

Jamdani Kotha: Weaving the Heritage

A.M. REZWANUL HABIB
ID: 12208019



Inspiring Excellence

Seminar II

Submitted in partial fulfillment of the requirements
for the degree of Bachelor of Architecture
Department of Architecture
BRAC University

August 2017

Abstract

Jamdani Saree is one of the most ancient and finest muslin textiles of Bangladesh. However, the craft of Jamdani weaving is facing threats of extinction due to various problems and obstacles compelling many weavers to leave their profession. The weavers, who play an influential role in the development of the textile sector of the country, are forced to leave their profession as they are denied the basic needs and minimum wages for a decent livelihood as a result the few who remain do not want their children to carry out the profession after them. This paper discusses the approach chosen for the benefit of the community as a whole and to create awareness towards the craft. It is a complex of functions that not only serves the weaver's community but also allows people all over the country and the world to come and participate, observe and learn.

Key words: Jamdani, Weavers, Customer, Institute, Research, People, Haat, Market, Exhibition, Craft.

Acknowledgement

I would like to express my deepest appreciation to all those who provided me the possibility to complete this project. A special gratitude I give to our course instructors Dr. Sajid Bin Doza, Abul Fazal MahmudunNobi, Tanjina Khan whose contribution in stimulating suggestions and encouragement, special thanks to Upama Kabir who helped me to coordinate my project especially in writing this paper.

Furthermore I would also like to acknowledge with much appreciation the crucial role of the taantis, Abul Miah, Ismail Uddin, Ahsan Sadik who gave the necessary informations by sharing their stories to complete "*Jamdani Kotha*". A special thanks goes to my juniors, Eftakhar Jahan Faisal, Swakshar Roy, Adil Ahnaf, Tushar Ahmed who help me to assemble this project and gave suggestions. Last but not least, many thanks go to my parents who have invested their full effort in guiding me in achieving the goal.

Table of Content:

Chapter 1: Introduction	5
1.1 Project Brief	
1.2 Project Introduction	
1.3 Problem Statements	
1.4 Project Rationale	
1.5 Scope of the project	
1.6 Aims and objective of the project	
Chapter 2: Literature Review	8
2.1 History of the Traditional Textiles of Bengal and the Muslin Industry	
2.2 Present Scenario of the Jamdani Industry in Bangladesh	
2.3 Tools and methods used in Jamdani production	
2.4 Export of Jamdani products	
2.5 Modes of innovation and how it can benefit the industry	
2.6 Creating a community and promoting the craft through design	
Chapter 3: Site Appraisal and Contextual Analysis	15
3.1 Site location	
3.2 Site Surrounding	
3.3 Background and current condition of the site	
3.4 Environment Considerations	
3.5 SWOT Analysis	
Chapter 4: Case Studies	21
4.1 International case studies	
4.2 Local case studies	
Chapter 5: Program	32
Chapter 6: Design Development	35
6.1 Concept	
6.2 Masterplan derivation	
6.3 Final masterplan	
6.4 Elevation and section	
6.5 Final Design models	
References	48

Chapter 1: Introduction

1.1 Project Brief

Project Name: Jamdani Kotha: Weaving the Heritage

Type: Heritage Culture Preservation

Client: BSCIC(Bangladesh Small and Cottage Industries Corp.)

Location: Noyapara, Demra, Narayanganj

Area: 20.1 acres

1.2 Project Introduction

Jamdani is one of the finest muslin textiles of Bengal produced in Bangladesh for centuries. Though the Bengali muslin and jamdani industries rapidly declined during the British rule due to colonial import policies, in recent years the production of jamdani has witnessed a revival in Bangladesh. The traditional art of weaving jamdani has been declared by UNESCO as an 'Intangible Cultural Heritage of Humanity' and has been labeled as a G.I product (Dhaka Tribune, 2016) of Bangladesh. Jamdani is now exclusively produced in only certain parts of Bangladesh on the outskirts of Dhaka, namely in Tangail and Narayanganj. In order to create jamdani, two main environmental factors need to be considered:

1. There needs to be a recreational space, preferably beside a water body for the *Taantis* to relax or take a break during the process.
2. The looms need to be placed in dark rooms with only the workspace illuminated by artificial light.

Currently the Government of Bangladesh has provided the *Taantis* 20 acre of land in Rugganj, Narayanganj to accommodate and facilitate their craft as well as have *haats* and wholesale shops to sell their products. Out of this 20 acre, 10.9 acre of land is selected for this particular thesis project. The original Jamdani Haat, which has been taking place for decades, took place right opposite to the Government provided land at the opposite side of the Shitalakkha River.

The *Taantis* do not sell their products directly to the retail shops, but rather use a middle man called "Mohajon" to do it for them. The *mohajons* are businessmen who in turn provides them with the capital needed to make their craft like machinery, materials etc.

1.3 Problem Statements

According to a national daily, a senior *taanti* or "ostad" earns about Tk 2,500 to Tk 3,000 per month. Junior weavers get much less, around Tk 1,600. As a result many weavers do not want their children to take up this profession.

There are now two haats on every Friday at opposite sides of the river. One happens on the Government provided land and sells good quality products as it is better monitored by BSCIC, *Taantis* and Mohajons and the other takes place on the opposite side where the old haat used to come about, this old haat now sells low quality products. Since the old haat has been occurring there for a longer time, a lot of the people buy their sarees from there and as a result get the low quality sarees which in turn diminishes the value of Jamdani and gives it a bad name.

There are no defined workstations for the *Taantis* to work on. The *Taantis* live on the space provided by the mohajons, they have their looms on the same space. By law every taanti should have a loom in their home but since the demand for Jamdani subsided, fewer *Taantis* remain in the profession but they still live on the government provided land. There are no defined work place that they can go and work at which does not provide a good working environment.

1.4 Project Rationale

Jamdani weaving is a rapidly declining art of Bangladesh. It is a Heritage that needs to be saved from extinction. Currently the Government is taking steps to revive the art of Jamdani weaving by provided the land and helping BSCIC with this project. A well designed and strategically planned area will help achieve this goal by providing the *Taantis* with a better working environment as well as help create awareness and promote this craft.

One of the main focuses of this project should be that instead of two haats there needs to be one big one on the land provided by the government. This will help BSCIC monitor the quality of the craft. This could be achieved by creating bigger spaces for the *haats/* fairs, creating exhibition spaces and giving the *Taantis* their own handlooms and workstations. There is a haat/ fair every Friday morning where the *Taantis* can sell and showcase their crafts; having better designed spaces to accommodate such haats would give more control to the *Taantis* over the promotion of their crafts. Shops could be provided to the *mohajons* so that they can sell the products there. Keeping these facts in mind, a list of probable programs is given below:

Programs:

- Haat
- Exhibition space: where the craft would be exhibited so that people from all over the country as well as around the world can come to view the handicrafts
- Workstations/ handlooms for the *Taantis*
- Museum: showcasing the history of Bengals finest fabrics
- Cafeteria
- Amphitheatre: For the recreation of *Taantis* as well as visitors
- Housing for the *Taantis*
- Shops

1.5 Scope of the Project:

- Site study and analysis of the surrounding socio-economic and cultural infrastructure.
- Observing and analyzing the current benefits that the *Taantis* are getting and finding out what needs to be provided.
- Analysis and study of the relation between the *Taantis* and the Mohajons to better understand their cultural and traditional roots.
- The facilities provided by the government to the people in the area.

1.6 Aims and Objective of the Project:

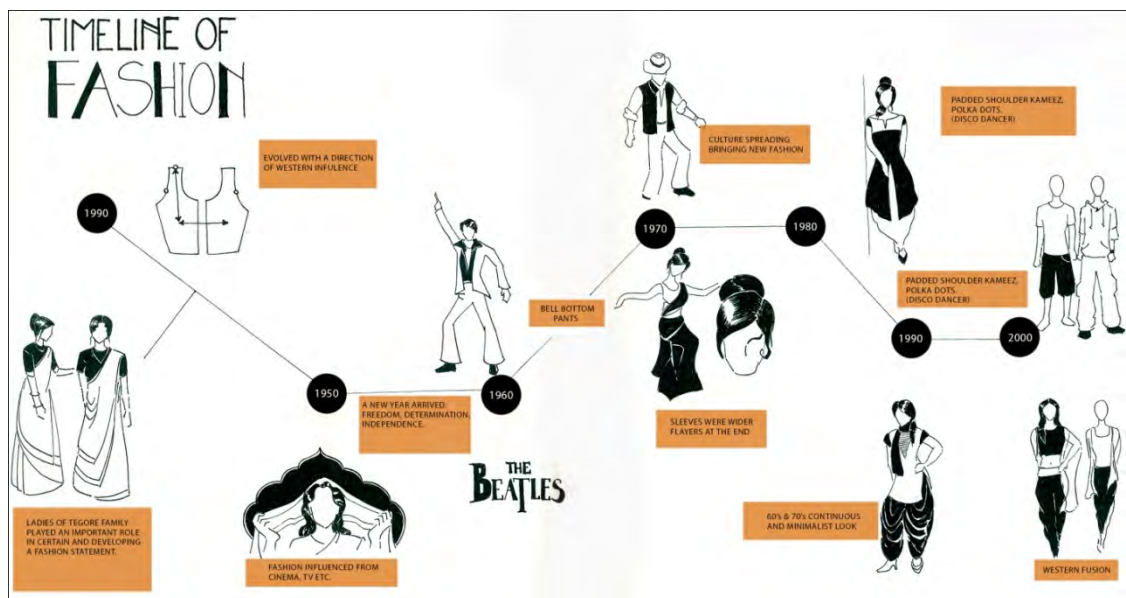
- Introducing the cultural costume of Bangladesh and highlighting it's process
- Increasing the attraction about cultural costume
- Increase awareness about culture
- Improving the livelihood of *Taantis*
- Development of traditional fashion
- Development of culture
- Increasing the export of Jamdani

Chapter 2: Literature Review

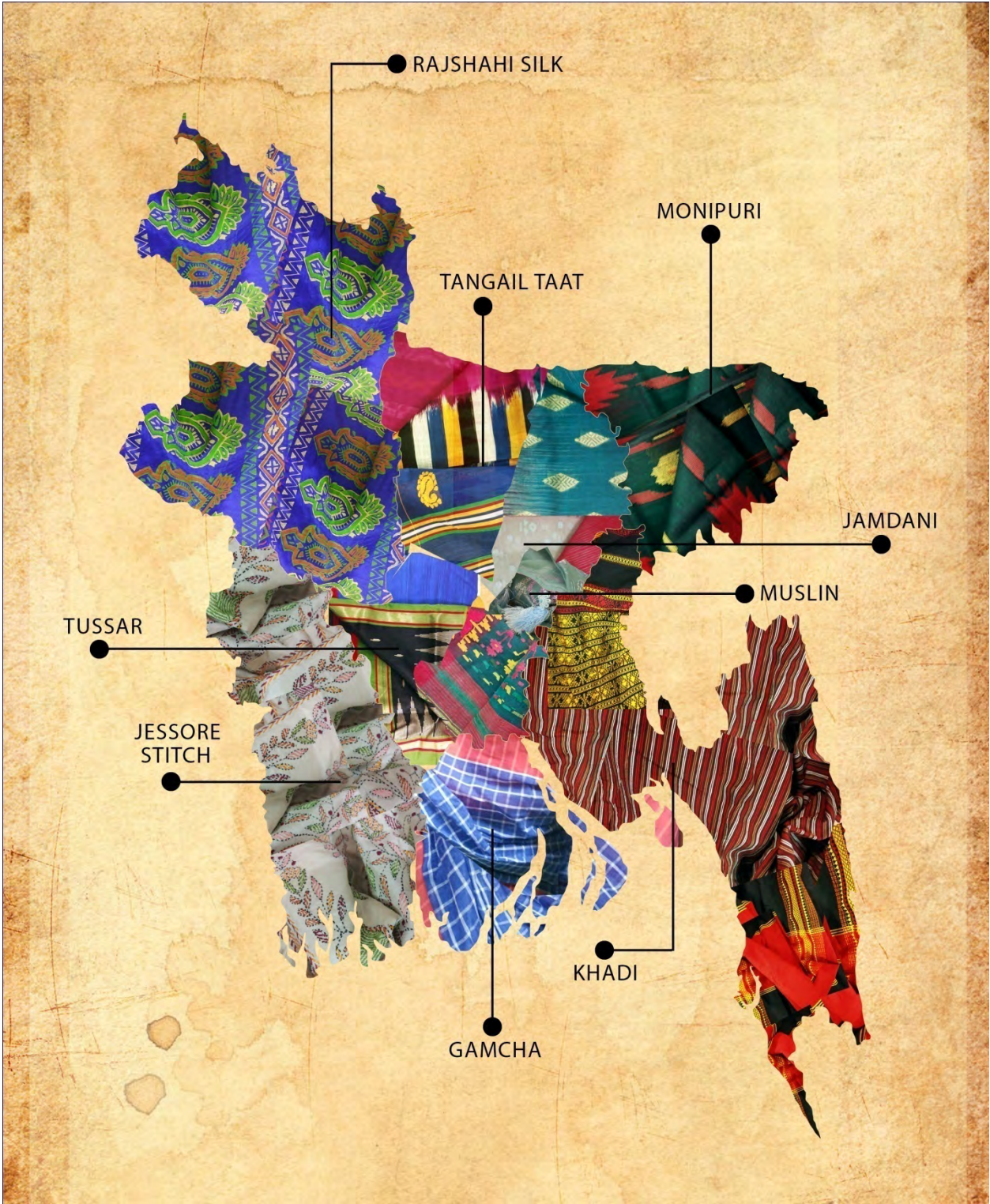
2.1 History of the Traditional Textiles of Bengal and the Muslin Industry

The history of Bengal's textile traditions goes back to antiquity. Early centres of cotton manufacture in the Indian subcontinent led the way to this craft being introduced to Persia, Egypt and later to Europe. Among the fine fabrics produced in Bengal, muslin was one of the finest fabrics produced in the region. It was mostly tailored for the royal families of the region. The unrivalled quality of Dhaka's muslin was attributable to three important factors: its special cotton, the fineness of its handspun yarn and the extraordinary skill of its weavers (Ghuznavi, 2006). In his report on *Cotton textiles of Dacca*, John Taylor identifies this unique quality of the cotton can only be grown along the banks of Brahmaputra and branches of the Meghna river as the best for muslins and believed that it could not be cultivated anywhere else in the world. Jamdani, one of the most expensive forms of muslin, was said to be a chef d'oeuvre (masterpiece) of the Dhaka loom (Watt, 1903). Under the influence of the Mughals muslins and jamdanis reached an unprecedented standard of excellence as it was the preferred fabric for the royalties.

The downfall of Mughal rulers caused the affluent market for muslin to end. Though manufacture and trade of muslin continued under the British (Karim, 1975) it started to decline with the restriction of export of muslins into Britain and the importation of machine made cloth into the Indian market.



Even though the fashion scene is changing, Jamdani has always been a “constant”. It has always been “in-fashion”.



Map showing the famous sarees in various parts of the country

2.2 Present Scenario of the Jamdani Industry in Bangladesh

Jamdani saris have always been greatly valued and appreciated for their unique beauty. As sophisticated expensive textiles jamdani have catered primarily to refined urban markets. However, the trade took some major blows when it lost an affluent Hindu clientele during the partition of India in 1947. The greatest setback for the handloom sector in general and specifically jamdani was caused by the turmoil of the liberation war in 1971 (Saidur, 1993) and the subsequent years of economic crisis with the perennial shortages of yarn and dyes and absence of credit and the destruction of looms during the war led many weavers to abandon their crafts and look for other professions. The situation improved somewhat after the mid-70s where the government took steps but these efforts were quiet inadequate and did not improve the condition of the sectors that much.

The real revival of the jamdani industry began in 1980's (Saidur, 1993) when a number of craft development organizations, NGOs and individuals provided credit and marketing facilities to the weavers. Major exhibitions with weaving demonstrations helped the weavers to demonstrate their crafts and interact directly with their customers and retailers and negotiate a fair price for high value jamdani instead of being entirely dependent on weekly markets (haats) which are often dominated by middlemen and wholesalers.

These efforts were simply inadequate as the weavers simply do not earn enough through this craft and often seek to go to other profession in order to get a better livelihood. At present many jamdani handloom units remain un-operational besides, weavers are suffering from scarcity of working capital which are mandatory to maintain the smooth flow of production (ADB, 2002).

It is estimated that about 2,000 pieces of Jamdani saris are being produced per week in the region. The price of saris ranges between Tk. 5,000 and Tk. 40,000. Specially made saris can cost as much as Tk.150,000 (Iqbal, 2014). According to *The handloom census*, 2003 there are about 12,383 numbers of jamdani looms among which 9,997 are operational which is 80.7%. The reasons for the non-operational looms are shown in the table below:

Table 01: Reasons for the non-operation of looms

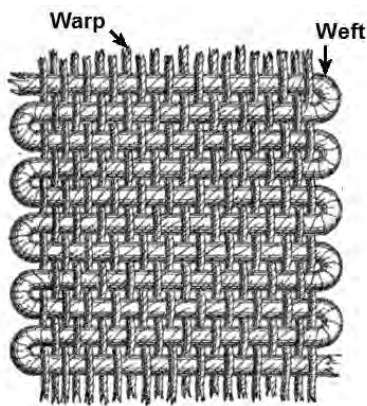
Reasons for non-operation of loom	Frequency, 2003	Percentage, 2003	Frequency, 1990	Percentage, 1990
Lack of capital	75511	79	123597	80
Lack of yarn	11566	12	12284	8
Labor problem	1865	2	2334	2
Sale problem	4931	5	5860	4
Others	1509	2	10220	6
<u>Total reporting units</u>	<u>95382</u>	<u>100</u>	<u>154295</u>	<u>10</u>

Source: Handloom Census, 2003

2.3 Tools and Methods Used in Jamdani Production

2.3.1 The Weaving Technique

Though muslins were woven by single weavers, jamdanis require two to work in unison to weave the patterns perfectly. Natural or pre-dyed yarn is washed and starched and wound on a cylindrical bamboo frame known as *natai* and allowed to dry. The weft yarn is rolled on bobbins known as *moura* and inserted individually into comb-like dents of bamboo reed called *shana*. Warp preparation has two people feeding the yarn into some 26 bamboo posts, *hor* or *khuti*, set in the ground in pairs and at regular intervals. Thread for the warp are drawn from 40 to 50 bobbins, *noli*, set in a bamboo or wooden frame. Each warp is prepared for 4 jamdani sarees of 6 yards each. The final step prior to weaving is its application to the end roll. The warp is prepared by the *howzainna*, a specialist in charge of this process, and not the weaver.



Warp and weft in plain weaving
Source: textilefashionindustry.com



Reeling yarn
Source: Author

2.3.2 The Loom

The jamdani loom is a marvel of simplicity, made primarily of wood and bamboo. Once the wooden beam of the warp yarn or *bairer narad* is installed on the loom; the weavers attach the threads on the wooden pole in front, known as the *koler narad*. A set of colored yarn for *churi* or *kandi* (border edging) are fed in the dents of a tiny *shana* (reed), draped over the loom and weighed down with half a brick to maintain the tension. Borders are demarcated with a continuous pattern called *madli*. Pattern threads are inserted into the warp with a *kandur* (wooden horn or spindle) to create the design. On completion of each line, the weft yarn is passed across the warp from one weaver to another using a *makku* (metal spindle). Weft and design yarn are set by pulling the *dopti* (lay) tight against the previous line. The *tolpawa* (foot pedal) of the loom is manipulated by the master weaver to lower or raise the double *jhap* (bamboo reeds) which are drawn by a stroke of the lay to set the yarn firmly in place.

Thus the jamdani loom has the following parts:

- *kandur* (wooden horn or spindle)
- *makku* (metal spindle)
- *tolpawa* (foot pedal)
- *jhap* (bamboo reeds)
- warp beam



Yarn and implements

Source: Author



2.4 Export of Jamdani Products

According to the Export Promotion Bureau (EPB), the country fetched \$59 thousand only in the 1996-97 financial years. It showed an upward trend in the next financial year (1997-98) following introduction of the cash incentive scheme. The earning was \$19.6 lakh in that fiscal year, which dropped to \$4.5 lakh in the following fiscal year when the cash incentive was reduced. The export income fell to only \$21 thousand in the 1999-2000 fiscal year, but rose to \$41 thousand in the 2000-01 fiscal year. Export was nil in the next financial year while it was of \$31 thousand



in the 2002-03 financial year and the total jamdani export was of \$ 51thousand from 2003 to June 2004. The government in 1997 introduced 25 per cent cash incentives for promotion of the jamdani export. The support was reduced to 15 per cent in May 2000, to 10 per cent from July 2003 to June 2004 and to only 5 per cent this fiscal year. Bangladesh exports jamdani to India, South Korea, Belgium, USA and Bhutan, among which, India is the largest importer of the item. Kamal Sarkar, vice president of the Jamdani Exporters Association, pointed out lack of production as one of the major reasons (Iqbal, 2014) for shaky export figures of Jamdani.

2.5 Modes of Innovation and How It Can Benefit the Industry

Ghosh (2015), states that the declining productivity of the handloom industry in Bangladesh is caused by the following internal and external factors:

- Weavers don't get quality raw materials
- Weavers don't get quality raw materials at right time
- Weavers don't get quality raw materials at right price
- Weavers are suffering from inadequate contemporary technology
- Government supports are not adequate
- Weavers are facing scarcity of working capital
- Promotion programs are not effective
- The industry faces competition from mill and power loom sector
- Weavers face lack of skills
- High level of skills are needed to produce quality products
- Weavers' association is not efficient
- Production is not enough to meet the demand.

Although these factors are generalized to the handloom industry as a whole, these are also true in the case of jamdani production as well. The process of creating jamdani takes much time and thus it has low production, due to which weaver has low income. Many of the weavers leave the craft to join other profession. Training and skill development of the young and encouraging them with new ideas and technologies can encourage joining the sector.

2.6 Creating a Community and Promoting the Craft Through Design

Jamdani is one of the finest handicraft art in Bangladesh, as such it's preservation and promotion has both socio-cultural and economic significance. The Jamdani polli in Rupganj has the potential to become a strong community where the weavers can thrive and create exceptional works of art. The settlement needs to have facilities that will create an environment

that will encourage the weavers to learn and develop better skills as well as encourage young taantis to join. It needs to have amenities that will catalyze the growth of the sector.



Source: Author

Chapter 3: Site Appraisal and Contextual Analysis

3.1 Site Location

The site is located in the Narayanganj district in Dhaka in the Rupganj Thana beside Shitalakshya River. It is situated 1.16 KM from the Kanchpur bridge on the way to Sylhet. It takes around an hour by road to reach the site from the main city of Dhaka.

The area of the site is 67,2654 sq ft (15.44 acre) with 7.34% of road, 23% water body and 30% forestation, so the built area is going to be around 40% of the total site which is around 47,7140 sq ft (10.9 acre).

3.2 Site Surrounding

3.2.1 Existing Site

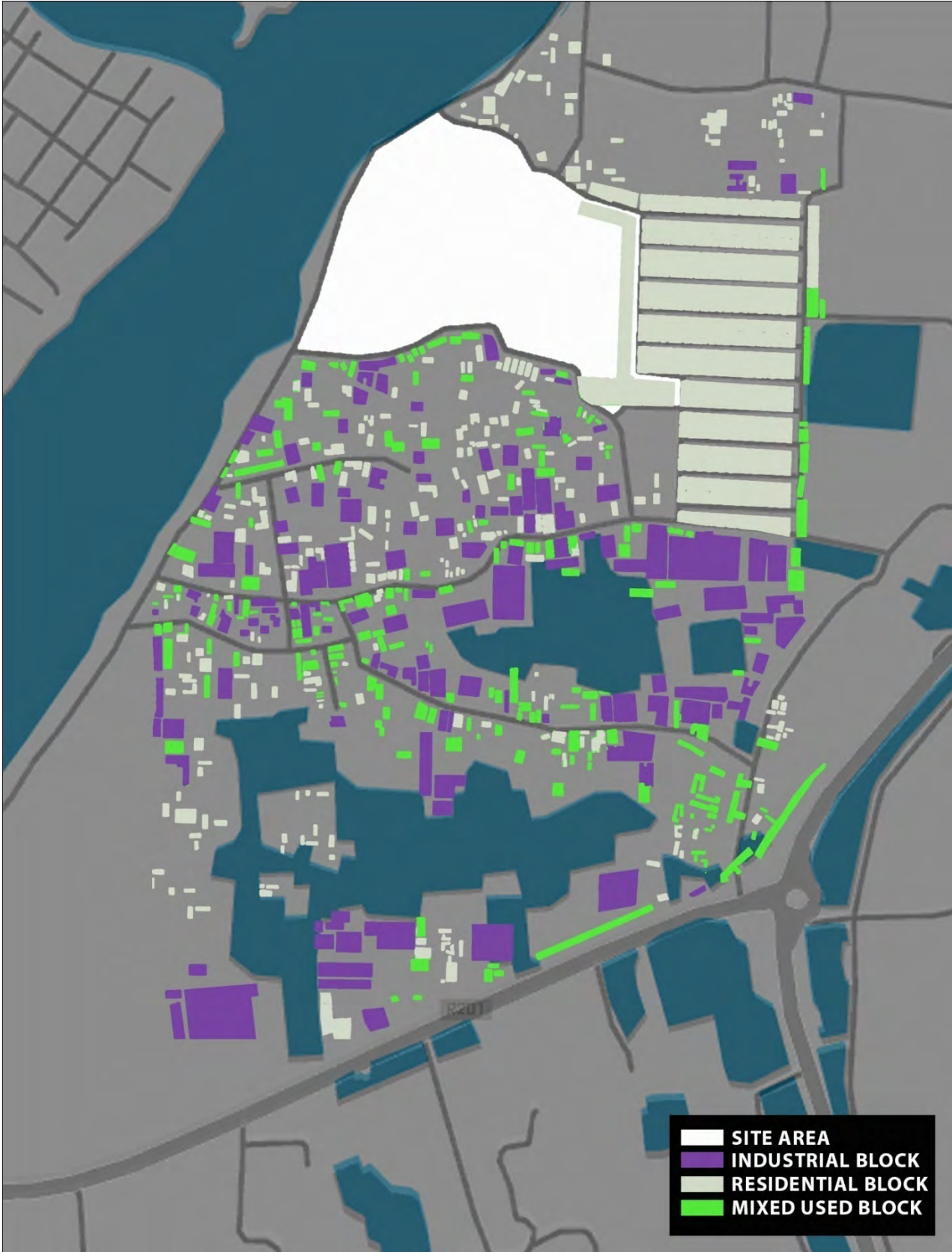
The primary roads around the site are around 30 ft wide while the secondary roads are around 15-20 ft wide. The site has Shitalakshya River on one side. This site was chosen by the Government instead of near the old Jamdani Haat because the weavers had to cross the river as most of them lived on the site. This was also chosen as it was easier to get to the site from the main city.



Site Location



Road Network



Zoning

3.2.2 Adjacent Land Use

The adjacent land still holds the age-old Jamdani Haat on Fridays. Apart from that there are several jute mills and Demra University College on the opposite side of the river.



Old Haat

Source: Author



New Haat

Source: Author

3.3 Background and Current Condition of the Site



Shops

Source: Author



Roads

Source: Author



Demra Bridge

Source: Author

Findings

The site currently has a housing complex designed by the government for the weavers next to it. The weavers are required to keep a loom in each of their houses. Some of them have moved to other professions but since it's compulsory for them to keep a loom in order to keep the house, many households own a loom but they are not operational.

The site is a flat land and the surrounding households are no more than 2 storeys high.

The highway is not far from the site and accessibility is not a problem as there are secondary and tertiary roads that leads to the site.

The secondary roads are around 15-20ft wide but there are no pedestrian walkways which make it difficult to navigate the site.

3.4 Environmental Considerations

Wind velocity is fairly higher due to the river nearby and since all the structures nearby are low-rise and does not block the wind.

The site has a very rich micro-ecosystem as it is surrounded by various flora and fauna as well as water bodies. The aim is to approach the design without damaging the existing flora and fauna or the ecosystem.

3.5 SWOT Analysis

Strength

- The site is located very close to the Dhaka City Bypass, thus having an easy access from areas focused primarily on traditional handloom production such as Narayangonj, Tangail, Pathrail etc.
- The site is located right beside a water body which can act as a strong platform for positive activities and functional uses can be generated with the development of the project and its surroundings.
- The site is located on the eastern most side of the township and in one way can be seen as an isolated island, not hampering or being a nuisance to surrounding activities

Weakness

- Being part of a township, the site has got no existing urban life or features to analyze and predict accordingly.
- The site surrounding is still industrial and will take much time to develop as per desired design goals.

Opportunities

- The site is located in a very strategic position, and can provide an interesting platform for the convergence of artisans and weavers from all over the country as well as designers and enthusiasts from the city and abroad.
- The site is located in a new and barren development, and holds the strength in controlling the urban sprawl that shall direct to a new visualization.

Threat

- ❑ The site and its surrounding land can turn into a dense like Dhaka.
- ❑ The urban development shall disrupt the present green landscape and cause environmental harm if not addressed at with proper design.

Chapter 4: Case Studies

It was hard to find projects that were comparable to this thus; in this chapter different feature of the project is briefly analyzed with a number of local and international projects.

4.1 International Case Studies

4.1.1 Khamir Artisan Village

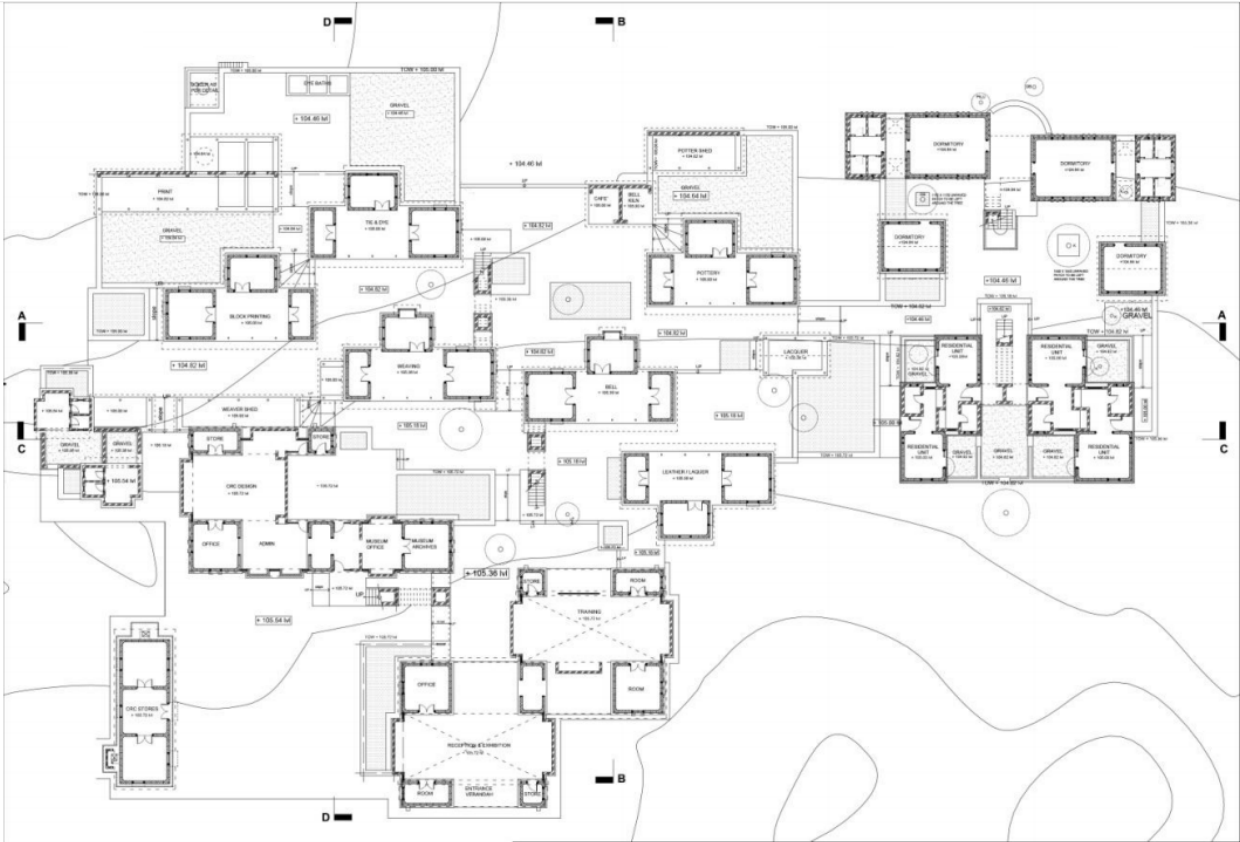
Khumir artisan village is located at 16km from Bhuj, in Kutch, Gujarat. It is a place which promotes, expands and aids the traditional skills and knowledge of Kutch art, culture, heritage and national resources.

People can visit the village and explore the traditional communities of Kutch. The artisan communities include Embroideries, Leather Works, Lacquer Work, Rogan Work, Copper Bell making, traditional pottery, wood carvings and much more. The Khamir campus requires for visitors to wear conservative clothing respecting the local traditions. The village was established in the aftermath of the Bhuj earthquake with the help of non-profit organizations and industry stakeholders in the Kutch region. The projects aims to create a cultural resource center that enables artisans to conserve their traditional way of life by creating a sustainable livelihood build around their crafts.

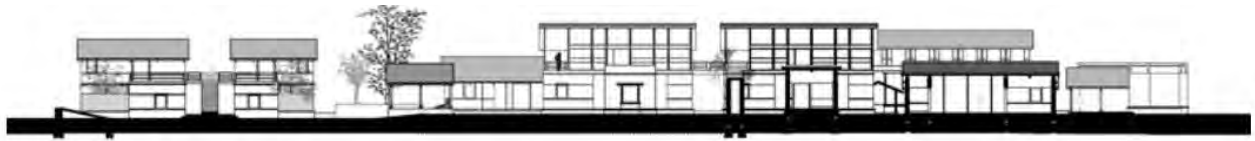


Khamir Artisan Village (Photo Source: Retrieved from [http:// www.hunnarshala.org/ publications.html](http://www.hunnarshala.org/publications.html))

The project was designed by Architect Neelkanth Chaya. The communities within are represented by the sensitive designs of the dwelling clusters, with user friendly spaces that has workshops and artifacts open for public use as well. Overall the village gives a sense of inclusiveness that is also necessary for the promotion of Jamdani in this project as well.



Site Plans



SECTION AA



SECTION BB



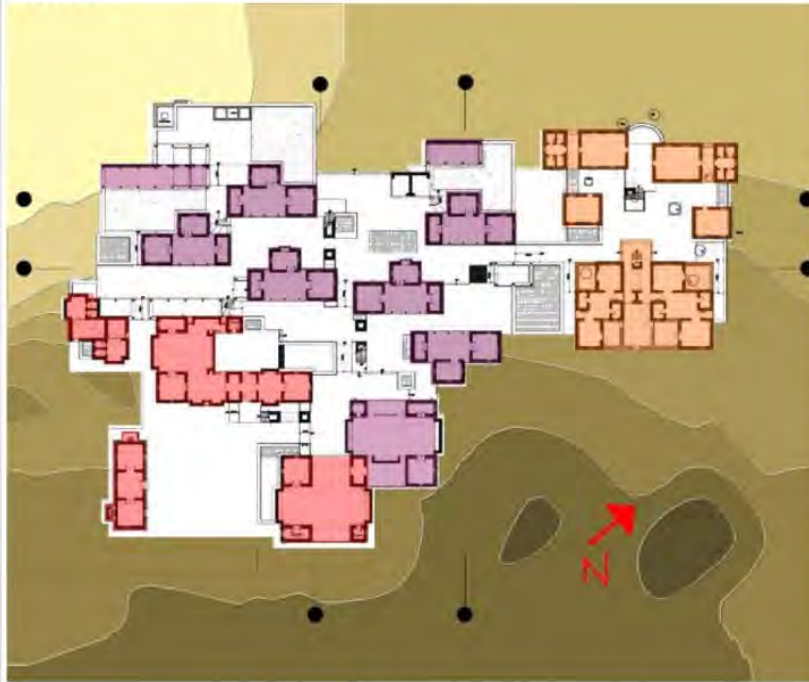
SECTION CC



SECTION DD

Site Sections

ZONING



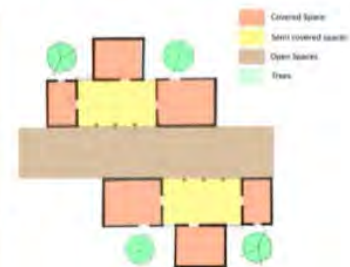
- Residential Area
- Workshop Area
- Administration

- Staggered arrangement of built form can be seen in plan .
- As shown in plan same modules repeat to form clusters which represent Kutch village.
- Built up area is about 2200 sq. m.
- Orientation of built form (workshops n administrative block) results in proper breeze flow , reduction of thermal radiation exposure and create effective daylight conditions.

CIRCULATION



- Vegetation
- Circulation
- Pavings
- Semi open area



- Interrelation between closed , semi open and open spaces to create natural and fresh environment for people working there.
- Building module are placed in such a way to form narrow pathways and shaded spaces
- Courtyards are connected by shaded pathways.
- Kattas (outdoor seating) are provided in courtyard.

The village creates a democratic and empowering space which encourages a range of stakeholders to exchange and develop new ideas and work together. They work to raise the value of the crafts and shift consumer viewpoint.

4.1.2 Kuthampully Handloom Village

Situated in the banks of river Nila, Kuthampully is one of the popular weaver's villages in Kerala, India. This used to be a centre point for the weaver's village in the long-gone years. The looms are set up in the small vernacular houses of the villager's homes, many of which are now converted into big modern buildings.



Kuthampully Handloom Village(Photo Source : Retrieved from <http://www.welcomekeralaonline.com/article/handloom-weavers-kuthampully>)

There are many small pathways leading to the main road that has traditional houses lining both sides of the road, this is the residential area of the community. There is a long area in front of each of the weaver's houses that they use to warp yarns. This community was established in 1972 with the aim to centralize the efforts to promote and facilitate the weaving crafts of Kuthampully products and provide a decent income source to the weavers. There were 500 weavers in 1990 but at present there are only 160.

The villagers use both traditional and innovative methods when designing saris and other clothes. The houses are supplied with materials by the co-operative society. The items are up for sale in the village of Kuthampully and in Kerala but their products are also famous in other parts of the country as well.

4.1.3 Belapur Incremental Housing, Mumbai, India

Belapur incremental housing designed by Charles Correa is located on 6 hectares of land 2km from the city center of New Bombay. This project demonstrates how high density can be achieved in the context of low rise housing typology.

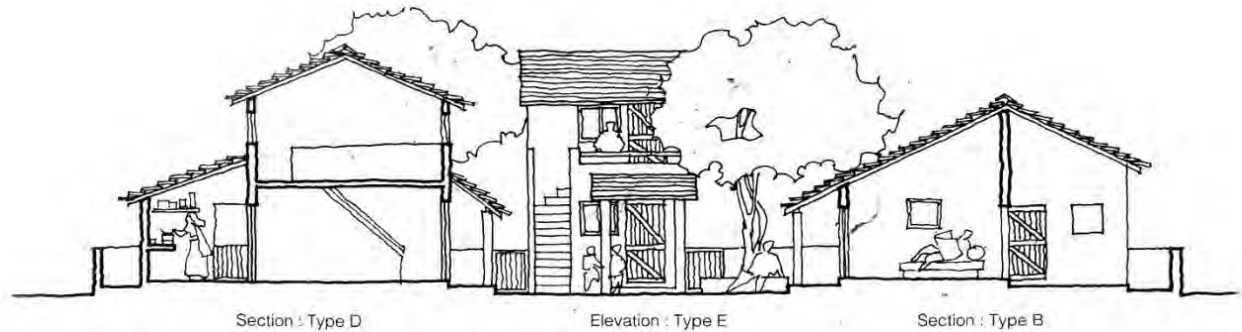
A cluster of seven houses surrounds an 8mx8m shared courtyard and the site plan is generated through the hierarchy of such community spaces. Each house is placed on its own piece of land so each family can have access to open to sky spaces.



belapur incremental housing (photo source: retrieved from <https://arcnstation.wordpress.com/tag/belapur-housing/>)



Belapur incremental housing (Photo Source: Retrieved from <https://pt.slideshare.net/rithikarockingravishankar/belapur-incremental-housing-a-case-study/9>)



Belapur incremental housing (Photo Source: Retrieved from http://www.mukogawa-u.ac.jp/~iasu2012/pdf/iasu2012_Proceedings_404.pdf)

Correa suggests that cities should be developed based on spatial hierarchy which ranges from the private individual dwelling to the communal court (traditionally containing a well or a common tap) to the greater public space- the maidan. Belapur's geometry is expressive of this grammar (Davey, 2015).

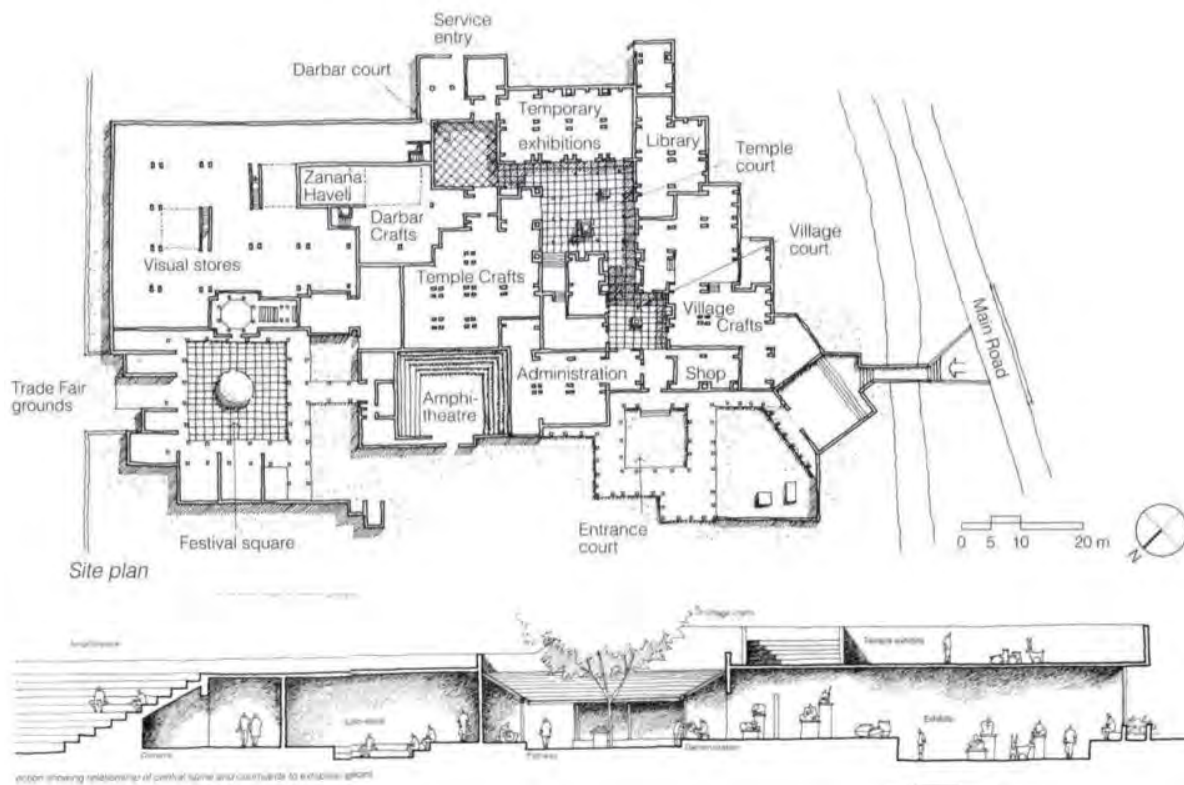


Belapur incremental housing (Photo Source: Retrieved from http://www.mukogawa-u.ac.jp/~iasu2012/pdf/iasu2012_Proceedings_404.pdf)

Correa's community and social principle are linked to socio-economic ideas. He believed that prefabricated system building is not ideal as it diverts resources from the local craftsmen so the structures at Belapur are around one or two-storey high and built traditionally. The houses allow the people to change it to suit their needs.

4.1.4 National Crafts Museum, Delhi

National crafts museum done by Architect Charles Correa was set up over a period of 30 years starting in the 1950s and 1960s by the efforts of late freedom fighter Smt Kamaladevi Chattopadhyay when the area was envisioned as an ethnographic space where craftsmen from various parts of India would come in to work in preserving the various traditional arts and crafts of India.



National Crafts Museum (Photo Source: "The complete works of Charles Correa")



National Crafts Museum (Photo Source: "The complete works of Charles Correa")

Today the museum holds over 35,000 rare and distinctive pieces reflecting the continuing tradition of Indian craftsmen through painting, embroidery, textiles, various crafts of clay, stone and wood, incorporating traditional architectural vocabulary into a modern design. This museum strives for an identity, it is an institution within itself which acts like a ground for the artisans to interact and gain firsthand experience. The archives are studied by the artisans and research is conducted. In this manner they can interact and interchange their ideas as well. This project is basically an incentive which has till now never been available to traditional Indian craftsmen, (Handicrafts India, 2017).

4.1.5 Islampur Handloom Village, Swat, Pakistan

The centuries old cottage handloom industry in the small village of Islampur in Swat is famous for their Hand woven shawls. Although not professionally designed a lot could be learned from the organic growth of the village and the zoning of the industry to help with this project.



Islampur handloom village (Photo Source: Retrieved from: <https://www.dawn.com/news/1195676>)

The looms are placed in semi-open spaces surrounding a courtyard where the weavers prepare their yarn. The shops are at the main entrance to the village but weaver's also sell items from their homes. According to the Islampur Cottage Industry Association (ICIA), the cottage industry comprises 3,000 handloom units owned by several individuals with over 80pc of the population making up its workforce.

4.2 Local Case Studies

4.2.1 Dhamrai Pottery Village

Dhamrai Pottery Industry is one of the renowned pottery industries in Bangladesh. There are several pottery villages in Dhamrai. Such as Kagozi Para (Pathantola), Shimulia Paal Para, Notun Bondor Paal Para etc. These villages are not professionally designed but the users have modified them to suit their own needs and to better suit their crafts. A Kumar's house usually has the same type of zoning and configuration. Beneath the same thatched roof are the kiln, storehouse and dwelling house, while a free space in front of the door or the courtyard is used as a place to prepare the clay. This type of zoning where space is left in front of the house can also be seen in Rupganj Jamdani polly as well as in Kuthampully handloom village in Kerala where the space is utilized for warping yarns.



Dhamrai pottery village (Photo Source: Retrieved from: <https://hiveminer.com/Tags/dhamrai,woman>)

4.2.2 Tangail Handloom Industry

Tangail handloom industry is one of Bangladesh's oldest cottage industries. A survey conducted in 2013 said there are 60,000 looms in Tangail. Of them, 8,305 are pit looms, 51,141 are Chittranjan looms and 892 are power looms (Banarjee, et al, 2014).

The zoning of the houses here are also very similar to that of the previous examples. A free space in front of the house is used as a place to warp yarns, color the threads and prepare the saree for the loom. All of these examples point to how the zoning of the houses and the adjacent courtyards need to be versatile enough for the craftsmen to adjust it to their own needs.



Tangail Handloom village (Photo Source: Retrieved from: https://www.youtube.com/watch?v=YGOGs9IH_8Y)

Chapter 05: Program

Function	Area in Sq ft
• Haat	6,400
• Museum Curator's office Ticket counter Information/reception Lobby Toilet	4,000
• Cafeteria Kitchen and Store Main serving area for 250 people Outdoor space for kiosks (2,000 sft)	8,000
• Common workstation 10 rooms (1250 sft/ room) Looms/ room = 10	12,500
• Shops 100 sft x 20 shops	2,000

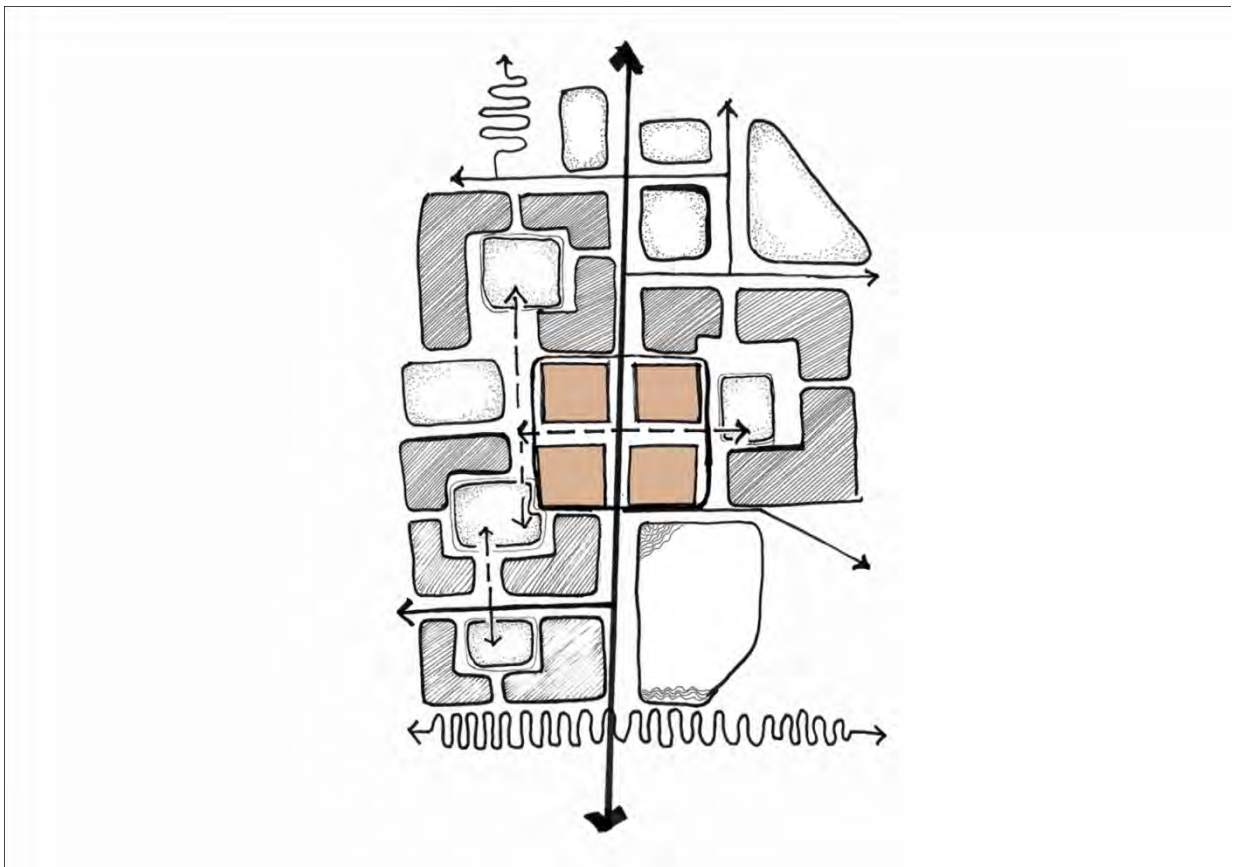
<ul style="list-style-type: none"> • Exhibition space <p>Permanent gallery with work on display – 4,000 sft</p> <p>Permanent gallery displaying project – 4,000 sft</p> <p>Open gallery – 3,000 sft</p> <p>Lobby space – 3,000 sft</p>	<p>14,000</p>
<ul style="list-style-type: none"> • Seminar room x2 	<p>3,000</p>
<ul style="list-style-type: none"> • Administration <p>Reception – 500sft</p> <p>Admin office – 650sft</p> <p>Account section – 250 sft</p> <p>Computer and engineering- 300 sft</p> <p>Conference room – 600 sft</p> <p>Information and resource center – 3,000 sft</p>	<p>5,300</p>
<ul style="list-style-type: none"> • Library and Documentation archive 	<p>3,000</p>
<ul style="list-style-type: none"> • Multipurpose hall <p>Space required/ person – 10 sft</p> <p>No of users – 1,000</p>	<p>10,000</p>

<p>Research and design center</p> <p>Material treatment lab – 2,000 sft</p> <p>Research lab – 1,000 sft</p> <p>Material archive – 600 sft</p> <p>Fabric analysis lab – 500 sft</p> <p>Chemical testing lab – 500 sft</p>	4,600
<p>• Workshops</p> <p>Admin, director and staff zone – 2,000 sft</p> <p>Classrooms x 3 (1 classroom = 3 looms, 6 people can learn) – 1125sft</p> <p>Finished good storage – 2,000 sft</p> <p>Common space – 1,000 sft</p>	6,125
<p>• Accommodation (for guests/ visitors)</p> <p>No. of rooms – 5</p> <p>Sft / room – 300</p> <p>Common lobby – 1,000sft</p> <p>Dining and kitchen – 1,000 sft</p>	3,500
<p>• Accommodation (for temporary Taantis)</p> <p>Total number of taanti's – 100</p> <p>Type A: 6 people/ room – 800 sft x (5 rooms)</p> <p>Type B: 4 people/ room – 400 sft x (5 rooms)</p> <p>Type C: 10 people/ room – 1400 sft x (5 rooms)</p> <p>Common dining space – 1000 sft</p>	14,000
Total	99,425

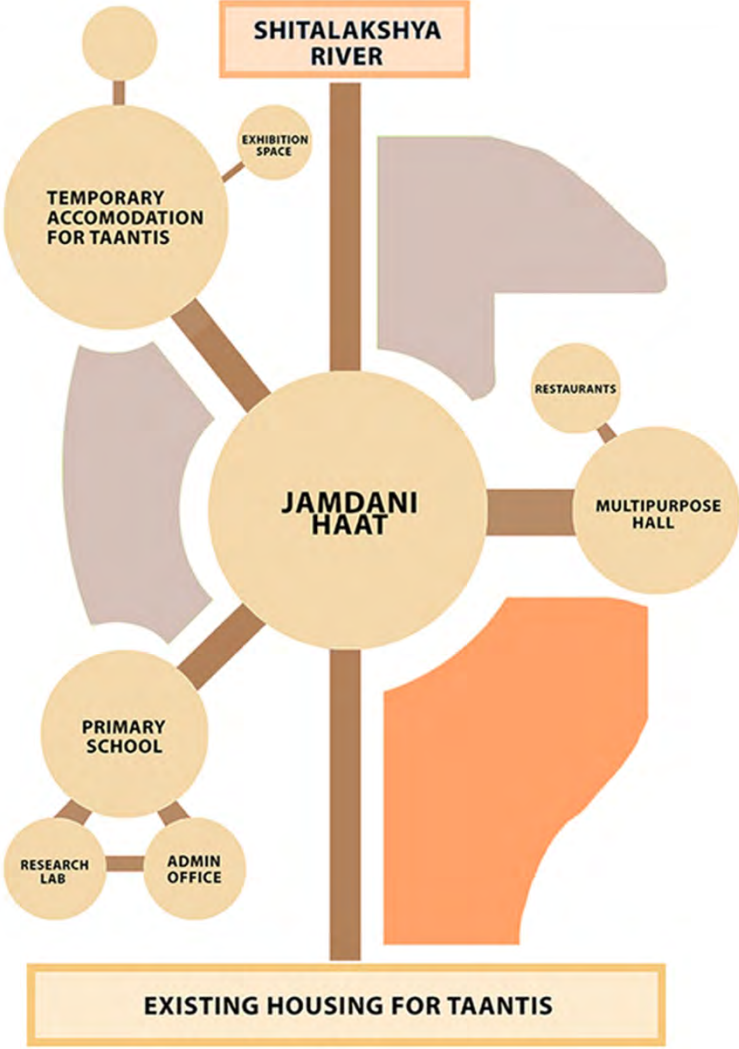
Chapter 06: Design Development

6.1 Concept:

Throughout the design process the goal was to make the “Haat” the heart of the project. The goal was to create a focal point at the center of the site which would be designated for the Haat while having linear pathways connecting all the functions leading to the Haat. Each function has a courtyard that connects to each other leading up to the Haat. The courtyards are designed following the tradition of having a community space designated on the front of the house or workshop as seen on various case studies.



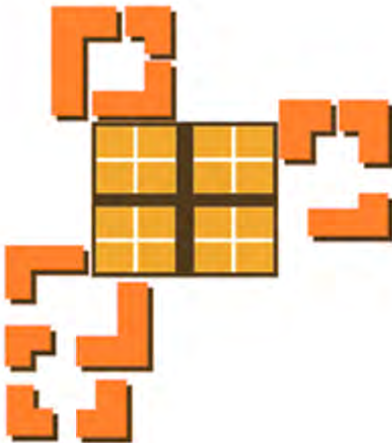
6.1.2 Schematic and Zoning



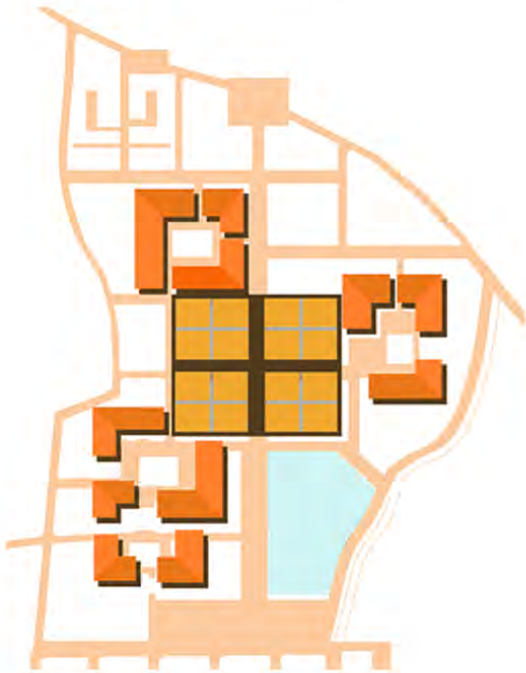
6.1.3 Cluster Formation



HAAT FORMATION



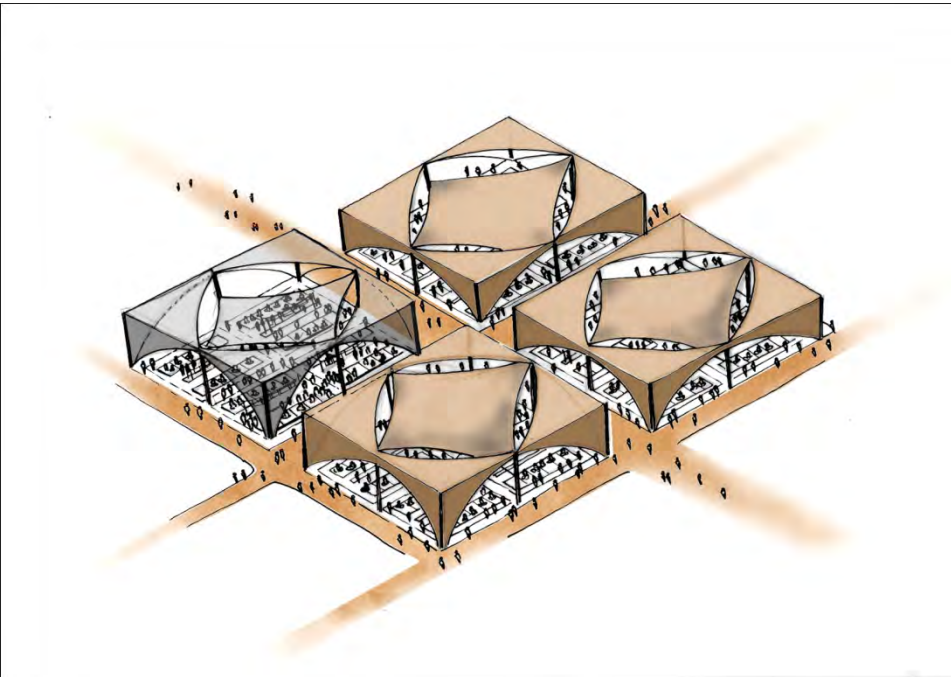
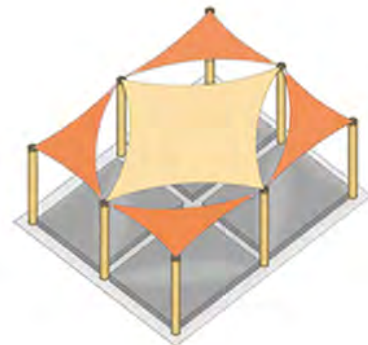
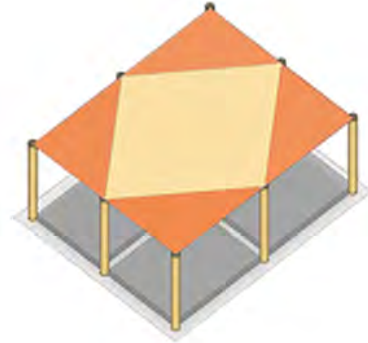
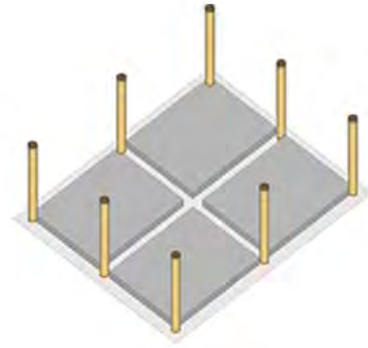
CLUSTER FORMATION



CIRCULATION PLAN

The alignment of the functions and the pathways all lead towards the Shitalakkha River on the west of the site. This was intentionally done to create a sense of direction and focus on the River as it is the oldest part of the area and produces a great view as well as opportunity for trade and business.

The geometric form of the Haat is derived from the geometric patterns of the jamdani designs. Studying the pattern of the designs one can see that it has no organic forms but only sharp angles and linear forms that have been mimicked throughout the project.



PAVILION FORMATION FOR HAAT

6.2 Masterplan Derivation

Since one of the main focus of the project was to connect the housing to the river and creating a flow towards the river, the process of deriving a masterplan first started with pathways that connected all throughout the site.

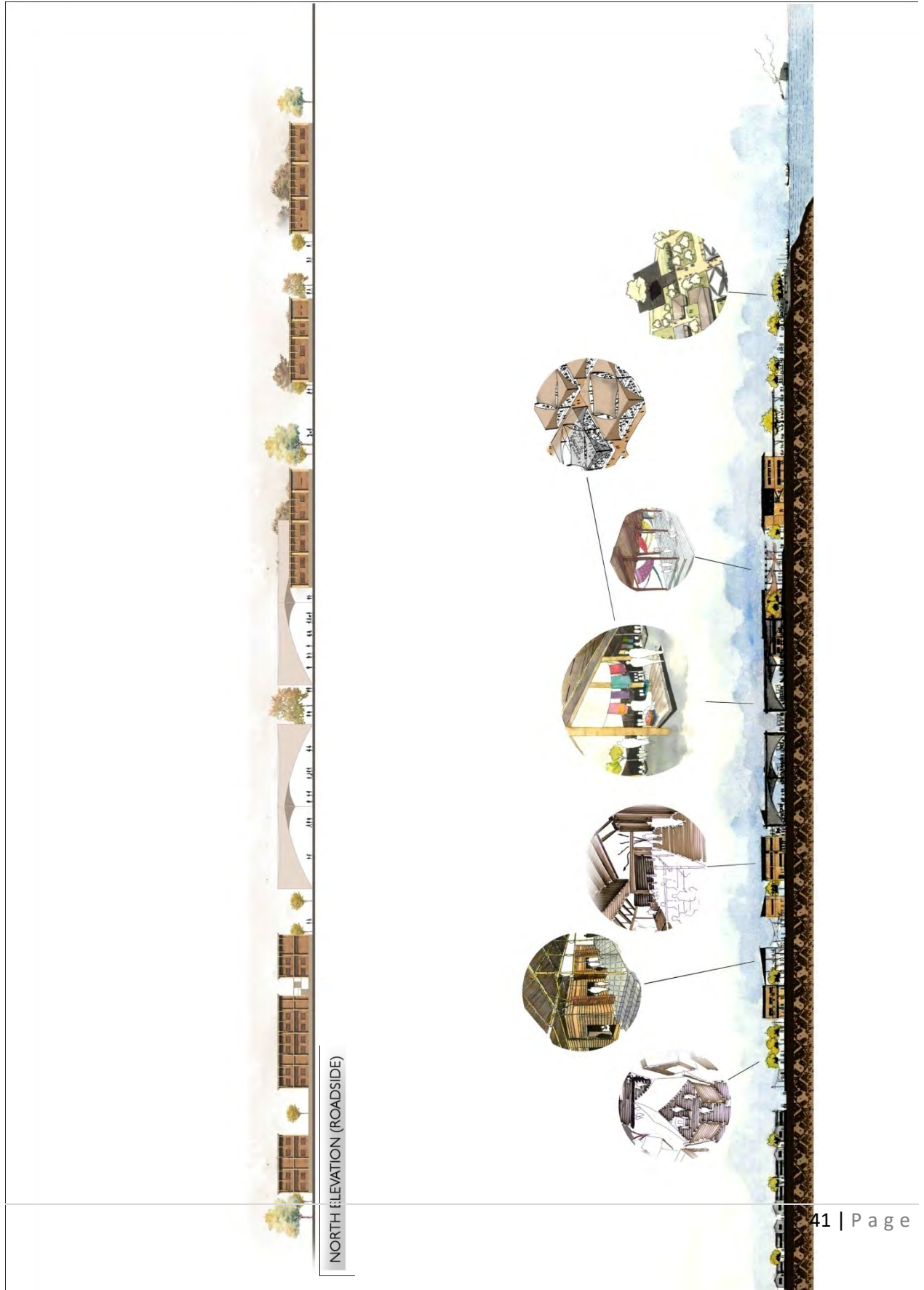


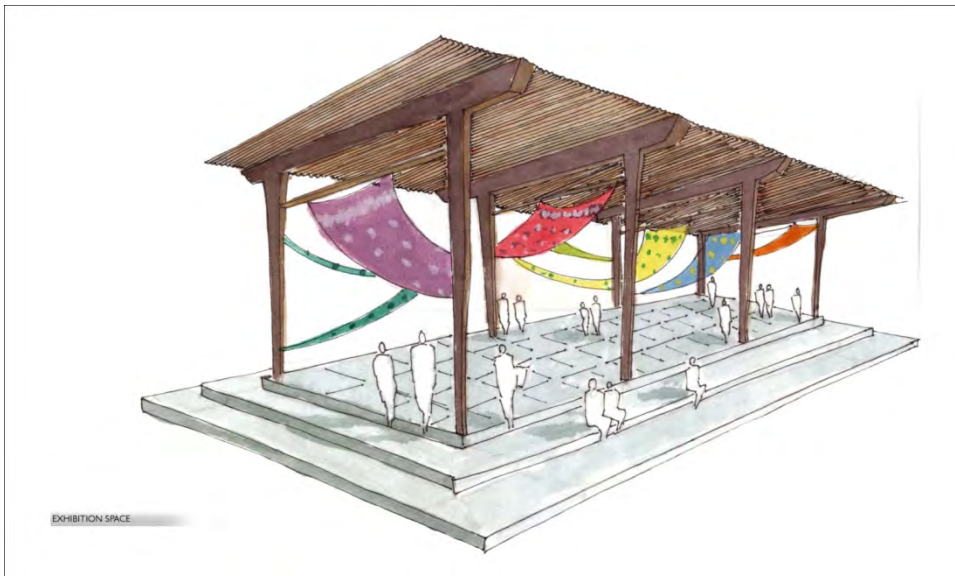
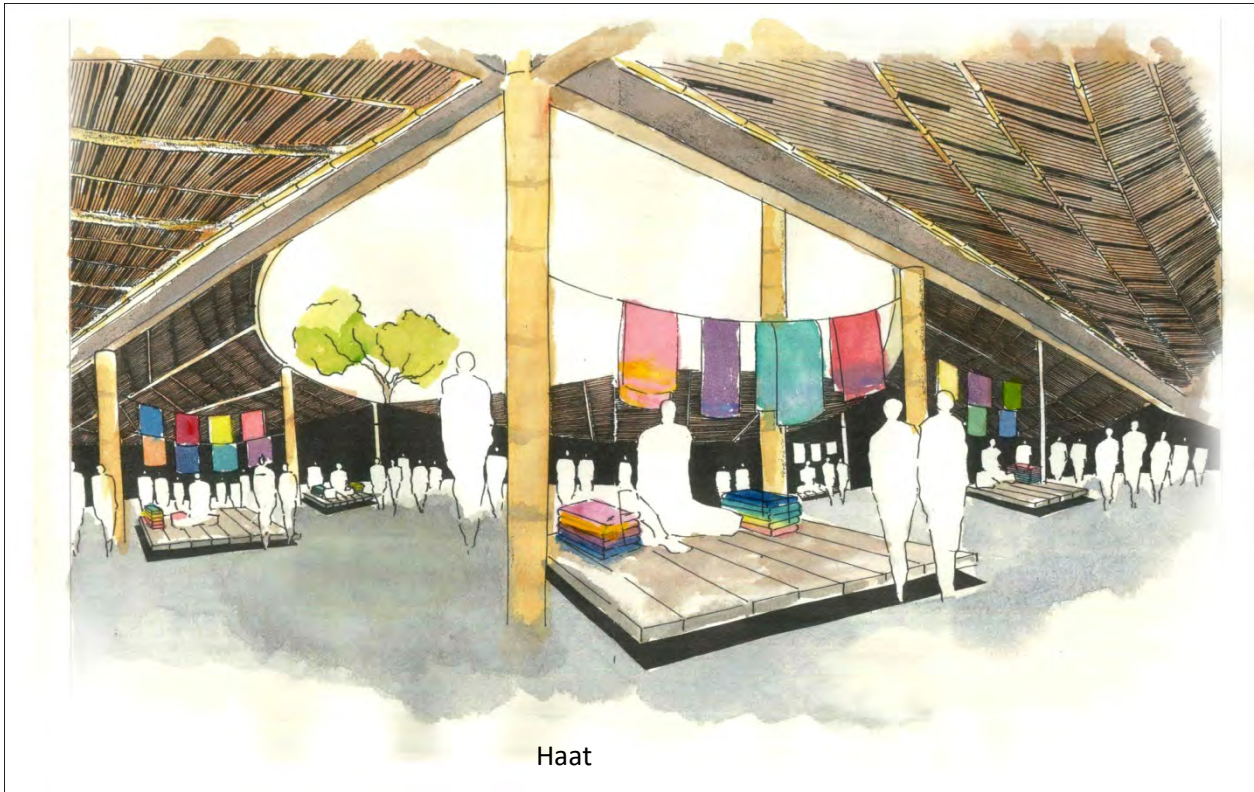
6.3 Final Masterplan



 **GROUND FLOOR PLAN**
SCALE: 3/64" = 1'-0"

6.4 Elevation and Section

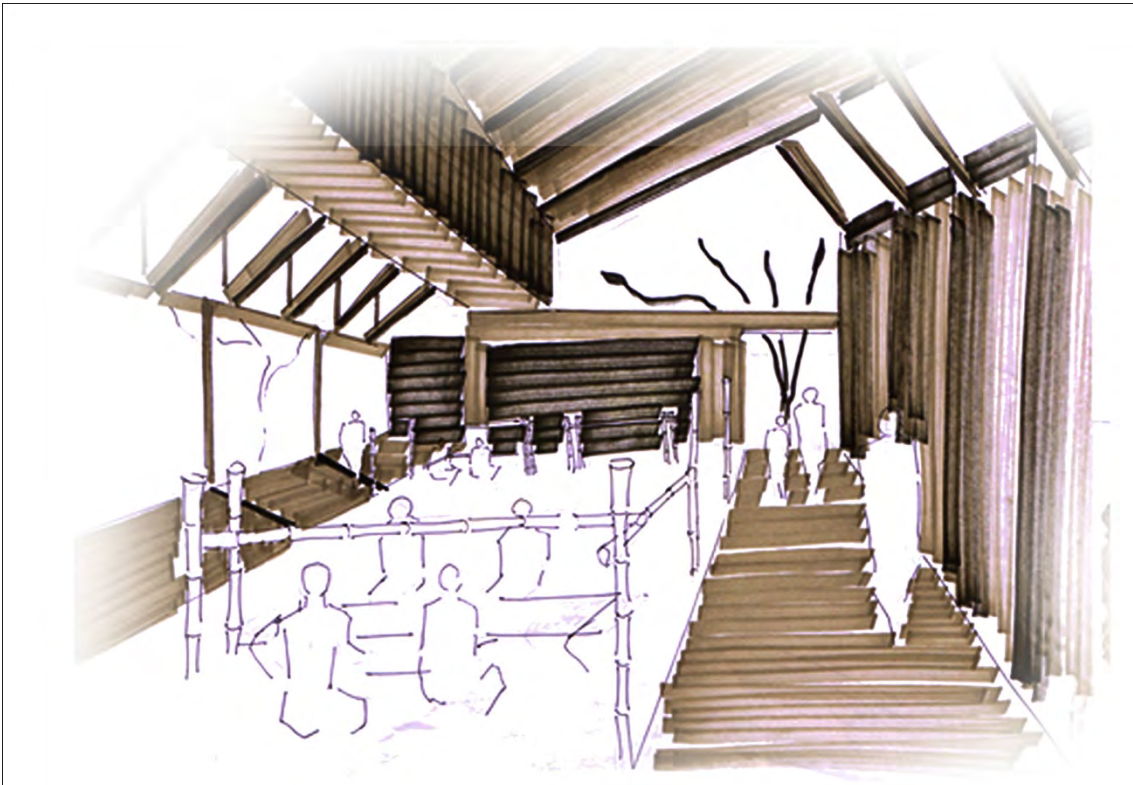




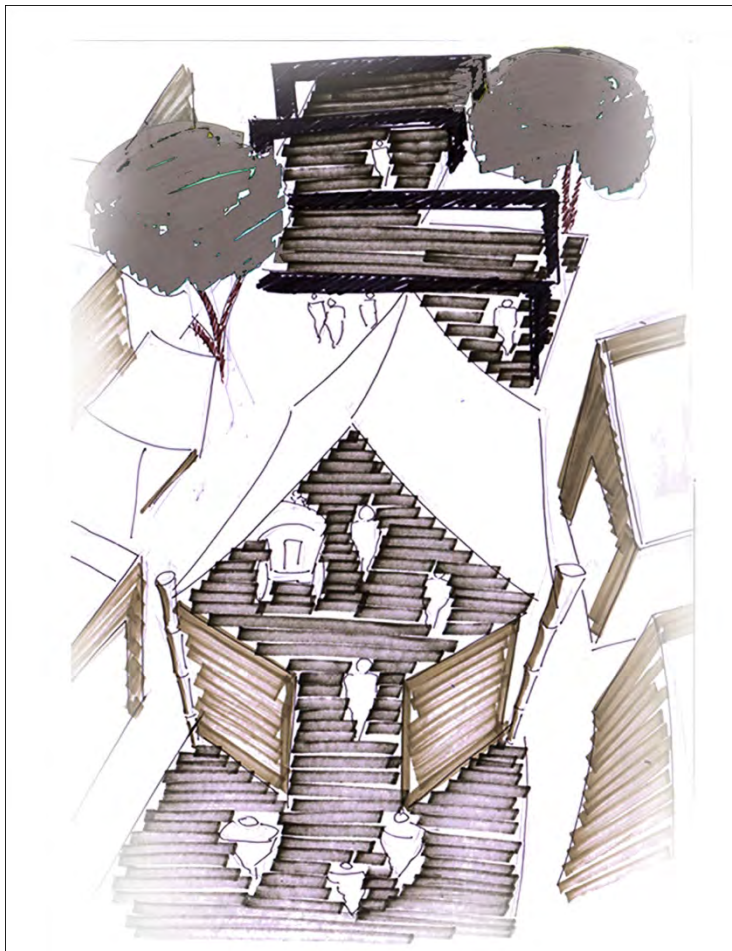
Exhibition spaces created for the *Taantis* to exhibit their works for the visitors and create awareness.



In addition to general education, the primary school would also have vocational training on the art of Jamdani to generate an interest among the young. Along with regular classrooms, the primary school also has workstations where children can learn the ways of the craft. Since less and less youngsters are interested in taking up the profession which is leading to an extinction of the art.



Workstations are designed in a way so that visitors can sit and observe as the weavers are at work.

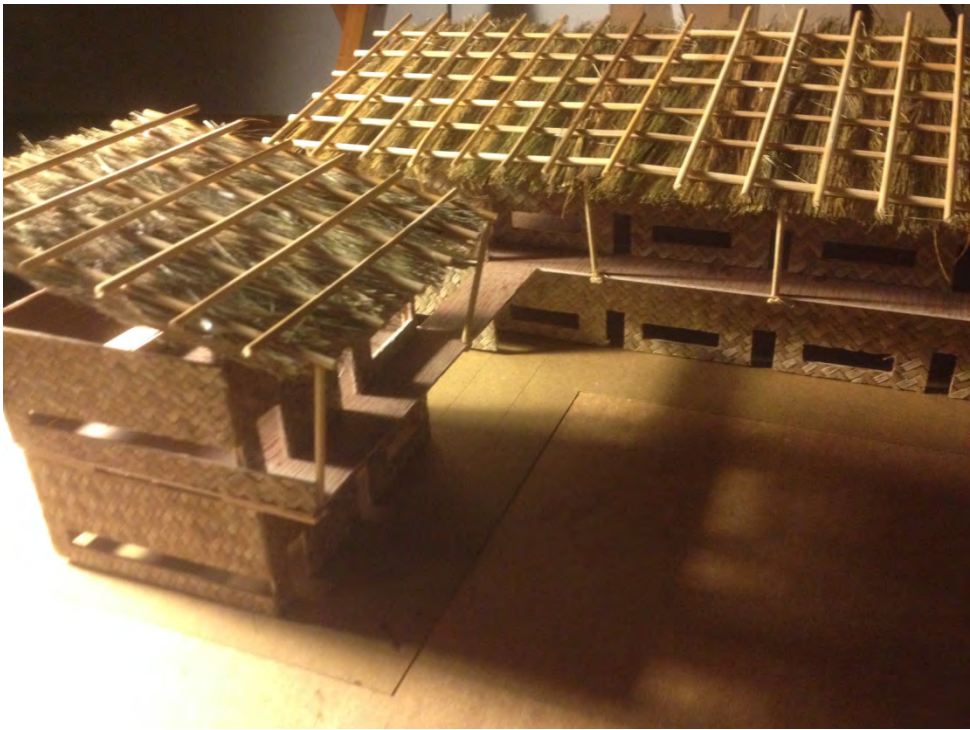


ENTRY SPACE

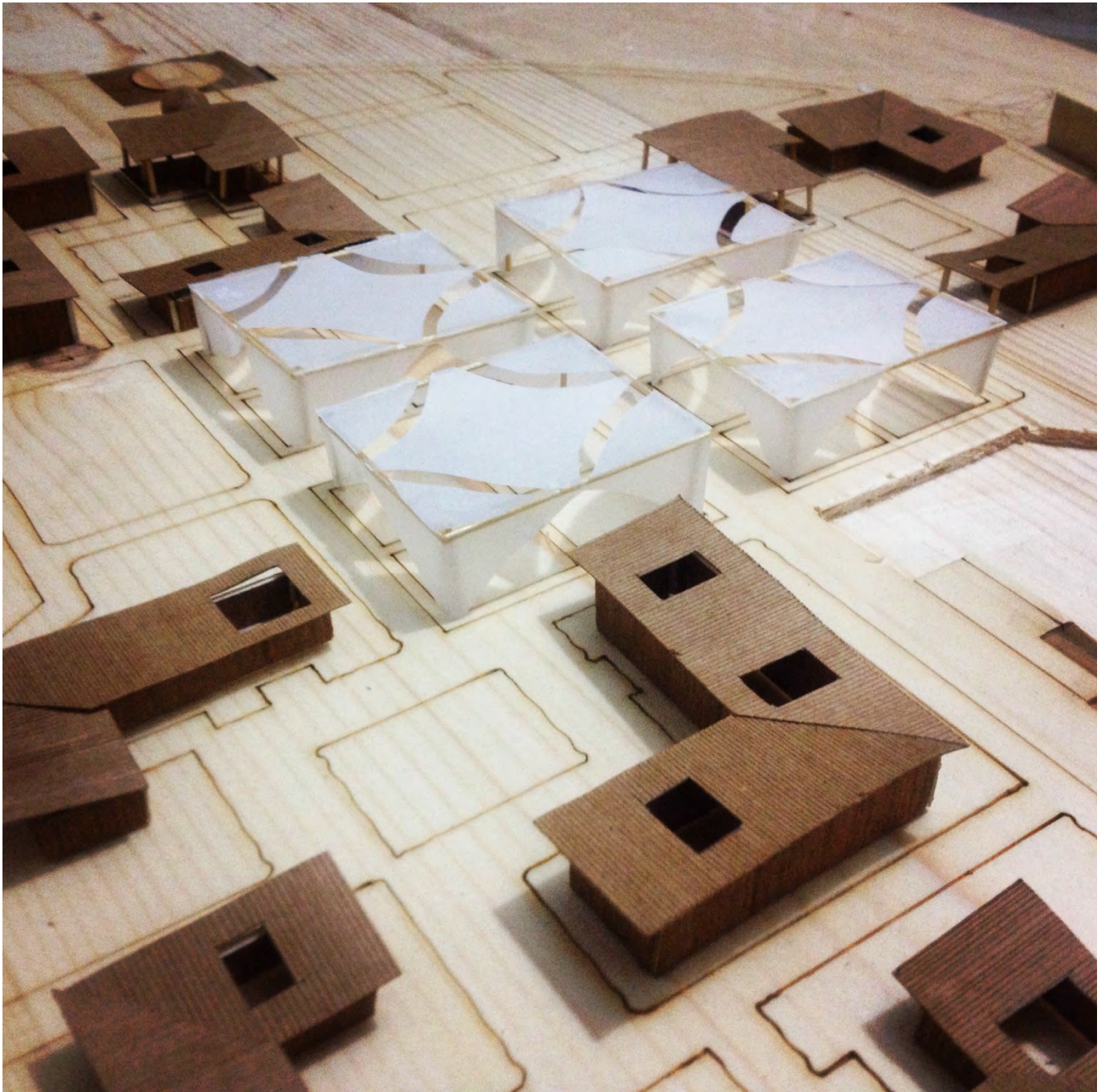


BIRD'S EYE VIEW

6.5 Final Design Models



Blow up Details



Conclusion:

The project aims to revitalize the craft of Jamdani sarees and enrich its potential. It aspires to revive through the process of strategic planning in order to create awareness and promote the craft and our age-old tradition. It gives the weavers an opportunity to demonstrate their craftsmanship to the world and create a platform for next the generation of weavers.

References:

1. Ghosh, S. K. (2005). Handloom Industry on the Way of Extinction: An Empirical Study over the Predominant Factors. BRAC University Journal, Vol. 02, No. 02.
2. Jamdani export becomes rickety (2005). Bdnews. Retrieved from <http://bdnews24.com/business/2005/09/01/jamdani-export-becomes-rickety>
3. Iqbal, I (2014). Protection of Jamdani. The Daily Star. Retrieved from <http://www.thedailystar.net/protection-of-jamdani-33014>
4. Retrieved from Bangladesh Handloom Board; Census of 2010, Institute of Business Administration, University of Dhaka.
5. Ghuznavi, Sayyada R. *Naksha: A collection of designs of Bangladesh*. Dacca, 1981
6. Karim, Abdul. *Dhakai Muslin*. Dhaka: Bangla Academy, 1975
7. Saidur, Mohammad. *Jamdani*. Bangla Academy, 1993
8. Taylor, John. *Report on cotton textiles of Dacca*. India office records, 1800.
9. Watt, Sir George. *Indian art at Delhi*. Calcutta, 1903.
10. Ghuznavi, Sayyada R. (2006) *Jamdani: The Legend and the Legacy*. In *Textile traditions of Bangladesh*. National crafts council of Bangladesh, (pp 37-59). Dhaka, Bangladesh.