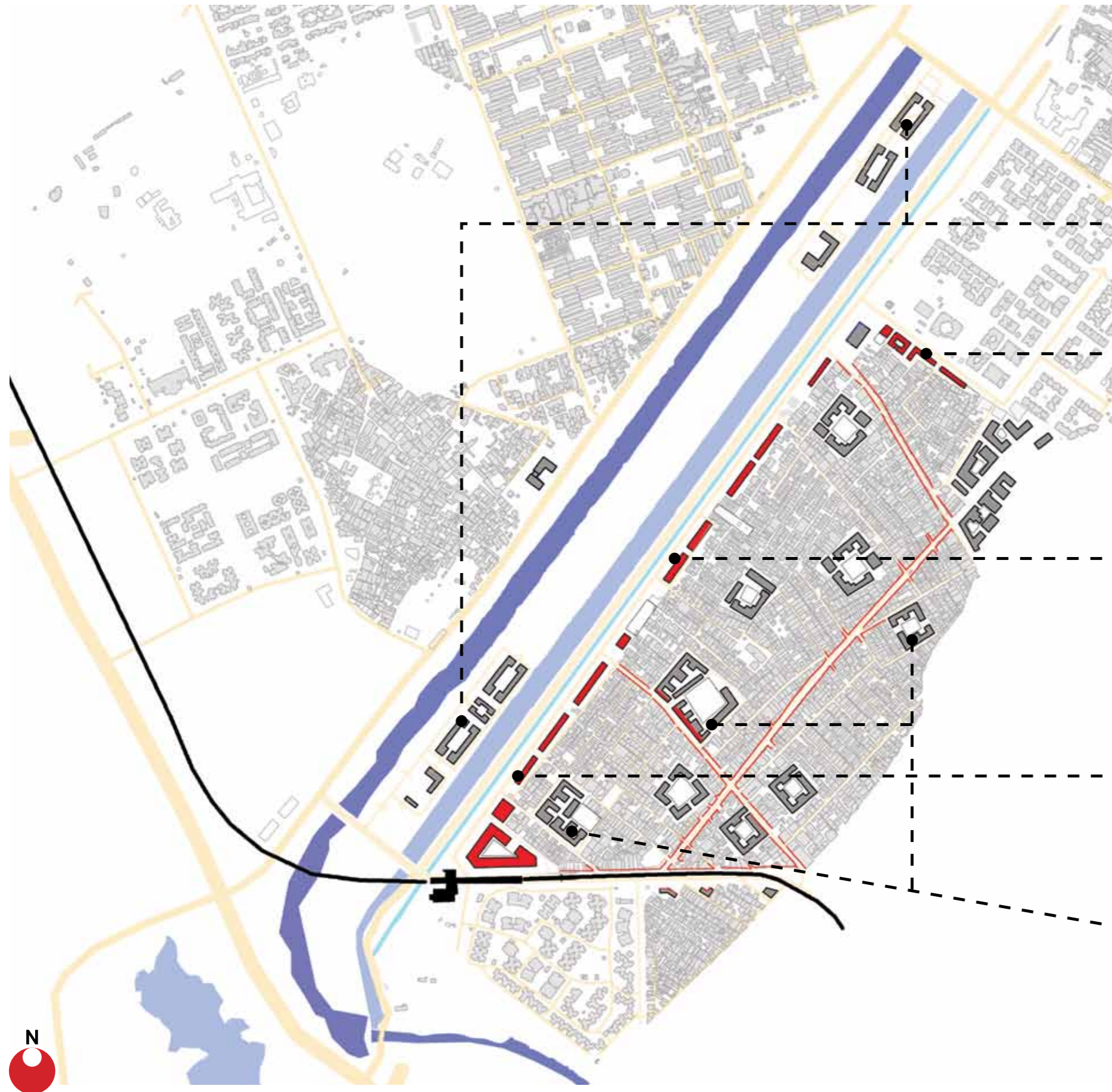
Root Zone Treatment of water bodies
 In order to treat the sewage of the the Ghazipur Drain and the Hindon Canal, the Root Zone Treatment System (RZTS), also known as the reed bed system, is used. This system is not only ecofriendly but has low operational costs, producing high water quality (up to bathing water standards) suitable for re-use. These features make RZT systems low-cost, environment-friendly, and reliable in both the short and long term.

Green space between Hindon Canal and Ghazipur Drain as a functional & physical connector
 The green space is used as an area to functionally connect the two sides of the ward through functions useful to both as well as a series of landscaped areas that compensate for the deficit of green and open spaces in the dense settlement areas. Pedestrian links are used to connect the settlement areas to the verge.



Hierarchical open space network is created through redevelopment

4.3.3 Proposed Built Form and Use Plan

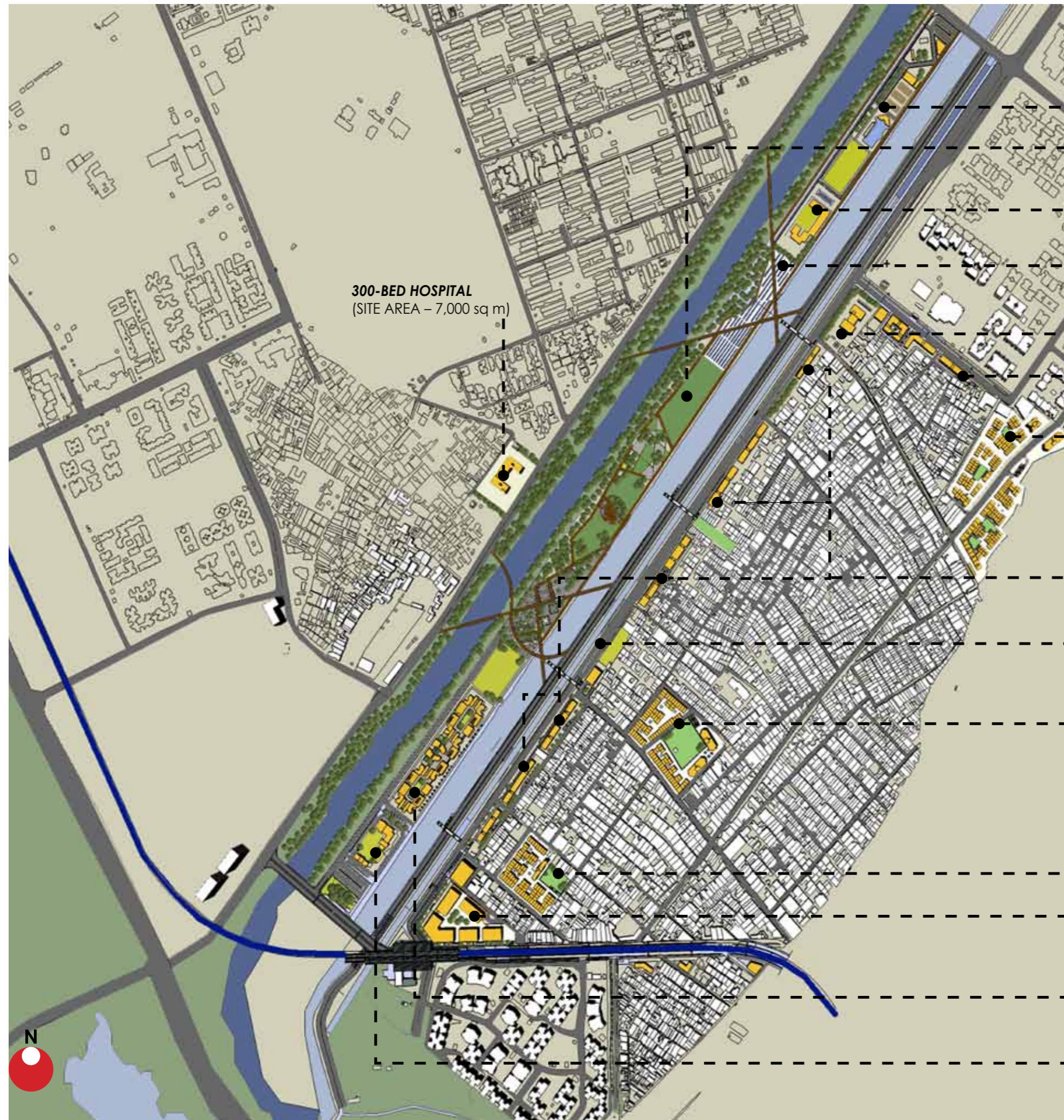


Green Space between Ghazipur Drain and Hindon Canal
 The central green island is used so as to compensate for the deficit of social infrastructure ranging from school, vocational training centres, sports facilities etc. While the provision of facilities is made at the expense of building on existing open and green space, the functions for this area are carefully chosen to be INSTITUTIONAL.
 These buildings are planned with lesser ground coverage and as low-rise low intensity development, in order to maintain the green character of the area and also cause minimum impact to the natural systems.
 The other major functions provided in the area are a series of landscaped areas, both soft and hardscape.
 The provision of hardscape areas like urban haat bazaar; fruit and vegetable market, space for weekly markets, spaces for sociocultural activities like amphitheatres.

Mixed Use Edge Buildings
 A new edge is formed around the unauthorized colony facing the water bodies with provision of new commercial units as well as housing, health, education and social infrastructure like Barat Ghars, banquet halls and multilevel car parkings.
 With these becoming the new face of the settlement, the new development as a strategy is used to decongest the traffic in the interior areas of the settlement. It is imagined that a considerable amount of commerce from the internal roads would shift to this edge, as it will be much more visible and will facilitate parking of vehicles.
 The new development also acts as commercial property incentives, which can facilitate the redevelopment model for the housing areas. By virtue of comparison, the commercial component is considered to be four times the cost as compared to the residential component for an equivalent space.
 In cases where the equivalent amount of residential space cannot be compensated to the owners, benefitting them through providing commercial space is used as a policy.

Housing Area Redevelopment
 Housing areas are redeveloped, so as to reorganize the space to keep the housing character as a mix of low-rise high density housing and mid-rise apartment blocks and merge with the existing residential fabric. The aim of the redevelopment is to provide for better living conditions, ventilation and sunlight in residential areas, while keeping intact the social structure of the area.
 Equivalent residential floorspace is given back to the owners by allocation of either plotted area or part-plot and part-flat.

4.4 Masterplan



Development of green space between Hindon Canal and Ghazipur Drain

- Community Sports Centre
(Site area – 2 ha)
- Multipurpose Ground
(AREA- 0.7 ha)
- Vocational Training Centre
(SITE AREA – 7,500 Sq m)
- Solar Farm
(SITE AREA – 1.5 ha)

- Maternity Home
(Site Area – 0.5 ha)
- Redevelopment along Dashmesh School Road
- Redevelopment of Housing through Plot Amalgamation
- Edge Redevelopment through Mixed Use Blocks
 - Retail Shopping
 - Offices
 - Institutions like coaching centres
 - Restaurants, Banquet Halls
 - Dispensary
 - Primary Schools & Kindergartens
- Redesign of Canal Road Section

- Redevelopment of housing through Plot Amalgamation
- Redesigning the Road Section
The existing road space is redesigned either through widening or reorganizing so as to accommodate for non-motorized vehicles, parking, and pedestrian areas.

- Community centre
(Site Area – 1.35 ha)
 - Retail Shopping
 - Offices
 - Institutions like coaching centres
 - Restaurants, Banquet Halls
 - Dispensary
 - Multilevel Car Parking
 - Space for Hawkers and Informal Trade

- MCD Integrated School
(SITE AREA – 2.3 ha)
- Banquet Hall
(SITE AREA – 1.2 ha)

4.4.1 Rearranging the Scenery

300-Bedded Hospital

To compensate for the major deficit in health infrastructure of the ward

Solar Farm

A solution for the all-encompassing problem of power shortage of the city, where the area supplies electricity to the grid stations

Mixed Use Blocks

New built edge to the settlement, as well as to incentivize the housing redevelopment by providing commercial components to compensate for smaller residential properties

Car Parking

MLCPs & basement car parks within walking distance of residential areas.

Housing Redevelopment Scheme

A mix of low-rise high density & mid-rise towers is proposed so as to open up space on ground as well as maintain the existing urban form & built character of the area.

MCD Integrated School

A larger and combined plot area is provided for a school that accommodates for the increasing needs of the area, with a playfield. Located in a quieter surrounding, the access to the school is also through LMV's and pedestrian connections from the settlement areas.

Community Centre

The present site of the MCD school is proposed to be the community centre for organizing commerce, reducing congestion on internal streets, incentivizing builder participation in redevelopment schemes.

Vocational Training Centre

Maternity Home

Multipurpose Ground

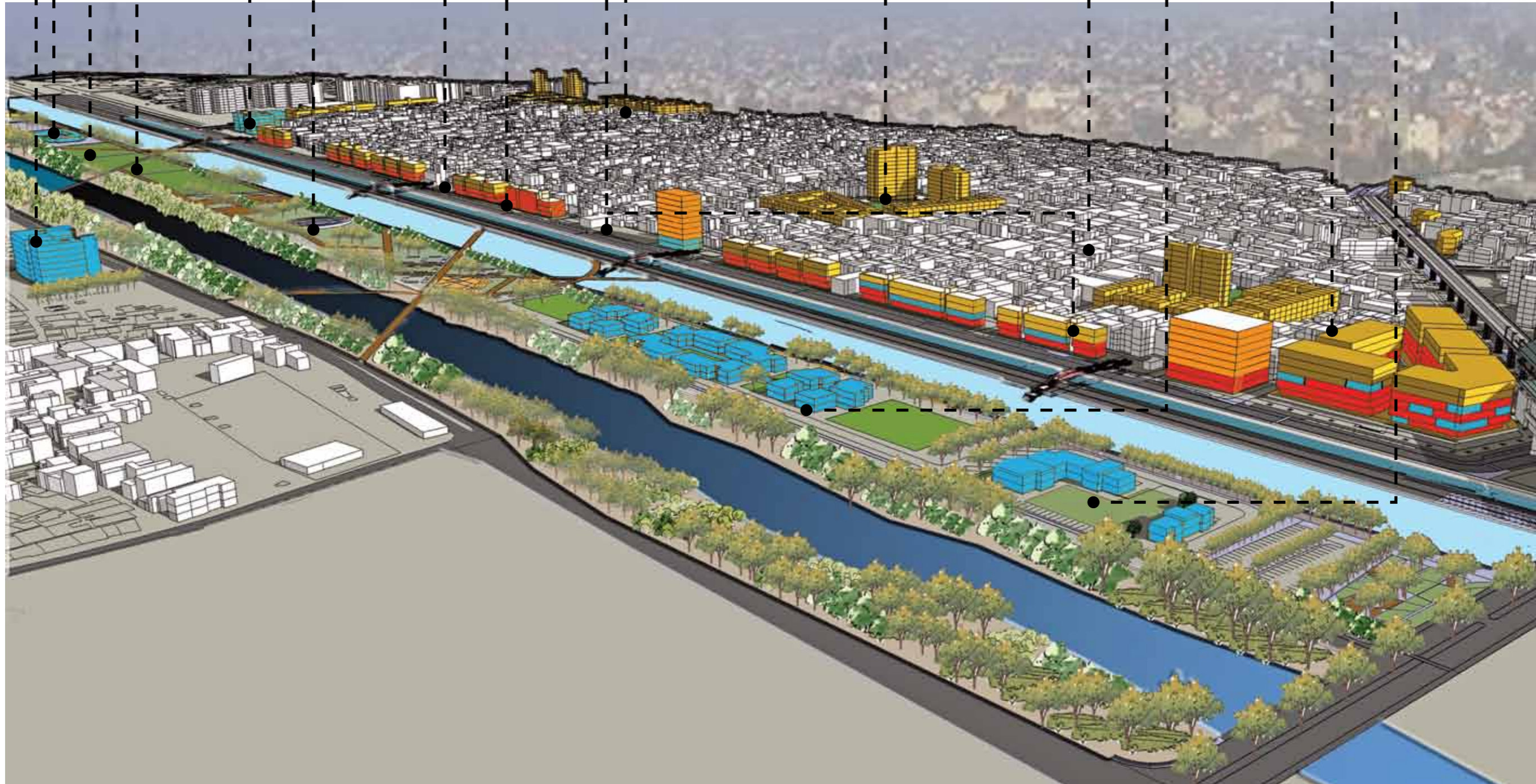
Playground, jogging tracks etc.

Public Park

The major green space for the area, with urban haat, space for fruit & vegetable market, park, sociocultural gatherings

Banquet Hall

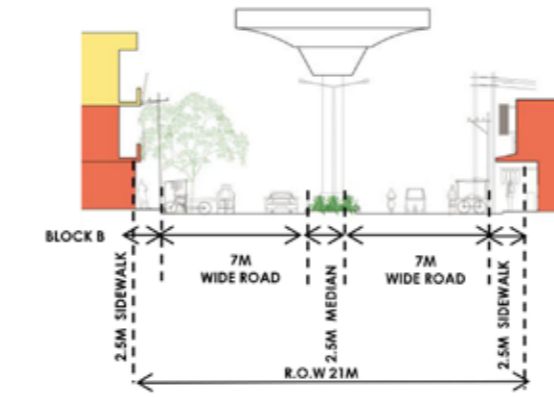
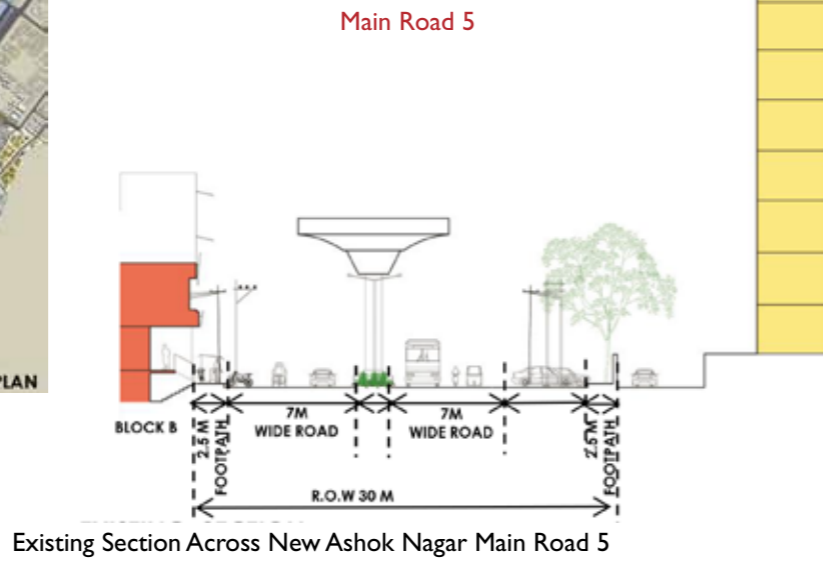
The immediate need of the area is addressed with proper parking space as well as greater area.



Building Use Description of the Design Scheme

4.5 Detailed Proposals

4.5.1 Redesigning the street sections along major roads



Existing Section across Main Road 5



Proposed part plan of main road in front of East End Apartments

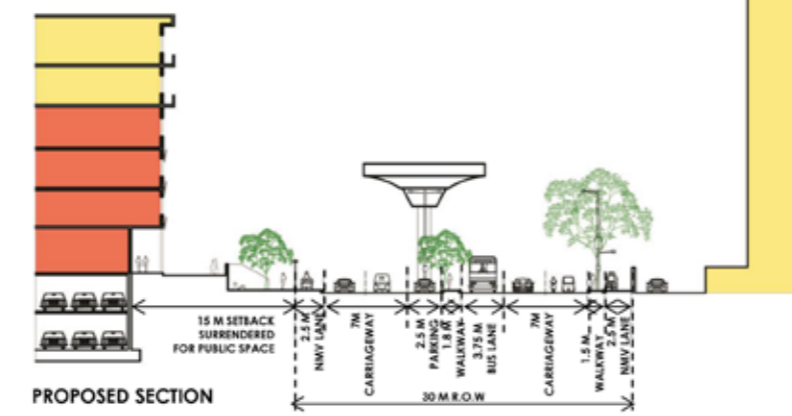


Proposed Part Plan of Main Road in Front of Block-B1

Strategies

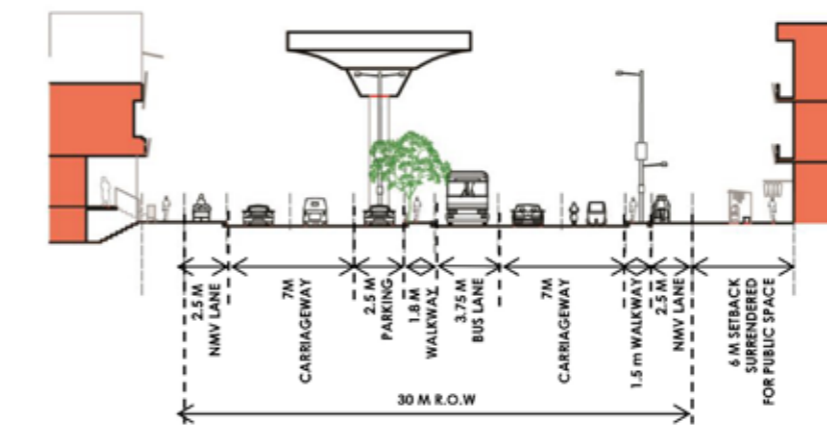
The street section is redesigned so as to make it a uniform ROW of 30 m as this is the main connection to the site as well as an important connection to Noida from Delhi.

The street section is reorganized by making two-vehicular carriageways on both sides of the road. A one-way bus lane has been made, catering to the local as well as city level service, which has currently been stopped within the area because of insufficient ROW and congestion.



Proposed Section Across Main Road 5

On both sides of the road, provision of lanes for non-motorized vehicles and pedestrian movement are demarcated and made, as this area sees a lot of such movement due to the presence of the Metro line. As this road already has major problems of congestion due to existing mixed use, which generates a lot of parking demand, the space under the Metro line is used to accommodate the on-street parking. Pedestrian crossovers at regular intervals are given so as to ensure the safety of pedestrians while they park their cars under the Metro line and walk to the commercial areas.



Proposed Section Across Main Road

Community Centre

The present school and Bharat Scouts & Guides site is redeveloped as the community centre for the area. As a design gesture, the front and back setbacks of this building are surrendered so as to provide for public space as well as space for hawkers and street vendors.



Community Centre

Existing Site Area = 13,470 sq m
 Achieved Ground Coverage = 30 %
 No. of residential plots removed = 11
 Height = G+6
 FAR achieved = 2
 No. of cars to be accommodated = 300

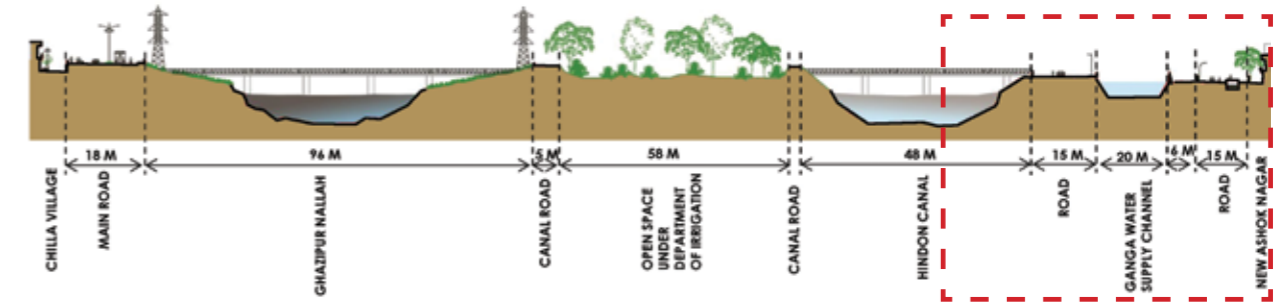


Existing main road with no demarcation of space for pedestrians, non-motorized vehicles, parking

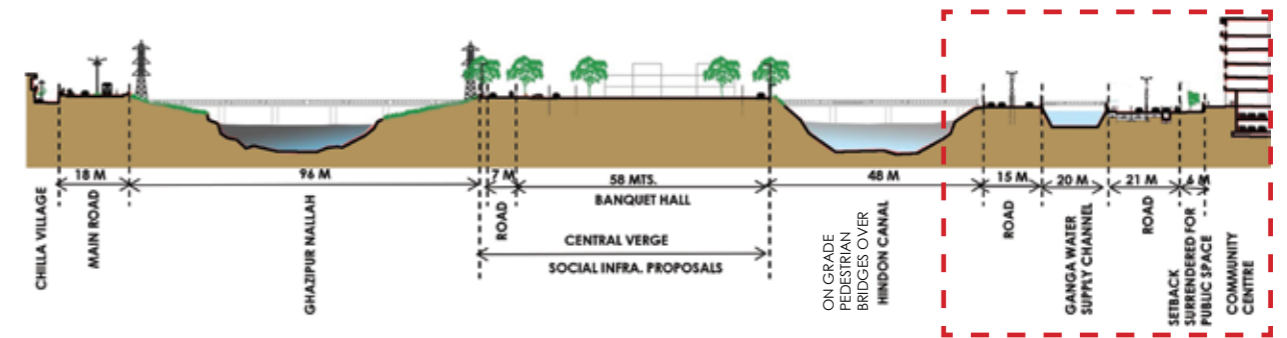


Proposed main road with new street edge, space for street vendors & hawkers, pedestrians & NMV zones, bus lanes

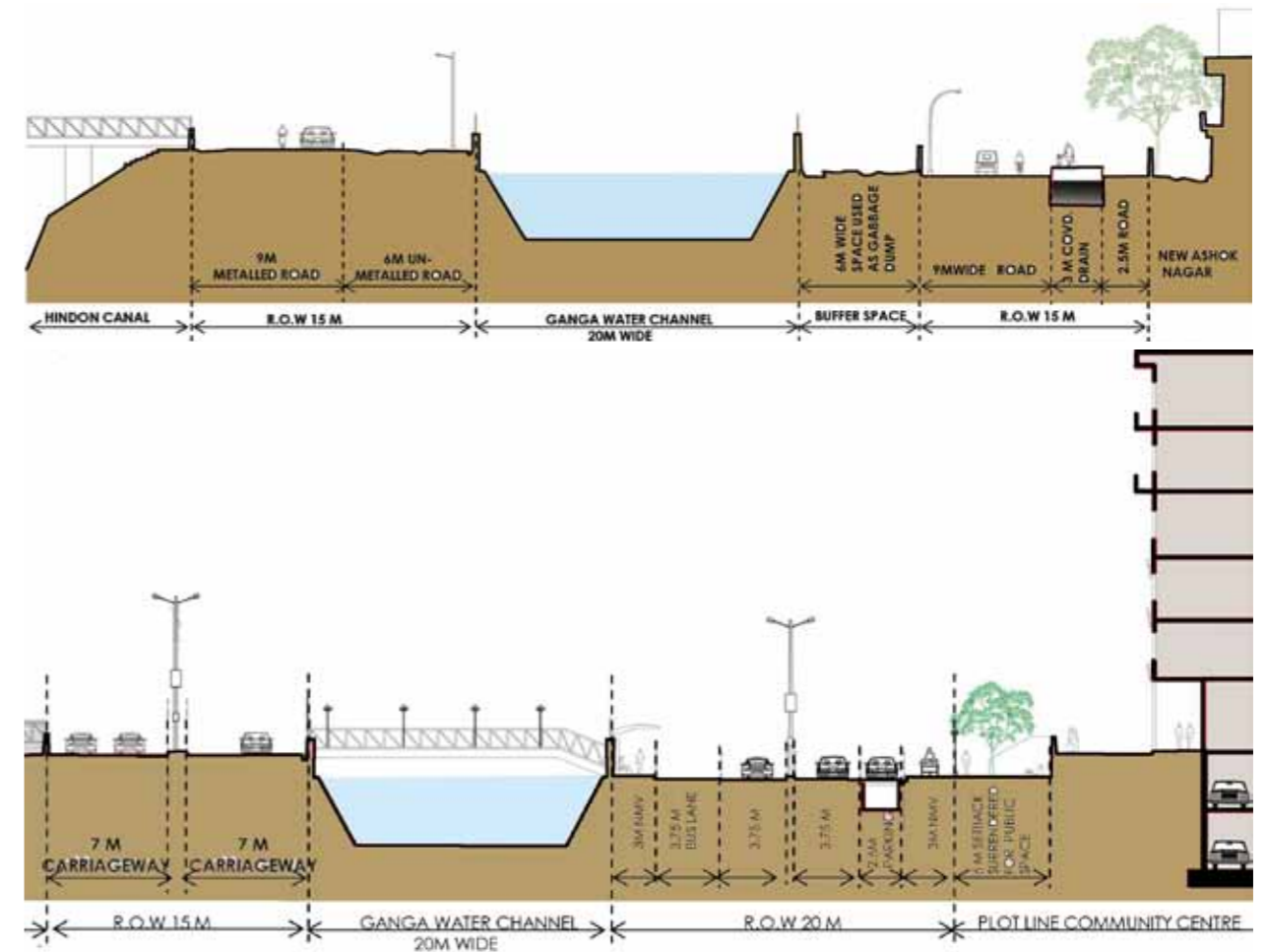
Road abutting Ganga Water Channel & proposal for the green space between Ghazipur Nallah & Hindon Canal



Existing Section across the water bodies, green space between Ghazipur Nallah and Hindon Canal and New Ashok Nagar edge

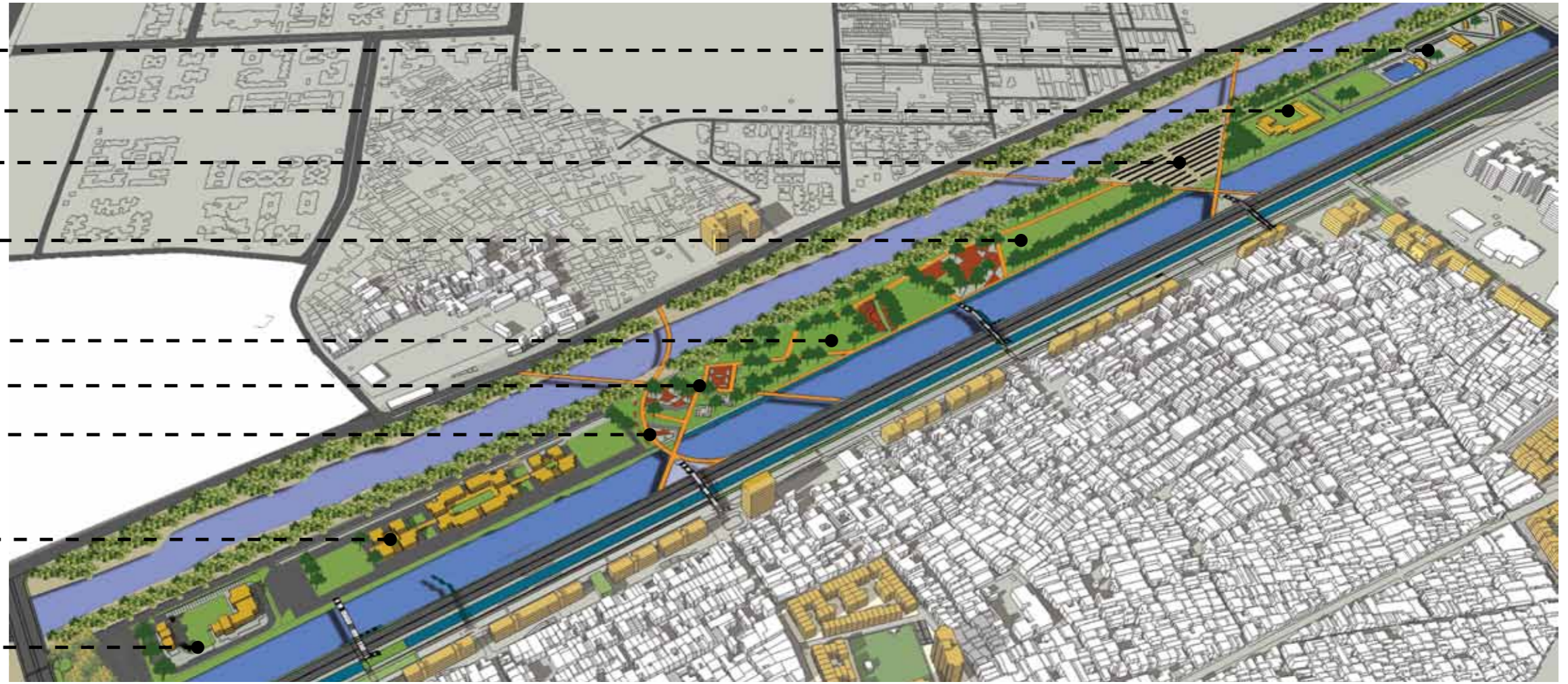


Proposed Section with Reconfigured green space between Ghazipur Nallah and Hindon Canal, roads and edge of New Ashok Nagar



Proposed part section of New Ashok Nagar edge along the Ganga Water Channel

- Sports Centre - - - - -
- Vocational Training Centre - - - - -
- Solar Farm - - - - -
- Multipurpose Ground - - - - -
- Public Park - - - - -
- Space For Weekly Market/ Haat - - - - -
- Pedestrian Linkages - - - - -
- Integrated MCD School - - - - -
- Banquet Hall - - - - -



Existing road along canal with garbage dump, undesigned road section, New Ashok Nagar built edge with area to be demolished

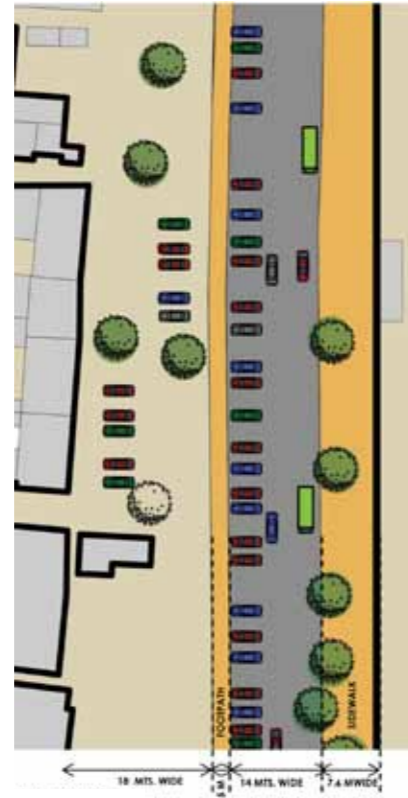


Proposed Canal Road with redeveloped built edge, reorganized street space with parking, NMV and pedestrian areas, bus lanes

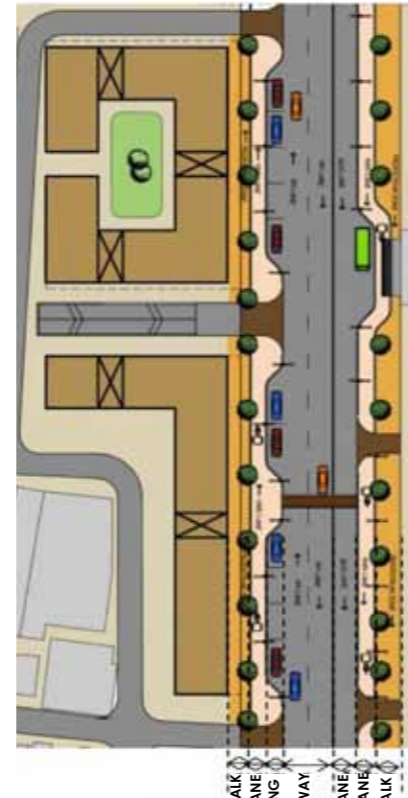
Redevelopment along Dashmesh School Road 3



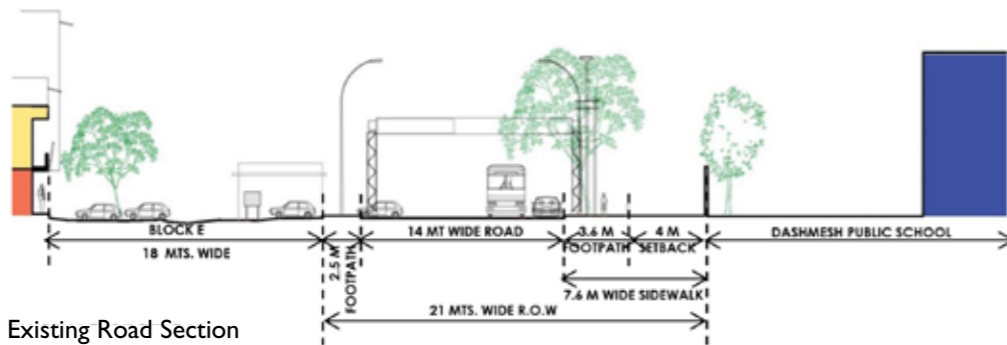
Existing condition of the edge



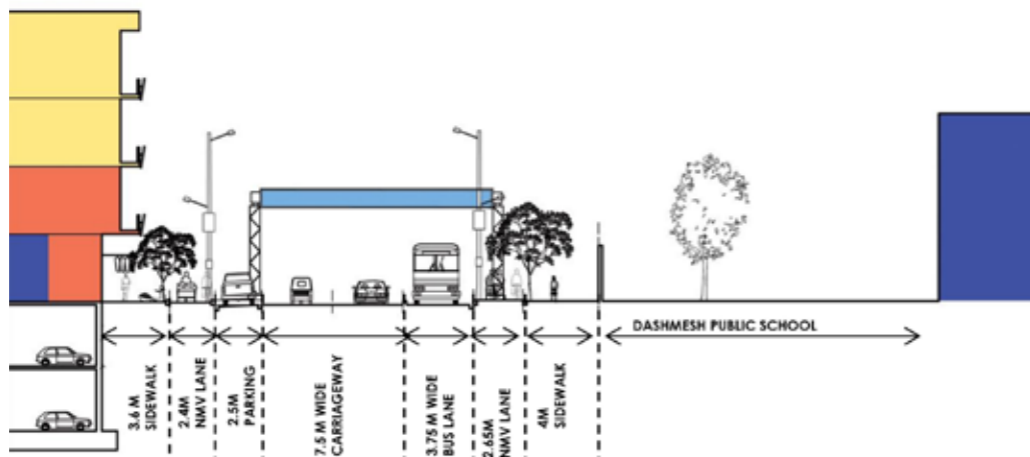
Existing Part Plan



Proposed Part Plan



Existing Road Section



Proposed Road Section

Strategies



Existing view of Dashmesh School road, with setback area occupied by garages for parking, unorganized street section

The potential to reorganize the edge arises from the wasted spaces that are used as ad hoc parkings by the local garages.

The mixed use edge is reorganized by amalgamation of existing private plots as well as governmental lands like police station, dispensary etc. G+3 mixed use blocks are developed with ground floor dedicated to retail, first floor to institutional as well as offices and residential. Also double basement parking and rear entries are designed so as to ease traffic on the road and also for the settlement.

PLOT 4	PLOT 3	PLOT 2	PLOT 1
AREA= 2,160 sq m	AREA= 1,900 Sq m	AREA= 1,920 Sq m	AREA= 1,122 Sq m
GROUND COVERAGE = 29%	GROUND COVERAGE = 29%	GROUND COVERAGE = 36%	GROUND COVERAGE = 29%
HEIGHT = G+3	HEIGHT = G+3	HEIGHT = G+3	HEIGHT = G+3
FAR= 1.3	FAR= 1.2	FAR= 1.75	FAR= 1.2



Proposed view of Dashmesh School road, with redefined street edge, organized street section

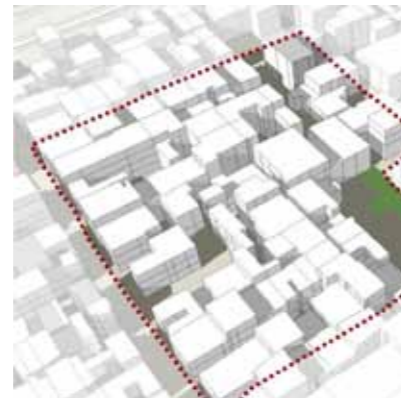
LEGEND
 RESIDENTIAL
 COMMERCIAL
 MIXED USE
 PUBLIC/SEM PUBLIC

4.5.2 Housing Redevelopment

Block-B



Key Plan



Existing view of the site

Existing Statistics
 Site Area = 9,875 sq m = 0.98 ha
 No. of Plots = 120
 Ground Coverage = 86%
 Average Height = G+2
 FAR = 2.1
 Average Plot Sizes = 80 sq m, 45 sq m, 25 sq m, 12 sq m

Existing condition of the redevelopment pocket, with dense residential fabric, minimal open space

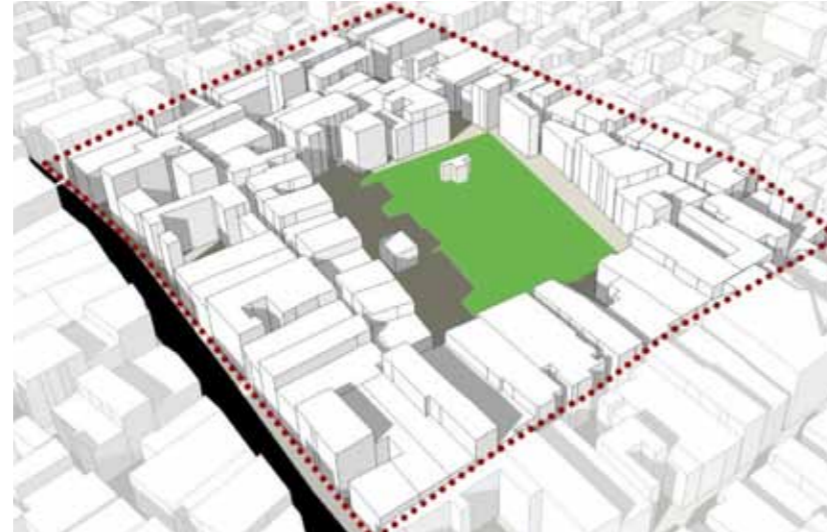


Housing redevelopment at Block B

Proposal Statistics
 Site Area = 9,875 sq m = 0.98 ha
 No. of Plots = 80
 No. of Flats = 80
 Total No. of Dwelling Units = 160
 Ground Coverage = 40%
 Average Height = G+3
 Residential Towers = S+10
 FAR = 1.8
 Average Plot/ Flat Size = 40 sq m

Proposal for the pocket with reorganized housing stock in G+3 and G+10 configuration, opening up more space on ground

Dargah & Open Space



Existing condition of the redevelopment pocket, central Dargah space

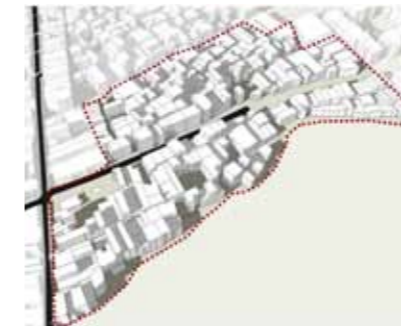


Proposal of the redevelopment pocket with reorganized housing stock in G+3 & S+8 configuration

Existing Statistics
 Site Area = 18,690 sq m = 1.86 ha
 No. of Plots = 190
 Ground Coverage = 64 %
 Average Height = G+2.5
 FAR = 2.25
 Average Plot Sizes = 120 sq m, 80 sq m, 45 sq m, 25 sq m

Proposal Statistics
 Site Area = 18,690 sq m = 1.86 ha
 No. of Plots = 98
 No. of Flats = 128
 Total No. of Dwelling Units = 228
 Ground Coverage = 36%
 Average Height = G+3
 Residential Towers = S+8
 FAR = 2
 Average Plot/ Flat Size = 50 sq m, 40 sq m

Block-E



Existing Statistics
 Site Area = 25,990 sq m = 2.6 ha
 No. of Plots = 220
 Ground Coverage = 82%
 Average Height = G+2.5
 FAR = 3
 Average Plot Sizes = 120 sq m, 80 sq m, 45 sq m, 25 sq m

Existing condition of the redevelopment pocket



Proposal Statistics
 Site Area = 25,990 sq m = 2.6 ha
 No. of Plots = 180
 No. of Flats = 120
 Total No. of Dwelling Units = 300
 Ground Coverage = 36%
 Average Height = G+3
 Residential Towers = S+10
 FAR = 2
 Average Plot/ Flat Size = 80 sq m, 50 sq m, 40 sq m

Proposal of the redevelopment pocket with G+3 & S+10 blocks

4.5.3 Improvement of Area Level Roads

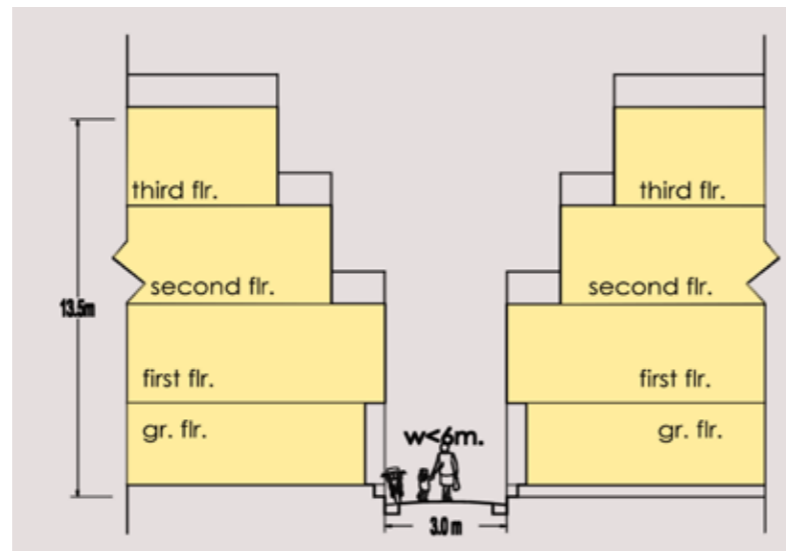
A. Internal Streets (Residential Areas)

There is a set hierarchy of internal roads from 2m, 3m, 4, 5, 6 and 8 m, but conditions are still very poor because of encroachments in the form of steps, drains, platforms on road. The following are the strategies for their improvement:

- No projection till first floor for better light and ventilation at lower level.
- Recessing all projections above first floor by a metre at each level so as to facilitate better light in houses.
- Demolition of all encroachments on streets in the form of steps to clear the street. Plinth steps to be accommodated inside the respective plots.
- Roads will be paved by interlocking pavers.
- Open drains should be covered by gratings and can act as stormwater drains.

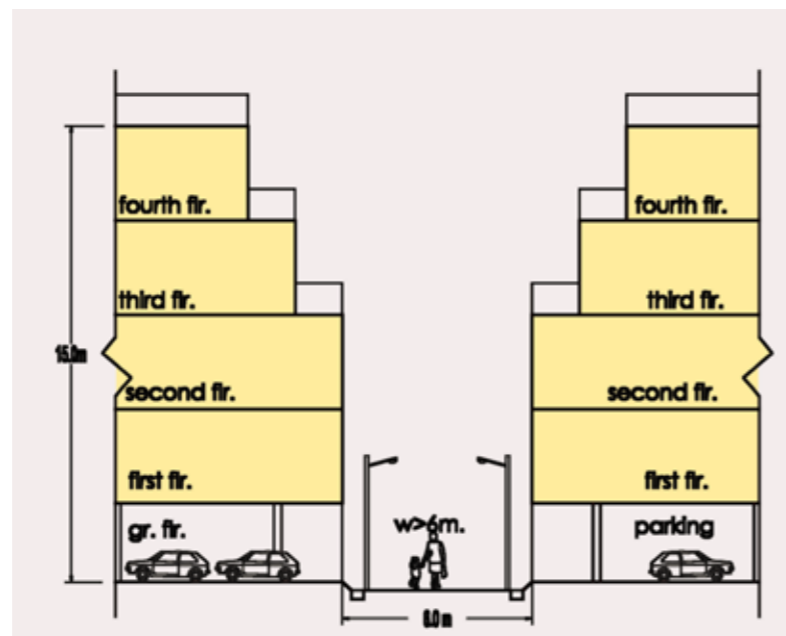


Existing condition of 4.5-m-road



Proposed section for 6-m-road

- Plots on roads having less than 6 m width will not have any kind of stilted or four-wheeler parking
- As a car park they use MLCP placed at periphery of New Ashok Nagar
- Two-wheelers are allowed on the streets
- Plots on roads having 6 m or more than 6 m width can have stilted parking on ground floor, which will be not counted in FAR.
- Street lights on alternate sides at set intervals.



Proposed section for road less than 6-m-wide



Existing 12-m-wide road condition

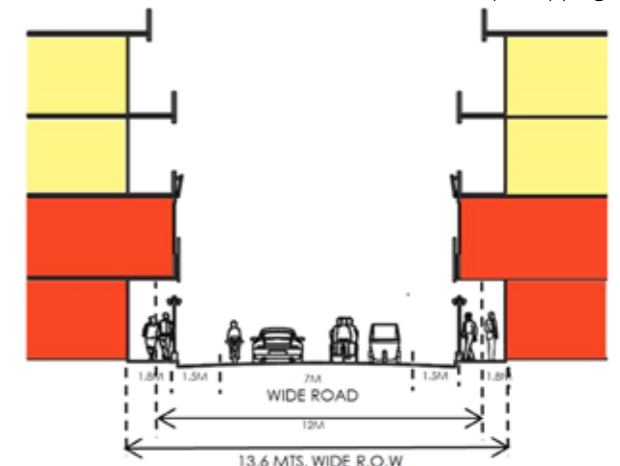


Proposal on 12-m-wide road

B. Street: 12 m wide

This is one of the major roads connecting one edge of Hindon Canal to other Metro network roads. It has major mixed use activity. The following are the strategies for its development:

- Metaling of roads
- Raised and covered pedestrian paths, shopper and shopkeeper friendly.
- Clear 7 m ROW for easy movement of all types of traffic.
- Textured/permeable paving for short-term side parking
- Pedestrian-scale street lighting.
- Signage control
- Street furniture after certain intervals for easy shopping



Existing 12-m-wide road condition

- Demolish all the encroachments on the road to achieve clear 12 m ROW as shown in the drawing submitted by RWA of New Ashok Nagar for approval to the authority.
- To make it an active and shopper-friendly covered pedestrian corridor; demolish 0.8 m more on ground floor from both the sides of road. Now the total width on ground will be 13.6 m.



Existing 15-m-wide road condition

C. Street: 15-m wide

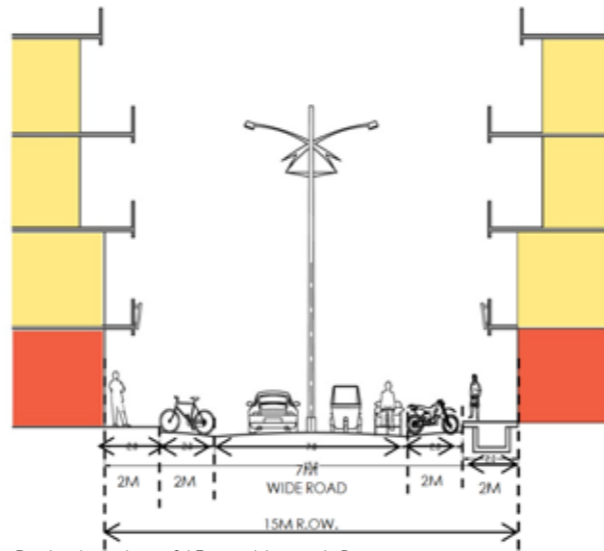
This is the widest and one of the major internal roads of New Ashok Nagar. One tip of it touches the Metro network and the other connects to the planned area. The character of this is mainly residential, only the beginning when it passes through B block is commercial on ground floor. The following are the strategies for its development:

- Metaling of roads
- Raised and covered pedestrian paths, walker-friendly.
- Clear 7 m ROW for easy movement of all types of traffic
- Textured/permeable paving 3 m wide on both sides for side parking

- Street furniture and trees after certain intervals
- Hawkers not allowed at these locations as it adds to the congestion. Separate Hawker Zones earmarked in other areas of the scheme.



Existing condition of 15-m-wide road B



Revised section of 15-m-wide road B

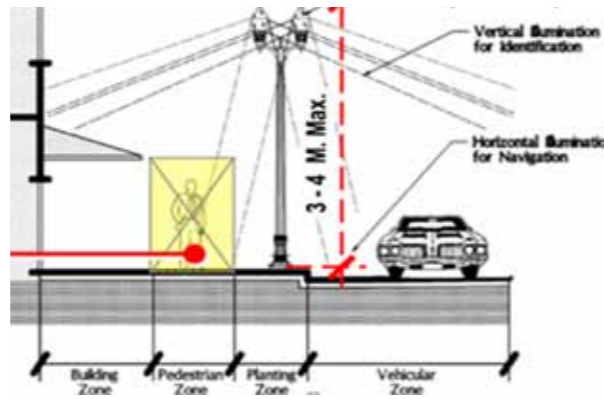
Notes:

Common guidelines for internal streets to be followed by the whole of New Ashok Nagar

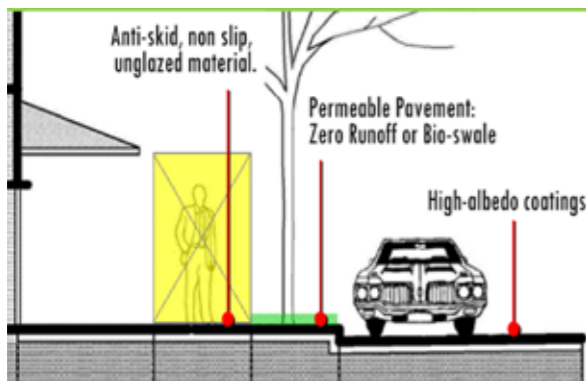


Permeable Cement-Tile Tree Pit

Tree gratings finished at same level



Pedestrian scale street lighting



Material selection



Designated pedestrian moving zone

4.5.4 Proposed Solid-Waste Management System

Waste management is the collection, transport, processing or disposal, managing and monitoring of waste materials. Waste management practices can differ for developed and developing nations, for urban and rural areas, for residential and industrial producers and from unauthorized to planned colonies.



Garbage dump along Canal Road

Community participation in SWM is the key to a sustainable and integrated proposal.

- The aim is to get as many local actors as possible to participate and actively contribute to the proposal. Most importantly, we want to create a feeling of ownership for the proposal among the citizens, whose waste is managed and whose local environment is improved by the proposal.
- An important step to motivate and engage the public by giving economical gain to all stakeholders.



Garbage dump along roads

Stakeholders

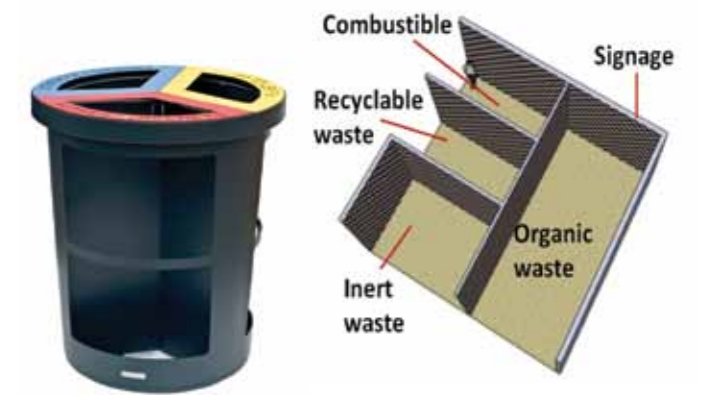
- Residents
- NGOs/RWAs or Local Associations
- Government
- Councillor

Proposal

The proposal consists of segregation at source with local participation. It includes the following activities in broad outline:

Segregation of Waste At Source (House Level)

Each household will be provided with one three-partitioned bucket in different colours free of charge, and collection from houses will also be free of charge. The households will segregate the waste at source into organic waste, combustible and recyclable waste respectively.



Design of dustbin

Design of dhalao

Collection

Door-to-door collection of waste will take place on a daily basis, but on alternate days for alternate waste type in either pushcarts or rickshaws. After the waste has been collected from the households and the common areas have been swept, the waste is transported to the block-wise dhalaos

Design of Partitioned Community Dust Bin (Dhalaos)

- Dhalaos will have four sections for different types of garbage. So that after collecting segregated waste from each household, we collect it in its respective chamber; it will have a weighing machine also attached to it.
- Organic waste will go to a nearby biogas plant built in the ward, it will produce energy out of this waste which further will be supplied to grid
- Recyclable waste will be segregated into different items and sold to kabaris
- Inert waste will be sold to construction sites.
- Combustible material will be given to NGOs to make useful products

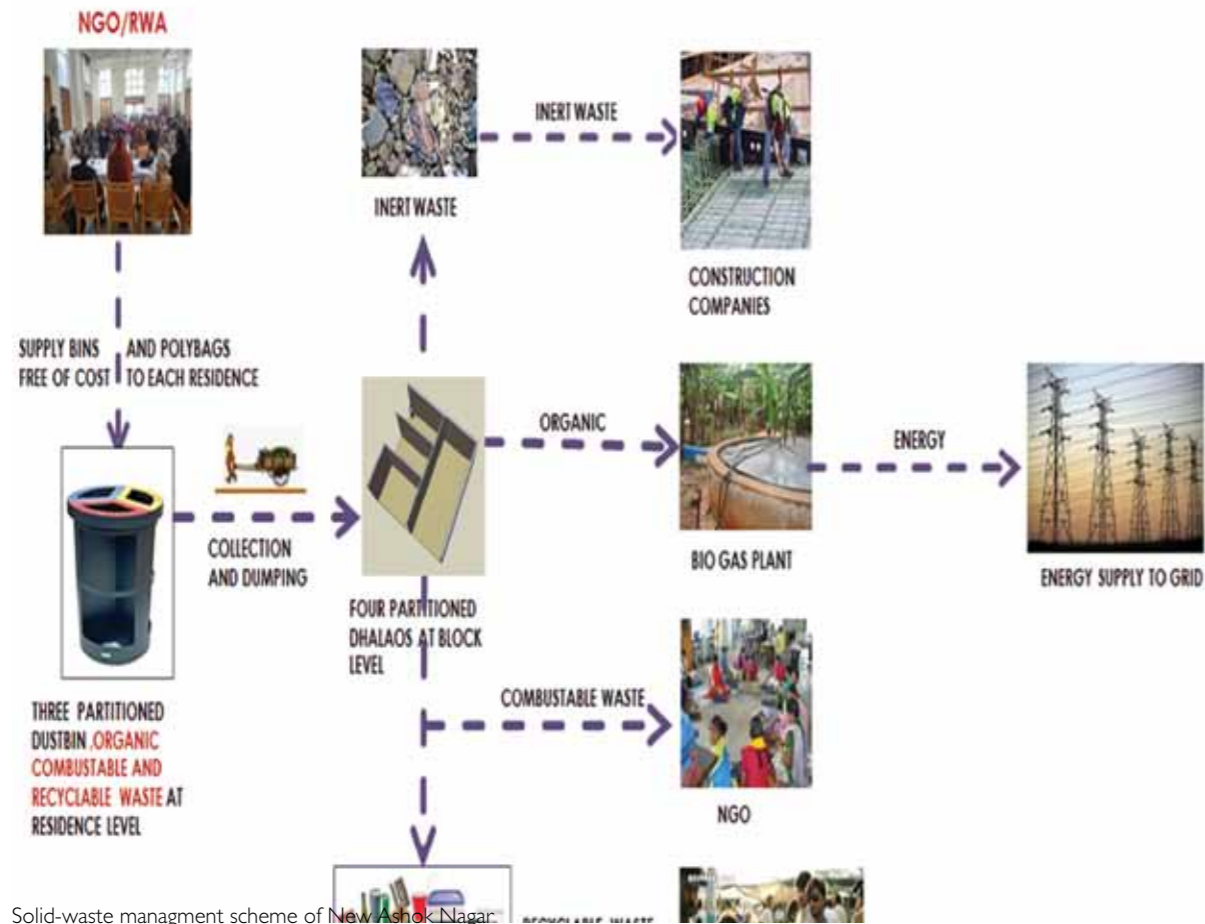
Financial Gain through scheme at every level

Residents: They are getting free service of garbage collection, bins and polybags and benefits for efficient working.

NGO/RWA: Economic gain by selling garbage, recognition in society and gets star ratings depending upon cleaning of blocks and garbage generation.

Government: Making dhalaos and giving to NGOs for maintenance, generating money by signages on each dhalaos

Councillor: More stars more annual fund in terms of percentage to the area (eg. 5 stars mean 10% more money that will be added to annual area fund by government).



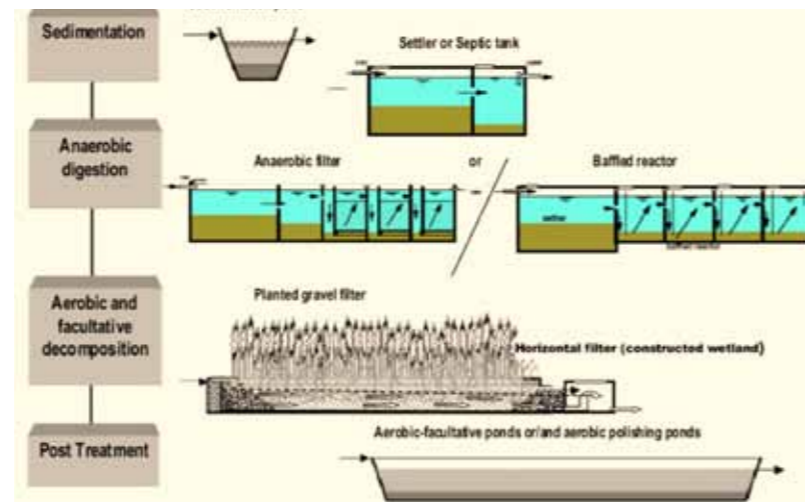
Solid-waste management scheme of New Ashok Nagar

4.5.5 Proposed Sewage System (unauthorized colonies)

For unauthorized colonies providing sewage systems means massive infrastructure and permanent high running and maintenance costs. To avoid this, the low-cost DEWATS system can be used which is self-sustainable, easy to maintain and run.

DEWATS (de-centralized waste treatment solution)

- It can be designed to handle organic wastewater flows from 1-1,000 cum per day
- It is reliable, long lasting, economical and tolerant towards inflow fluctuations.



DEWATS System

Functioning of DEWATS system

The sewage first goes into a two-chamber settler. After the primary treatment the wastewater goes to the Anaerobic Baffled Reactor which is a nine-chambered system with the Anaerobic Filter in the last two chambers. Then the wastewater flows to the planted filter. Finally to the polishing pond.

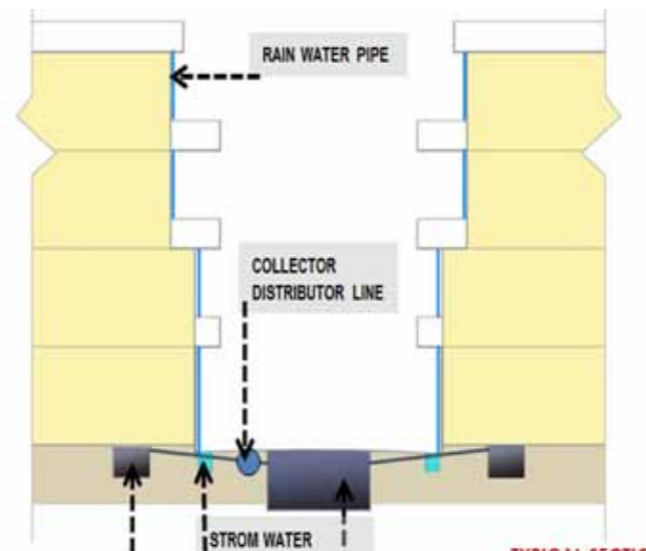
From the polishing pond the treated wastewater is reused.

This treatment system is maintained in such a way so that the area can be utilized as a public space also.

The excess of treated wastewater goes to the stormwater drain which passes through the city.



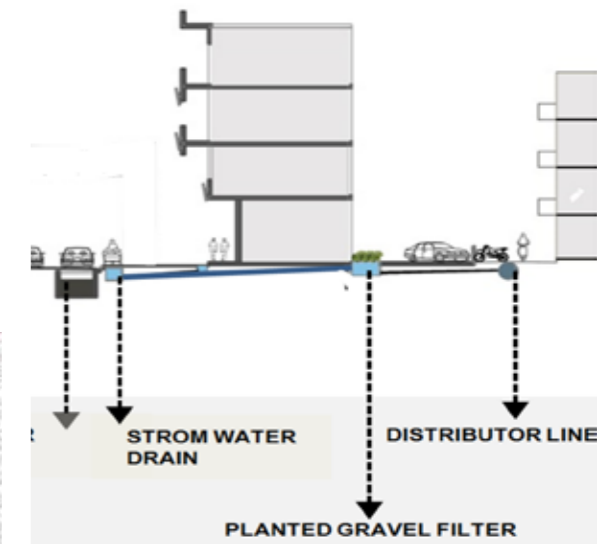
Layout of B block showing proposed DEWATS system



Proposed sewage system on roads

Proposed Sewage System in Existing Conditions

Separate the rainwater from sewer water. Open existing drains will be covered and will be used as stormwater drains. Existing house septic tanks will act as a settler. Septic tank of each house is connected to collector line, which is connected to Anaerobic Baffled Filter placed underground at the centre of existing roads (minimum road width 6 m). From here, wastewater goes via distributor line running under existing roads to the planted gravel filter placed at the edge of Block-B. The water which comes out can be reused for public purposes and the excess treated water will go to stormwater drain.



Section showing proposed DEWATS system

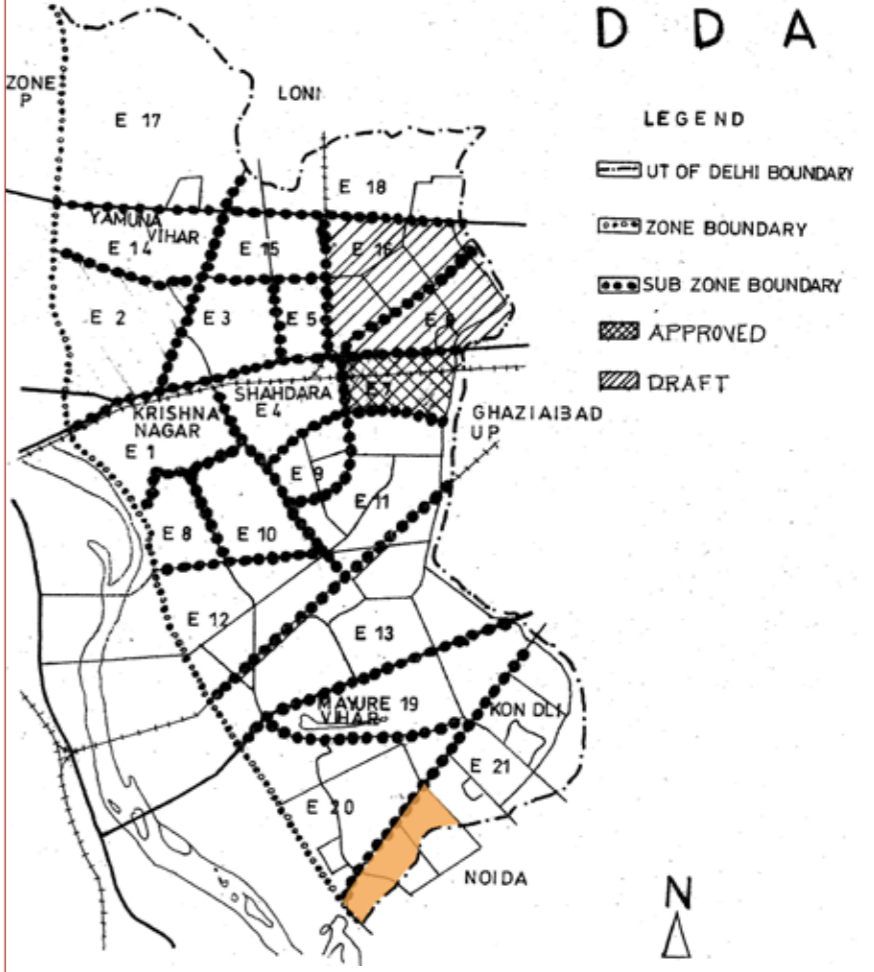
Calculations

Population of Block-B = 9,800 people
 Water consumption as per NBC = 100-120 L/P/D
 Quantity left after all losses = 75 L/P/D
 Quantity of water to be treated = 9800x75 = 735,000 L/Day
 To treat 1 CUM=1,000 L=4 SQM Space required for Anaerobic Baffled Filter (as we are using existing water tank as settler)
 We have 735,000 L= 735 cum= 2940 sq m space req
 Approx Tank size= 70 sq m, No of tanks required = 42 Tanks



5.1 Terms & Definitions

<p>Unauthorized Colony</p>	<p>The term means a colony or development comprising a contiguous area where no permission of concerned agency has been obtained for approval of layout plan or building plan. "Unauthorized Colonies" in Delhi is the designation given by the Delhi Development Authority (DDA), to the hundreds of residential colonies that have evolved in Delhi over the past forty years over private agricultural lands, which came within urban limits, and were sold by farmers to private developers who made colony plans, streets and lanes, but without DDA's authorization. Thus, they do not follow the city's Master Plan regulations.</p> <p>Unauthorized colonies mainly lack in civic and social infrastructures and in many areas authorities like MCD do not function to full capacity. The government is presently taking steps to regularize the same by the provision of basic infrastructure to improve the environment. Presently there are 1,639 unauthorized colonies in the city of Delhi. Out of them, 895 have been granted provisional regularization recently.</p> <p>(SOURCE: Mujherjee, S. (1988). Unauthorized Colonies and the City of Delhi. Master's Thesis. MIT Sudarshan, R.M, Pande, S. (2007). Ensuring Public Accountability through Community Action: A Case Study of East Del New Delhi. Institute of Social Studies Trust, Master Plan for Delhi 2021)</p>
<p>Urban Villages</p>	<p>As the city expands, many nucleated settlements on the outskirts of the city with agriculture as their dominant economic activity are engulfed, resulting in dependency upon urban activities as the means of livelihood. This process of urbanization has brought about transformations in these settlements and they are known as Urban Villages. These are characterized by compact built form, narrow circulation space, low-rise high density development, and mixed use.</p> <p>(SOURCE: Soni, A.K. (2011). Quality of Life in an Urban Village. Dissertation. New Delhi. USAP, Master Plan for Delhi 2021)</p>
<p>Planned/Approved Colonies</p>	<p>These are colonies that are approved by the zonal agencies and form a part of the Master Plan of Delhi.</p> <p>(SOURCE: Sudarshan, R.M, Pande, S. (2007). Ensuring Public Accountability through Community Action: A case study of East Delhi. New Delhi. Institute of Social Studies Trust.)</p>
<p>Electoral Ward</p>	<p>A ward is a subdivision of a local authority area, typically used for electoral purposes. The National Capital Territory of Delhi comprises 12 planning zones, the planning zones are further divided into wards, which are 274 in number.</p>
<p>Provisional Regularization</p>	<p>The Delhi government had issued provisional regularization certificates to over 1,639 unauthorized colonies ahead of the Assembly Polls in 2008. The government, while distributing the certificates, had promised to regularize the colonies if Congress came to power for the third term.</p>
<p>Local Area Plan</p>	<p>Local Area Plan (LAP) is a framework for participatory planning and development control. The Master Plan for Delhi 2021 introduced the concept of LAP – the plan of a ward/subzone. It is prepared and approved by the concerned local body. The framework of such plans is based on the Master Plan and Zonal Plan. A Local Area Plan is a legal document and must be prepared and adopted in a particular manner and within a strict timescale. The Planning Authority must indicate the period for which the Local Area Plan is to remain in force and may at any time amend or revoke the plan. The LAP proposals should illustrate the detailed policies and proposals in the written statement, defining sites for particular developments or land uses, development controls, boundaries of designated areas, such as heritage sites/ zones, conservation areas, redevelopment areas, influence zones along major transport corridors, development areas, etc.</p>

<p>Master Plan Delhi 2021</p>	<p>The MPD emphasizes on rejuvenation of the Yamuna River and its conservation as an important resource for the city of Delhi.</p> <ul style="list-style-type: none"> Regularization of unauthorized colonies as per government policy. Provision of infrastructure development, services and facilities. Lays down guidelines for redevelopment of unplanned areas like slums, unauthorized areas etc.
<p>Zonal Development Plan Zone-E</p>	 <p>The Zonal Development Plan suggests detailed measures for the rejuvenation of the Yamuna River; through refurbishment of trunk sewers, adding sewers to unsewered areas, treatment of drains.</p> <p>In particular with the unauthorized colonies, the Zonal Development Plan suggests the routine procedure of regularization of unauthorized colonies by the concerned civic authorities.</p> <p>Proposal of cycle tracks along major roads as well as widening of the Canal Road abutting New Ashok Nagar Unauthorized Colony has been suggested to 45 m. But the MPD 2001, has marked the ROW of this road as 30 m, without further changes.</p>
<p>Redevelopment Scheme for Existing Urban Area</p>	<ul style="list-style-type: none"> Permission to reorganize /pool plots for planning purposes Provision of social infrastructure through transfer of development rights and reduced space standards. Enhanced FAR for redevelopment schemes Unauthorized colonies slated for regularization area also proposed to be through redevelopment through public participation. <p>Guidelines for Redevelopment</p> <ul style="list-style-type: none"> Participants can be residents/cooperative societies/private developers Cluster block for a minimum of 3,000 sq m the owners should pool together and reorganize their individual properties so as to provide minimum 30% of area as common green/soft parking besides circulation areas & common facilities.

5.2 Strategic Interventions/Development Proposals

	<ul style="list-style-type: none"> Amalgamation & reconstitution of plots for planning purposes will be permitted. Norms of group housing with respect to ground coverage, basement, parking & setbacks (except FAR) shall be applicable To incentivize redevelopment a maximum FAR of 50% over and above the existing permissible FAR on individual plots subject to maximum of 400 shall be permissible <p>Residential Plot Group Housing Minimum size of plot: 3,000 sq m Maximum ground coverage: 33.3% Maximum FAR: 200</p>																								
<p>Building Regulations</p>	<p>Residential Plot Group Housing</p> <ul style="list-style-type: none"> Height NR (subject to clearance from AAI/ fire department and other statutory bodies). Parking 2.0 ecs/100 sq m built up area Plots for group housing should be located on roads facing a minimum width of 18 m ROW (13.5 m ROW for redevelopment areas and 9m ROW for slum rehabilitation / special area and villages). Ground coverage up to 40% may be allowed to achieve low-rise high-density housing without lifts Number of dwelling units, FAR, height of building, shall be as per MPD-2021 norms for residential plotted development. However, full ground coverage permissible & no setbacks allowed. <p>Controls for Residential Plotted Housing</p> <table border="1"> <thead> <tr> <th>Area of Plot (sq m)</th> <th>Max. GC</th> <th>FAR</th> <th>No. of DUs</th> </tr> </thead> <tbody> <tr> <td>Below 32</td> <td>90%</td> <td>3.5</td> <td>3</td> </tr> <tr> <td>32-50</td> <td>90%</td> <td>3.5</td> <td>3</td> </tr> <tr> <td>50-100</td> <td>90%</td> <td>3.5</td> <td>4</td> </tr> <tr> <td>100-250</td> <td>75%</td> <td>3.0</td> <td>4</td> </tr> </tbody> </table> <ul style="list-style-type: none"> Building height maximum of 15 m Stilt parking allowed (height 2.4 m) Projections/chajjas/covered chajjas built up portion up to 1 m above 3 m height from the ground shall be regularized for plot sizes up to 175 sq m on roads below 24 m RO 	Area of Plot (sq m)	Max. GC	FAR	No. of DUs	Below 32	90%	3.5	3	32-50	90%	3.5	3	50-100	90%	3.5	4	100-250	75%	3.0	4				
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<p>Environment</p>	<p>Planning Norms /Standards for Recreational Areas:</p> <table border="1"> <thead> <tr> <th>Category</th> <th>Population (Approx.)</th> <th>Plot Area</th> </tr> </thead> <tbody> <tr> <td>Community Park</td> <td>1 lakh</td> <td>5 ha</td> </tr> <tr> <td>NeighbourhoodPark</td> <td>10,000</td> <td>1 ha</td> </tr> <tr> <td>Housing AreaPark</td> <td>5,000</td> <td>0.5 ha</td> </tr> <tr> <td>Tot Lot at Cluster Level</td> <td>250</td> <td>0.0125 ha</td> </tr> <tr> <td>Community Multipurpose Ground</td> <td>1 lakh</td> <td>5 ha</td> </tr> </tbody> </table> <p>Activities Permitted in Recreational Areas:</p> <table border="1"> <thead> <tr> <th>Category</th> <th>Activity</th> </tr> </thead> <tbody> <tr> <td>Community Park</td> <td>Park, Children's Park, Open-Air Food Court, Playground</td> </tr> <tr> <td>Multipurpose Ground</td> <td>Public Meeting Ground, Social Functions, Stalls & Kiosk</td> </tr> </tbody> </table>	Category	Population (Approx.)	Plot Area	Community Park	1 lakh	5 ha	NeighbourhoodPark	10,000	1 ha	Housing AreaPark	5,000	0.5 ha	Tot Lot at Cluster Level	250	0.0125 ha	Community Multipurpose Ground	1 lakh	5 ha	Category	Activity	Community Park	Park, Children's Park, Open-Air Food Court, Playground	Multipurpose Ground	Public Meeting Ground, Social Functions, Stalls & Kiosk
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<p>Transportation</p>	<p>Parking in Residential Areas All encroachments on residential streets to be removed.</p> <p>Multilevel Car Parkings should be developed in designated parking spaces or in residential areas, public/semi-public facilities, etc.</p> <ol style="list-style-type: none"> Minimum plot size required – 1,000 sq m In order to compensate for the cost of the MLCP, a maximum of 25% of the total floor area may be utilized as commercial/office space. 																								

<p>Physical Infrastructure</p>	<ul style="list-style-type: none"> The drains and waterfront can be landscaped in the form of interconnected parkways. Improvement of sewerage & stormwater drainage systems Solid-waste management Laying of sewer lines in unsewered parts of Delhi 									
<p>Social Infrastructure</p>	<table border="1"> <thead> <tr> <th>Category</th> <th>Population (Approx.)</th> <th>Plot Area</th> </tr> </thead> <tbody> <tr> <td>Primary School</td> <td>5,000</td> <td>800 sq m</td> </tr> <tr> <td>Sr.Secondary School</td> <td>10,000</td> <td>2,000 sq m</td> </tr> </tbody> </table> <p>Following facilities can be clubbed in composite Facility Centre (500-1,000 sq m) – multipurpose hall, Basti Vikas Kendra, religious centre, health centre, park/Shishu Vatika</p>	Category	Population (Approx.)	Plot Area	Primary School	5,000	800 sq m	Sr.Secondary School	10,000	2,000 sq m
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Objections Against Widening of Canal Road to 45 m

Letter Dated 15.11.11 Expressing Objections to the Director (Planning), DDA, New Delhi

Letter Dated 5.12.11 Expressing Objections to the Director (Planning), DDA, New Delhi

