

Listening Archive



The aim of the Listening Archive is to employ a scenario that will not only be a means to indulge with the everyday life of the existing resettled population, but also influence the ecologies of future resettlement initiatives in Mumbai. The built environment of the resettlement initiatives has implicit relation with the socio-cultural and economic norms of its inhabitants.

With the support and guidance of SPARC, India Alexander Valencia and Shibani Jadhav, conducted extensive research in June and July 2015, to critically document the design details of the existing resettlement initiatives in order to articulate the needs of the inhabitants for a desirable environment. The aim of the research was to document the existing relations reflected by the socio-spatial, cultural and economic conditions of the resettlement initiatives in Mumbai. Research was conducted in Lallubhai Compound, Natvar Parikh Compound, Vashi Naka [three of the biggest resettlement initiatives as of July 2015] and Milan Nagar in Mumbai and Yerwada [rehabilitation] and Warje in Pune.

The depth and relevance of the field research sparked the need to comprehensively compile it in form of a report, that can be used as a tool by the beneficiaries and local organizations to negotiate with the governing agencies to demand for desirable settlements, hence the Listening Archive. The Listening Archive is a diagrammatic compilation of peoples voices, lived experiences, observations and a direct reflection of collective consciousness of spaces and places.

Addressing different dimensions such as the compound, the building and the unit, the archive indulges with design details such as positioning of doors, to shared common spaces within the buildings and the neighborhood, to the translation of employment generating assets -pre and post relocation. The analysis and reflections are based on the changes that the inhabitants have made over time based on their needs and capabilities.

Considering the magnitude of the initiatives, three [Lallubhai Compound, Natvar Parikh Compound and Vashi Naka] out of the five resettlements researched are used as a case studies in the following document. The three case studies are collectively analyzed in all the

three dimensions: The Compound, The Building and The Unit. Most common and influential assets and hurdles are highlighted and further elaborated to bring forth its relation to social, spatial, cultural and economic aspects of the inhabitants.

Limitations: Given the time frame and the nature of study, the report is limited to the relationship between the built environment of the resettlement initiatives and its inhabitants. It is a sincere attempt to advocate for more responsive and inclusive built environment, one that addresses the needs, desires and aspirations of its inhabitants. While the report, successfully brings forth the significance and implications of the built environment on the everyday lives of the inhabitants, it does not indulge with, equally relevant - macro aspects of settlements. Proximities to civic amenities [schools, hospitals, colleges, grocery stores], employment opportunities and proximity to environmentally treacherous locations such as factories, oil refineries, dumping grounds and so on. Further the sudden disruption caused due to the process of resettlement is an astonishing leap of faith, a rupture that needs care and time to heal. All these factors call for a multi dimensional approach which not only addresses the built environment at the neighborhood scale but also focuses on both, the macro factors in relation to the location of the settlements and the intimate dimension that focuses on the everyday lives of the inhabitants.

Acknowledgement:

This Archive is dedicated to Mahila Milan [MM] community leaders and the residents of Lallubhai Compound, Natvar Parikh Compound, Vashi Naka and Milan Nagar in Mumbai and Yerwada and Warje in Pune. Their guidance, enthusiasm and valuable insights has given birth to and shaped the Listening Archive.

The Compound



Case Study I



Case Study II



Case Study III



Location:

Located in the M [East] ward, **Lallubhai Compound** is a dense network of 69 building closely spaced in suburban Mankhurd, east Mumbai.

Governing Agencies Involved:

The site was initiated to resettle Project Affected Person [PAP] by the MMRDA projects of MUTP, MUIP.

Origin of Residents:

Built in 2005, under the Slum Rehabilitation Act [SRA], Lallubhai Compound is now home to residents originally from Chembur, Matunga, Mahim, Byculla, Dadar, Parel, Elphinstone, Prabhadevi, Kurla, CST, as well as other areas of the City.

Composition:

The five to seven-storey structures are closely placed at a distance of 3 meters from each other along the access path and lesser than 3 meters on the other side of the building.

Location:

Located in the M [East] ward, **Natvar Parikh Compound** [commonly known as Indian Oil] is a dense network of 60 building closely spaced in suburban Mankhurd, east Mumbai.

Governing Agencies Involved:

The site was initiated to resettle Project Affected Person [PAP] by the MMRDA projects.

Origin of Residents:

Built under the Slum Rehabilitation Act [SRA], Natvar Parikh Compound is now home to residents originally from the pavements of Byculla, Nagpada, Mithi Nadi, Chembur, Sewri and Kurlas well as other areas of the City.

Composition:

The Seven-storey structures are placed at a distance of 3 meters from each other.

Location:

Located in the M [East] ward, **Vashi Naka** is a dense network of 90 R&R building in suburban Chembur, east Mumbai.

Governing Agencies Involved:

The site was initiated to resettle Project Affected Person [PAP] by the MMRDA projects of MUTP, MUIP, MRDP and the Municipal Corporation of Greater Mumbai (MCGM – formerly the Bombay Municipal Corporation) project of MGPy.

Origin of Residents:

Built in 2004, under the Slum Rehabilitation Act [SRA], Vashi Naka is now home to residents originally dwelled along the railway lines in Ville Parle, Vijay Nagar, Santacruz and Bhandup, Mulund, Dahisar, Dadar, Dharavi, as well as other areas of the City. Before they were resettled to Vashi Naka the residents lived in transit camps in Mankhurd and Sion Koliwada.

Composition:

Five different developers, namely Rockline, RNA, Runwal, Dinshaw and Kukreja were contracted to build seven-storey buildings in Vashi Naka R&R colony.

Open spaces are nodes that connect and cultivate a sense of solidarity and belonging by providing an environment to interact and indulge in collective activities. A space to celebrate festivals, functions and come together in times of grief. The absence of such spaces has the potential to rupture the existing social structure within the compound. The compact resettlement compounds of Lallubhai, Natvar Parikh and Vashinaka have extremely low built to unbuilt ratio, which not only restricts the flow of services and individuals within the compound, but also adversely impacts the social, cultural and environmental wellbeing of the residents. Lack of open spaces within the compounds has resulted to repressive effect on both the young and the elderly. While children need safe and designated play areas for their overall development, the elder population of the settlements need spaces where they can share their experiences and everyday life. The main pathways of the compounds which are about 5 to 7 meters wide are used by the residents to sell vegetables, play games and celebrate collective functions [page6: top]. The evidence of these activities only emphasizes the need to acknowledge their relevance in the design process. While Lallubhai Compound has negligible open space, Natvar Parikh Compound has leftover open spaces produced due to building services [image page 6: bottom]. Such underutilized spaces should be treated in order to activate and facilitate communal activities.

The **narrow alleys**, formed as a result of closely spaced structures, not only obstructs the flow of wind, but also blocks the sun rays from penetrating to the ground at any given time of the day. The residents on the ground and first floor of Lallubhai compound are deprived of natural light and ventilation and have to rely on artificial means, which in turn increases their monthly expenses.

While most of the narrow dark alleys, in both Lallubhai and Natvar Parekh Compound have been transformed into dumping grounds by households residing on upper floors, the alleys used by the residents to commute in and out of the compounds are observed to be clean and maintained [image page 7]. With insufficient dustbins and irregular collection, for compounds of approximately 70,000 residents, garbage disposal continues to be one of the major issues within different compound. It's the duty of BMC [Brihanmumbai Municipal Corporation] to ensure collection and disposal of garbage on regular

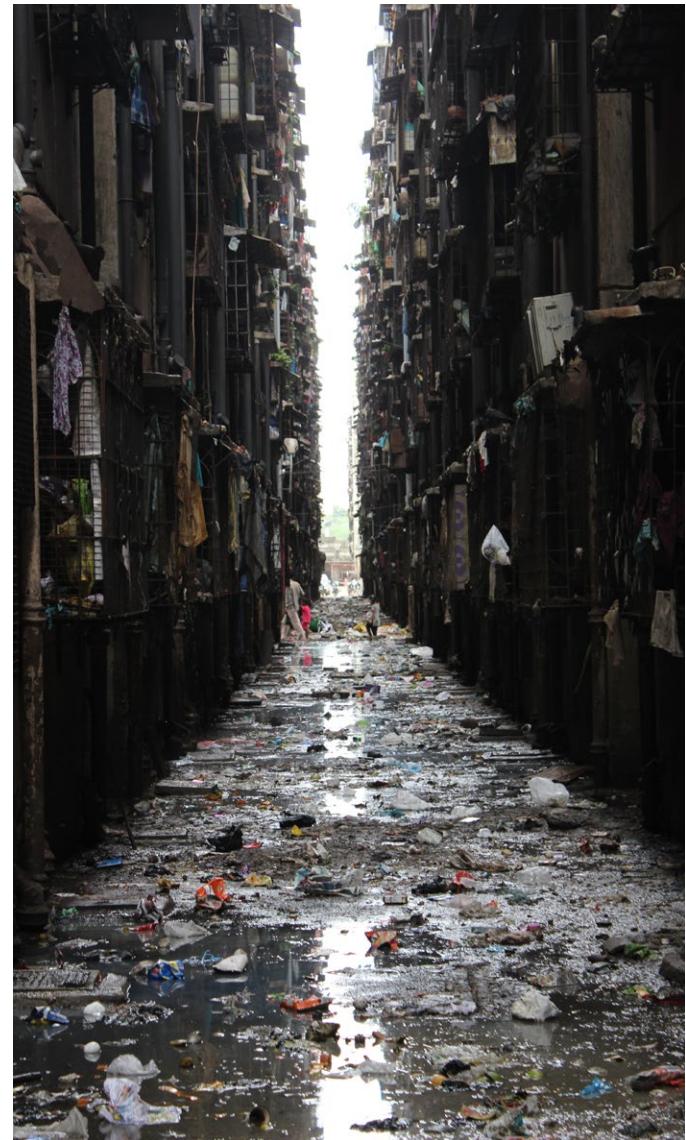
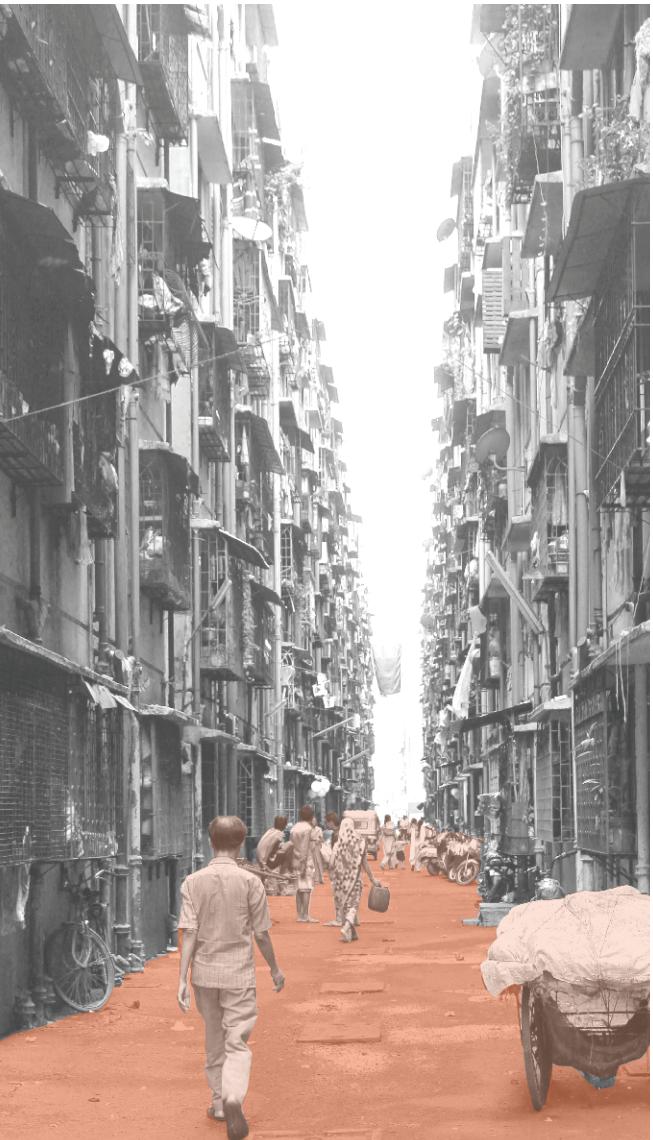


basis for settlements of this dimension. The poor quality of natural light and ventilation along with stagnant and continuous garbage disposal in the narrow alleys has given rise to health issues among both, kids and adults in the compounds. Such unhygienic conditions is one of the many reasons for rise in respiratory diseases like Asthma in the recent past. Although a more reliable and frequent system of garbage collection and disposal can help address this issue to a certain extent, the activation of these unused alleys can enforce a sense of responsibility and belonging among the residents, in order to curb the disposal of garbage in these narrow alleys. It is vital to avoid leftover spaces while designing the settlements as such spaces belong to everyone and to no one, thus easily abused and neglected.



The buildings in the heart of the compounds cannot be **accessed** with a four wheeler, thereby causing inconvenience to the residents and at the same time it situates them in a vulnerable position. Rescue vehicles like firetrucks and ambulances cannot access the interiors of the compound and are thus unable to provide assistance in times of emergency. Heavy gas cylinders often have to be manually carried in the interiors and on upper floors of the buildings.

The built environment of these settlements has implicit relation with the **economical aspects** of the inhabitants. Prior to resettlement most of the households had adopted a means for additional income, like small grocery stores, grain mills, ironing, carpentry and so on within their houses, to support their family. The flexible and incremental nature of their prior dwellings gave way to facilitated these activities. The resettlement compounds need to support these activities, so that the beneficiaries of the settlements can continue or start a new means to generate income. Natvar Parikh Compound has spaces on the ground floor designated to incubate small businesses. These spaces are also open for external businesses on a condition that it employs women from within the compound. On the other hand Lallubhai and Vashi Naka residents have appropriated the ground floor units to host society offices, welfare centre and *balwadi* (crèche) in order to facilitate communal activities yet, it fails to provide spaces that can help them to generate additional income to cope with monthly expenses incurred post resettlement.



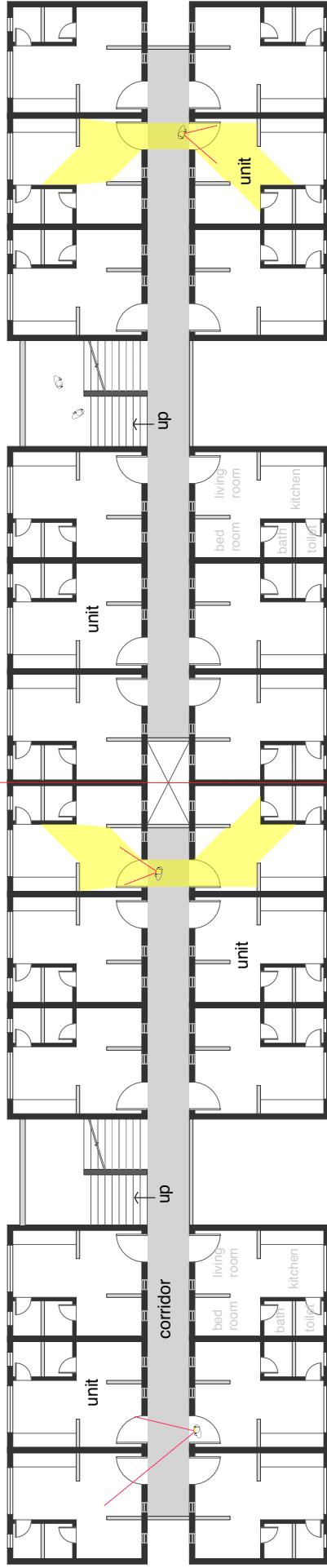
"The distance between two buildings should be wide enough, to avoid disasters. In times of emergency, at the least a fire truck or an ambulance should be able to maneuver. Last year there was an incidence where an apartment had caught fire. The fire truck could not reach the location and we extinguished the fire by ourselves."

- Natvar Parikh Compound Resident.

The Building



Lallubhai Compound Building Floor Plan [Level 1 and above]



Section A
Section B

Lallubhai Compound: [illustration: left]

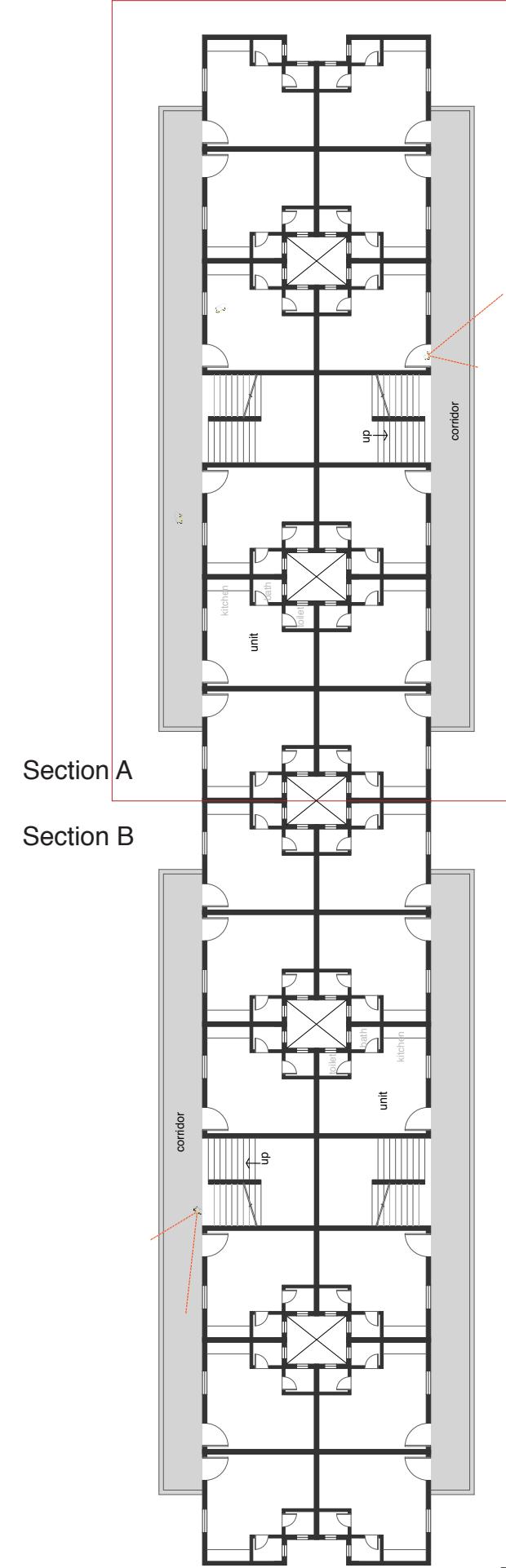
24 units per floor.
Section A and B [12 units each]
Every section has a set of staircase and a central shared corridor.
Corridors: 1.5 meters wide.
Unit doors face each other.

Natvar Parekh Compound: [illustration: right]

24 units per floor.
Section A and B [12 units each]
Every section has a pair of staircase and a peripheral shared corridor.
Corridors are 1.5 meters wide
Unit do not face each other.

Vashi Naka: [illustration: page 12]

10 units per floor.
One section only.
A set of staircase and a central shared corridor.
Corridors are 1.5 meters wide.

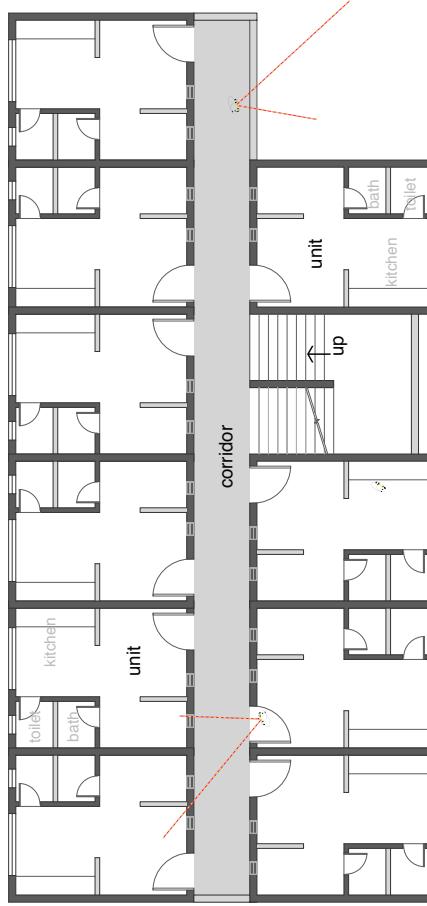


Section A
Section B

Most of the unit doors do not face each other. The built environment within the compounds consists of 6 to 8 floor buildings. All three compounds have different architectural designs for the buildings. The high density of lallubhai and Natvar Parikh compounds is a result of the **composition** of the building designs, both settlements have two sections of 12 units each connected to form an extremely long and slender building, further resulting to formation of long, narrow and dark alleys. On the other hand 12 units per floor in Vashi Naka, not only allows more flexibility in the positioning of the buildings in reference to each other, but also influences the quality of light and ventilation in the common spaces within these buildings.

The absence of open and common spaces within the compounds has transformed the role of **Corridors** from merely being transitional spaces to spaces of interaction, for kids to play and people to meet and bond. Although, the long, narrow and central corridors in Lallubhai Compound are interrupted by a slender air

Vashi Naka Building Floor Plan



shaft, the corridors are not naturally lit for most part of the day. Each corridor feeds 12 units. The residents often leave their doors open for cross ventilation and at times to host guests. As the main doors of these units face each other and the windows of the living areas open up in the corridor the design offers minimal privacy to the residents. Staggering the door openings, as in the case of Vashi Naka will optimize privacy. The residents believe that small design details like these have a huge impact on their social and cultural lives. Although the residents make a sincere attempt to use the corridors as a common asset and not to satisfy their personal needs, some activities like storage of bikes and drying of cloths are common practices. Natvar Parikh Compound has corridors on the periphery of the buildings. Each corridor is accessed by a set of staircase and is shared by 6 units on each floor. The corridors which are natural light and ventilated are often used outdoor seating space by dwellers, without compromising on the privacy of other dwellers.

The **building services** in all the three compounds have been designed considering an average of four individuals per unit. Considering the family sizes of the individuals interviewed, during the course of the study, on an average of 6 to 8 individuals reside in each unit. The plumbing system, designed for a smaller number of population, fails to function, resulting

to unhygienic conditions. In Natvar Parikh Compound specifically the water tanks and septic tanks were in close proximity to each other. The failure in plumbing system led to over flow of sewage water into ground water tanks used by the residents for drinking and to satisfy their daily needs, as a result young as well as adults were victims of water borne diseases. Measures should be taken to satisfy building codes and bylaws for minimum distance between water tanks and septic tanks.

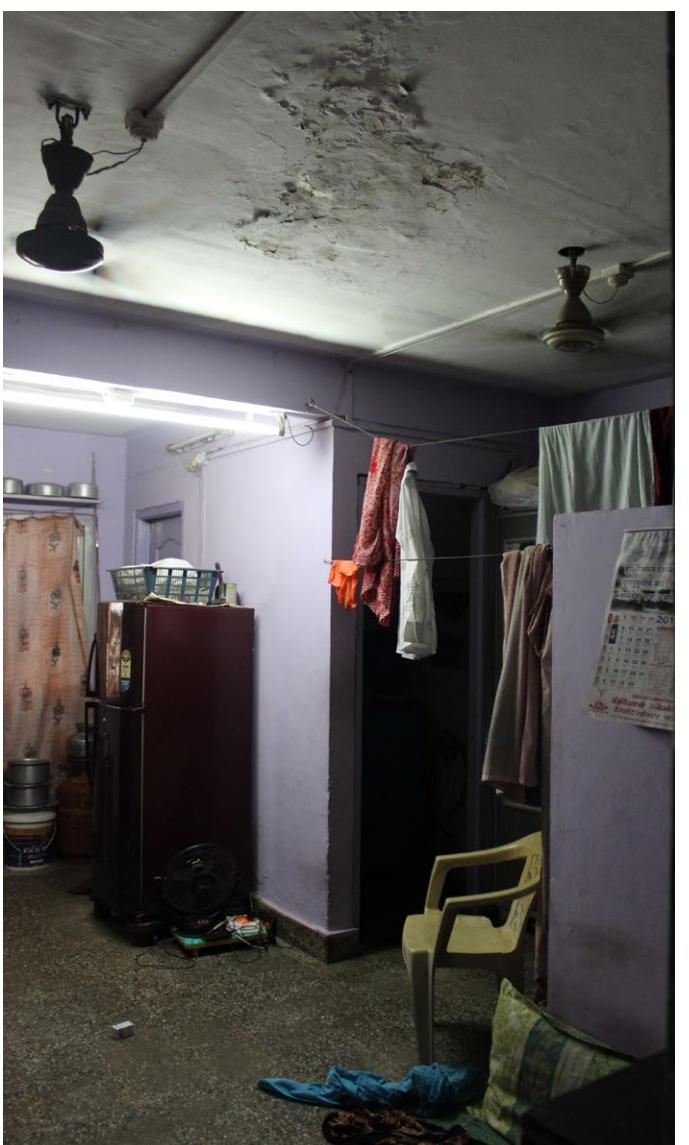
A house is not just four walls, but one that is furnished with **basic services**, one that has the ability to cater to everyday needs of individuals and families. Absence of basic services such as adequate supply of water [drinking and domestic use], reliable system of garbage disposal and a functional sewage system, has the ability to deepen the sense of othering. The quality of materials used and the habits of residents, together affect the state of the structures. [Image: bottom] illustrates the peeling of paint due to structural leakages. The residents believe that this is caused due to poor quality of materials and continued habits of residents such as washing cloths by banging it against a stone.



"One of the most important requirement is a playground within the compound. We have 60 buildings but the govt. did not think of a ground. They think that these are pavement dwellers they don't need a ground... Our future is in our kids, so they should also think about their (kids) needs."

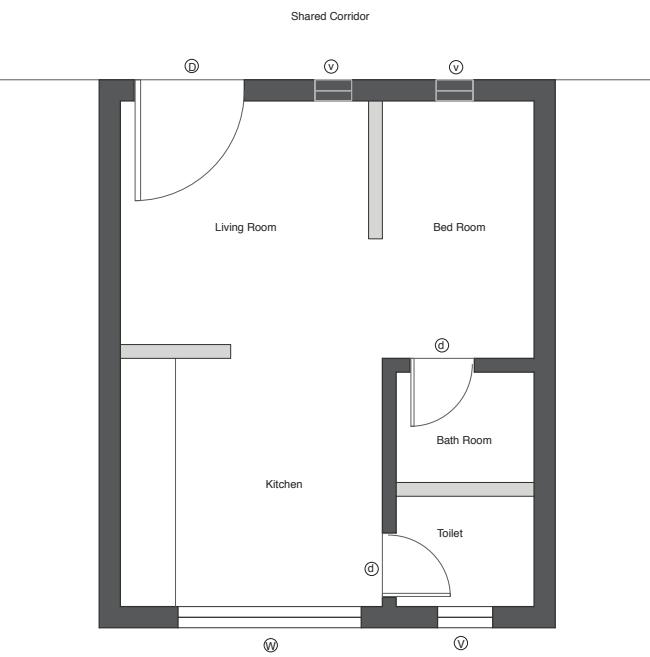
- VashiNaka Resident.

"When kids play in the corridor, everyone shouts at them. They are kids, where else will they play?" - Lallubhai Compound Resident.



The Unit



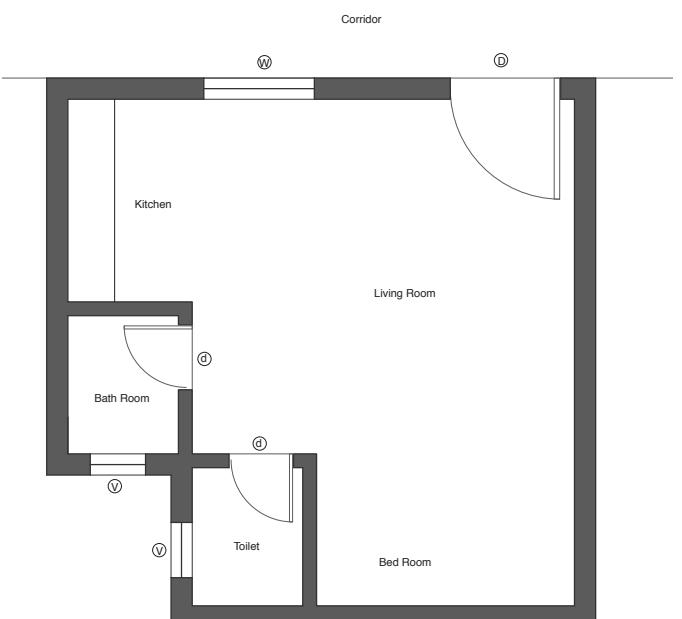


Lallubhai Compound: Original Unit Plan

Total Carpet Area: 225 sq.ft

Type of Plan: Defined Plan

Spaces: Living Room, Bed Room, Kitchen, Bath Room and Toilet.

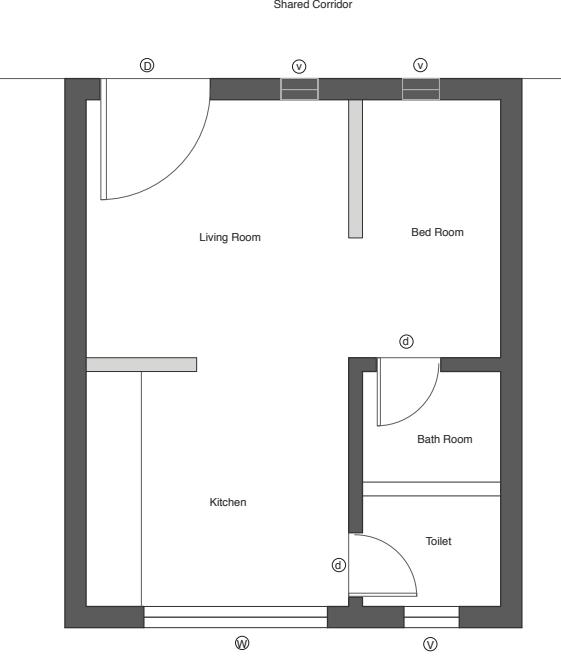


Natvar Parikh Compound: Original Unit Plan

Total Carpet Area: 225 sq.ft

Type of Plan: Open Plan

Spaces: Open space, Kitchen, Bath Room and Toilet.



Vashi Naka: Original Unit Plan

Total Carpet Area: 225 sq.ft

Type of Plan: Defined

Spaces: Living Room, Bed Room, Kitchen, Bath Room and Toilet.

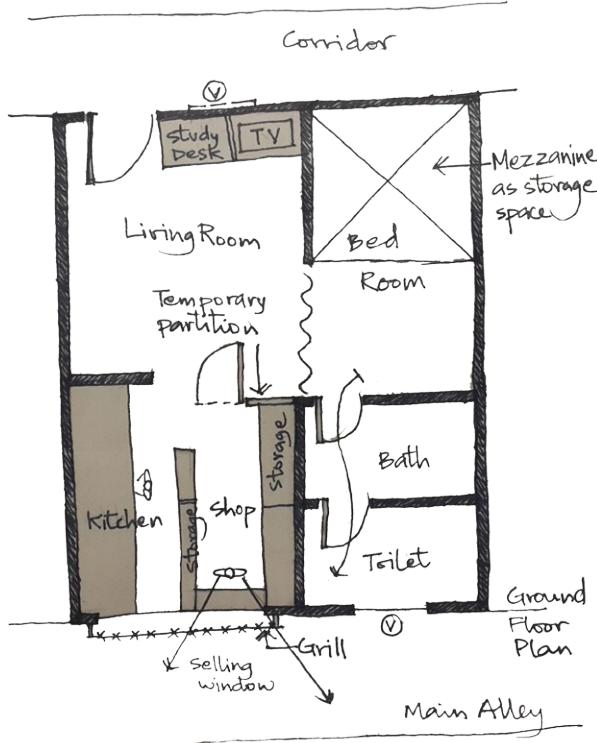


Designed to accommodate designated spaces for basic activities, all the three unit types incorporate an inbuilt bath and toilet area, a kitchen, a bed room and a living area. Lallubhai and Vashi Naka have similar unit layouts, where spaces are well defined by partially built **partition walls**. These partial internal walls not only reduces the construction cost, but also minimizes the required initial investment, on being resettled, to make the units functional for their respective family sizes and cultures. The partial walls allow light to diffuse throughout the unit, yet it fails to provide privacy within the unit. On the other hand, Natvar Parikh Compound's open unit plan was designed to provide complete flexibility for the inhabitants to create their own spaces. Although the inhabitants had initially built their own *kachaa* houses, the process of resettlement is packaged with added responsibilities, expenses and concerns. The limitations resources available, makes it nearly impossible for the beneficiaries to invest in the given units.

The **layout** of the units influences the functional and cultural aspects of the families. As the bathroom can only be accessed through bed room within the unit, the room fails to provide much desired privacy. One of the most common concern among the beneficiaries is the opening of the toilet in the kitchen area. The kitchen is considered to be one of the most cleanest areas within a house, hence it is often used as space to carry out daily religious rituals. Orienting the toilet towards the kitchen not only leads to unhygienic conditions but also makes it culturally undesirable for cooking and to practice religious rituals.

The **area of the spaces** within the units do not correspond to the use/activity of the space. While the kitchen is spacious the bed room is just enough to accommodate a single size bed. Additionally there is no provision for any kind of storage space. Often undervalued during the design process, the need for inbuilt spaces for storage, specially in multiple family households, transients in all the three compounds.

Due to the close proximity of the buildings units on the lower floors do not receive **natural light and ventilation**. Further the garbage accumulated in the alleys has forces households to seal their window, their only source of light and ventilation.



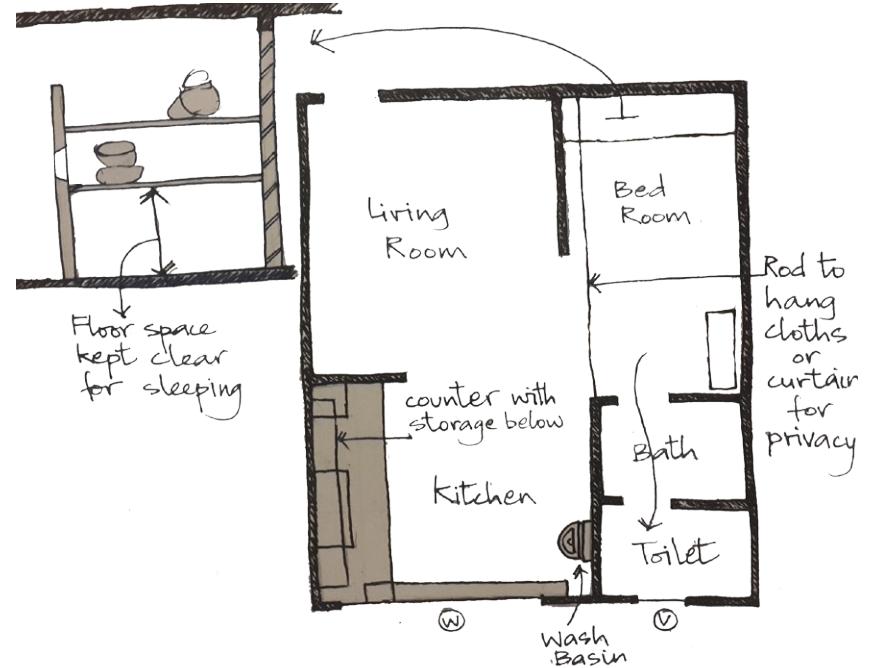
To holistically design a desirable dwelling and to understand the needs and requirements of the inhabitants, it is important to consider the changes that the inhabitants have made, within the units, to accommodate and compliment their everyday lives. Some of the frequently documented observations in the compounds are illustrated through drawings and images.

1. Space for economical benefit:

Some residents living on the ground floor have improvised their kitchen to incorporate a space for economical activity, such as store, ironing, stitching, four grinding and so on. The window thus becomes a point of interaction with the customers and highlights the importance of a space for economical activities for the residents to indulge in [page 18: left and top right]

2. The positioning of the doors:

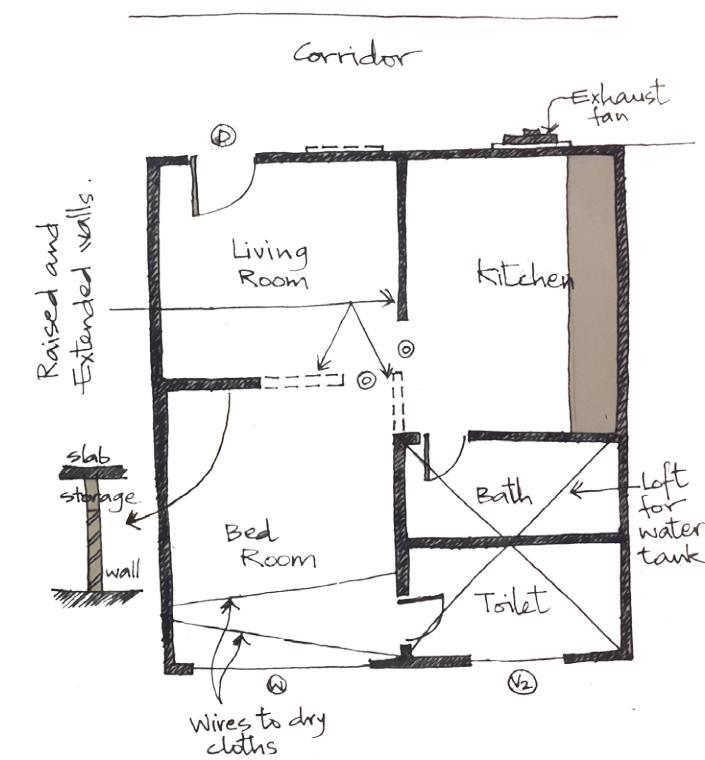
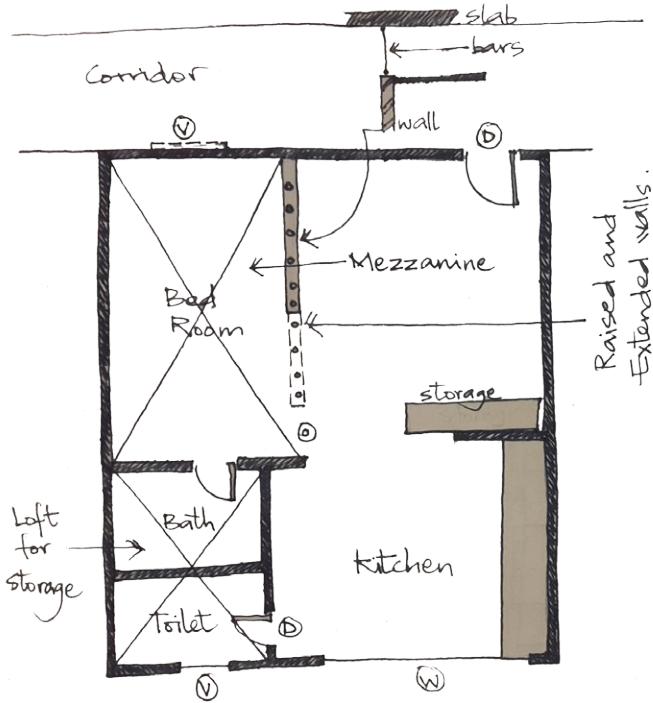
Opening the door of the bath in the bed room affects the privacy of the only private space in the unit. More importantly, residents have sealed the opening of the toilet that opened in the kitchen to not only, avoid unhygienic conditions in the kitchen, but also use the length of the wall for storage of goods and utensils. [Page 18: bottom middle]



3. Storage:

The need for inbuilt storage resonates among all the residents of the compounds researched. The residents are often unable to invest in furniture on being resettled, given the added responsibilities such as expenses for utilities and daily commute to schools and work.

Depending on the nature and size of the family residing in the unit, different ways and means for storage we observed as illustrated in the drawings and images. While many used the space above the bath and toilet as a mezzanine storage space [page 21: top left], some have additionally built a storage over the bed room [page 19:bottom right, page 20:bottom]. Local *Kadappa* stone and wooden planks have been used by residents to build over head shelves. [Page 18: bottom right, page 19: bottom left]

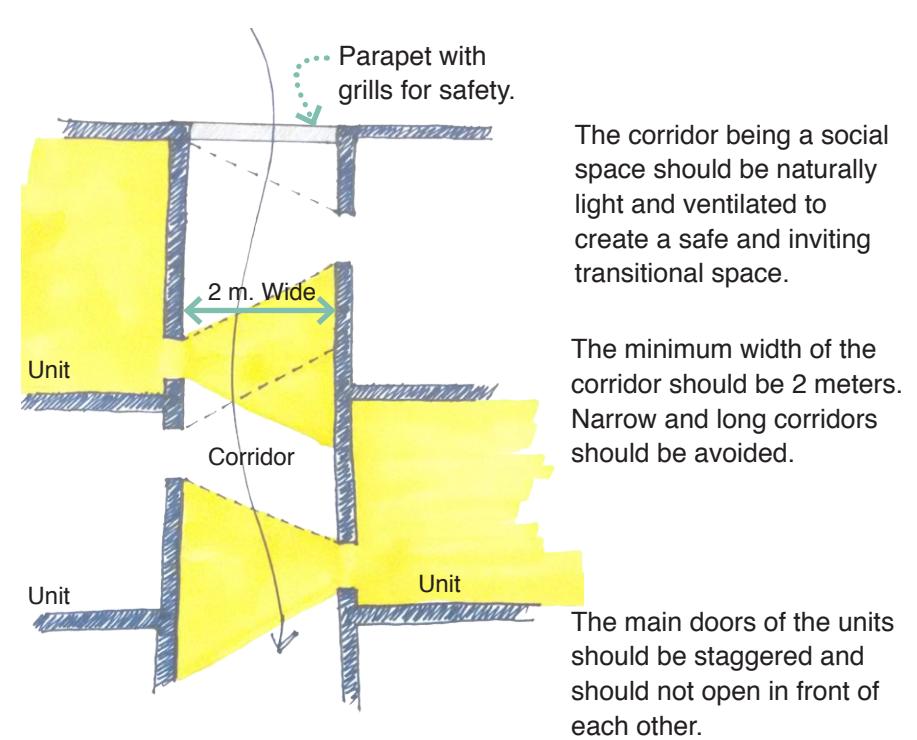
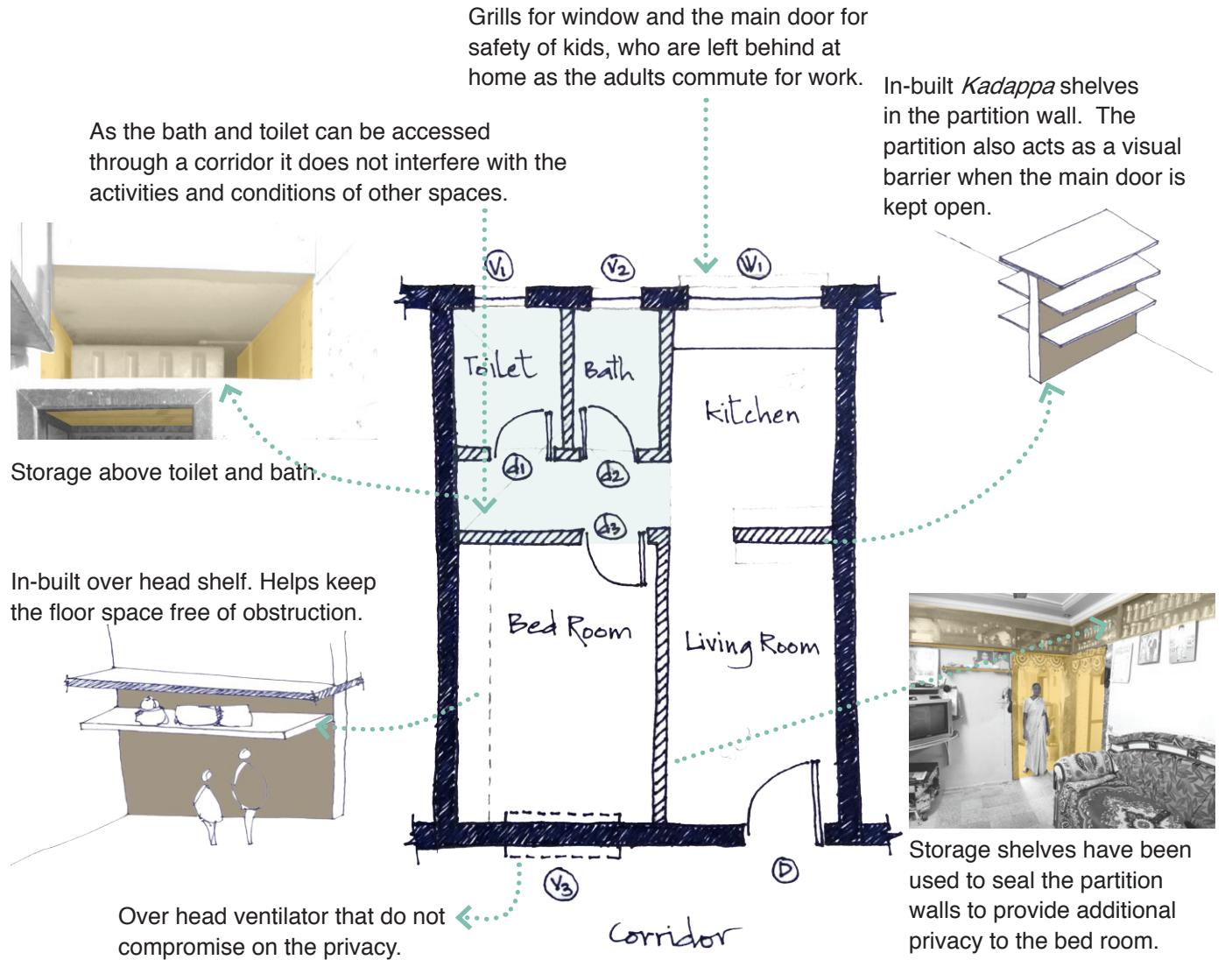


4. It is important to provide optimum areas for different activities in the unit. As illustrated in the diagram on the left the residents switched the position of the kitchen and the bed room. By switching the spaces and extending the partition walls the residents were able to have a spacious bed room and an optimum size kitchen.

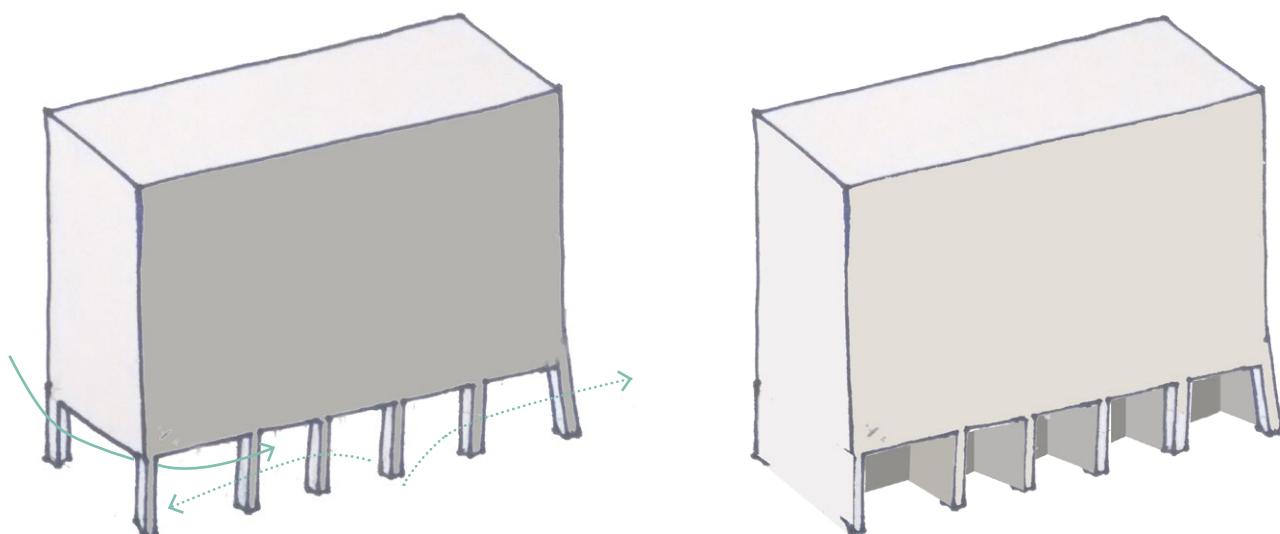
"All women are architect of their own house. From locating the kitchen, and toilet, to deciding who will sleep in the kitchen, the living room and who sleeps near the toilet. Where to place the cupboards and beds. All women are thus trying to adapt and making the most out of the situation. We can't sleep outside now. If we do there will be no difference between the slum and the building. So, we are applying our mind and make provisions within the house by making partitions and drawing curtains." - Natvar Parikh Compound Resident.

Reflections





As much as it is important to understand the influence of the built environment on the everyday lives of the inhabitants to design future resettlement locations, it is equally important to alter spaces in the existing locations. The neglected spaces in the existing [re]settlement colonies have the potential to be transformed into desirable active spaces. It's been observed that spaces that serve a purpose are cared for by the inhabitants. Spaces such as long and narrow alleys which do not serve any purpose end up being dumping grounds causing nuisance. Meaningful spaces that inculcate a sense of belonging should be incorporated in the designs.



The buildings should be on stilts to allow natural ventilation and free movement for the inhabitants. Some of the ground floor spaces can be utilized by the residents for commercial use to support their prior economical activities or to initiate a new business. The ground floor space can also be used as community spaces.

Acronyms:

MHADA: Maharashtra Housing and Area Development Authority
MM: Mahila Milan
MMRDA: Mumbai Metropolitan Region Development Authority
MUIP: Mumbai Urban Infrastructure Project
MUTP: Mumbai Urban Transport Project
NSDF: National Slum Dwellers Federation
R&R: Resettlement and Rehabilitation
SPARC: Society for Promotion of Area Resource Centre
SRA: Slum Rehabilitation Authority

Image Locations:

Page 2-3: Natvar Parikh Compound
Page 4 -5: Base maps : Google Earth, 2016
Page 6: Natvar Parikh Compound
Page 7: Lallubhai Compound
Page 8-9: Vashi Naka
Page 10: Lallubhai Compound
Page 11: Natvar Parikh Compound
Page 12 -15: Lallubhai Compound
Page 18-19: Lallubhai Compound
Page 20-21: Vashi Naka

Image Credit:

Images if not specified are captures by Shibani Jadhav.
Page 16 [right] and page 11 : SPARC Archive
Page 22-23: Chiara Passerini

Illustrations:

Alexander Valencia and Shibani Jadhav
Page 10-12, Page 16-17
Shibani Jadhav
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