

No Strings Attached:  
Reimagining the Redevelopment of Delhi's Kathputli Colony

By

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# ABSTRACT

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The Kathputli Colony in Delhi is filled with the spirit of gypsy lifestyle and magic. These people used to live in tents that were easily packed up and moved as circumstances conspired. They used their tents both to adapt to, and transform the environments that they inhabited. As the world continued to urbanize, temporary settlements became more permanent. Tents gave way first to metal sheds then warrens of tiny dwellings constructed of brick.

Over the years, cities have grappled with what to do with makeshift settlements. Recently cities in India have launched programs to construct new homes for these colonies. The unfamiliar challenge for gypsies is how to adapt to standardized housing and lifestyles it implies.

This thesis explores this dilemma and questions the limits of a colony of gypsies to adapt to sedentary and normative environments. In so doing, it questions what it means to be a gypsy.

## KATHPUTLI COLONY & THESIS TIMELINE

- ~1956** Rajasthani folk artists start settling in the empty Shadipur bus depot.
- 1990** First relocation plan at Vasant Kunj, after much resistance it was scraped.
- 2007** The Delhi Development Authority initiates its attempt at *in-situ* slum rehabilitation for the Kathputli Colony.
- 2011** Construction of transit camp in Anand Parbat (approximately 3 miles north of existing colony) Currently 1000-2000 families have moved there since.
- 2015** Release of the film, *My Gypsy Colony*, by Martine Palmer and Stéphane Subiela.
- July 2016** PUPPETS UP! Festival in Almonte, Ontario hosts the Aakaar Puppet Theatre from the Kathputli Colony. Puran Bhat and Martine Palmer meet Peter Mansfield.
- August 2016** Peter Mansfield discusses the plight of the Kathputli Colony with Benjamin Gianni, who proposes it as a thesis project to Gillian Walczak.
- September 2016** Start of thesis research; initial discussions with Martine Palmer about the Kathputli Colony and their needs.
- October 2016** Viewed two documentaries about the Kathputli Colony: *My Gypsy Colony* and *Tomorrow We Disappear*.
- November 2016** Puran Bhat, puppeteer and spokesperson for the Kathputli Colony, moves his family to the transit camp.
- December 2016** Systematic demolition of the Colony begins. Following a surge of families that agree to relocate to the transit camp.
- Early February 2017** Puran Bhat and Martine Palmer visit the Azrieli School of Architecture & Urbanism to take part in the *Shifting Frames: Urbanization, Slums, and Cities of the Future Symposium*. Gillian Walczak receives feedback on her proposal for the redesign of the community.
- February 2017** Travel to Delhi, India to visit the Kathputli Colony, the transit camp and discussions with Raheja Developers about my proposal for the re-design of the colony.

## ACKNOWLEDGEMENTS

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Thank you to my parents, Jerzy and Deborah, and to my sisters, Krysia and Asia. Thank you for your love and strength throughout this journey, it means the world to me.

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Appendix A – Informal Settlements

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**gyp•sy**

[jɪp'sē]

1. Often offensive.
2. A member of any various traditionally itinerant groups unrelated to the Romani.
3. One who follows an itinerant or otherwise unconventional career or way of life...<sup>1</sup>

In his *Historical Dictionary of the Gypsies (Romanies)*, author Donald Kenrick states that gypsy is used as an alternative word for Romany. He also notes that:

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Gypsy is not a Gypsy word, and there is no single word for Gypsy in all Romani dialects. Rom (plural Rom or Roma) is a noun meaning “a man belonging to our ethnic group” but not all Gypsies call themselves Roma. ... With regard to race-relations legislation, however, Gypsy is considered to be a synonym for the ethnic term Romany.<sup>2</sup>

It is important to note that “Gypsy” can be used as a pejorative term, and in many cases, the identifier “Roma” is preferred, as this is how many of the people identify themselves. However, the term “Roma” is not used by all people who fit under the term “Gypsy.” In fact, among all the literature reviewed and interviews held for this thesis, the term Roma was never once used. Indeed, the Kathputli people refer to themselves as Gypsies and are proud of the term -- as people who have a propensity to be outdoors, who adapt and persevere while keeping their traditions alive.

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<sup>1</sup> “The American Heritage Dictionary of the English Language.”

<sup>2</sup> Donald Kenrick, *Historical Dictionary of the Gypsies (Romanies)*, 103.

# INTRODUCTION

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*The word slum carries severely negative connotations. They are known to be environments which lack basic necessities and contain harsh living conditions.<sup>3</sup> The industrialization of agriculture forced many villagers to move to cities in search of work. Rebuilding their lives in large cities, these people learn how to be poor in a different environment with a distinct set of tools, resources and networks.<sup>4</sup> Architect and UQAM professor Nicolas Reeves' research established that the way a slum is built reflects the villagers' origins. The fingerprint of a slum can communicate the values and experiences of the people that built it. The way the community is governed and the social relations between residents can be deduced from the way buildings are constructed and organized.<sup>5</sup>*

*Slums are not only places; increasingly they are a worldwide phenomenon.<sup>6</sup> As countries continue to urbanize slums have become a global circumstance – and cities are struggling to figure out how to deal with them.*

Most slum redevelopment proposals force residents into generic housing that supports neither the lifestyles to which they are accustomed nor the informal economies on which they depend. The challenge of slum redevelopment is finding ways to provide needed infrastructure without destroying informal interactions and networks that are key to the success of residents. In the spirit of John FC Turner, slums are not a problem, they are a solution.<sup>7</sup> This thesis was carried out with this concept in mind.

In search of work in the late 1950s, a group of gypsy artisans from Rajasthan set up camp on an empty bus depot in Shadipur – a neighborhood in suburban Delhi. Over the course of several decades this group of settlers evolved into the Kathputli Colony, home to an estimated 20,000 people. The Kathputli – or marionettes – make their living as magicians, puppeteers, acrobats, and other various types of performance artists. They have essentially created a pocket where traditional forms of art and performance are kept alive. Though the Kathputli Colony has thrived as an artist settlement, the people who live there are poor, and the colony lacks basic infrastructure. Like other informal settlements in and around Delhi, the city has designated the colony as a slum.

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<sup>3</sup> Jean-Nicolas Orhon, *Slums: Cities of Tomorrow*.

<sup>4</sup> *Ibid.*

<sup>5</sup> *Ibid.*

<sup>6</sup> *Ibid.*

<sup>7</sup> Richard Harris, "A Double Irony: The Originality and Influence of John F.C. Turner."

Having launched a major slum eradication program, the Kathputli Colony is among the first areas to be targeted by the city of Delhi. Given its relatively central location and proximity to a newly constructed subway stop, the land occupied by the colony is considered to be prime for investment and redevelopment. The Delhi Development Authority (DDA) has given Raheja Developers the right to develop about a third of the parcel in exchange for providing 2800 EWS (economically weaker section) replacement units for residents of the colony. On its portion of the parcel Raheja plans to erect two high-end, private sector housing towers and a shopping mall. The colonists, who currently occupy one and two-storey dwellings, will be rehoused in a massive wall of 14-storey slabs at the back of the site. From the community's perspective, neither the process of consultation nor the proposed redevelopment has adequately recognized the unique character of the community. As a result, the design of the replacement housing poses a threat to the community's survival as a colony of artists and street performers. The community has argued that its exceptional character and cultural significance both demand and deserve a different approach.

Puran Bhat is a world-renowned puppeteer and representative of the Kathputli Colony. He and other community leaders have struggled with the proposed design and the redevelopment process, which requires occupants to relocate to temporary housing off site. Having moved to the Shadipur site with his family as a child, Mr. Bhat was among the colony's first residents. Having witnessed and supported the community's evolution for several decades, he does not want to see it disappear – or even transform beyond recognition. Mr. Bhat understands the integral relationship between the physical structure of the community, its social cohesion, and the transfer of knowledge from one generation of performers to the next.

I was first introduced to the Kathputli Colony – and Puran Bhat – in a film produced by filmmakers Martine Palmer and Stephane Subieta.<sup>8</sup> In the film, Mr. Bhat discusses the imminent threat of redevelopment and presents a vision for a community comprised of low-rise, courtyard-oriented housing. Using design as a form of research and following

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<sup>8</sup> Subiela Stéphane, *My Gypsy Colony*.

the guidelines suggested by Mr. Bhat – with whom I've since had the opportunity to meet several times – this thesis explores an alternative approach to the redevelopment of the Kathputli Colony. The proposed design attempts to:

- 1 Reflect, support and sustain the unique characteristics of the residents.
- 2 Reinforce the cultural importance of the colony within Delhi and beyond.
- 3 Reflect both the informal nature of the colony and the interactions that take place within it.
- 4 Augment the colony's visibility in proportion to its significance without making it vulnerable, overly structured or bureaucratic in the process.
- 5 Accommodate revenue-generating commercial and performance space that fosters interaction between the community and the city at large.
- 6 Acknowledge the colony as more than a place to live, and recognize that the colony cannot be reduced to a housing complex. Residents learn and hone their *métier* within the community. As such, the structure of the proposed redevelopment will directly affect the residents' ability to make a living. The Kathputli Colony differs from other so-called slums since residents live, learn and “work” within the community.

## CHAPTER 1: CONTEXT (THE CURRENT SITUATION)

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*It was physical and emotional overload; the mass of people, vehicles, animals and scents, in constant motion as though performing in an open-air theatre. The environment forced me to adapt. You learn to keep moving, push through, and stay alert. It seems like the way of life in Delhi, people persevere, working, living, and surviving in their environment. It is an architect's dream and nightmare. How do you organize, how do you study, with the massive amount of everything? Layers of history, architecture, demographics and lifestyles. Delhi is a city in which you cannot overlay or copy and paste from somewhere else; you must work with the fabric. The history of Delhi shows constant adaptation, creating a resilient people and society. The Kathpulti Colony is an example of that.*



Figure 1: Location of India.

India is the world's second-most populous country. It is bordered by the Indian Ocean on the south, the Arabian Sea on to the west, and the Bay of Bengal on the southeast. From northwest to northeast India shares borders with Pakistan, China, Nepal, Bhutan, Myanmar (Burma) and Bangladesh. The National Capital Territory (NCT) of India, Delhi, includes the city of New Delhi, the capital of India. With a population of over 18 million, up from 400,000 in 1901, Delhi is one of the fastest growing cities in the world.<sup>9</sup> Much of its history relates to the shifting Imperial rule in the city, servicing several conquests since 6th century BCE. Being enclosed by the Delhi Ridge to the south and west and protected by the Yamuna River to the east, the location of the city was attractive. Although there has been a British presence since capturing the city in 1803, the British shifted their colonial capital from Kolkata to Delhi in 1911, engaging Edwin Lutyens and Herbert Baker to devise a plan for a major expansion of city. Lutyens and Baker laid out an extensive urban grid including the monumental Rajpath and major plazas, as well as designing several the city's most prominent government buildings. The reorganized city expanded rapidly. Accompanied by their families, migrant workers travelled to Delhi to construct the new city. Many remained in Delhi following the

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<sup>9</sup> "Delhi Population 2017."

completion of work, contributing to the city's expanding population. Immigration from elsewhere in India coupled with repeated foreign conquests over the centuries, has resulted in an ethnically and religiously diverse city.<sup>10</sup>

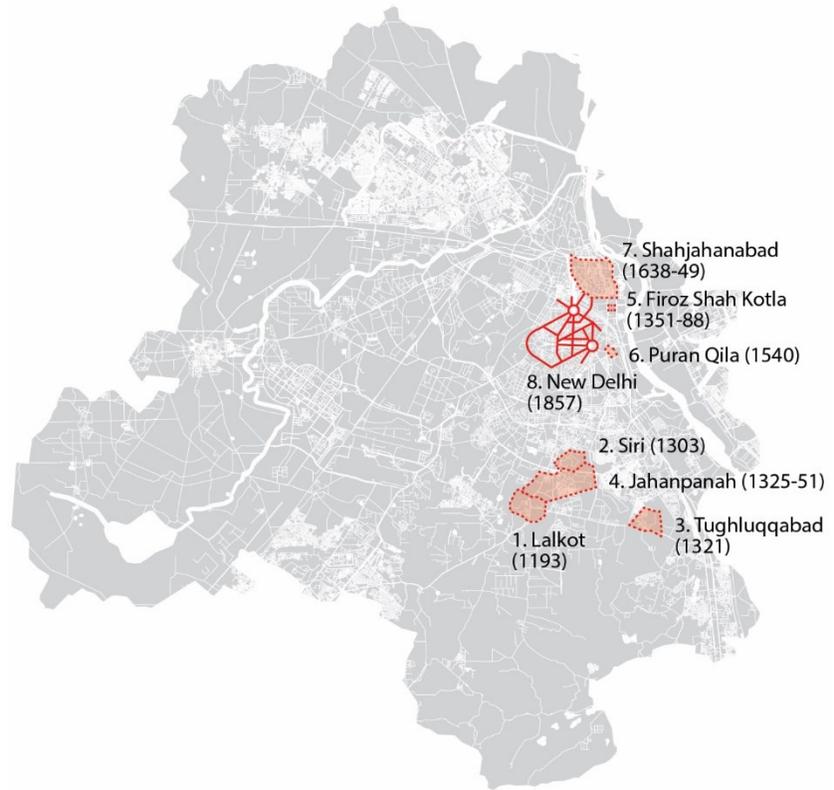


Figure 2: The Seven Lives of Delhi.

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<sup>10</sup> "Delhi - History."

## THE KATHPUTLI COLONY

*It was clear we were close to the community when everyone we passed greeted Puran Bhat, with happiness and respect. Soon after the buildings dropped from the consistent 4-5 storeys to compact, two-storey makeshift homes. Roadways became alleyways. We entered the colony through the south-east streets adjacent to the site. We walked single-file through the settlement, passing partially demolished homes, children playing, roaming livestock, piles of brick, and open sewage. Yet despite the condition of their homes, everyone was smiling.*

The Kathputli Colony was formed in the late 1950s, the exact date unknown since it was never officially recorded. The Kathputli colony took root on an unoccupied 5.22-hectare former bus depot in the Shadipur neighborhood just west of Delhi. It consists of migrant populations from the surrounding states and other areas beyond Delhi. Most Kathputli residents are gypsy artisans from Rajasthan who settled there while continuing to practice their art. While similar colonies appeared elsewhere in Delhi, the Kathputli Colony retains the highest percentage of artists and performers.

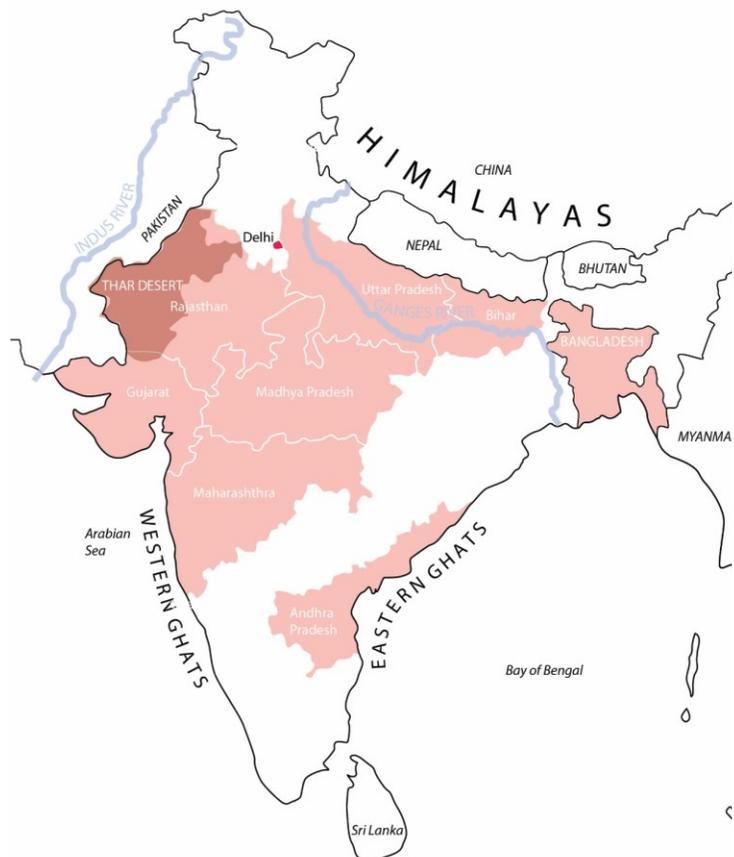


Figure 3: Map of India and regions where communities of the Kathputli Colony migrated from.

Train tracks form the western boundary of the site. Patel Road, which forms the boundary to the north, is elevated along the length of the site to cross over the train tracks. Elevated subway lines run along Patel Rd (Blue Line) and just west of the railroad tracks (Green Line). The Kathputli Colony is located between the Shadipur and the Kirti Nagar metro stops on the Blue Line. The Kirti Nagar stop also serves the Green line. Diagonally across Patel Road is the Shadipur bus depot. The colony forms the southern tip of a swath of informal development that cuts through western Delhi following to the train tracks. These are comprised of the Nehru Nagar, Prem Nagar and Baljit Nagar neighbourhoods.

The population of the Kathputli Colony site has declined in the past seven years as families have moved to the camp. Currently 500 families remain on the Shadipur site while between 1000-2000 have relocated to the transit camp. As of February 2017, some 40% of the houses in the colony had been demolished, most likely by the Raheja Developers under the DDA. This was done to discourage new families from occupying houses vacated by those who relocated.



Figure 4: Location of Kathputli Colony in Delhi, India.

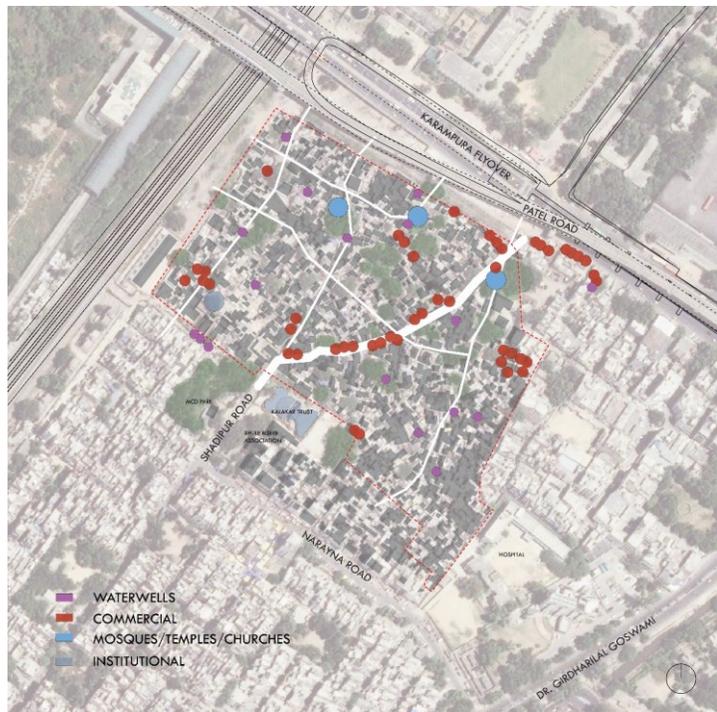


Figure 5: Kathputli Colony Site Analysis Plan.

## TOWARD A SLUM-FREE DELHI

Having been under the rule of numerous empires and governments over time, Delhi comprises a multitude of urban planning and building types. Population growth and the expansion of the transit systems over the past several decades have transformed peripheral sites into central ones. Sites like the one occupied by the Kathputli Colony are under increased development pressure.

In 1970, the municipal government initiated a program of “resettlement colonies” under which informal developments were removed and residents relocated in an attempt to revitalize the city. This relocation scheme backfired since many of the resettlements were located on the outskirts of the city where transport infrastructure was poor and access to services and stable employment was limited. Instead, it furthered the development of slum-like communities. In 1990, the Kathputli Colony was assigned a relocation plan that would displace them to the southwestern part of the city – far from available services and individuals who would regularly hire the artists for performances. After much resistance from the colony, the plan was cancelled.

Delhi has introduced several national housing initiatives since the failure of the resettlement colonies program. The *2021 Delhi Master Plan*, drafted by the Delhi Development Authority, envisions Delhi as a global metropolis and world-class city. Among other improvements, the plan attempts to address the challenge of population growth due to rural-to-urban migration, slums, adequate infrastructure, services and more. Incorporated into the *2021 Delhi Master Plan* is the national “Slum Free City Plan of Action” (SFCPoA), initiated in 2010. The SFCPoA, initiated by India’s Ministry of Housing and Urban Poverty Alleviation, emphasizes private sector participation, cost recovery and use of market mechanisms.<sup>11</sup> It includes a program called *Rajiv Awas Yojana* (RAY), the objectives of which are:

- 1 Bringing existing slums into this system and giving the same level of basic amenities as the rest of the town,

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<sup>11</sup> Einar Braathen, “Addressing Sub-Standard Settlements Policy Brief.”

- 2 Redressing the failures of the formal system that lie behind the creation of slums, and;
- 3 Tackling the shortages of urban land and housing that keep shelter out of reach of the urban poor

An important aspect of RAY is security of tenure through entitlement, in which monies are made available from the Central Bank to give slum dwellers access to affordable units to which they have title. Providing people with a mechanism through which to own their homes will promote inclusive cities.<sup>12</sup>

RAY includes the provision that “slum dwellers are given property rights for the location they reside in, instead of being shifted to other distant regions.”<sup>13</sup> As such, the program includes in-situ rehabilitation where residents of informal developments are provided with properly built houses, and proper sanitation and water on the land they occupy. Provisions are also made for schools, health facilities, and market places around the housing complex. The program explicitly prohibits the relocation of slum dwellers to other places – which poses challenges where the density of existing settlements is high.<sup>14</sup>

In 2007, the Delhi Development Authority (DDA) adopted the SFCPoA standards, agreeing to in-situ slum rehabilitation as the most effective way to eradicate slum living. In-situ slum rehabilitation includes provisions for the temporary relocation of residents while the site is being redeveloped. The guidelines estimate that construction of replacement housing could take up to two years to complete, during which time residents would be accommodated in a transit camp.

The Kathputli Colony was chosen by the DDA as a pilot project and poster child for a “Slum-Free Delhi.” The colony qualified because it was classified as a JJ cluster – an informal development under the category of a slum or shantytown.<sup>15</sup> – and occupied a site which was likely to attract private-sector interest. Ongoing expansion and investment

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<sup>12</sup> Government of India, “Rajiv Awas Yojana: Guidelines for Slum-Free City Planning.”

<sup>13</sup> Sadafut Tauhid, “Kathputli Colony: The Illusion of Rehabilitation.”

<sup>14</sup> Chandana Das Simpreet and Raju Bhise, “Slum Free India: Myths and Realities (A Status Report on Rajiv Awas Yojana).”

<sup>15</sup> See Appendix A – Informal Settlements

in roads and subway infrastructure have made the Shadipur neighborhood significantly more accessible than it once was. Large-scale investments in infrastructure – such as the subway line serving Shadipur – are frequently offset by increased tax revenue from properties that benefit from that investment. Being underserved by water and sewer infrastructure, the Kathputli Colony could also pose health risks to the inhabitants of other nearby properties that were also ripe for re-development.

## THE DDA AND RAHEJA DEVELOPERS PLAN FOR REDEVELOPMENT

*"This transition to the transit camp has given us a change of lifestyle," Mr. Bhat said. He went on to observe that he noticed when people realize that amenities like toilets, and running water are provided, they interact with the environment differently. It may be the first step in learning how to live in environments where it is not acceptable to toss trash out windows for the street sweepers to clear. Life in the transit camp was recasting relationships between people; they were learning how to keep their belongings in their houses and so as not to disturb neighbors. By adapting to the transit camp families were slowly becoming prepared for their future life in apartment buildings. I thought of it as a trade-off: they lose some of their culture and tradition in exchange for sanitation and resources. Puran Bhat doesn't seem to see it as an absolute trade-off, he has adjusted to the transit camp and is hopeful a similar adjustment will happen in the high-rises.*

The Delhi Development Authority (DDA) staged a Request for Proposal (RFP) for the redevelopment of the Kathputli Colony in 2008, and the project was awarded to Raheja Developers. In 2009, a public-private partnership (PPP) was created between the private-sector developer, Raheja, and the DDA. It was agreed that Raheja would be in sole control of the in-situ rehabilitation process. This enabled the developer to propose market-oriented, private sector housing on a portion of the site in exchange for constructing 2800 replacement units for the people of Kathputli Colony.

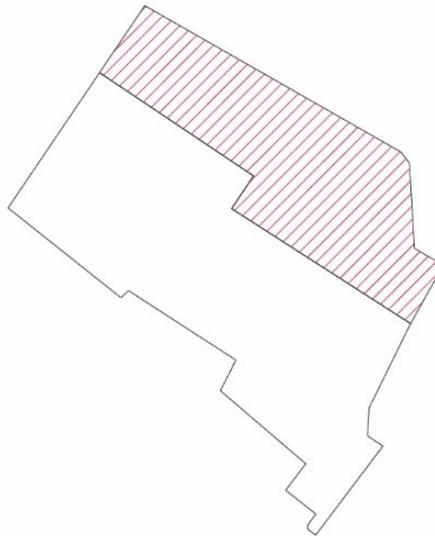


Figure 6: Area designated for private sector development.

Along Patel Road would be a private sector tower called the Raheja Phoenix, also known as Navin Minar, planned to be the capital's first skyscraper at a height of 190m, with 54 floors.<sup>16</sup> The high-end residents and the surrounding neighbourhood would also have immediate access to a commercial complex to be constructed on the site.



**Figure 7: Raheja Developer's private sector tower, Raheja Phoenix**  
Future project, The Navin Minar, by Raheja Developers, digital image, UGCC BURGUNDY, September 21, 2013, accessed April 2, 2017, <https://paramountsi20.wordpress.com/2013/09/21/raheja-developers-navin-minar-new-delhi-9818387802/>.

While the parcel was under redevelopment, temporary accommodations for residents would be made available at a transit camp constructed by the developer, located about a kilometer away at Anand Parbat.<sup>17</sup> In the period between 2014 and 2016 some 500 of the colony's 2800 households moved to the transit camp. In December 2016, after a contract was signed with community representatives, increased pressure was exerted to encourage the remaining families to relocate.

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<sup>16</sup> Banerjeel, "Will Low-Rise Delhi Take to High Living?"

<sup>17</sup> "Petition: W.P.(C) 1290/2014 and CM APPL. 3834/2014."

The process of evacuating homes and shifting residents to the transit camp has been carried out with the help of the police and paramilitary forces.<sup>18</sup> While it was hoped that families would relocate to the transit camp on their own volition, this did not happen. After a few attempts at forced eviction, it was agreed that more time should be given to remaining families to make their own decisions. As of March 2017, all but 500 of the families had relocated.



Figure 8: A view down one of the lanes of housing at the Anand Parbat transit camp.  
Kathputli Colony transit camp at Anand Parbat, Anand Parbat, Delhi, personal photograph by author, February 19, 2017.

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<sup>18</sup> Dey, “With Demolition at the Door of Delhi’s Colony of Puppeteers, 300 Policemen Keep Watch.”

## RAHEJA DEVELOPERS REDEVELOPMENT PROPOSAL

*After visiting the Kathputli Colony, Professors Gianni, Bonier, Mysore and I took an autorickshaw to the transit camp at Anand Parbat. We met with Mr. Bhat at the front gates, and were led through the camp to meet with the developers. We were directed into a makeshift portable office and introduced to Mr. Raheja himself. In between chai and cake, we attempted to pitch my design to Mr. Raheja, to get his opinion of it.*

Of the total site area of 5.2 hectares, 1.9 hectares (or about 36%) was divided off for private sector development with the remaining 3.35 hectares was designated for replacement housing and a school.

- The current plans for the replacement housing consist of a network of connected 15-storey apartment slabs with a total of 2800 units, each at approximately 330 ft<sup>2</sup> or 30.5m<sup>2</sup> (20' x 20' – including veranda)<sup>19</sup> In units alone this amounts to 103,600m<sup>2</sup>. Grossed up for circulation, this amounts to a least 125,000m<sup>2</sup>, assuming a double-loaded corridor configuration.

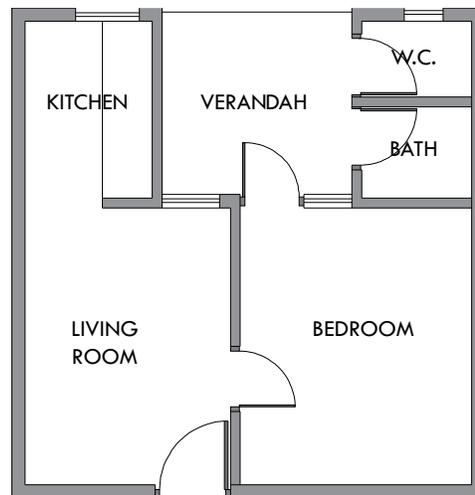


Figure 9: Typical Layout of a unit in Raheja's redevelopment "Details of Dimensions of a Typical Flat," digital image, Towards a Slum Free Delhi, accessed December 2, 2016, <http://www.kathputlicolonydda.com/proposed-units.asp>.

<sup>19</sup> Kathputli Colony DDA, Proposed In-Situ EWS.

Open spaces between the buildings, together, comprise an area of about 9600 m<sup>2</sup>, not including roads. This constitutes about 30% of the gross buildable area. Open spaces are divided into:

- Two large (30 m x 90 m) spaces between tower blocks; two smaller spaces between tower blocks (30 x 50 and 30 x 40); one triangular space (approx. 1500 m<sup>2</sup>).
- As the building sits up on *piloti*, the spaces under the building at grade are available for parking, and “art and craft display area and services.” 14 cores connect spaces at grade with upper levels.
- School: 3674 m<sup>2</sup>.
- Community garden plots.
- Two outbuildings containing: health center, police post, multi-purpose hall, “basti vikas” (shelter board office), and religious space.
- Roads:
  - 9 m. setback around the perimeter of the community (mostly used as a road) – east, west and south side of site.
  - 6 m. wide road along north side of site (separating Kathputli community from Raheja development).
  - 6 m wide fire lanes around all buildings.

Further examination of the site plan indicates that Raheja Developers did not provide a connection to the MCD Park, Kalakar Trust or the workshop, buildings located on the south-west edge of the site – nor has a connection been made to Shadipur road south of the site (the road currently runs through the centre of the community). The Workshop refers to a Bhule Bisere association run by the artists of the Kathputli Colony while MCD is the government department that handles the municipal infrastructure such as streets and water connections. These facilities are actively involved with the Kathputli community.<sup>20</sup> Also, the elimination of Shadipur Road would cut off cross-site circulation through the community.

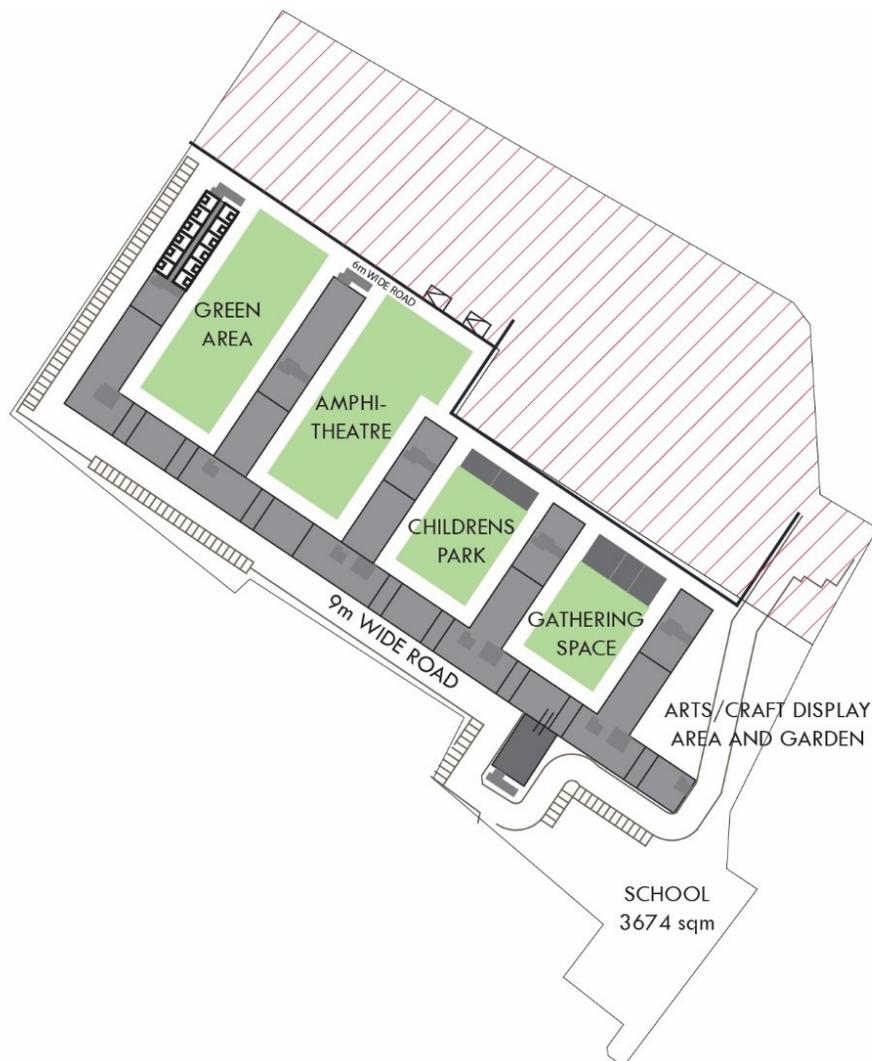


Figure 10: Raheja Developer's Proposal for the re-housing of the Kathputli Colony "Layout Plans of Proposed EWS UNITS," digital image, Towards a Slum Free Delhi, accessed December 2, 2016, <http://www.kathputlicolonydda.com/proposed-units.asp>.

<sup>20</sup> Martine Palmer, "Re: Kathputli Colony - Architecture Thesis Project."

## CHAPTER 2: ISSUES AND DEBATES

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### REACTIONS FROM THE COMMUNITY

*The Kathputli Colony is in limbo. 14-15,000 people have already moved, while 800-1000 families have not yet registered for the Raheja project and have not moved to the transit camp. This process has fragmented the colony and many different voices have spoken out about the redevelopment project. Every day Mr. Bhat and a few others visit the Kathputli Colony, speaking to the remaining families about the positive aspects of Raheja's redevelopment project. It has sapped their energy, emotionally and physically. However, they keep coming back to these families, to give them peace of mind. They tell them to visit the camp, instead of staying at home and listening to the rumors. Many people, like Mr. Bhat's brother, do not want to move because they have developed a high standing in the society of the Kathputli Colony. It would be difficult for him to step down and lose his status. However, Puran Bhat knows it will all take time.*

Redevelopment plans for the Kathputli Colony have raised a range of concerns – a number of which were outlined in a legal brief filed by the community in 2014.<sup>21</sup> Among the points of contention was the number of replacement units that Raheja had agreed to provide. The community argued that the number was insufficient, as a result of an incomplete enumeration on the part of the DDA and because the official list of households was never made available to the community for verification. Similarly, no provisions had been made for these missing households in the transit camp, nor have mechanisms been provided for “omitted” families to file grievances. Above and beyond the number of units, the community also contended that insufficient facilities had been provided at the transit camp.<sup>22</sup>

The design of the replacement housing was also raised as an issue. The community was concerned that the redevelopment proposal did “not take into consideration the needs of the residents of the area, who have peculiar requirements in view of the nature of vocations...”<sup>23</sup> Residents requested “assurance that the project is executed in such a manner that sufficient

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<sup>21</sup> “Petition: W.P.(C) 1290/2014 and CM APPL. 3834/2014.”

<sup>22</sup> Ashish Gupta and Manjit, “Kathputli Colony at Receiving End.”

<sup>23</sup> “Petition: W.P.(C) 1290/2014 and CM APPL. 3834/2014.”

space is made available for them to undertake the unique character of their vocation and display their skills for earning a livelihood.”<sup>24</sup> Included were “common facilities, multipurpose hall, auditorium and other utilities...”<sup>25</sup> The community contended that DDA and the developer had “not adhered to the development norms stipulated in the Delhi Master Plan 2021.”<sup>26</sup>

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<sup>24</sup> “Petition: W.P.(C) 1290/2014 and CM APPL. 3834/2014.”

<sup>25</sup> *Ibid.*

<sup>26</sup> *Ibid.*

## THE CHALLENGE OF DIFFERENT VOICES

### कठपुतली [kathputli]

1. hindi: a story puppet; a traditional wooden marionette, hand-crafted and decorated in long skirts without legs or feet. Kathputli puppeteers work in nomadic communities, sharing their stories of kings and heroes from village to village.

*Puran Bhat led us to the unit in the transit camp into which he and his family had moved three months earlier. We sat outside, next to the single room his family shares, drinking chai and discussing our meeting with Mr. Raheja. The vivacity and scenes at the transit camp were surprisingly reminiscent of those in the remaining colony, even stronger. People had set up shops projecting from the front of their units and there was minimal garbage in the streets. It appeared that colony members had adapted extremely well to their temporary homes.*

*Mr. Bhat's 14-year-old nephew Varun, accompanied us through the transit camp as we were leaving. We talked about school and how well he spoke English, and his puppeteering. Varun has been practicing the traditional kathputli skills under the guidance of Mr. Bhat since he was young, and loves it. He recently accompanied him on a trip to Australia for a performance, and is excited to continue his passion.*

However influential, Puran Bhat is only one of a number of senior community members. Others have different ideas about what they want for themselves and their families. The President of the Artists Cooperative “Bhule Bisne” and leader of the Kathputli Colony’s resistance group, Dilip Bhatt, is adamant about maintaining the status quo. He has refused to relocate to the transit camp and is fighting the demolition of what remains of the colony. He has criticized Raheja’s bank of 14-story high-rises, stating “There is no space for anything, like animals in a cage. Misery for an artist, the artist’s work will stop and we will become beggars.”<sup>27</sup>



Figure 11: A model of the apartment buildings that will be built to house the Kathputli Colony, Kathputli Colony, Delhi, personal photograph by author, February 19, 2017.

<sup>27</sup> Subiela Stéphane, My Gypsy Colony.

Younger members of the community also have their own ideas and perspectives on the redevelopment. Maya Pawar, an acrobat who was born and raised in the Kathputli Colony, was featured in the documentary *Tomorrow We Disappear*. She stated:

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“I am proud to live in an artist colony.... But I have many dreams, and I don’t know if they’ll come true. I think we should be allotted flats. Everyone would get a new life, but people here are not forward thinking. Living like this, an artist has no identity. Maybe if we had a proper house, there’d be a sign outside. And people would know, ‘Yes, this is an artist’s colony.’ ...The world is moving fast and we need to keep up with it.”<sup>28</sup>

Also featured in *Tomorrow we Disappear*, Puran Bhat states:

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“But those flats aren’t a place for us to live. They’re a place for us to die. Because there in the flats, all of my dreams, all I want to learn and do, will go away. Our art is already half-dead. What’s left, that will die off too. ... All we want is for you to remember us, to keep our art alive.” ... “What do I wish for my family? Do whatever you want. Get a normal job, work in an office, do whatever you want. Just don’t forget your art and culture. Don’t forget who we are.”<sup>29</sup>

A developed critique of Raheja’s design can assist in the formation of viable criteria that can be used for developing a new design that better suits the Kathputli Colony. The residents would have ownership, although the ability to modify the units is unknown. This leads to the issue of how compatible the units are with the lifestyle and work culture of an artist. Workshops and storage for large puppets and instruments are not provided.<sup>30</sup> High-rise living is not appropriate for the Kathputli Colony. It will severely compromise their ability to support and continue their traditional lifestyle. Also, the large, open spaces

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<sup>28</sup> Jimmy Goldblum and Adam M. Weber, TWD.

<sup>29</sup> Ibid.

<sup>30</sup> <http://www.indiaresists.com/save-kathputli-colony/>

in the Raheja site plan, will be difficult to use and patrol. They are of a very different grain and type than the spaces in the existing colony.

## THE DDA AND DEVELOPER'S RESPONSE: RAHEJA'S VOICE

*On the south edge of the Kathputli Colony tents have been set up to display models of Raheja's proposed redevelopment. Representatives from the DDA staff arranged this ad-hoc showroom to persuade community hold-outs to join the program. Elsewhere in the tent men in suits, presumably lawyers, wait to meet with the colony members they represent. Others sit at cubicles equipped with fingerprint scanners.*

Since 2009 Raheja and the DDA have been attempting to move the project forward. Efforts to forcibly remove residents from their homes created a backlash and stoked suspicion and mistrust of the developers. Puran Bhat and others protested that “we are people too,” calling for patience and an incremental, voluntary relocation of families from the colony to the transit camp. They reinforced the need to raise awareness and understanding within the community of both the project and the process. While security forces remained on site, their role shifted from intervening to keeping the peace. The DDA now maintains an onsite office, where a large model of the development is on display.



Figure 12: A view of the Kathputli Colony looking down Shadipur Road, Kathputli Colony, Delhi, personal photograph by author, February 19, 2017.

In response to the legal brief filed in 2014 by the Kathputli Colony<sup>31</sup>:

- 1 Names of households have now been posted and a mechanism has now been set up to file grievances.
- 2 Residents have been furnished with plans for the proposed redevelopment and residents “are at liberty to examine the same and submit their suggestions for making the common facilities and common areas more compatible to their needs, but within the scope of the plans as approved by the DUAC.”<sup>32</sup>
- 3 In tandem with the developer, the DDA agreed to review and respond to assertions that there are missing and/or insufficient facilities for the community in the transit camp “so that the stay of the relocated households at the transit camp can be made as comfortable as is possible.”<sup>33</sup>
- 4 Concerns were raised by the DDA and Raheja Developers about the degree to which the petitioners – those who filed the legal grievance on behalf of the Colony – represented the community, whose composition is somewhat diverse. As such, it was not clear whether agreements and concessions made by the DDA/Developer because of the legal action would be recognized/respected by the rest of the community.
- 5 The DDA/Developer contented that no coercion had been deployed to get residents to move to the transit camp. It was noted, however, that refusal of community members to voluntarily relocate could bring “the entire project to a grinding halt,”<sup>34</sup> and that the developer had already made a significant investment in setting up the transit camp.

Raheja’s proposal for the redevelopment of the site, including the design of the replacement housing, has not been sufficiently modified to suit the colony’s needs and aspirations. As documented in the films *My Gypsy Colony* and *Tomorrow We Disappear*, Puran Bhat’s vision for a perfect colony was for a low-scale design with units organized around a shared courtyard. The communal courtyard where cooking, practicing and art-

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<sup>31</sup> Authority of High Court of Delhi, “Indian Law Reports Delhi Series 2014.”

<sup>32</sup> *Ibid*, 122.

<sup>33</sup> *Ibid*, 219.

<sup>34</sup> Authority of High Court of Delhi, “Indian Law Reports Delhi Series 2014.”

making happens would be no more in Raheja's high-rise redevelopment. This thesis explores alternative approaches to the redesign of the Kathputli Colony.

## IDENTIFICATION OF THREE APPROACHES

Delhi has swallowed the Kathputli Colony, transforming it into prime real estate. Given the virtual inevitability of the redevelopment of the site, it is important to consider alternative approaches – drawing on several precedents.

### APPROACH 1

#### **Stay on the site and occupy the entire site.**

This would be the most ideal outcome for the Kathputli Colony, namely being able to stay on the site without having to share it with private development. This approach, however, poses economic challenges since private sector funding could not be leveraged to offset the cost of redevelopment nor could the city harvest as much tax revenue from the site as if it were shared with wealthy condo dwellers. It also increases the complexity of the project since the city or the DDA, not a third-party-private developer, would need to take the lead in the reconstruction.

Continuing to occupy the entire site accommodates a range of redevelopment options, including low-rise, courtyard-oriented housing similar in scale and spirit to the grain of the self-built housing the community currently occupies.

Precedents for this approach include:

Sheikh Sarai Complex

The Sheikh Sarai Complex, in the south of Delhi, was built for medium and low-income groups. Completed in 1982, the complex was designed by architect Raj Rewal for the Delhi Development Authority. As one of the first planned re-developments of an existing squatter settlement, the complex was intended to upgrade infrastructure and re-distribute density in the area.

At a significantly lower density than the Kathputli Community, Sheikh Sarai comprises 550 units on 14 hectares compared to 2800 units on 5.6 hectares for the Kathputli Colony. The Complex incorporates six different types of units ranging in area from 70 to 120m<sup>2</sup>, and in height from 3 and 4 stories. The design was inspired by traditional Indian domestic architecture and includes terraces for each unit.

A Self-Financing-Scheme was used to fund the project. This allowed the DDA to create a mix of units and make the project more economically viable. Local materials were also used to bring the cost of the project down. The concrete post and beam structure with plaster covered brick infill gave the residents flexibility to modify as well.<sup>35</sup>



Figure 13: *Sheikh Sarai Housing* by Raj Rewal , 1982, New Delhi, in *Raj Rewal Associates*, <http://www.rajrewal.org/projects/housing-sheikh-sarai.htm>.

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<sup>35</sup> “Sheikh Sarai Housing, New Delhi, India.”

## APPROACH 2

### **Stay on site but share it with private sector development.**

Using this strategy, the city can transfer both a portion of the cost and overall responsibility for the redevelopment (design, construction, etc.) to a third-party in exchange for access land on which to construct for-profit housing. Among the many challenges with this approach, however, includes the amount of land available. Sharing the site with a private-sector developer means the community, which is already dense by any standard, will become even denser. The colony's 20,000 residents will be squeezed into an even smaller parcel of land. The current redevelopment plan reduces the land available to the colony from 5.2 to 3.25 hectares. As such, residents must be accommodated at a density of 860 units per gross hectare (350 UPA). Densities like this make high-rise solutions unavoidable.

Accepting the inevitability of high-rises, it is possible to identify several ideological positions. The first – as adopted by Raheja – would be to design the housing to be as generic and market-friendly as possible. Market-friendliness describes the degree to which different units can be easily traded on the marketplace, and to which lending institutions deem individual units to mortgage-able at competitive rates and percentages. According to this point of view the community's values and ways of living will inevitably change along with the structure of the community. As property owners, they will transition into the middle class. While older colony members may wish to continue to survive as puppeteers and street performers, the values and aspirations of the young are likely elsewhere. Title to market-friendly units will increase the number of options open to the younger generation.

By contrast, the second approach would be to “customize” the design of the high-rises to better sustain the unique character of the community. Here generic “market-friendliness” may be less important than features that mitigate the trauma of moving to high rises – assuming such units can meet all applicable standards and codes.

Attempts to customize the design of high-rise housing include:

Taru Ruchi

Architecture student Taru Ruchi explored this approach in her thesis “Kathputli Village - Redeveloping an Artists Colony: A Slum Rehabilitation Project,” completed in 2010. Ruchi used the DDA requirements as a loose framework for her design, adapting it to better suit the community. The site included 14-storey buildings elevated on stilts, a tourist centre, art gallery, craft bazaar, cultural centre and shopping complex. Shared balconies and niches were extended from the exterior corridors that connect all the units on each level. These spaces were intended to be used as work and practice spaces for the community. Ruchi has kept space for Raheja’s private development plans of a shopping mall and residential tower.<sup>36</sup>



Figure 14: Axonometric of Taru Ruchi's proposal for the Kathputli Colony, digital image, Archiprix, 2013, accessed January 3, 2017, <https://www.archiprix.org/2017/?project=3263>.



Figure 15: Taru Ruchi's masterplan, with space for private development, digital image, Archiprix, 2013, accessed January 3, 2017, <https://www.archiprix.org/2017/?project=3263>.

<sup>36</sup> Taru Ruchi, “Kathputli Village - Redeveloping an Artists Colony: A Slum Rehabilitation Project.”

Vishal Dhingra

Like Taru Ruchi, Vishal Dhingra undertook the redesign of the Kathputli Colony as a thesis project at the University of Delhi. Entitled “Sustainable Livelihood Design for Kathputli Colony,” Dhingra proposed 7 to 9-storey buildings elevated on stilts. As in both the Raheja and the Ruchi proposals, the open ground level was intended be used for shops and circulation. The project includes workshops, a learning centre, eateries, flea markets, a connection to the metro line and community parks. Open, gallery access (single-loaded) corridors connect all the units, converging at certain areas to create wider spaces that function as elevated courtyards. The retail areas are modular forms created with local materials such as bamboo, tires and steel scraps.<sup>37</sup> Unlike Ruchi, Dhingra only provides commercial areas to be used by the community as a means of income to fund the project, versus reserving space on the parcel for a private development.



**Figure 16: Vishal Dhingra's proposal for the Kathputli Colony, digital image, Sustainable livelihood design for Kathputli Colony, [https://issuu.com/dhingravishal/docs/undergraduate\\_thesis](https://issuu.com/dhingravishal/docs/undergraduate_thesis).**

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<sup>37</sup> Dhingra, “Sustainable Livelihood Design for Kathputli Colony: An Undergraduate Thesis.”

### APPROACH 3

#### **Relocate the community to a different parcel of land.**

The location of the Kathputli Colony is both an asset and a liability. Were it not so convenient to central Delhi and were the site not immediately adjacent to the Shadipur metro station, it may not be under the same pressure to redevelop. Given this pressure, however, the community's high population density poses severe challenges. It has been put in the unenviable position of having to choose between being pressed into housing that threatens its survival as a community, and moving elsewhere – presumably to a larger, less convenient parcel on the far periphery. It bears noting that even staying put requires relocating. Already some members of the Kathputli community have been living in the transit camp for five years. And even if the holdouts agree to relocate tomorrow, it is unlikely the redevelopment would be ready to move in to before 2020.

The advantages of in-situ redevelopment – which is required under current law – must be balanced against the opportunities associated with relocation, namely access to a larger parcel of land on which it is possible to support housing that better sustains the identity and aspirations of the colony. In many ways having to move only once – to more suitable housing in a less favorable location – is better than having to move twice only to be housed “like animals in a cage.”

In whatever permutation, the redevelopment process will severely test the resilience of the Kathputli Colony. That said, the community's success in adapting to life in the transit camp, suggests that the form of the community may be more important than the location. Dwelling units in the transit camp are street-oriented and only two stories high.

Precedents for relocation include:

Savda Ghevra

Savda Ghevra is the largest resettlement colony in metropolitan Delhi. It was developed by the Delhi Urban Shelter Improvement Board and is located approximately 40km west of New Delhi, with resettlement starting in 2006.<sup>38</sup> Currently 42,000 people comprising of 8500 families live in plots allocated by the Municipal Corporation of Delhi (MCD). Savda Ghevra was created to re-house slum occupants evicted from their inner-city communities, those in the Economically Weaker Section (EWS), for the preparation of the Commonwealth Games in September 2010.<sup>39</sup>

Residents were offered simple relocation on semi-serviced blocks with plots allocated on the basis of eligibility: 18m<sup>2</sup> to squatter families who could demonstrate having lived in Delhi prior to 1990, and 12.5m<sup>2</sup> to families who settled in Delhi from January 1990 to December 1998.<sup>40</sup> Housing units are organized into rows and are attached on three sides with neighbouring properties. The result is an “urbanity of uniformity,” in contrast to the “spontaneous traditional development associated with illegal slums where the morphology responds to the pre-existing landscape, urban boundaries and thresholds.”<sup>41</sup>



**Figure 17: Savda Ghevra**  
Julia King, *Savda Ghevra*, digital image, *Architecture in Development*, <http://architectureindevelopment.org/news.php?id=71>.

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<sup>38</sup> Siddharth Pandey, “Savda Ghevra.”

<sup>39</sup> Julia King, “Unthinking Housing for the Urban Poor.”

<sup>40</sup> *Ibid.*

<sup>41</sup> *Ibid.*

There is a vast amount of undeveloped capacity in Savda Ghevra. This reflects massive financial losses due to the process of resettlement, the high personal cost of building a multi-storey *pukka*<sup>42</sup> house, short term leases, and the lack of job opportunities on the far periphery.<sup>43</sup> Local contractors have now taken the initiative to help design and construct housing that is structurally safe, technically sound, economical and capable of being built incrementally. Structures resemble Le Corbusier's Maison Domino, having only structural columns and slabs, which can be filled in over time. Being able to use non-loadbearing brick to create rooms substantially reduces the cost of incremental build-out.



Figure 18: A picture of a typical *pukka* house in the Kathputli Colony, Kathputli Colony, personal photograph by author, February 19, 2017.

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<sup>42</sup> A *pukka* refers to the final and permanent stage of housing that has been built in increments. It is made with concrete and load-bearing brick walls and proper roofs. Future additions to these houses are upper levels and terraces.

<sup>43</sup> Julia King, "Unthinking Housing for the Urban Poor."

## REFLECTION ON THE UNIQUENESS OF THE KATHPUTLI COLONY SITE AND PROJECT

*Mr. Bhat and other colony members have started to accept and prepare for their new lives in Raheja's 14-story housing slabs. They are already discussing how to divide up the spaces between the buildings at grade, and what they will use as performance areas. They discuss how to plan their time: working all day and hosting large productions in the evenings. Delhi citizens and tourists would buy tickets to experience the art of the Kathputli Colony. Puran Bhat hopes to keep their culture and tradition alive so future generations can experience and learn these specialized performance arts.*

The residents of the Kathputli Colony are what distinguish this project from other slum redevelopment projects. Across generations this artist colony has worked together to preserve its traditional art and lifestyle. Without underestimating the value of access to market-friendly housing as a stepping stone to the middle class, this project privileges the colony as a community of artists who are eager to sustain their identity and culture. Other redevelopment projects tend to disregard the way informal settlements were planned and how they function.

The colony has been lumped into the slum-free Delhi scheme. Whether by design or default, Raheja's redesign does not consider the unique aspects of the community. As gypsies, the residents are distinct, and their aspirations differ from those of the middle-class. All my interactions with the community have led me to the conclusion that it desires and deserves to be treated differently, particularly, that the generic redevelopment approach is not the best way forward. The use of their dwellings, and the informal network of knowledge transfer are deeply embedded in the organization of the community.

The colony's status as a cultural resource strongly suggests a different kind of obligation on behalf of the city. While all communities may have grounds to argue

for their uniqueness, the Kathputli Community is truly rare – and endangered.

## CHAPTER 3: PROPOSED DESIGN

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### ASSUMPTIONS

Based on communication with Martine Palmer in the early stages of the research, it was my understanding that the Kathputli Colony 1) was not open to relocating, 2) did not wish to share the site with private development if it meant sacrificing precious space for the colony and, 3) wanted a low-rise redevelopment that respected the existing organization of the settlement. Indeed, this is the position articulated by Puran Bhat in *My Gypsy Colony*. Ms. Palmer, who was in regular contact with Mr. Bhat, indicated that the community was unhappy with the proposals by Taru Ruchi and Vishal Dhingra, which accepted the inevitability of a high-rise solution. For a variety of reasons, the community was not open to compromise.

When he visited Ottawa in February of 2017, however, Mr. Bhat indicated that the community would have considered permanently relocating to the transit camp or another site within a kilometer or two of the existing colony. While the prospect of designing a new community would have been significantly easier on a larger site, I chose to proceed on the assumption the colony would remain where it was, and would occupy the entire site – largely to facilitate the exploration of a low-rise solution.

### PROCESS OF INTERPRETATION DESIGN AS A FORM OF RESEARCH

Reacting to the prospect of being forced into high-rises, Puran Bhat envisioned a “dream” colony that would protect the community’s way of life. Drawings for this community, which he presents in the documentary, *My Gypsy Colony*, show modular 2.5-storey housing organized around shared courtyards – nine units per module. Communal courtyards would be used for open-fire cooking and working while the shared spaces between modules would accommodate circulation, training and informal performances. Mr. Bhat’s

low-rise design emphasized the importance of informal interaction, chance encounters, and connectivity.

Puran Bhat envisioned tent-like roofs over courtyards that could be opened or closed depending on the weather. The use of a tent is interesting since it references the original settlement – which started as a colony of tents – and the fact that gypsies are nomadic. His proposal also included a large, circular cultural centre with two theatres, a school, and workshops. Ramps leading up to the lobby of the theatre encourage visitors to view down into the community to understand and appreciate how it functions.

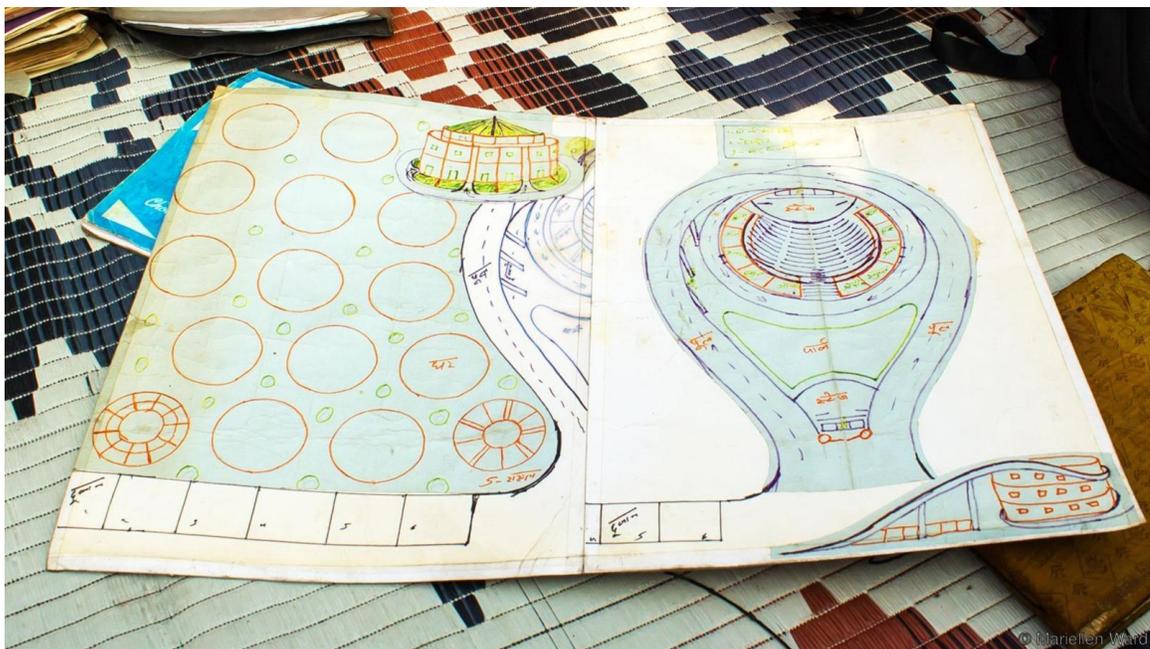


Figure 19: Mariellen Ward, <http://www.bbc.com/travel/story/20151116-the-puppeteer-who-saved-a-slum>, November 26, 2015, Kathputli Colony, Delhi, in BBC, <http://www.bbc.com/travel/story/20151116-the-puppeteer-who-saved-a-slum>.

Puran Bhat's vision for the Kathputli Colony provided the point of departure for my design explorations. As such, I began with a series of analytical exercises to determine if and how low-rise, courtyard-based housing might square with the DDA's unit counts and target square footages per unit. (See Figure 20) As expected, it was immediately apparent that space was extremely tight and that sharing the site with private-sector development would preclude anything but high-rises.

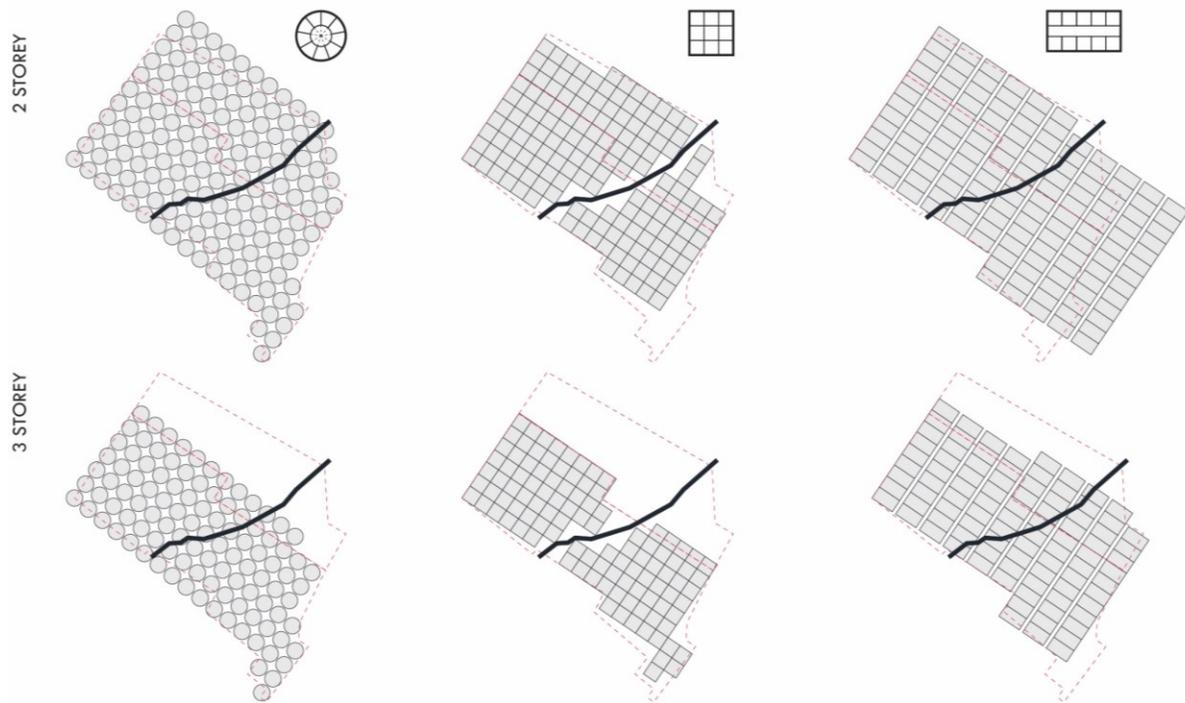


Figure 20: Analysis of how low-rise courtyard-based housing may fit on the site.

At the same time, I attempted to identify other criteria to bring to bear, such as informality and adaptability. Adaptability seemed especially important given the tendency for informal settlements to grow and transform over time. The term “incremental housing”<sup>44</sup> is used to refer to housing that is constructed over an extended period. Residents enclose rooms and add floors as needs change and means permit. Temporary materials give way to permanent ones over the course of time, transforming temporary dwellings into permanent housing. Adaptability and incremental building are essential to the success of informal settlements. As they evolve, shops and workshops can be incorporated into these structures to support economic activity. Portions of dwellings can also be rented out to generate income.<sup>45</sup> Incremental development is very much evident in the Kathputli Colony, where the buildings located in the middle of the colony – the homes of the earliest families to settle on the site some 50 years ago – are now permanent. The numerous multi-level brick houses with terraces and ground-level shops, are signs of a mature informal settlement.

<sup>44</sup> See Appendix B – Incremental Housing.

<sup>45</sup> Julia King, “Unthinking Housing for the Urban Poor.”

## LIMITING STRUCTURES TO 4 STOREYS

The interaction that exists in the Kathputli Colony could not be replicated in a high-rise building, nor do courtyards function well if the buildings around them are high. Limiting the structures to four storeys obviates the need for elevators and encourages movement between units and different modules.

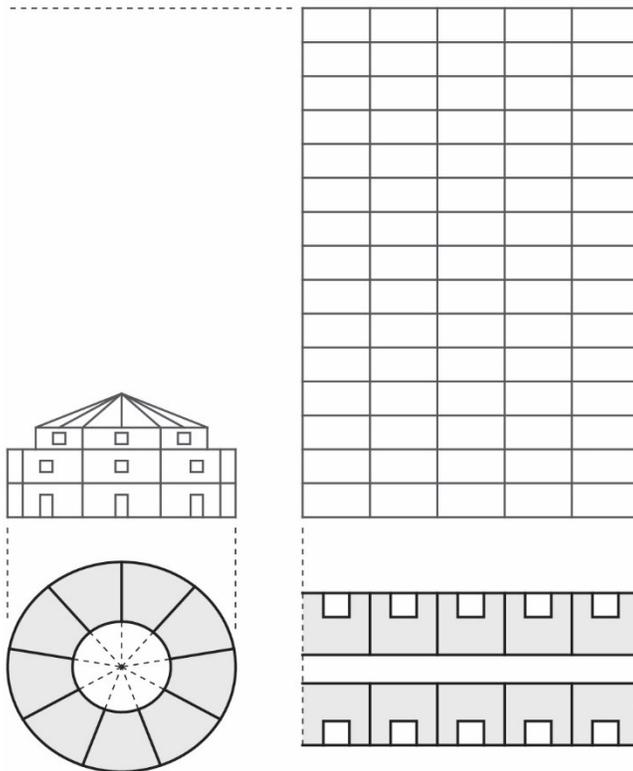


Figure 21: On the left, an interpretation of Puran Bhat's sketch of courtyard housing at 2.5 storeys, in comparison with Raheja developer's proposal on the right of the 14-storey highrise.

## ORGANIZED AROUND COURTYARDS AND FAMILY GROUPS

Traditional Rajasthani housing connects to a central courtyard where women cook and artisans work and practice their craft. Analyzing the nature and hierarchy of spaces between buildings within the Kathputli Colony, I based the general organization on a cluster of homes organized around a courtyard. After exploring a number of permutations, I settled on a pinwheel-type configuration with seven units per floor per courtyard.



Figure 22: Design process of the module.

## DESIGN PROPOSAL

The goal for this design was to:

1. Explore a lower-rise alternative to Raheja's high-rise proposal.
2. Privilege informality and adaptability, both as the scale of the unit and of the community.
  - a. Ability for dwellings to be modified in response to changing family composition, and with respect to the different ethnic and religious origins of residents. Explore housing that better acknowledges the way so-called gypsy populations inhabit dwellings and structure their communities.
  - b. Live-work units that accommodate informal economies.
  - c. Informal (and redundant) circulation routes that promote interaction and encourage chance encounters.
3. Consider community needs, desires, and recommendations.
4. Attempt to accommodate and account for residents that have moved into the Colony since unit targets for the development were first set in 2008.
5. Explicit consideration of the long-term sustainability of the community while working within the political and financial realities of the project.

## CONDITIONS

- Total population: While both household size and the overall population of the community are in flux, the assumption was that each unit would accommodate five people (two adults and three unmarried children).
- Number of units: While the number of households is likely higher (new families have occupied the units vacated by the families that began relocating to the transit camp in 2012), I chose to work with the target of 2800 units established by the DDA. The scheme, however, leaves room for vertical expansion.
- Number of levels: I attempted to stay with three floors, with some expansion to four around larger courtyards. At three levels, there is room for expansion. That said, the overall height must be controlled to allow sunlight to penetrate the smaller courtyards and to avoid the need for elevators.

- Size of unit: 1 settled on an area of 23.5m<sup>2</sup> per unit, using shared space in the courtyard to make up the balance required to reach the target of 30m<sup>2</sup> set by the DDA.
- Types of units: All units are the same size. The proposed concrete frame structural system, infilled with brick and rendered with plaster, will enable families to expand into adjacent units as they come available. All units have cross ventilation and are equipped with private toilets, washing and cooking areas.
- Circulation: Two-way vehicular roads are 6 metres wide, including Shadipur Road, which cuts through the community. Smaller pathways through the site are between 1.5 metres and 3 metres wide.

## FOUR MODULES = A POL

A module consists of three levels with seven units at every level, surrounding a shared courtyard. Two staircases in each module allow access to the upper units and to a common, open-air terrace on the roof.

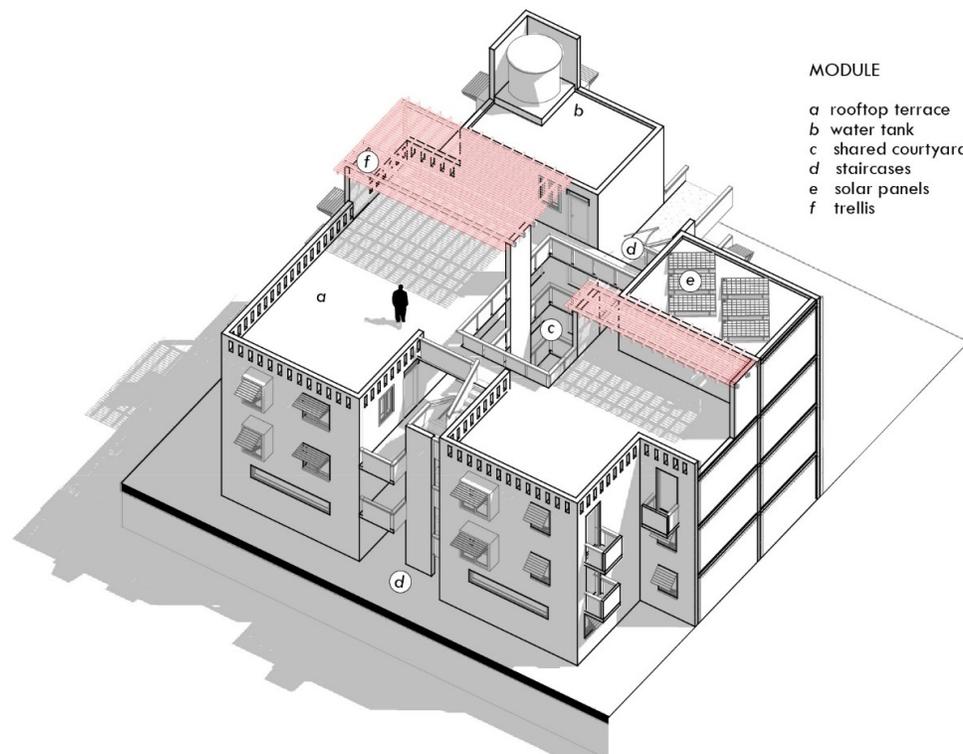


Figure 23: One module with 23 units.

At the next scale modules are mirrored and duplicated to create larger courtyards connecting clusters of four modules. Eight additional units are placed on the fourth level facing this larger courtyard, bringing the total number of units per cluster (or “*pol*”-- see Figure 24) to 92. Shared landings on the staircases facing the larger courtyard connect adjacent modules at each level, as do the roof terraces. This creates continuous circulation between the individual modules that comprise the cluster. The common space associated with each *pol* includes the smaller courtyards (45m<sup>2</sup> each), the larger courtyard (160m<sup>2</sup>) and the rooftops (470m<sup>2</sup>). These exterior spaces compensate for the small size of the interiors, as much of the community’s living happens outdoors. Taking into account common exterior spaces, each of the 92 units in each *pol* has access to 32.3m<sup>2</sup> – or slightly more than the 30m<sup>2</sup> per unit proposed by the DDA.

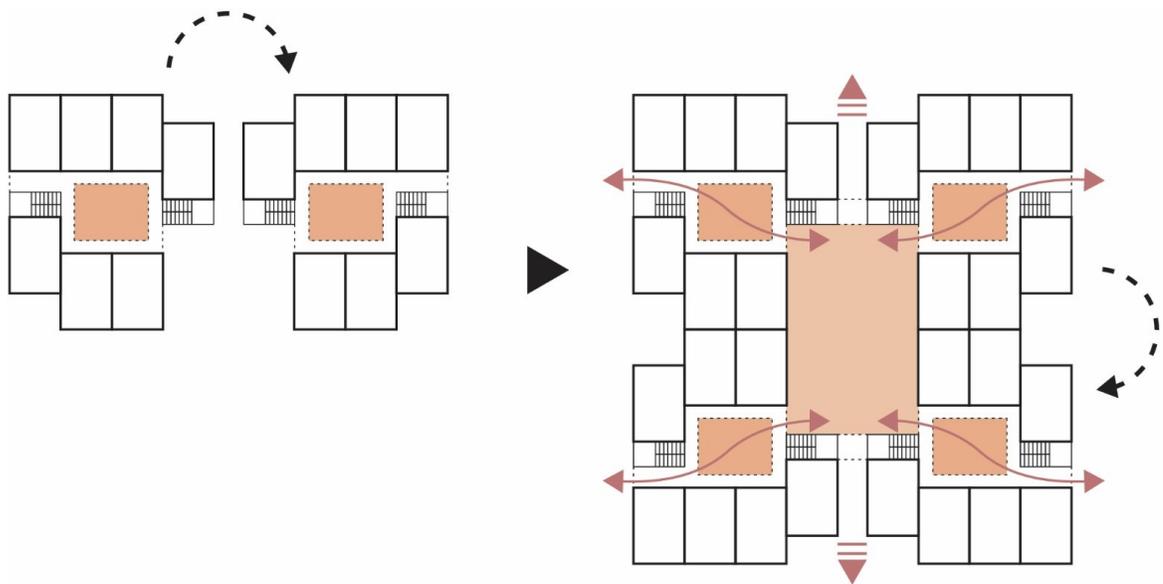


Figure 24: One module contains 23 units, when mirrored and duplicated they create a *pol* of 92 units.

In its current configuration, the Kathputli Colony is organized by different religious or artisan communities, each of which lives in an extended family group or sub-neighborhood. Clusters such as these are traditionally known as “*pols*.” Applying the idea of the *pol* to the redesign of the Kathputli Colony both respects and accommodates the community’s diversity. The 92-unit clusters are similar to the *pols* in the old walled city of Ahmedabad in Gujarat, India.

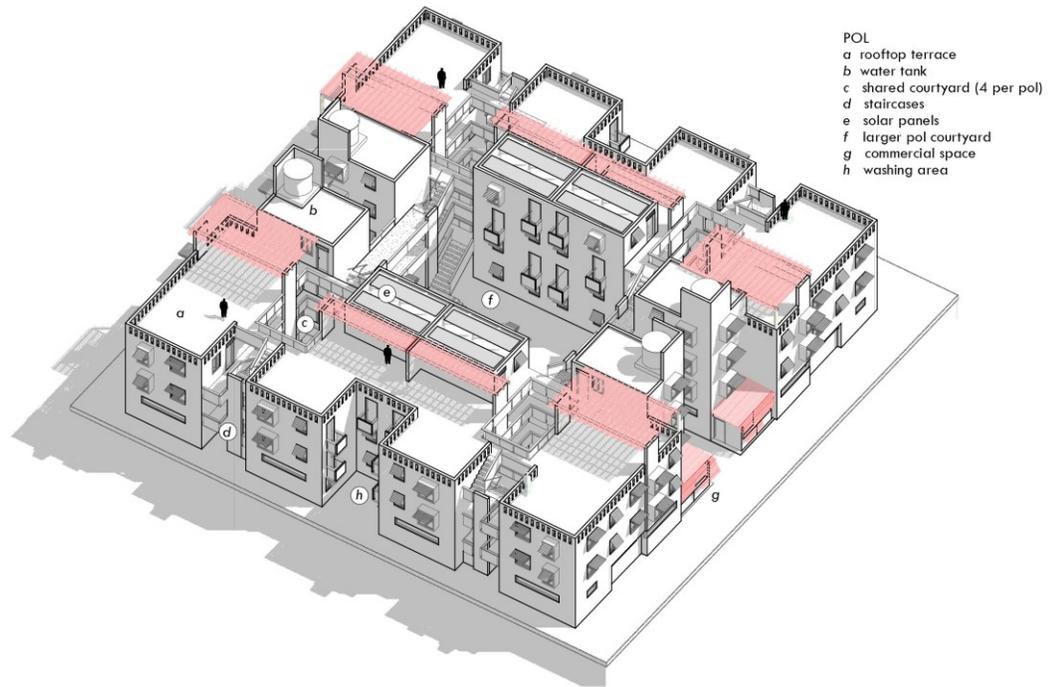


Figure 25: Four modules that create a *pol* with a total of 92 units.

The 5.2-hectare site can accommodate some 24 *pols*, together accounting for 2208 of the 2800 required by the DDA. I have chosen to accommodate the remaining 592 units in 12-storey apartment buildings on the south and western edges of the site. It can be argued that some colony members may want to live in these more generic, more market-friendly buildings, as they provide a change of lifestyle and are equipped with elevators to better accommodate those with mobility issues. I have also set aside a plot of land along Patel Road for a private sector tower. Clusters of market stalls for the community have also be located along the southern portion of Shadipur Road, adjacent to the existing Kalakar Trust community center (see site plan below).



**Figure 26:** Above is a bird's eye view of the pol courtyards. Below is one pol facade that faces the smaller pathways through the site. Niches are created and can be used as washing areas.



Figure 27: Proposed site plan.

The site plan shows Shadipur Road doglegging through the site, linking Patel Road with the extension of Shadipur Road to the southwest. Along the southwest edge is the Kathputli Market, where stalls can be set up for selling crafts and art. A road branches off of Shadipur Road, towards the southeast edge of the site, where it connects to the school and leads out to Narayna Road. The nearby green space of the MCD Park can be used by the colony.

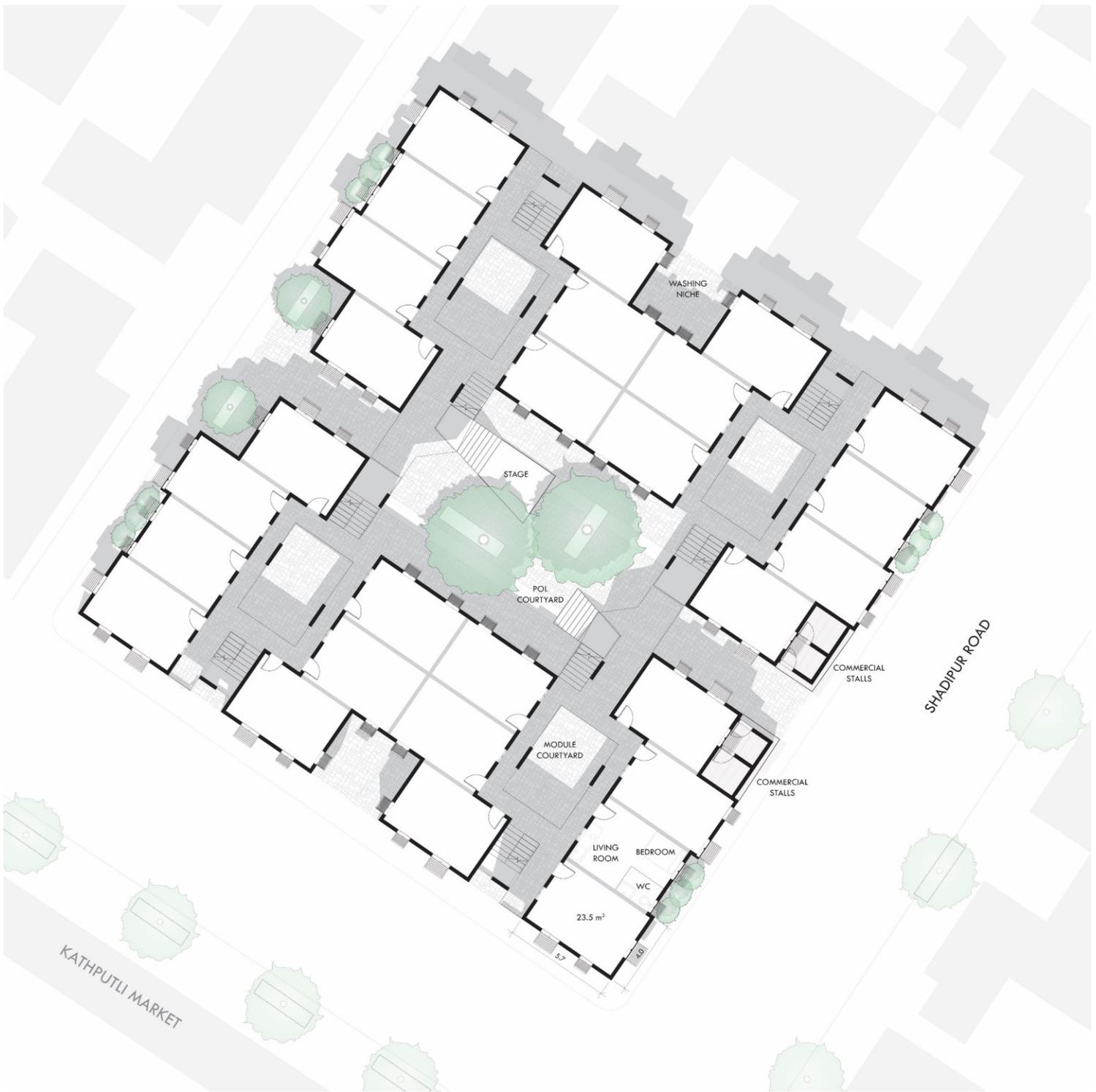


Figure 28: Pol with unit layout.

## A BLANK CANVAS AND EMPTY STRINGS

The proposed structural system consists of a reinforced concrete frame with slabs. Walls and interior partitions will be constructed of brick, rendered with plaster. This system allows for simple modification, as walls can easily be taken down to alter or combine units. This efficient construction method allows for the possibility of community engagement in the construction of buildings. This would help the community come together to decide and discuss collective space and forms of ownership. Ground level units in each *pol* could be used as mosques or temples, while the larger courtyards can function as performance spaces. The irregular footprint of each *pol* creates areas that can be used to wash clothes or sell goods, depending on where they're located. Gaps between the *pol*s create a flexible network of circulation paths of different widths.



Figure 29: Land Use Plan. The left shows an initial organisation of programs, while the plan on the right shows how there can be modifications to change the programs.



Figure 30: On the left is a *pol* consisting of housing. On the right shows a modified *pol*. The ground level of every *pol* can be modified to host a different program such as temples, artist's workshops or schools.

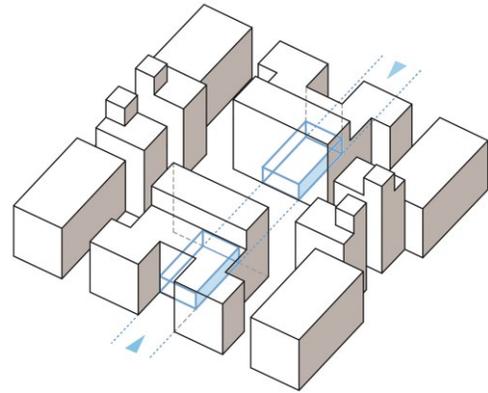


Figure 31: A *pol* that has been modified to host different programs such as a mosque and commercial spaces.

A realigned Shadipur Road, wide enough to accommodate two lanes of traffic plus sidewalks, cuts through the site. Like the existing Shadipur Road it connects Patel Road at the northeast corner with the extension of Shadipur Road to the southwest. Recesses in the buildings facing what will be the primary road through the community can be used to set up stalls for selling goods.

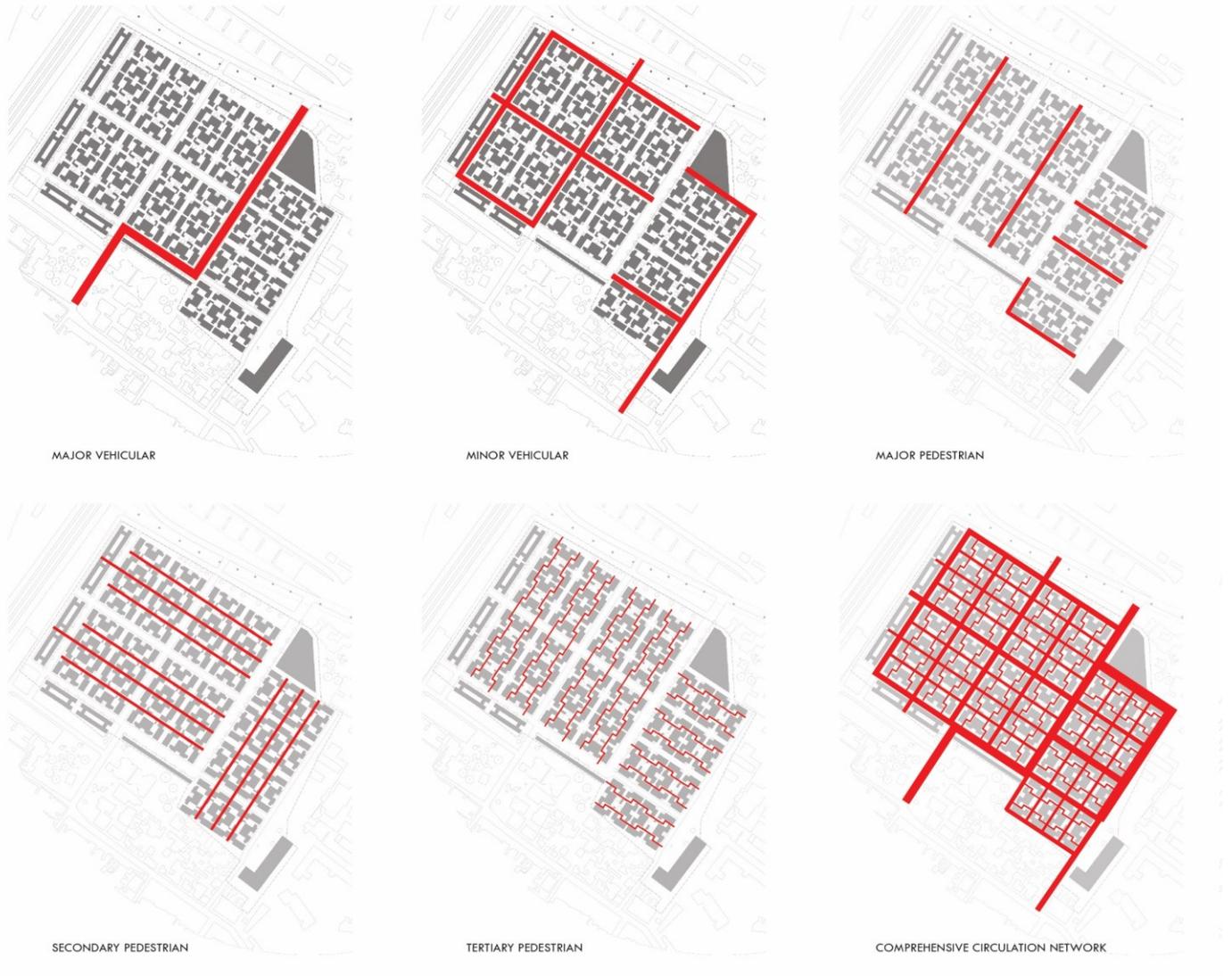
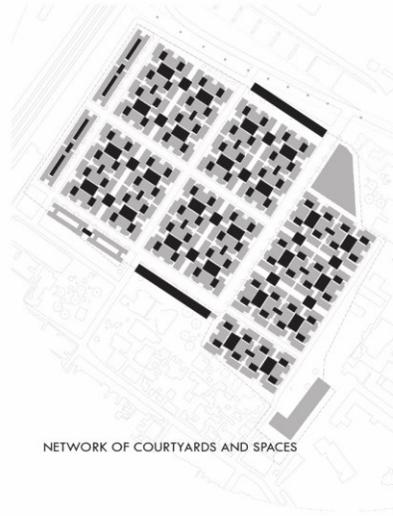
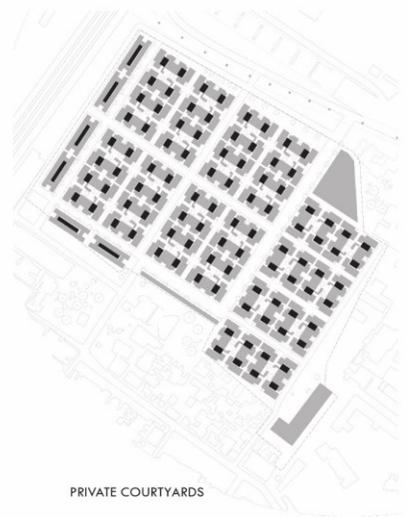
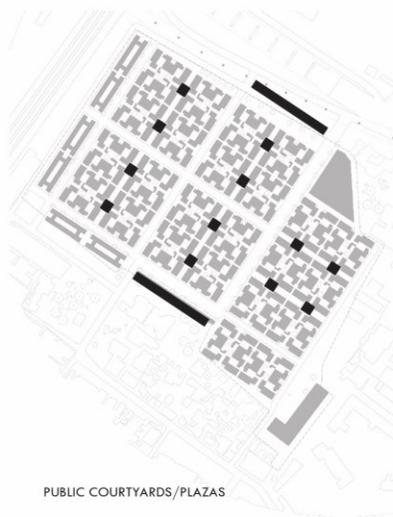


Figure 32: Levels of the circulation network on the site.



**Figure 33: Levels of the open spaces on the site. On the right the image shows a combination of open spaces and circulation network.**





Figure 34: A view into a pol.



Figure 35: Larger pool courtyard.

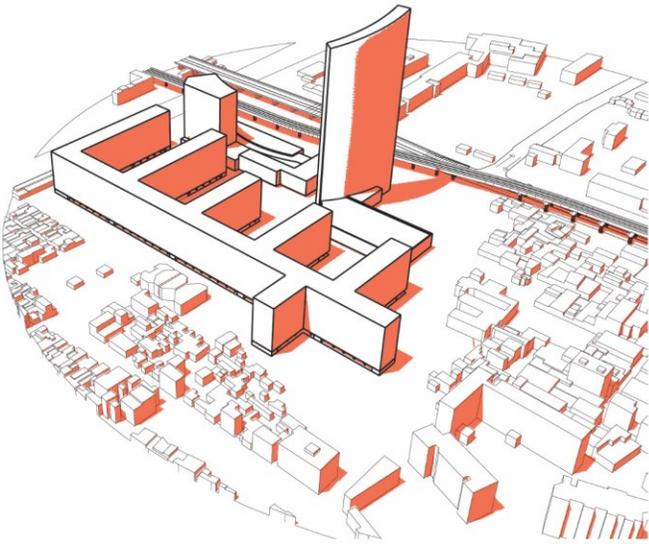


Figure 36: A view down Shadipur Road. On the right side, dotted lines show the possibility of additional levels added onto the units facing the wider road.

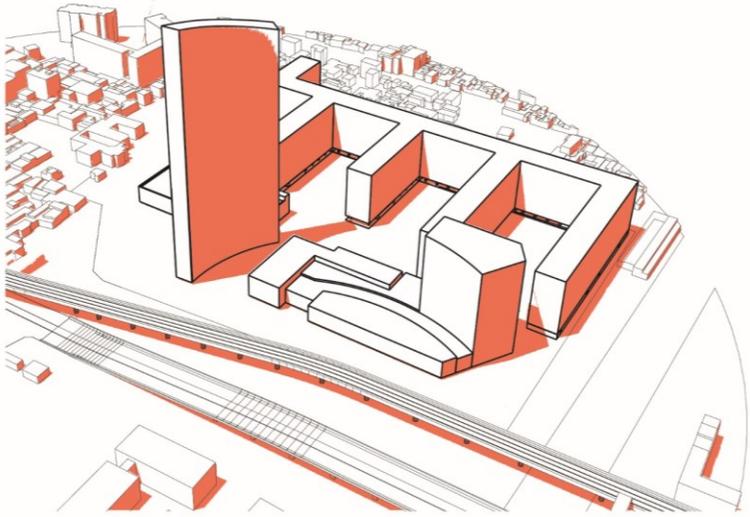
## PERMUTATIONS AND TRADE-OFFS BETWEEN LOW-RISE AND HIGH-RISE UNITS

Low-rise housing and high-rise housing represent radically different living situations and imply different community structures. While Raheja's high-rise approach is an effective way to house large numbers of people on a small footprint, it will disrupt the cohesion of the community. High-rise buildings are not particularly well suited to families with children inasmuch as shared space at the ground plane is difficult to reach and common areas (corridors, elevators and common areas at grade) are difficult to patrol. Elevators require constant maintenance. Relationships between community members and family groups may also be more difficult to preserve in the absence of convenient common gathering areas. Such areas provide spaces for people to assemble, talk, cook or smoke. No outdoor cooking would be allowed in a tall building, which represents a drastic change of lifestyle for Kathputli women who do much of their cooking outdoors over an open fire. Also, the double-loaded configuration proposed by Raheja would accommodate little to no cross-ventilation, which could be a significant problem during the hot summer months.

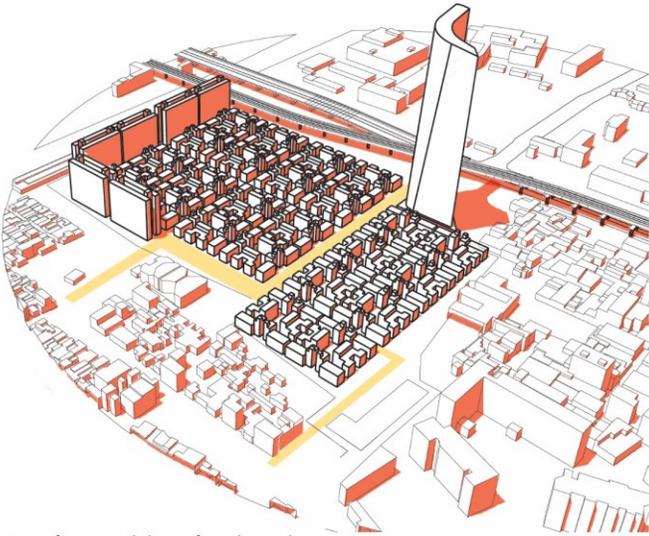
The colony asked for low-rise – nothing above 5-stories. My proposed design demonstrates that it is indeed possible to accommodate the bulk of the colony in low-rise housing that reflects and supports the way the community functions. Low-rise units foster a different genre of social relationships. Since units are closer to the ground, residents have a much greater connection to – and stake in – the activities occurring around them. They are also closer to commercial activities, performance spaces, workshops and to the tourists who come to explore the colony.



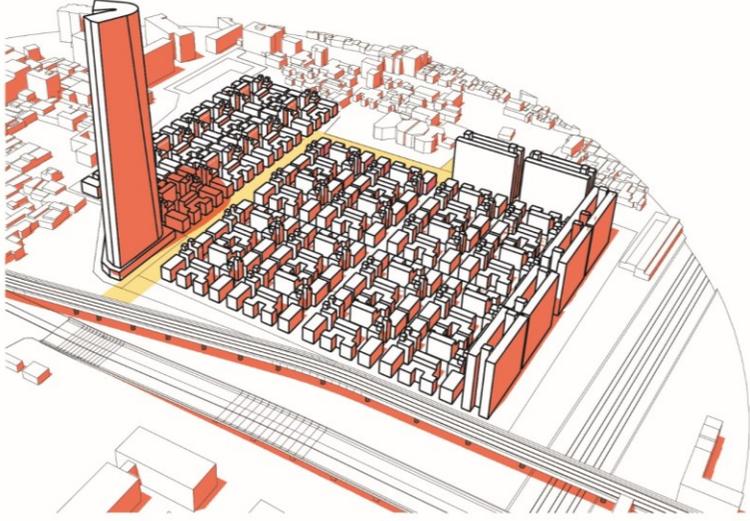
View of Raheja Developers proposal from the south.



View of Raheja Developers proposal from the north.



View of proposed design from the south.



View of proposed design from the north.

Figure 37: A comparison of Raheja Developers proposal with my proposed design.

## TENANCY

The current tenancy policy for the Kathputli Colony has been based on Mumbai's slum rehabilitation policy. It assumes condominium designation and states:

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There will be a restriction on transfer of tenements as dwelling units obtained under this scheme cannot be sold/leased/assigned/transferred in any manner for a period of ten years from the date of possession of the tenement. In case of breach of conditions, except transfer to legal heir, the tenement will be taken over by DDA.<sup>46</sup>

The condominium designation, where each unit is separately owned and common areas jointly owned and maintained, may not be the best option for this community inasmuch as it would limit the residents' flexibility in how they use their spaces and, by extension, jeopardize their traditions and lifestyle. Alternatives include *tenancy-in-common* (known as co-op in the United States), and *renting-to-own*. In Canada, "tenancy in common" enables the land and buildings to be owned by a corporation in which each household is given shares. A potential drawback to collective ownership, however, is the difficulty in securing mortgages. Cities with inflated real-estate markets have often used "renting to own" designations as an alternative to freehold or condo ownership in order to accommodate "critical" workers such as police, firefighters and nurses. The title, and a blanket mortgage, could be given to the overall community as a corporation and residents could rent from the community, with a portion of each payment going toward purchase until residents own their properties outright. As such, the property would transition over time from majority rental to majority condo ownership.

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<sup>46</sup> "Delhi Development Authority Office of Pr. Commissioner (H,LD&CWG) Sub: Draft Slum Rehabilitation Policy Based on Mumbai's Slum Rehabilitation Policy."

# CONCLUSION

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## REFLECTION ON METHODOLOGY

*Before even opening my document, Mr. Raheja admonished that "If you want to design in Delhi, you need to know the laws and codes." This led to a lecture about building regulations. Defending his 14 story apartment slabs, he seemed exasperated that I would even consider a low-rise alternative. He intimated that my proposal further muddied the waters and gave false hope to Kathputli residents. Mr. Raheja truly believes his design is the best solution for the people of the colony, namely free and clear title to the land they occupy and a commodity – in the form of housing units – which they can sell or rent. Catapulting poverty-stricken slum dwellers into the middle-class would be the greatest gift he can give.*

The more orthodox way to go about this project would have been to research slum developments and undertake a detailed review of redevelopment precedents. Instead I focused on what the client requested, using it as a basis to make decisions about building heights and configurations. If approached academically, I may have arrived at different conclusions, focusing instead, on policy questions like whether in-situ redevelopment was universally appropriate or whether laws governing maximum densities and minimum widths between buildings and percentages of open space should have been relaxed. Early on I accepted the fact that the Kathputli Colony's situation was unique, given the site constraints and extremely high densities.

Although what I proposed may not adhere exactly to Delhi's building laws, it abides by the spirit of the law. It is a vision on which to consider the circumstances under which exceptions might be made. Using design to determine what was possible, I worked with actual form instead of starting with a spreadsheet and a set of bylaws. Moreover, the overall design is flexible inasmuch as it is possible to adjust the balance between the number of units accommodated in the *pol*s and those in the high-rises (i.e., reduce the number of *pol*s to 23 in order to create more open space on the site or to accommodate additional private-sector development).

Scenarios that were ruled out in the beginning of the project may have proven to be viable. By the time we learned most of the community had acquiesced to Raheja's plan, I had already developed a low-rise concept. Had I had the opportunity to visit the site, speak to the developer and discuss the project earlier in the process, I may have changed my design approach. Building on the work of Taru Ruchi and Vishal Dhingra, the project could have focused on improving the design of the high-rises rather than avoiding them. Alternatively, I might have proposed a low-rise solution on a larger site elsewhere in Delhi. That said, the goal of this thesis would have remained the same, namely to explore the extent to which the redesign of the built environment could preserve the traditional lifestyle of the Kathputli Colony.

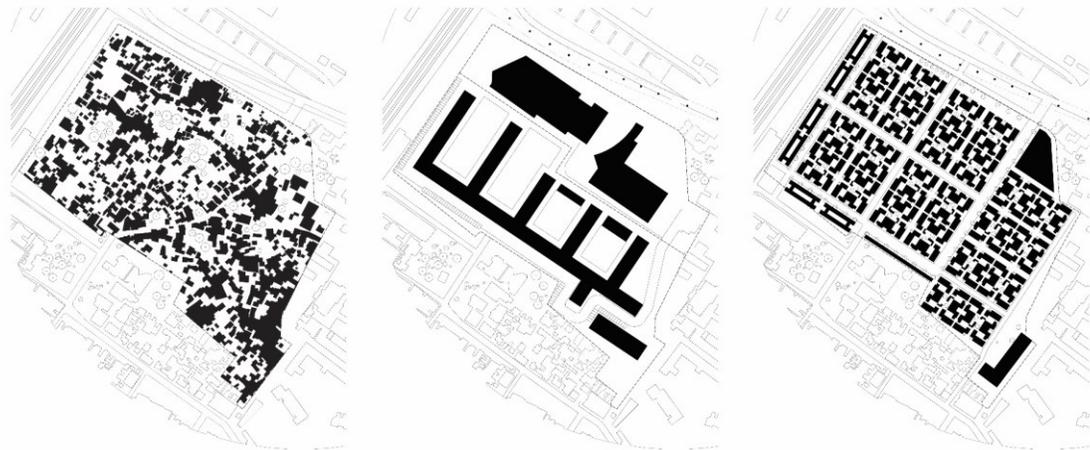


Figure 38: Figure ground plans of first the existing Kathputli Colony, Raheja Developers proposal, and finally my proposal.

## LESSONS LEARNED

Among the many lessons learned is that there are radically different ways of looking at the same problem. Speaking with the developer, it became clear that he had construed the problem in a completely different way. While my goal was to preserve the community's traditional way of life, he saw the redevelopment as an opportunity to transform it. He believed the Kathputli people were forced into their lifestyle because of lack of resources. Title to market-friendly units and access to new resources would significantly expand the options open to them.

I also learned just how complex projects of this kind actually are. At every turn one confronted trade-offs. Design alternatives were limited, especially given the mandate of in-situ redevelopment and the fact that a portion of the land would be transferred to a developer in exchange for managing the project. The process of having to shift the community twice, first to the transit camp, then back to the redeveloped site is also a challenging issue for the colony, the city, and developers.

There has been a lot of distrust between the community, the city and the developer since discussions about the redevelopment began. Some of this could have been avoided had the city and developers involved the community earlier rather than presenting them with what amounted to a done-deal forged from a spreadsheet. Community input, however, is complicated by the question of who is speaking for whom, leverage, and the challenge of forging consensus among a very diverse group of residents. Regular changes in the composition of the community also posed logistical problems. As families moved to the transit camp, new families moved in. Five years later the newcomers felt themselves to be legitimate members of the community with the same entitlements as longer-term residents.

## MOVING FORWARD

Moving forward I would finesse certain aspects of the design, including exploring more cohesive ways to connect the high-rises with the courtyard-oriented *pols*. Where the design of these 12-story buildings is concerned, I would explore alternatives such as a stepped configuration that would provide as many open terraces possible.

I would also revisit Delhi's regulations and guidelines for slum redevelopment. I would run a series of calculations to determine the extent to which the ratio of open to closed space I have proposed adheres to the guidelines. Mr. Raheja accused me of being disingenuous since I had not followed bylaws to which he claimed to be beholden. He referenced laws that made certain solutions "inevitable," like spaces between buildings (related to their height), required road widths, required percentages of open space, maximum FAR (floor

area ratio), and laws requiring slum dwellers to be accommodated on the same site after redevelopment. While this project proceeded based on finding a design that was acceptable to the community, its larger credibility would depend on it meeting minimal municipal standards. Moving forward I would determine the degree to which the project could be adjusted without compromising the larger design intentions. I would also like to study phasing alternatives to minimize the need and time for relocation. This would provide a less intense transition for the community.

Upon reviewing my proposal, Mr. Raheja questioned the absence of large performance spaces and other amenities. Going forward, I would further explore the trade-off between a large amphitheatre and multiple, smaller performance platforms such as those I have provided in the courtyards of each *pol*. Questions and choices could be presented to the community. The DDA/Raheja's plan includes a school, police station and small clinic. An alternative to providing these amenities would be to locate them in other nearby areas that the community can easily access.

As the community will continue to grow and transform, additional thought might be given to the adaptability of the design. If, for example, more of the fourth story were to be built out, or a fifth story were to be added, where might elevators be located? This is especially relevant along Shadipur Road, the width of which could easily sustain additional height.

Having focused on strategies for the overall site, the design of the individual units warrants further attention, including an assessment of their adaptability and market friendliness. Criteria to be revisited include unit size, location of windows, interior partitions, plumbing etc. It may also be worthwhile to explore how units might be combined into larger units over time, i.e., how many smaller units might transform into fewer, larger units as the colony transforms from a gypsy community into a more conventional middle-class enclave.

Thus far Puran Bhat is the only resident of the colony to comment on my design. Although he was very positive, I would very much welcome comments from the community at large. Indeed, lack of community consultation was one of the key points of frustration with the Raheja proposal, which was presented to the community as a *fait accompli*. Consultation is key in building trust and buy-in.

As a final note, I would like to explore how this design might be modified and applied to the redevelopment of other informal settlements. Specific elements could be designed differently in response to the specific circumstances of other, similar settlements in Delhi. Before it's too late, these communities should benefit from the lessons learned from the redevelopment of the Kathputli Colony.

## APPENDIX A – INFORMAL SETTLEMENTS

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In India, the word “slum” has been used to describe informal settlements. These informal settlements can be old, overcrowded housing sectors, clusters of self-made housing, and resettlement colonies for the demolished “slums”. Communities like this lack adequate urban amenities. Informal settlements in Delhi can also be categorised by their quality and evolution, see Table 1 (Informal Housing Types in Delhi). In regards to the Kathputli Colony, the community has been categorised as a Juggi jhopdi Cluster (JJ Cluster). JJ Clusters are settlements created by the encroachment of people on public and private lands, in this case, DDA owned land. The dwelling standard is extremely poor, as hazardous forms of self-made housing structures have been built over the years, and infrastructure rarely exists. In Delhi, 2.07 mn (14.8%) of informal settlements are JJ Clusters.

Informal Housing Types in Delhi<sup>47</sup>

TYPE	EVOLUTION	POPULATION	DWELLING STANDARD	INFRASTRUCTURE STATUS
Unauthorized Colonies	Developed on agricultural land by illegal means (land assembling, division and disposal)	0.74 mn (5.7%)	Haphazard but not fully dilapidated with no tenure security	Minimal
Regularised Unauthorized Colonies	Advanced form of unauthorized colonies	1.75 mn (12.7%)	Improved condition with greater tenure security	Govt. intervention into regularization has improved the condition
Urban Villages	Rural villages that got urbanized due to city expanding around them	0.88 mn (6.4%)	High degree of tenure security but congested living	Haphazard layouts create difficulties in extension of amenities
Rural Villages	Rural villages inside the city boundaries which	5%		Almost nil but not essential too

<sup>47</sup> Joel Michael, “Urban Villages of Delhi: Case Study Kotla Mubarakpur.”

	have not been yet urbanized			
<b>Juggi jhopdi Clusters</b>	<b>Arisen by encroachment on public and private lands</b>	<b>2.07 mn (14.8%)</b>	<b>Extremely poor</b>	<b>Rarely exist</b>
Notified Slums	Improved version of JJ cluster	2.66 mn (19.4%)	Improvements in the form of tenure security	Meager improvements
Juggi Jhopdi Resettlement Colonies	Formed by relocating squatters and slum households from the heart of the city to its periphery to improve their living condition	1.75 mn (12.7%)	Same as it is in Rural Villages	Basic amenities (water supply and sewage disposal) provided

The informal development that happens in Delhi mainly occur because of the rapid growth of population, there are multiple ways that they can be created depending on their context. Like JJ clusters; unauthorized colonies are developed by illegal means, though solely on agricultural land. Urban villages are previous rural villages that have been urbanized due to the city expanding around them. Juggi Jhopdi Resettlement Colonies are also considered separate from JJ Clusters, as they were made a reality by resettlement programs which attempt to eradicate the inner city's informal settlements and relocated them on the periphery. This only moves the issue from view, and the impoverished community continue to rebuild, resulting in yet another slum-like settlement.

Informal communities transform over time as new families move to the edges of the community. This growth in housing is incremental, the housing formed by the communities reflect that, and the community matures.

## APPENDIX B – INCREMENTAL HOUSING

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Incremental housing refers to the concept of households being built in increments, as resources become available to the resident. The house starts off as a *kuchha*, meaning impermanent, and is constructed with temporary building materials like bamboo and tarpaulin. As residents begin to gain income, and new materials are bought, their houses become semi-*pukka*. Semi-*pukka*, meaning semi-permanent, upgraded structure from the initial *kuchha*, and are built with brick walls and corrugated tin roofs. The last type of housing is classified as a *pukka*, meaning permanent. These houses are in their most permanent stage, made with concrete and load-bearing brick walls and proper roofs. Future additions to these houses are upper levels and terraces. This categorization was developed and adopted by NGO facilitators working in informal settlements.<sup>48</sup>

The type of housing built in JJ Clusters can be defined as incremental housing. These types of housing epitomise informal settlements in India, they are self-built and are continuously in the process of being made.<sup>49</sup> Many migrant workers who move to the city are faced with insufficient housing, and end up living in hand-built temporary settlements. Tents are pitched on barren lands, close to their workplaces.<sup>50</sup> This begins the process of incremental housing.

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<sup>48</sup> Julia King, “Unthinking Housing for the Urban Poor.”

<sup>49</sup> Einar Braathen, “Addressing Sub-Standard Settlements Policy Brief.”

<sup>50</sup> Sadafut Tauhid, “Kathputli Colony: The Illusion of Rehabilitation.”

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