

Making Delhi a Liveable City by Improving Urban Sanitation

Recent surveys carried out in Delhi have shown that 75 percent of its population is now living in informal settlements. The Delhi government defines eight types of settlements in the city, including "Planned colonies". The others are : slum designated areas, jhuggi jhopri clusters, unauthorised colonies, regularised unauthorised colonies, resettlement colonies, urban villages and rural villages.¹

With such a large majority of the population living 'informally ', it is evident that planned urban development has failed.

Greha is a voluntary organisation (registered under the Societies Act, 1860) engaged in research on human habitat for over three decades. Our research in informal settlements of Delhi has revealed that the most critical problem here is of drainage/sanitation. Sewage treatment and the management of the water cycle in densely built up urban areas is the key to eradication of slums in the city.

Greha's research has been promoted by the Department of Science and Technology (DST), Government of India (GoI)² first, and subsequently the Delhi Government for whom Greha prepared, " Aya Nagar Development Project - report on first phase" in 2009, which presented a methodology for the design of an ecologically viable and sustainable sanitation model for decentralised management at neighbourhood level.

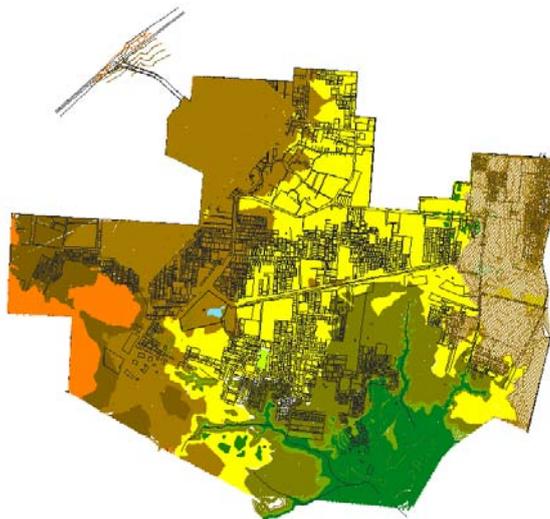


Figure 1 : Slope Analysis of Aya Nagar on topographical survey generated by I&FC , GNCTD

The program to implement this was prevented by the Commonwealth Games project.

1. Centre for Policy Research, August 2015, "Exclusion Informality, and Predation in the Cities of Delhi. An overview of the Cities of Delhi Project.

2. Mission for Application of Technology to Urban Renewal and Engineering (MATURE), a research project of DST GoI, funded by UNDP, 1998.

In 2013, the research was detailed further as part of the City Level projects undertaken by the Delhi Urban Art Commission (Goi), and the report published in January 2014

<http://www.greha.org/sites/default/files/Aya%20Nagar%20Urban%20Development.pdf>

The senior consultant for this project was MN Ashish Ganju, architect and President Greha.

Subsequently the methodology and techniques were developed further for application to the precinct of Lado Sarai, in two reports made to the DUAC City Level Projects program. These reports have presented techniques and planning approaches for decentralised sewage treatment and management of the water cycle, with the neighbourhood as the planning unit.



Figure 2: Environmental Upgradation of Open Spaces in Lado Sarai Village

Whereas the Lado Sarai project is awaiting implementation, in Aya Nagar a pilot project for a sanitation improvement plan has been initiated for execution by the Delhi Urban Shelter Improvement Board (DUSIB) with Greha as consultant for design and supervision. Implementation on ground is awaiting finalisation of tender documents by DUSIB.

The project will demonstrate the provision of decentralised sewage treatment system with waste water treatment and recycling, including rainwater/storm water management on roads resurfaced with concrete pavers, to be implemented in Z block of Aya Nagar, a neighbourhood built on 11,120 square metres land area, with a resident population of 600 persons which will grow to 1000 in the next year or two. The full system is estimated to cost Rs 1800/- per capita at today's prices.

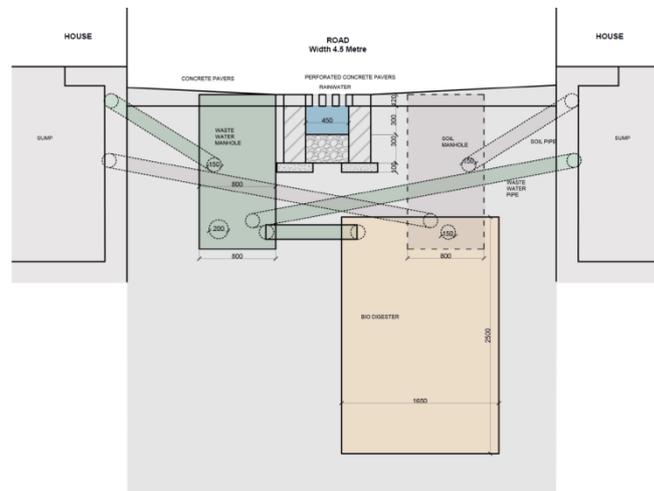


Figure 3: Schematic Section of road in Pilot Project at Z Block Aya Nagar, New Delhi

The demonstration project points to the beginning of a city wide strategy for planned sanitation based on a decentralised approach. This is a radical departure from the current practices of centralising sewage treatment in plants catering to populations of lakhs, with soil and waste water being conveyed to an STP by long lengths of piping energised by pumping stations, and flushed by large quantities of water which is in very short supply, and likely to get worse in the future. It is therefore necessary to take a comprehensive view of the provision of integrated and efficient delivery of urban utilities/services, especially in a situation where the majority population is living in housing built spontaneously by poor migrants, outside the master plan framework, in a high density with uncertain legality.

To bring the issue of 'liveability' centre stage in urban development policy and practice, we believe the single most powerful instrument is **sanitation management in a decentralised model** as is being demonstrated by the projects developed by Greha, and now awaiting implementation. Policy level intervention is required to scale up and spread this work across the city.