"PAHICHAAN"- THE SAPTARIYA THARU HUB

Saptari, Nepal

By:

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750147

A thesis submitted in partial fulfillment

of the requirements for the

Degree of Bachelor of Architecture

Purbanchal University

KHWOPA ENGINEERING COLLEGE

DEPARTMENT OF ARCHITECTURE

Libali, Bhaktapur, Nepal

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ABSTRACT

Culture represents the values and understandings that make us human. Unlike other living beings, we express ourselves, speak, communicate, live in societies, and seek knowledge and meaning. This journey has led us to develop languages, customs, traditions, arts, crafts, music, science, and technology. Culture allows us to learn and grow, shaping how we live and think for our betterment.

The "पहिचान : THE SAPTARIYA THARU HUB'' is a suitable project for Nepal, as the Tharu are the native people of saptari and tourism is a key income source. A 'THE SAPTARIYA THARU HUB' suggests a place that embodies the traditions and natural essence of the Tharu community. The center is located near the Tharu settlemets, making it easily accessible through the Tharu village..

The main feature of the "पहिचान :THE SAPTARIYA THARU HUB" is that it will be designed in the traditional Tharu architectural style, utilizing local materials and techniques from the Tharu ethnic group, predominantly found in the Saptari district of Madhesh Province, which has a higher saptariya Tharu population compared to other areas in the province. This approach will promote tourism and provide the nearby population with a community space to celebrate programs, promoting and preserving Tharu traditions and crafts. As a popular tourist destination, Saptari will offer a platform for Tharu culture to gain recognition both nationally and internationally.

DECLARATION

I declare that this dissertation has not been previously accepted in substance for any degree and is not being concurrently submitted in submission for any degree. I state that this dissertation is the result of my own independent work/investigation, except where otherwise stated. I hereby, give approval for my dissertation, to be available for photocopying and understanding that any reference to or quotation from my thesis will receive an acknowledgment.

_____

Swastika Chaudhary(750147)
September 2024

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CHAPTER 1 INTRODUCTION TO PROJECT

INTRODUCTION

" पहिचान : THE SAPTARAYA THARU HUB"Which Means "Identity" which Makes the tharu people.This project aims to improve the income and infrastructure facilities of local art and craft people and to make native art and craft popular one amongst the people.The Tharu Hub is a place where one learns about all the art and crafts which is produced by the tharu community people and they can able to know about their importance and its history behind each craft work.It is place where one learns to observe how these crafts are made and what are the techniques which is used by the craft person to make this craft products. It is a place where one learns about the instruments which is used by the craft people to make these crafts and different step by step process by which this art and craft are made. Craft bazaar provide everything about the craft products from the history to how these craft products are made everything can be known in a single place and people who visiting this place can able to learn this craft works also so it will improve the infrastructure requirements and income of the craft people who making this craft products in tharu community of provinces no.2.

1.1 BACKGROUND

Nepal is one of the multi-cultural countries with different indigenous groups living together in harmony sharing their cultures, traditions, rituals along with their way of living. There are over 125 groups of people, each with their own language and traditions. This makes Nepal one of the most diverse countries in the world. The people in Nepal have a rich history of art, festivals, and customs that are a big part of their everyday life. This cultural diversity has always been important to Nepal. People from different parts of the world and locals are attracted to Nepal because it has preserved its unique culture. This not only makes Nepal special but also helps the country make money through tourism. So, by keeping and sharing their cultural traditions, Nepal not only celebrates its identity but also boosts its economy.

The Tharus are an indigenous group of the people that inhabiting the Tarai of Nepal and they are the ,son of land of Tarai (Chaudhary, 2073; Sarbahari, 2073). The entire Tharu population in Nepal is 18,07,124 people, according to the National Population and Housing Census 2023, it indicates that the Tharus are the second largest indigenous group in Nepal (CBS, 2023). According to Panjiyar (2000) the term "Tharu" is made up by two words Tha+Ru where, "Tha"- means Tarai and "Ru"- means permanent settlers. It means Tharus are the indigenous people of Nepal living in Tarai (Panjiyar, 2000 as cited in Chaudhary (Tharu), 2011). The Tharu people are an indigenous people those who living in the Terai plains on the border of Nepal with India. This is the Tarai region's largest and oldest ethnic group who living in the villages near dense malaria-infested forest, in regions that were isolated over the millennia allowing them to develop unique culture (Bista, 2004 as cited in Ghimire and Bastakoti, 2008). Although the term 'Tharu' is commonly used to refer to a single Nepalese population, it actually refers to a number of subgroups based on cultural and linguistic variety within the Tharu community Tharus are believed to be one of the largest and oldest ethnic groups of people, living in villages near dense infested regions that were isolated over the millennia,

allowing them to develop unique "diverse cultures and languages" (BULLETIN, 2013, p. 1) inhabiting in Nepal (Rajaure, 1981). Tharus can be seen in the southernmost part of Nepal and Nepal's southeast border India where the Tharu used to work usually as farmers or peddlers. "The Tharu, however, recognize many different subgroups distinguished by clan, region, cultural differences, and language" (Eichentopf & Mitchell, 2013) and endogamous sub-groups of Tharus are Rana, Katharia, Dangaura, Kochila, and Mech (Rajaure, 1981). Kochila tharu is one of a subgroup of tharu where Kochila Tharu people live in the districts "are Bara, Rautahat, Sarlahi, Mahottari, Dhanusa, Siraha, Udayapur, Saptari, Sunsari, Morang and Jhapa" (Eichentopf & Mitchell, 2013, p. 1). According to Boehm (2018), the Kochila/Morangia Tharu, found mostly in Morang and Sunsari, are distinguished from other Tharu who call themselves Kochila in Siraha, Udayapur, and Saptari districts by dress, customs, and language. But generally, Kochila tharu is also known as Saptariya tharu, since the dominant Kochila Tharu people live in the saptari district. Kochila Tharu, often referred to as Eastern Tharu, has a historical connection to the Brahminical and Vaisnava culture of Mithila kingdom in the eastern Terai region . The ethnonym "Koshila" or "Kuchila" is possibly associated with the name of Koshi River, along the banks of which they traditionally resided, as suggested by the Krauskopff. Among these several endogamous sub-group of Tharu,My thesis work will be concentrated on the tharus living in the terai of Eastern Development Region of Nepal, dealing mainly with the saptarian tharu. In this region, Kochila tharu have their own way of living culture, tradition, arts and architecture

1.2 PROJECT JUSTIFICATION

One's identity comes from the combination of cultural background, family upbringing, personal experiences, social environment, geographical location, historical context, personal choices, and psychological factors. These elements collectively shape who we are and how we see ourselves.. Since I originally belong to the Tharu community in Eastern Nepal, specifically in the Madhesh Pradesh provience, our identity is deeply rooted in our history and background. Our way of life, clothing, beliefs, traditions, and architecture have evolved over time, forming distinctive patterns that define us. However, these authentic practices are gradually disappearing due to shifts in our socio-economic status and the influence of globalization and modernization. The traditional lifestyle and culture of the Tharus in Nepal are currently undergoing significant changes, leading to the loss or abandonment of many heritage practices.

1.3 OBJECTIVE

The main focus of a Tharu Hub is on economic activities, trade, and the exchange of goods. It may serve as a hub for local commerce and contribute to the livelihoods of Tharu people.

- The objective is to design a built-up space that promotes capacity building by including facilities to investigate and record Tharu art, culture, beliefs, customs, festivals, and the way of life that have shaped their traditional architectural forms. It will feature studio and workshop spaces for arts and handicrafts, as well as a community gathering area where people can meet to enjoy or participate in cultural activities.and craft products.
- To provide a better place for the local art and craft makers to sell their products and

to teach their craft work to the people.The essence of the traditional art and craft work will be retained amidst the modern.

- To create a space that fosters community engagement and participation in the development and management of tourism-related activities.

1.4 STATEMENT OF THE PROBLEM

The Tharu community had lots of indigenous knowledge, skills,culture,tradition,technology and practices among them handicraft making practice was most important and unique skills. **We see museums and galleries for spreading the cultures of our various ethnic groups. But, a place for the promotion of local materials, ideas, arts, and creation with the economic perspective of ethnic groups is not done well** Gradually, the time and space handicraft making practices of Tharu people have been change and somehow lost. Among the Tharu people they had handicraft making practices to make and weave different kinds of baskets, tools, weapons, nets, mats and so on for the different purposes of household use and ceremonial activities. The economy of Tharus is based on agricultural farming. Besides, the supplementary occupations like house construction and maintenance, making of basketry, pottery, nets, mats, and ropes, etc, are keep the Tharu people busy during the leisure time of agricultural work (Maiti, 2001). Tharu people specially women, who have amazing skills to weave different kinds of baskets such as delwa, dhakya,bhauka, panchhopni, etc. which some baskets are colourful and some baskets are seen without any designs or colour. The colorful ones are for joyous events such as weddings or other festive occasions, while without any designs and the plainly colored ones are generally used to store food items or other household items. Those baskets are replacing by market products. Instead of weaving delwa, bhauka, panchhopni etc. they want to buy market production of steel box, suitcase etc. “The practice of making basketry has been transition to be more of a leisure activity than a cultural practice, with traditionally woven baskets are gradually being displaced by less expensive synthetic alternatives” (Isch, 2019).

These days, only few Tharu women still know how to weave traditional baskets or baskets weaving techniques,and Tharu men who used to make various gifts for their in-laws out of natural fibers but now they would use plastic materials or buy readymade plastic chairs for gifts or home usage.In sum to say that, indigenous handicraft making practices have not been carried on the Tharu community. Younger generations are not interested in weaving traditional baskets, because it requires a lot of time and efforts to weave these types of baskets like dhakiya and bhauka, but they have little market value. “Although the technique of weaving these traditional baskets has been passed down through generations, there has been a steady decline in this trend in recent years, as weaving baskets requires a lot of time and efforts, where the larger baskets are taking up to a month to finish.But nowadays,these baskets are currently limited to being use during weddings. Instead of weaving Bhauka and Feruwa to store clothes and other home items, people prefer to buy modern products, which are easily available in the market”(Chaudhary, 2019). There is lack of interest among people to follow their tradition and cultural practices; young are becoming highly attracted to Western culture, and to follow traditional practices are being considered as outdated(Lekhi, 2019). In the Tharu community, they have lots of traditional cultural practices which are till practicing but somehow are gradually changing and have been lost from the society.

1.5 SCOPE AND LIMITATION

The thesis explores the pivotal role of the Tharu Hub in preserving and promoting traditional Tharu crafts, arts, and cultural practices, contributing to the broader cultural heritage landscape.

Investigation into the economic impact encompasses understanding the potential benefits for local Tharu artisans and entrepreneurs, examining how market activities can serve as a catalyst for economic.

1.6 METHODOLOGY

To get the expected results, the procedures we should follow must be correct. For any project to be carried out the first step should be the proper selection of the methodology. The methodologies and procedures to be used are as follow : literature review, case study, and design idea formulation and planning. This procedure involves identifying the project location, conducting a case study of the similar projects to determine the building situation, and developing a design program. A design concept will be generated based on the literature review, case study, and the research done as shown in figure 1 below.

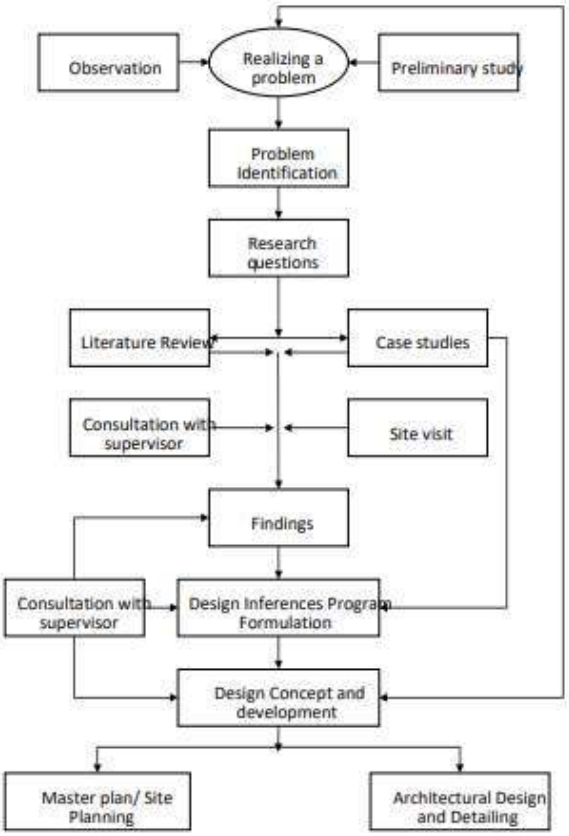


Figure 1- Methodology

CHAPTER 2. LITERATURE REVIEW

2.1 ORIGIN OF THARUS IN NEPAL

The Tharu community is a native ethnic group that has resided in the lowlands of Nepal for generations. Tharus are spread throughout the entire terai region of Nepal, showcasing a variety of cultural practices, artistic expressions, architectural styles, ways of life, languages, social structures, and political objectives(UN RCHCO, 2013). The Tharus are considered to be the indigenous people of this area. Nevertheless, the ancestry of the Tharus is a subject of debate. Legend has it that they migrated from the Thar Desert in Rajputana, located in the northwest of India. This migration supposedly occurred when Rajputana was seized by Muslim invaders, resulting in the murder of the men. The royal women then sought refuge in the Terai forest, taking their servants as their new husbands. As a result, the Tharus are believed to be the descendants of the union between Rajput women and their lower caste servants. (Risley, H.R. (1892), The Tribes and castes of Bengal, Vol. II, P.313).

There are at least ,**26 different Tharu groups**, many of which have their own languages and traditions in nepal. According to some Tharu activists, there are at least 60 numerous groups that identify as Tharu. Almost all Tharu communities currently hold this belief, which is supported by the Nepali State, that they are native to the Terai. Since neither the Madheshi community nor Pahadi immigrants to the Tarai claim to be original to the regions where the Tharus inhabit, this indigenousness is also an element of the Tharu identity (UN RCHCO, 2013).

The Tharu community is the most extensive and ancient ethnic group in the Terai region. Their unique culture has developed over centuries of living in isolated areas surrounded by malaria-infested forests and densely populated settlements. The Mulki Ain, a legal system introduced in 1854 by Jung Bahadur, the first prime minister of Nepal's Rana dynasty, established a caste system that placed the Tharus at the lowest social rank. The displacement of their land caused turmoil in the region, resulting in the forced eviction of many residents. The World Health Organization (WHO) collaborated with the Nepalese government in the 1950s to eliminate malaria from the Terai region. This effort attracted migrants from other areas seeking fertile land, leading to the subjugation of the Tharu people under the newcomers. The origin of Tharu is ill-defined. According to J.C. Nesfield, it must have been derived from the language of the group, 'Thar' which itself means '' **man of the forest**''. While performing most of the tasks allocated to them- which includes agricultural work, herding of cattle families get together in groups of two or three and jointly farm the lands to facilitate cultivation and to get a better yield.

2.2 SPATIAL DISTRIBUTION OF THARUS IN NEPAL

The Tharu people in Nepal are geographically distributed primarily across, the Terai region, which is the southern lowland strip bordering the India as shown in figure 2 below

Figure 2- Spatial distribution of Tharus in Nepal

Figure 3- Graphical distribution of Tharus in Nepal

Tharus do not have any collective identity; they are identified with their speaking style, dressing and rituals. They are divided into following groups such as shown in above figure :

a) Rana Tharu (Kailali and Kanchanpur districts of the far western Nepal Terai)
b) Dangura Tharu (western Terai: Dang-Deukhuri, Banke, Bardia, Kailali Kanchanpur Rupandehi and Kapil zvastu Districts districts)
c) Kathariya Tharu (Kailali District and in India.)
d) Chitwaniya Tharu (central Terai: Sindhuli, Chitwan and Nawalparasi Districts.)
e) Kochila Tharu (Eastern Terai: Saptari, Bara, Parsa, Rautahat, Sarlahi, Mahottari and Udayapur, Morang and sunsari districts.
f) Lampucchwa Tharu in Morang District

A) Kochila Tharu

Figure 4 - Spatial distribution of Tharus in Madhesh Pradesh

Kochila tharu is one of a subgroup of tharu where the Kochila Tharu people who live in the districts as " Bara, Rautahat, Sarlahi, Mahottari, Dhanusa, Siraha, Udayapur, Saptari, Sunsari, Morang and Jhapa" (Eichentopf & Mitchell, 2013, p. 1). According to Boehm (2018), the Kochila/Morangia Tharu, found mostly in Morang and Sunsari, are distinguished from other Tharu who call themselves Kochila in Siraha, Udayapur, and Saptari districts by dress, customs, and language. But generally, **Kochila tharu is also known as Saptariya tharu, since dominant Kochila Tharu people live in the saptari district.**

2.3 EVOLUTION OF KOCHILA THARU ARCHITECTURE

The Kochila Tharu architecture in the Terai region of Nepal has a fascinating past that goes back over 2000 years. It first emerged in villages situated near the Koshi River and has undergone changes throughout the years, showcasing the social, cultural, religious, and environmental characteristics of the area. The study of the native Kochila Tharu architecture in the Tharu village reveals how they live, the shapes of their houses, and how they are oriented, which is similar to the housing styles of the western Tharu. The materials and technologies used are influenced by the climate, geography, and social, religious, and cultural standards of the Terai region. Tharu architecture is known for its excellent use of mud, but there are limitations in constructing houses due to the scarcity of timber, khariya grass, alluvial mud, and the challenge of meeting the modern needs and demands of the Tharu community. Unlike the Newar architecture in Kathmandu valley, there are no other modern buildings that incorporate the basic characteristics of Tharu architecture. Unfortunately, due to a lack of architectural knowledge and unfavorable local and national conditions, traditional architecture is gradually disappearing

According to a study conducted by Rajaure in 1981, it has been officially recognized that although the Tharu people physically resemble others in the area, they have their own language (Rajaure, 1981). The study also reveals that the Tharu people are known by various regional names such as Morangia Tharu, Saptariya/Kochila Tharu, Mahotari Tharu, Chitwania Tharu, Danguara Tharu, Kathoriya Tharu, and Rana Tharu. The language they speak is also referred to as Tharu, (Chaudhary, 2013).

2.4 TYPICAL THARU HOUSE AND ITS LAYOUT

The Tharus are famous for their immaculate homes. They usually build their houses using mud, wood, and grass. Tharu homes are known for staying cool in the summer and warm in the winter. Each house is a standalone unit with a field and a vegetable garden. It is separated from other houses by a narrow or wide lane. The direction the house faces is important for wealth, so it must face east. The size of the house depends on the number of family members. Every home must have a Than (place of worship). Wealthy Tharus also have a Bangla next to their main home (the Rest House).

The layout inside the house remains consistent, except for the size and number of rooms. The kitchen and deity room are always in the same location, creating a constant distribution of features on the east and west sides of the house, in addition to the north-south axis. (Chaudhary,2022)

From North to South the house is divided into three sections

- The southernmost area is “Ghari” (place to keep cattle’s cow, buffalo, goat, etc.)
- The next middle section “Bahari” is a semi-public area.
- The northern section called “Bhitar” contains the “Konti” sleeping room,

“Bhansa” the kitchen and “Deurar” the deity room

2.5 MATERIAL AND CONSTRUCTION TECHNOLOGY OF THARU HOUSE

The construction materials are sourced from nature, such as wood, bamboo, soil, rice husk, and cow dung. Young tree wood, with a diameter of 12 to 14 cm, is used for posts and beams in the ceiling framework and false ceiling for drying maize. Bamboo is har-

vested within the village, with bamboo stems used for fences and bamboo lathes for the framework and roofing. Straw for roofing is cut into 1-meter lengths and bundled. Clayey soil mixed with rice husk creates cohesive cement. Clayey soil and dried cow dung are applied to cob walls, floors, and household equipment like silos and fire stoves. The dwelling has a thatched roof supported by rows of wooden poles, arranged in a fixed order to divide the building into bays. The frame consists of poles supporting the purlin, with 7 purlins resting on fork heads of poles and made of 2 or 3 pieces of wood joined together to cover the building's length.

Bamboo

Mud mixing

Timber

Figure 5- Building materials used in Tharu house

The roof is constructed using rafters called "Keri" that stretch from the ridge to the roof. These rafters are connected to the purlin using plant straps and are placed at intervals of 60-80 cm. On top of the purlins, bamboo laths called "Bati" are placed parallel to the ridge, with a distance of 30 cm between each one. Together, the purlins and bamboo laths create a lightweight frame on which straw is placed. The straw is tied into bales and arranged in layers, held in place by the bamboo laths.

Figure 6- Roof of building

The walls of the facade below the roof and the two gable ends are built separately as shown in figure 7. The facade walls, which are 3 cubits high and approximately 10 cm thick, are plastered on the outside and made of crisscrossed bamboo sticks. Horizontal laths are used to hold the bamboo sticks in place, and two intermediate poles called "Do-

asa" help maintain the vertical position of the structure. The gables of the building are created by assembling "Jakra" between the poles of the framework, and this can be seen from the outside.

Figure 7- Roof in Tharu house

To provide light and ventilation to the living area, door openings, small windows, and "Moaka" are included in the external walls below the roof. The doors are made of a wooden framework and have two pivoting leaves, allowing for a passage that is 63 cm wide and 150 cm high. The thatched roof is cut to provide easier access.

2.6 DEMOGRAPHIC STUDY OF SAPTARI , MADHESH PRADESH PROVINCE

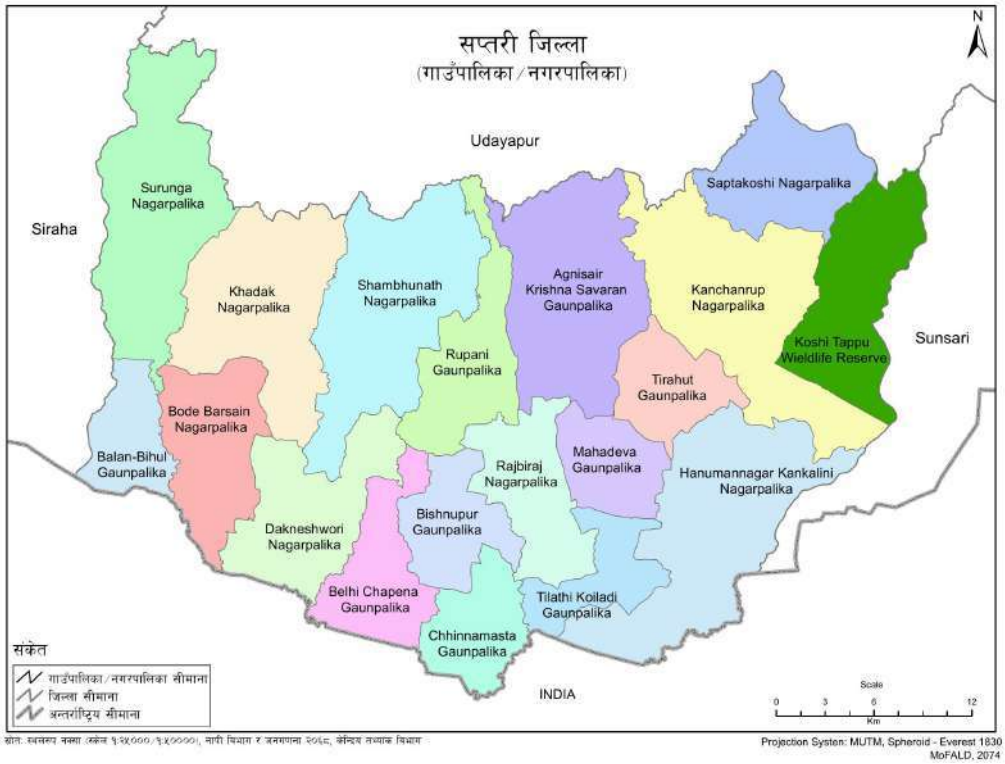


Figure 8- Map of saptari district

Saptari district, a part of province no. 2, as shown in figure 8 and is one of the seventy-five districts of Nepal, a landlocked country of South Asia. The district, with Rajbiraj as its district headquarters, covers an area of 1,363 km² and has a population (2001) of 706,255. Saptari is renowned for its agricultural output, and is bordered on the east by the massive Sapt Kosi River and Bihar state of India, west Siraha district, north Udaypur and south boarder is surrounded by Bihar state of India. Saptari lies between 260 25' west to 26o 28' latitude and 860 east to 870 7' longitude. It covers 1363 kilometer squire area of Nepal. It average east-west length 43 Saptkosi to Balan river and north-south 42 km. Significant towns are Rajbiraj, the district centre, Hanumannagar, and Fattepur with the area government "Matsya Palan Kendra" fish farm. The famous Rajdevi temple, Chhinna Masta Hindu temple and Kangkalini temple are also located in Saptari District.
The majority of people in the district is from Tharu ethnicity. They are also the original inhabitant of the district.The figure shows the graphical representation of the total population of tharu people living in saptari district i.e 10.8 % male and 11.7% female.

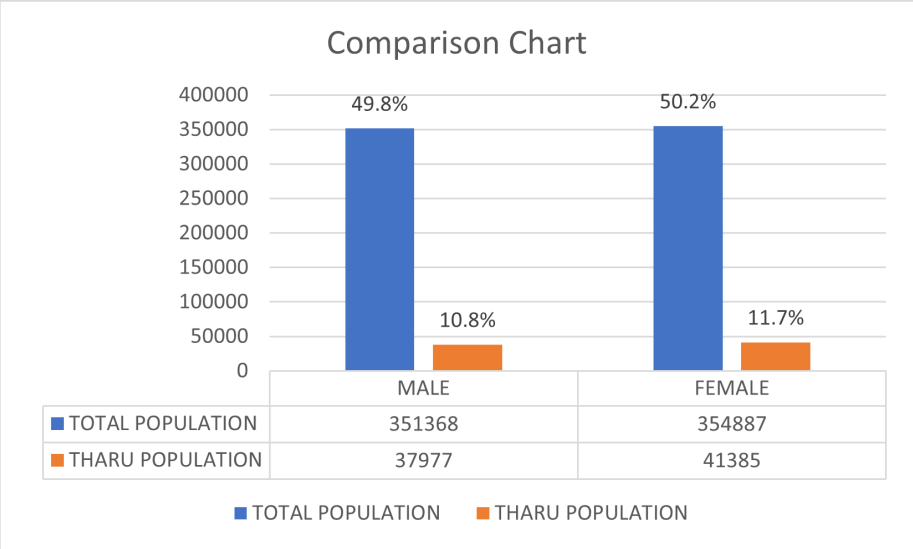


Figure 9- Tharu population in saptari District

2.7 THARU VILLAGE

Figure 10-Tharu Villages in Saptari

Tharu villages are situated at a distance of about 20 minutes by foot from each other and are connected by a network of mud pathsas shown in figure 10. The houses in these villages are typically made of mud and thatch, with intricate designs and decorations adorning the walls. Each household is self-sufficient, growing their own vegetables and raising livestock for food and income.

The Tharu people have a strong sense of community and cooperation, with villagers coming together for festivals, ceremonies, and communal work projects. They have a rich cultural heritage, with traditional music, dance, and art forms that have been passed down through generations.Despite facing challenges such as land encroachment and environmental degradation, the Tharu people have managed to preserve their way of life and maintain a deep connection to the land. Their villages serve as a reminder of the importance of living in harmony with nature and each other.

On both sides of the road, We can find houses that are traditionally positioned north-south and stretch across the entire settlement. It is believed that one of the facades under the roof should face east in order to bring prosperity to the family. To ensure prosperity remains within the village, four wooden stakes are placed to mark the cardinal points. Each village has its own unique arrangement of community facilities like wells, animal ponds, oil crushers, threshing grounds, and places of worship. Additionally, the number of constructions and the size of houses vary depending on the size of the family.

2.8 BUILT ENVIRONMENT

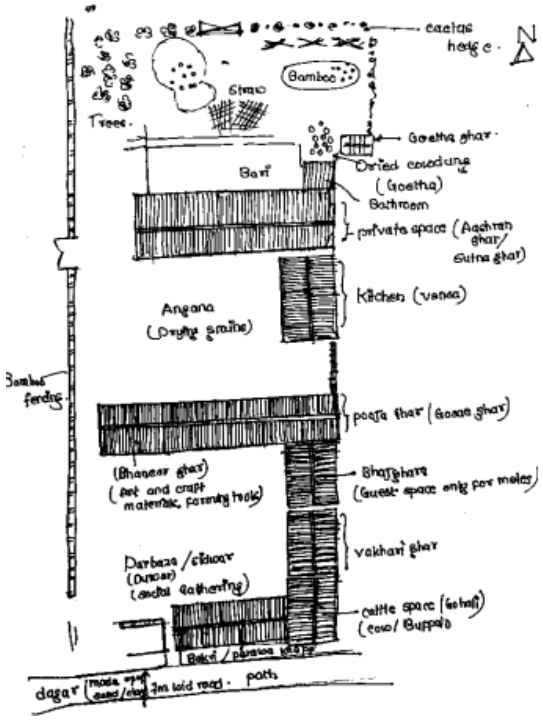


Figure 11- Build environment of tharu Household

(Source: Man and his House in Himalayas: A Tharu Houses in The Dang Valley: Camille Milliet-Mondon ; Edited by Gerard Toffin) The dwelling unit includes separate areas for cattle, living, and various activities as shown in figure 11 above. The main construction is surrounded by an open space, partially enclosed by a cactus hedge. The "Angana and Sidwar" area, about 3.20 sqm, connects the building to the road. Some of this

space is designated for animals, marked by wooden posts, and includes a pigsty. Straws and dung are stored here, and part of the area is used for drying grains and vegetables. The oil crusher "Kad" is placed near the animal space.

Another space behind the main building forms a small courtyard enclosed by branch partitions. This area is used for tasks requiring water, such as washing large vessels, personal washing, and preparing vegetables. Next to the courtyard is a storage area "Chapra" for wood and various implements. The kitchen garden "Bari," enclosed by a hedge, is used for growing daily consumption vegetables and includes banana and guava trees.

The house size adjusts based on the number of occupants, accommodating 4-25 people. However, the dimensions (height, width, and length) can vary. The building's height above the platform is determined by the poles' height on the axis. Typically, regardless of size, the hall or "bahi" occupies the space between two rows of poles. The cattle shed is on the left, while the dwelling area and equipment are on the right.

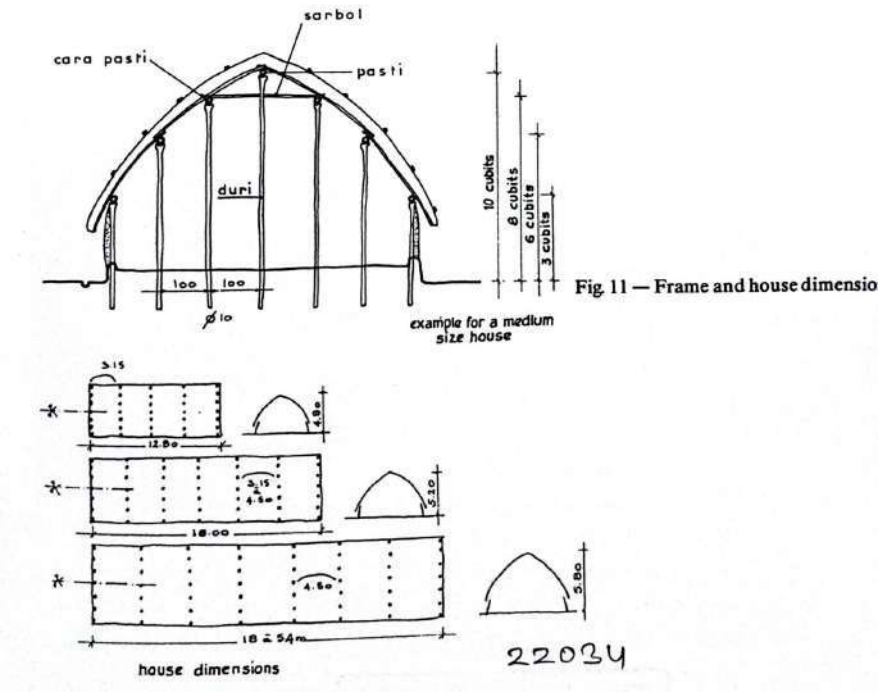


Fig. 11 — Frame and house dimensio

Figure 12- Standard Dimension of Tharu house

2.9. CONSTRUCTION MATERIALS

The materials used in construction are procured from the natural environment: wood, bamboo, soil, rise husk, cow dung, etc. The wood of young trees, a section varying from 12 to 14 cm is used to make posts and beams, which form the framework of the ceiling and the false ceiling for the drying of maize. Bamboo is cut within the village. Bamboo stems are used to make the fences while bamboo lathes are used in the framework and the roofing.

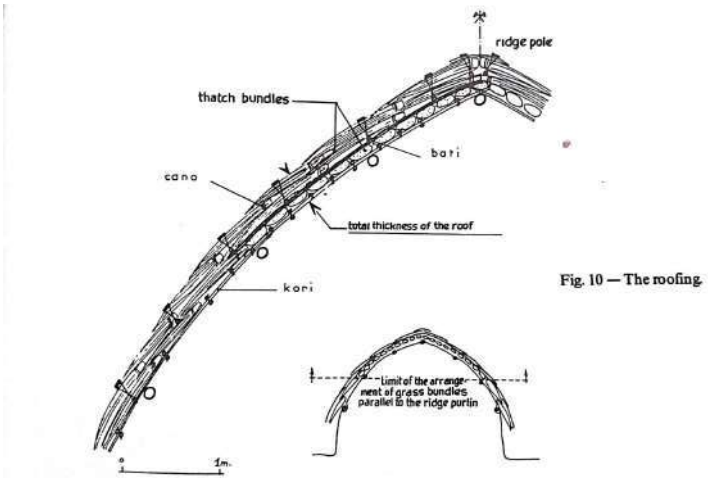


Fig. 10 — The roofing

Figure 13- Roof details of Tharu house

The grass (straw) used in the roofing is cut to a length of about 1 meter and tied into a bundle. The yellow ochre clayey soil mixed with the rice husk forms cohesive cement. A coating of clayey soil and dried cow dung is applied on the cob walls, the floors, and the household equipment: silos, fire stoves, etc

2.10 PASSIVE TECHNOLOGY IN THARU HOUSE

The houses of Tharus are thermally comfortable, and their vernacular technology for the construction of houses is more energy efficient. The factors that are mostly found in the Tharu vernacular buildings are:

Response to Climate:

- Slope Roof with 30–40-degree slope angle
- Overhangs are typically used to protect the facade from the weather.
- The prevailing wind from the west is prevented by vegetation on the west.
- Small openings to prevent the hot sunray in summer and prevent cold wind in winter.

Solar Orientation:

- The Tharu house is elongated with width facing the N-S direction.
- Entry of the houses faces east or west direction since the house is arranged in a courtyard system.
- The kitchen is placed in the north so that they can get rid of maximum heat in summer.

Water level/Microclimate/drainage:

There is heavy precipitation in the Terai region so there is a problem with the water logging system. Most Tharu villages have a wide pond-like drain that is used by the duck and also acts as a water body to cool the hot breeze in the summer season. The settlements are mostly linked with water sources so it is easy to connect the drain with the river. So, the water table of the Terai is also high so it is easy to get water from the hand pump.

The agricultural land is just nearby the village, as well as the villages, have plenty of trees and water bodies which create a separate climate from the regional climate. This type of microclimate helps make the climate of the built environment more comfortable. In the summer the people also rest in the shade of the tree and cold air breezes in the hot climate due to the microclimate.

2.11 THARU CULTURE, TRADITION, AND LIFESTYLE

2.11.1. Language:

'Tharu' is the ethnonym for the language spoken by the Tharu folk group. Tharu is spoken as a first language and Nepali is spoken as a second language by the Tharu people. At the same time, other people residing in the Tharu community speak Tharu. The language is used in the social and cultural domains of their daily life, such as among the community members, at workplaces, within the family, at the rites and rituals, etc. Among the Tharu people, very few are monolingual, some are bilingual and some are multilingual speakers. Nepali, Hindi, and English are the other languages spoken by these bilingual or multilingual Tharu people. The language shift has not been felt strongly yet in the community, though the competence in the language has been found gradually decreasing among the young generation. Code mixing and switching are found in the community. Tharu peple are found loyal to their language. Tharu language has 29 consonants and 8 vowels. The Tharu language consists of 39 phonemes, 29 consonants, and 8 vowels. Tharu folk tales, tales of the origin, folk epics, etc. have been published.

2.11.2. Religion:

There are gods and evil powers worshipped by the Tharu community. Some of these are related to Hindu mythology, some others are placed in the local shrines, and some are worshipped in rituals and religious works.

2.11.3. Major Festivals:

A. Maghi Diwani / New year:
Tharu's new year is also called Maghe Sakranti. On this day, the villagers appoint Bar Ghar 'Mukhiya', Chir Kariya ' Pujari', Chowkidar, Guruva 'Protector', Ghar muli 'owner of the house for one year. This is under Gan Pratha. This tradition of appointing is Maghi Diwani. On this day, villagers take a bath in the nearby river
and perform Bhakal puja. This way of worshipping nature is believed to bring peace to children and fulfil their wishes. (Shrestha, 1333 Nepal Sambat)

B. Jitiya Parba:
This is celebrated in the month of Ashwin according to the lunar calendar. Bhakal puja is done worshipping the son of Surya's son Jitiya Mahan. Women do fasting on this day for peace and a happy family. Just like Teej, where the brother goes to his sister's home to bring her Maita. Although, they arrive a few days earlier in case
of a newly married woman, arrives before Krishnaastami. Also, she has to bring Pigeon meat for her Maiti ghar. (Shrestha, 1333 Nepal Sambat)

C. Fagui Parba 'Holi'
This is the worshipping of the goddess of nature. A variety of foods is prepared using new rice harvested from the field. The theme is similar to Yomari Punhi of Newars and Kirant's Udhauli Parba. Jhajhara roti is prepared on this day. (Shrestha, 1333 Nepal Sambat)

D. Samachkhewa
On the ending day of the Chhath of the Madhesi people,the festival of Tharu, Samchkhewa is celebrated. It is celebrated till Purnima. Small crafts of clay are prepared and played for 10 days. This celebration is believed to strengthen the bonding of siblings. The woman wishes for a long life for her brother. And on the last night of this festival, those mud crafts are thrown awayin a nearby river or pond. (Shrestha, 1333 Nepal Sambat)


Figure 14- Samachkhewa Festival

2.11.4. Dance:

A. Jhumra Nach(Dhumara)
This is celebrated around Dashain Tihar.


Figure 15- Dhumara nach

B. Sakhiya Nach
Related to Krishna Lila. performed in Dashain Tihar.

C. Laruhawa
This is performed by using a stick on each hand by performers. An unmarried woman can also participate in this dance while the presence of Guruwa, and Aguwa, Pachuwa is mandatory. This is celebrated around Dashain Tihar.

D. Mungrahawa Nach:
This nritya starts around a month before Dashain. In this dance, two or more people beat Madal, where male and female dance using a stick (munghro) and a piece of cloth respectively in their hands. Men carry peacock feathers on their backs and colourful dresses. While women wear different ornaments and dresses.

E. Barko nach:
This is based on stories of Mahabharat. During Dashain, a large bamboo is erected in the performing place and the dance starts when Guruva put a strip of cloth 'lota' and recites a mantra. It requires more than 100 people and needs many characters for the story, expenses, and mantras from Guruva. Women play the role of Draupadi.

F. Kathghori Nach:
In this dance, the man performs as a horse with rhythmic tunes of madal. Sacrifice 'pashubali' is done for puja by Guruva before starting the dance. This dance is believed to be get-in from Madras. Except for Dashain, it is also performed on other special occasions.

G. Maghauta nritya or New Year / Maghi:
Maghi or the first of Magh is the biggest festival of Tharu celebrated on the first day of Magh. Maghauta Dance is performed on this day. Men and women both participate in singing and dancing. It starts from Mukhiya's home and reaches almost every house in the

village. Just like in Tihar, the participants get rice, cash, and other foods.

2.11.5. Foods and Drinks

Food items made of rice and wheat are the main courses and the drinks made of fermented grains are the drinks Tharu traditional food drinks. Besides, they include fish and shells in their traditional food as shown in figure below. Tharu foods can be classified into ordinary food and special foods which are consumed in daily life and feasts and festivals, respectively.

Figure 16- Traditional tharu food

1. Ghungi: This is a kind of snail found in kuwas, small streams and fields. The soft flesh inside the cover is eaten. This is also the famous food of Danuwar, Rajbansi, Majhi, Bote, and many others of Terai.
2. Til ko Laddu:This is generally eaten by most of the caste group during Maghi. Chaku or Sakkhar is used to make this.
3. Bhuja(bhujiya)
4. Laai Dallo
5. Andik ko bhat: This grain looks like millet 'kodo' in shape while is prepared like rice. This is supposed to be purer than rice used for offering to gods.
6. Kerako Taruwa:This is made by removing the outer layer of bananas and prepared like other vegetables. Terai is known also for its banana plantation.
7. Crab 'Gagato':

Gagato is captured in kuwa. They work gently to catch crabs hiding in the stone in water bodies. It is prepared like fish. This is the food for the rainy season.

8. Kachha Roti
9. Jhajhara Roti:

2.11.6. Marriage

Some offerings are given to the bride's family. This is opposite to the culture of Madhesi where offerings are given to the bridegroom before marriage. Also, unlike in other caste traditions of staying at the groom's home after marriage, a man can stay at a female's home as ghar jwain. This tradition is called bhwar paithana. (Shrestha, 1333 Nepal Sambat)

2.11.7. Death

When a man dies in a family, the younger brother has to take care of their sister in law

and if the brother is not in the house, then another man will be searched for her marriage. Depending upon the situation, the body is either buried or burnt. A dead man's body has to face downward to the earth, while a woman's body faces upward to the sky during burying. On the 11th day, mahadan is conducted and on the 13th day of the death ritual, local alcohol, meat, and fish are used. (Shrestha, 1333 Nepal Sambat)

2.11.8. Priest

Guruva or Gurau or Dhami are the protectors of the village. In any disease, animal's terror, disaster, and lightning, they are remembered.

2.11.9. Social Structure:

Tharus from the mid-west and far west of Nepal have been practising the Badghar system, where a Badghar is elected chief of a village or a small group of villages for a year. The election generally takes place in the month of Magh (January / February), after celebrating the Maghi Festival and after completing major farming activities. In most cases, each household in the village which engages in farming has one voting right for electing a Badghar. Thus, the election is based on a count of households count rather than a headcount. The role of the Badghar is to work for the welfare of the village. The Badghar directed the villagers to repair canals or streets when needed. They also oversee and manage the cultural traditions of the villages. They have the authority of punishing those who do not follow their orders or who go against the welfare of the village. Generally, the Badghar has a Chaukidar to help him. With the consent of the villagers, the Badghar may appoint a "Guruwa" who is the medic and chief priest of the village.

2.11.10. Musical Instruments

1. Ektarey
2. Kaara
3. Kole
4. Khanjadaa
5. Golaki
6. Ghada Baaja
7. Jharro
8. Jhaaiel
9. Jhilmile
10. Jhumari Madal
11. Danph
12. Dugdugi
13. Tamaura
14. Naara
15. Pipahi
16. Bayal Ghanta
17. Baunsi
18. Mandra
19. Maina Murali
20. Reuni
21. Resham Chauki
22. Sakhiya Madal (Shrestha, 1333 Nepal Sambat)

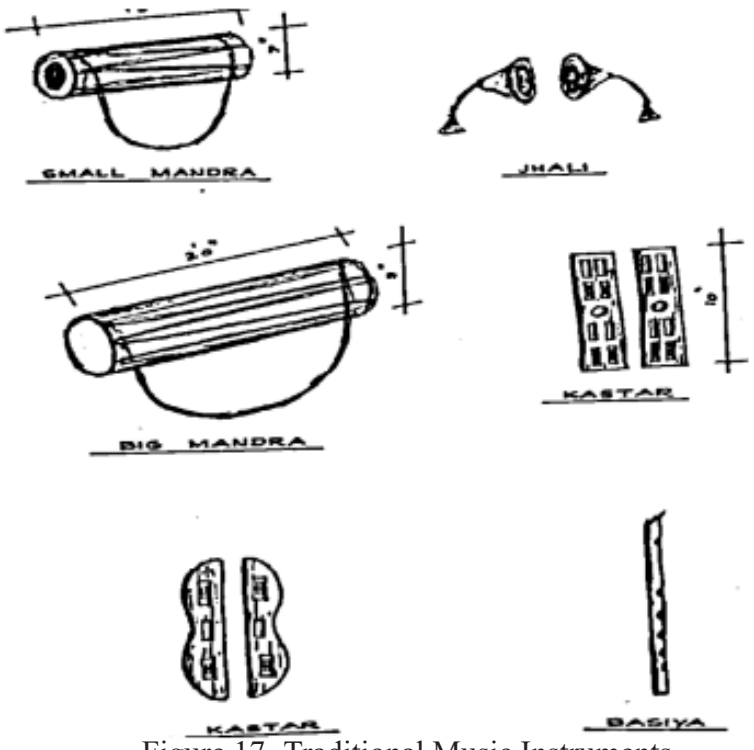


Figure 17- Traditional Music Instruments

2.12 AGRICULTURAL IMPLEMENTS AND IRON TOOLS

Agriculture is the main profession of Tharu. They have farming schedule throughout the year. They use their own traditional system of farming as shown in figure 18. Modern systems are also applied by some Tharu in these days. Generally, they prepare their agricultural implements by themselves but they purchase iron tools and items from blacksmiths. The agricultural implements and iron tools used by the Tharu are:

• Sikhar –A kind of rope, which is specially made to fit in Bahinga to carry various baskets.

• Bahinga- A wooden member generally 5 feet in length, which is placed on shoulder to carry two baskets fitted with sikhar on two sides.

• Chhittwa-A small kind of basket, made of bamboo, which is generally 1'6" in dia. And 1' height and used to carry various small goods.

• Chhatri- A kind of hat made of bamboo and leaves with special weaving system, which is 3'0"- 5'0" in dia. and used to protect from rain and sun in field.

• Dheki – it is like a machine mainly consist of 7'3" long and 9" wide wooden beam with a pounder attached at the end and used for husking rice or maize with the help of leg.

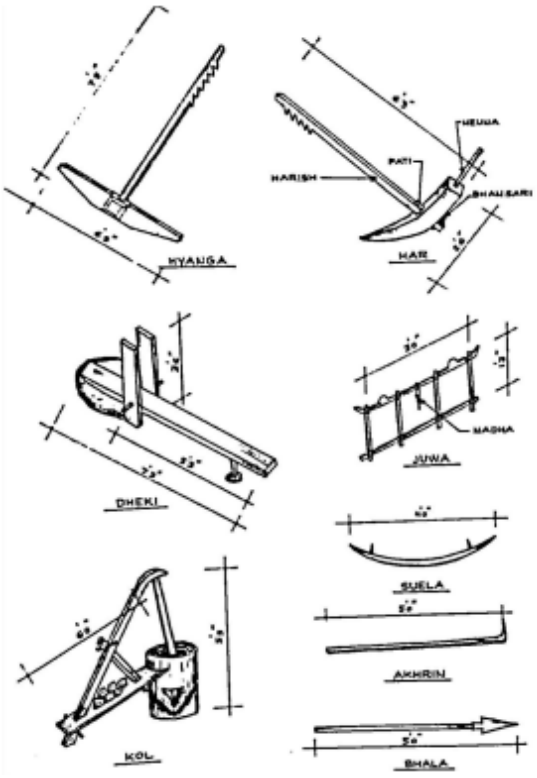
• Hasya-A kind of iron tool with wooden handle, used for cutting grass, shrubs, vegetables, etc.

• Khurpa –it is also a iron tool with wooden handle, a kind of sickle, which is 1'3" in length.

• Har- It is a plough used to dig the agricultural land.

There are two types of har; Murhara Har, Jangha Har.

• Far-An iron implement used in har to plough the dry land.



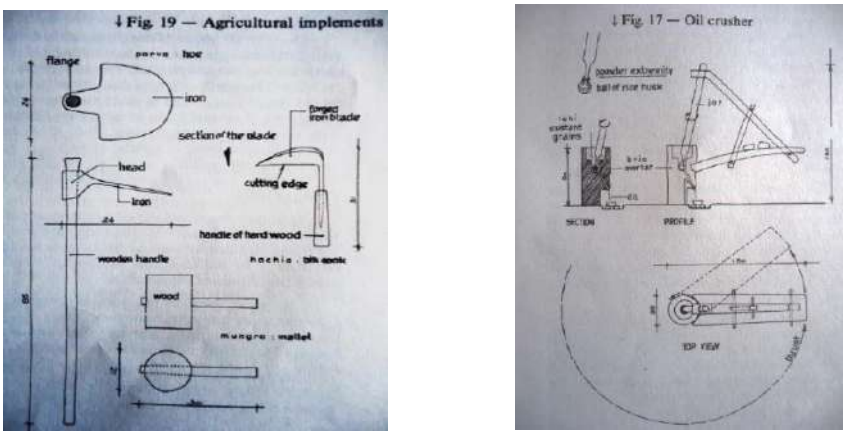


Figure 18- Traditional Agriculture Tools

2.13 FISHING TOOLS AND GOODS

Fishing is the major activity in the spare time between agricultural activities. They all know how to fish even the children. Fishing methods vary in accordance with seasons. In, summer, when the water is deep, bow net and cast nets are used. During winter, when the water level goes down, women look for selfish in the riverbeds while the men fish in rapids. They prepare their fishing tools and goods by themselves and they are:

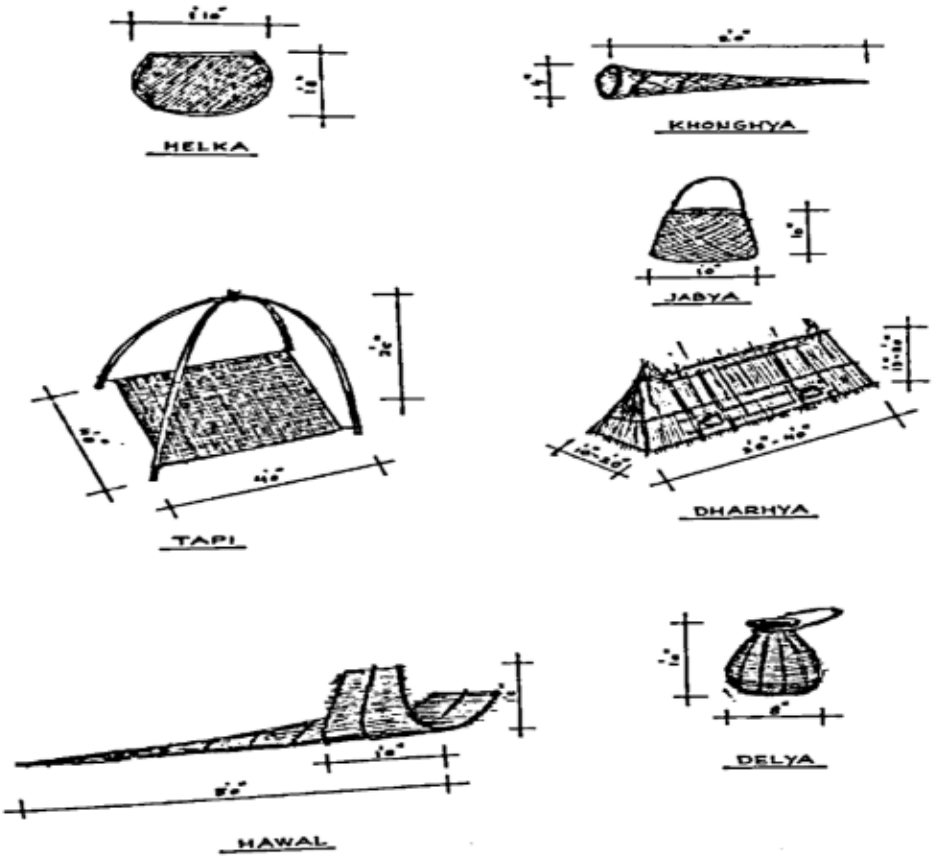


Figure 19- Traditional Fishing Tools and goods

• Jal – A fishing net made from San.
• Mahajal- it's a kind of big jal and is used to catch big fishes.
• Helka- It has a small frame of wood in which net is fitted. In this day's iron frames are also used.it is only used to catch small fishes.
• Tapi-it contains two flexible bamboo sticks in which a net is tied at four corners with the help of rope.It is generally 4' 0" square in base with 3'6" height.
• Dharya- it is a special kind of fishing tool made from bamboo weaving. It is placed at flowing water, after sometimes fishes are collected in it. Fishes cannot come back when they once enter into it. It is made in various sizes. The length varies from 2'6"-4'0", width 1'0"- 2'0" and height from 1'3"-2'0".
• Hawal- it is also a special kind of fishing tool made from bamboo weaving, which is placed at drain to collect fishes. It is 5'0" in length with wide opening at mouth and narrowing to another closed end.
• Khonghya – it is a small kind of fishing tool used at small drain, which is 2'0" in length with only 4" circular opening and closed at other end.
• Dondya – A large type of Khonghya.
• Delya- A type of basket that is 1' 0" in height and 8" in dia. And used to keep the dead fishes.
• Tikthi- it is also used to keep the dead fishes.
• Jabya- it is prepared from net to keep the dead fishes.

2.14 HOUSEHOLDS' GOODS AND FURNITURE

Household goods and furniture used by tharus are as shown in the figure 20:

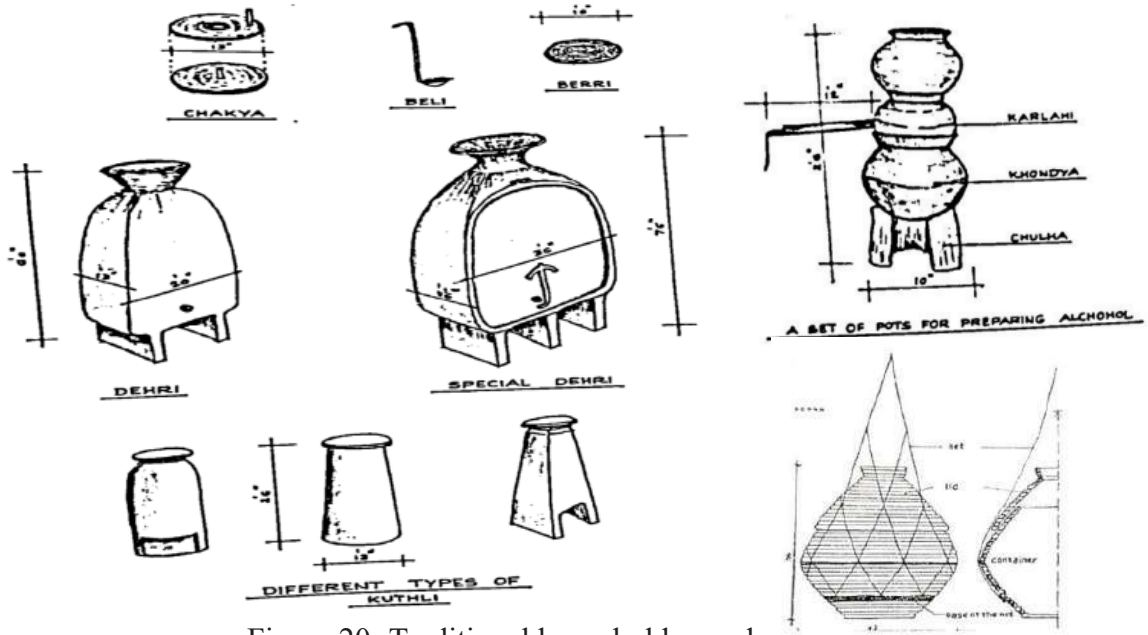


Figure 20- Traditional households goods

• Jhopaha Berra- A special kind of Berra, which is decorated with shells and used in marriage ceremony.
• Pataha dehri-it is a large size of dehri that is placed between kitchen and deity room and

is worshipped as the ancestral spirit or kul deuta. Various tharu deities like Gurubaba, Mainya, Khekri,etc. are attached to this silo or placed beneath it

• Kuthli-it is a cylindrical type of small earthenware silo used for storing grains.it is 1’3”-1’6” in dia. With 2’6” – 3’0” ht.

• Dhakan- A kind of earthenware lid.

• Bhakari – A kind of earthenware vessel that is used to prepare rice beer.

• Kurwa- a large size of bhakri.

• Dokni –A small wooden block that is used for grinding spices in kitchen.

• Berri – A small circular cushion or seat made of weaving straw.

• Lauka- A dry skin of a kind of pumpkin, which is used as pot.

Figure 21- Berri

• Khatya- it is like a bedstead made from weaving san fixed to the wooden frame,which is 5’9” in length,3’6” in width and 1’4” in ht.

• Petarya gondri-it is a kind of mat, which is 5’6” in length and 2’6” in width and made from special reed called Gwan. It is prepared by a single woman and it can be used from both sides.

• Bhauka- it is a special kind of basket used by tharus to store their clothes, ornaments and personal objects. It is hung from the roof and prepared by weaving a special material called Bharga. It is 1’8” in ht. with 6” dia. At base, 1’8” at middle and 1’0” at top opening. Generally, topna is used to cover the opening and Pendi is used as base of Bhauka.

• Bhauki- it is a small kind of Bhauki and it is 10” in ht. with 4” dia at base, 10” at middle and 7” at top.

• Bastha- it has similar function to Bhauka, but shape is different.

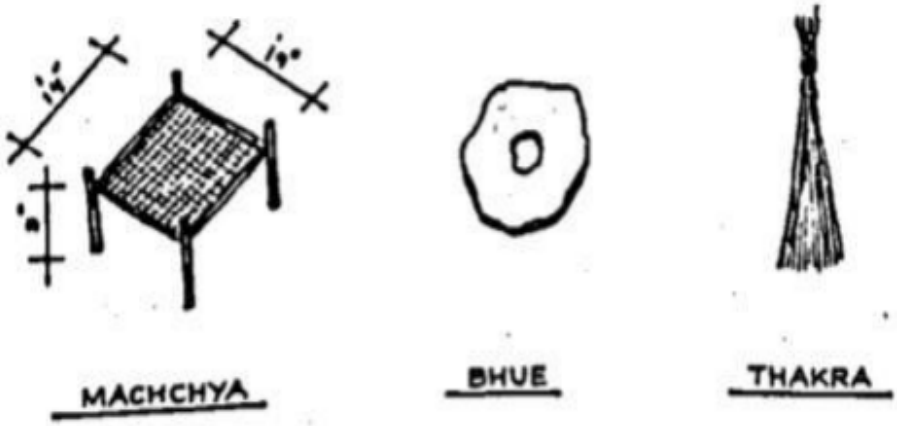
• Topna – it is used as cover or lid of basket.

• Pendi- it is used as base of basket.

• Berra- A small circular base used overhead for carrying pots, baskets etc.

• Siratta – a small square cotton base that is kept below berra while carrying goods.

• Machchya- a kind of small stool made of wooden frame with San weaving, which has 1’4” square seating base with 9” ht.



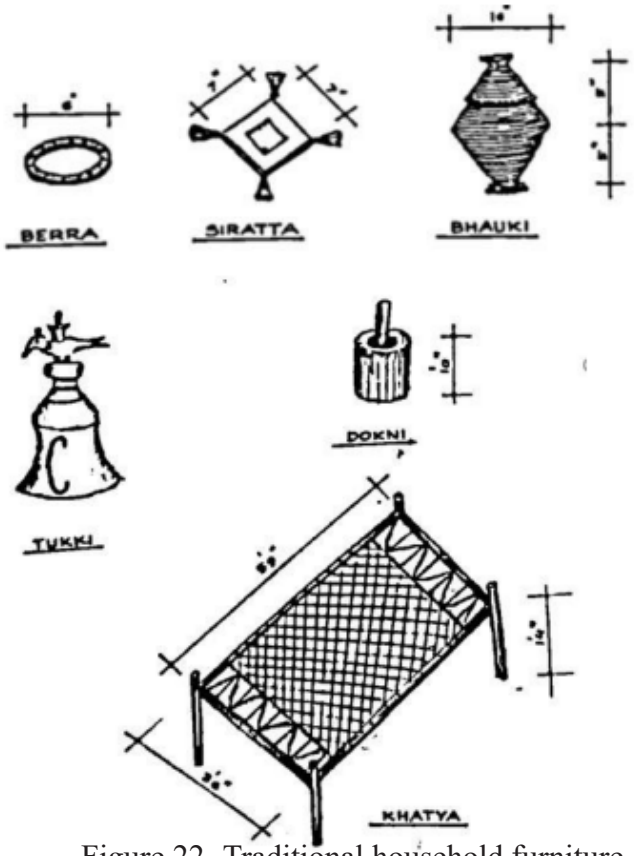


Figure 22- Traditional household furniture

2.15 DRESS AND ORNAMENTS

Figure 23- Traditional Dress and Ornaments

The major costumes of a THARU man consists of a Mardani (dhoti) and Phad (Kachhad- a piece of cloth worn to cover the lower part of the body as in the figure 23). THARU people are generally engaged in agriculture and live in the Terai (plains) regions of the country. It is due to the nature of their occupations and climate that THARU people prefer wearing short and thin cloths, as they are light and comfortable. While working in the

field, the THARU men generally carry their hats made up from bamboo and dried leaves, "Kodalo" (spade) to plough the field, tobacco and a sickle fixed at their waist with a string. THARU men are laborious and appear tough and fit (Reecha, 2013). However, the costumes and ornaments worn by THARU women are completely unique compared to other tribes. Cholia (Choli) is worn as a top, Nahagi is a white cloth dress and Uporona is the cloth worn around the chest area are the mojor attires worn by the THARU community women. During special occasions and festival different jewels made from gold and silver are worn on various parts of the body.

The different kinds of ornaments worn by THARU women are "Nathiya" on the nose, "Kanphul" in the ear, "Hansuli" and "Kanthi" on the neck, "Matha" on the wrist, "Tadia" on the elbow,"Tikuli" on the forehead and "Upairi" on their feet. THARU women also love to have Godana- a tattoo art made on various parts of their body as shown in the figure 24 below (Reecha, 2013).

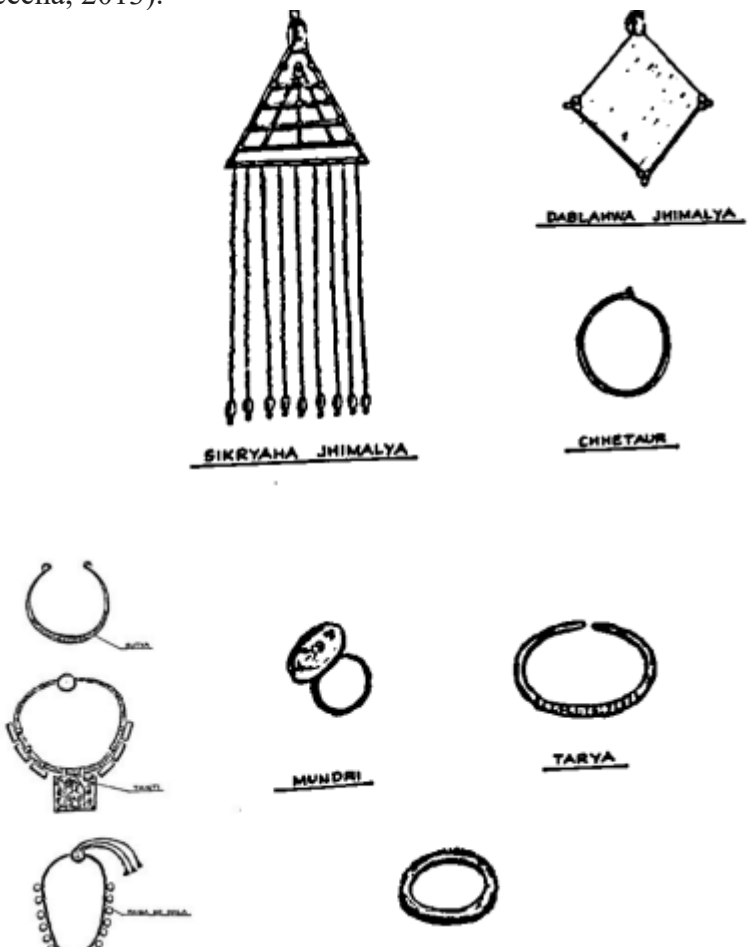


Figure 24- Traditional Ornaments

2.16 HANDICRAFT PRACTICES

There were lots a of arts and crafts making practices by the Tharu people in earlier days. They would makedifferent kinds of basket items, pottery items, mat items, net items, rope items, etc, using with bamboo, different kinds of grasses, clay and husk, nylon, wood and etc that can be helpful for them in their daily life. There were lots of handicrafts andits making practices which Tharu people of the study area were practicing, during the leisure

time of agricultural work Tharu people would weave different kinds of basketry things, net, mat, hand fan, rope and making pottery things keep the Tharu people busy. n earlier days, there were lots of arts and crafts making practices and its uses in
their everyday household activities, which are listed below:

- Chhitwa and chhitni:Baskets made by bamboo to store and carry goods.
- Gaija: A kind of Basket made by bamboo to put and carry grass and straws.
- Chhatri:A kind of umbrella made by bamboo and flat leaf to protect from rain.
- Dhakiya:Basket made by grasses (punja and moonj kasunna) to store and carry goods, especially grain.
- Bhauka: Basket made by grasses to store clothes.
- Delwa:Basket made by grasses for decoration.
- Payin: Basket made by grasses to cook dhikari.
- Panchhopni:Flatten type of product to cover water jugs made by grasses.
- Feruwa:It is comparatively bigger size of Panchhopni to keep goods made bygrasses.
- Dhachya mat: Men making mat made by gwan (a kind of grass).
- Petar mat: Women making mat made by gwan.
- Byana: Hand fan made by bamboo andgwan also.
- Dyala: A kind of basket made by bamboo.
- Banthi: A kind of basket made by bamboo.
- Bahinga: A stick made by wood to carry load.
- Swila: A tools to carry goods made by wood and rope.
- Sikahar: A kind of rope to carry and hang baskets.
- Supa:A open bamboo basket for cleaning or winnowing grains
- Benrra:A circle ring to carry baskets and any loads on head made by grass and thread.
- Bhangra: A cotton thread bag to put grasses for animals.
- Jhapkhanya: A kind of basket made by bamboo to puts goods.
- Jaal:A nylon or cotton fishing net used by male.
- Helka:A sack nylon fishing net used by female.
- Jabya: A kind of net bag made by sack thread to put caught fishes and crabs.
- Delya: A kind of basket made by bamboo to put caught fishes and crabs.
- Chiraiya latthi: A stick made with bird type as for doll small one and big one is taken when carry bride carts (doli).
- Hegari: A doll for children made by bamboo.
- Dariha pathli: A dolls for children made by punja, kasunna, stick, bird and vignette.
- Mandrak tangi: A kind especial rope for Madal.
- Hookah: A kind of tobacco smoking tool made with wood metal.
- Larai:A kind of tobacco tube or pipe for hookah made by bamboo with colored.
- Pouchari: A kind of rice cutting supporting tools made by bamboo decorated with peacock feather and sutahi (mussels).
- Dhuina: A kind of especial rope for tying load to carry.
- Machya: A kind of chair made by wood and thread.
- Sonchira: Insect feather for decorating delwa.
- Tekui: A tools to twisting thread made by wood.
- Doktha: A tools to keep twisted thread made by wood and bamboo.
- Denhari: A kind of larger earthenware made by mixing mud and rice husk to store food grains.
- Kuthli: A kind ofsmaller earthenware made by mixing mud and rice husk to store food

grains.

- Laiya:A kind of earthenwareto keep fire made by mixing mud and rice husk.
- Chulha: this is anearthen stove for cooking, which is made of soil mixed with rice husk.
- Dokni: It is a kind of mortar and pestle to grind salt and pepper or seasoning made by wood and stone.
- Dhenki:It is a rice hullar made by wood.
- Larihya: It is a wooden cart used to carry loads with buffalo.
- Khonghya: A tools made by bamboo and reed grass to catch fish, crab etc.
- Dhariya: A tools made by bamboo to catch fish, crab etc.
- Vitte chitra (Mural): Any kinds of pictures painted on a wall with soil.

These things which were made by Tharu people are most important for their household use. But nowadays Tharu people are colonized by market producedgoods, they prefer to buy all things from the market rather than their own homemade things .The Tharu arts and crafts are briefly defined below:

1. Reed and Moonj Grass Item

Figure 25- Rees and grass Item

These are locally available material in terai region. Tharu women weaved with using reed and moonj grasses for everyday household use and decorative purposes to utilize their free time.They give particular name to
these art and craft for the baskets made of straw and grasses, they named according to the size and used in different rituals and fir households.some of them are as follow:

	Name of craft	Use of craft
1	Sika	The authentic sock of dried grass used for storing milk, curd which is hanged by ropes to the roof.
2	Khara doira	The bamboo joints are tied with khara doir
3	Tama	Measure grains in kitchen
4	Mauni	Used in kitchen as bowl
5	Daliya	For worship god godess/ marriage rituals
6	Daura	Used in marriage rituals and store grains
7	Payinis	It is especially made for cooking dhikari a Tharu cultural food.
8	Dhama	Decoration for interior/ cooking bagiya/ store grains
9	Panchhopni	used to cover water jugs
10	Feruwa	It is hanged on ceiling and used to keep goods.
11	Bhauka	used to store their garments and other important items like as jewelry, rings, and other valuable things .

Market Analysis :

Sikki (dhakiya)is being used in Nepal in Tharu communities as a gift during marriage ceremony of daughter. In addition, many items arecrafted by skilled artisans from this fiber. This sikki handicraft not only make items which are used in daily life but its large portion is of decorative unique items. Variousobjects such as hot case, vessels,thal chakadi, egg shape pen holder, pen holder,khutruke, belawa/thulo dhakiya,dust bin, hand bag and tray are made from Sikki and sold at NPR 150 to 1200 per piece based on types of crafts.

2. Bamboo Item

There were many traditional basket items made by bamboo pieces, it is mostly men making products:

	Name of craft	use of craft
1	Delya	A jug type of basket which is used to put caught fishes and crabs and sometimes other things too
2	Supa	An open bamboo basket for cleaning or winnowing grains.
3	Chhitwa	Used to put and carry household goods in every house for every day.
4	Khonghya and Dhariyaare	The traps to catch fishes, crabs and etc.
5	Jabiya	Used in cow/ buffalo mouth.

Market Analysis :

The products especially Nanglo and Chalni is being required in everyday life in both rural and urban areas have high demand and hence are easily marketable.

3. Nylon Items

Jaal and Helka are the fishing nets which are made by male using with nylon or cotton thread and sack thread. Jaal is used to fishing by male and helka is used to fishing by female. For the making of jaal and helka, there is used wooden stick, nylonor cotton and sack thread, thin slice of bamboo called chapni and trident-shapedniddle called kainra and some time they made bamboos niddle as a kainra for the making of helka. Nylon or cotton thread are bringing from the market for the jaal and sack thread are made Tharu people themselves for the helka with the help of tekui (wooden twister). Jabya is a kind of net bag made by sack thread to put caught fishes and crabs and other things too. This is also the same tools and procedure to make like fishing nets.

4. Earthen Items

Earthenware items hold great significance within the Tharu community. Tharu women skillfully craft Denhari and Kuthli, which are earthen structures made from clay and rice husk. These structures come in various shapes and sizes, such as circular, rectangular, conical, and more, and can be used for a long period of time. The skilled Tharu women mix mud and rice husk to create these structures, and the strength of the Denhari and Kuthli depends on the quality of the mixture. Denhari is a larger container, while Kuthli is smaller.

Traditionally, the Tharu community uses these containers to store food grains like paddy, wheat, rice, maize, lentils, peas, and mustard seeds. The making of Denhari requires a specific type of clay, known as loamy clay, which is sourced from ponds and lakes within the forest. Denharis not only hold cultural significance within the Tharu community but also possess religious importance.

2.17 DESIGN CONSIDERATION ON DIFFERENT SPACES

2.17.1. Acculturation

The transformations that take place as a result of cultural interaction between two or more groups. The outcomes of such changes are also referred to by this phrase. Based on the circumstances of cultural encounter and change, two main types of acculturation - directed change and incorporation—can be separated. (Britannica, 2018)

Incorporation

When people of different cultures maintain touch and exercise their right to political and social self-determination, free borrowing and modification of cultural aspects take place. (Britannica, 2018)

Directed change

When one group imposes its supremacy over another through political or military conquest.(Britannica, 2018)

2.3.2. Built Environment

It refers to the artificial environments created by humans that provide a place for human activities. Examples include buildings, parks, neighbourhoods, and cities. These environments frequently contain their auxiliary infrastructures, such as water supply or electricity networks. It consists of places and areas that people have made or altered, such as structures, streets, sidewalks, parks, and transit networks. It is a building where people regularly live, work, and have fun. The built environment supports healthier communities and enhances the development and well-being of children and young people. (RICS SBE, 2019)

2.3.3. Place Making

Placemaking is a process that is heavily reliant on community involvement and is focused on people and their needs, goals, desires, and visions. Placemaking, which focuses on reimagining public areas to improve the relationships between people and these spaces, is the creation of new places. It covers many different variables, including comfort, sociability, uses, activities, access, connections, and image. (Moreira, 2021)

1. Design Consideration on Studio or Training Spaces

A. Freedom and Flexibility of Space

For ideal working environment – large ventilated rooms, with high ceiling and transitional areas such as courtyard, or open to sky spaces should be well appreciated in the studios and work areas. The link between indoor and outdoor apace should be maintained as far

as possible

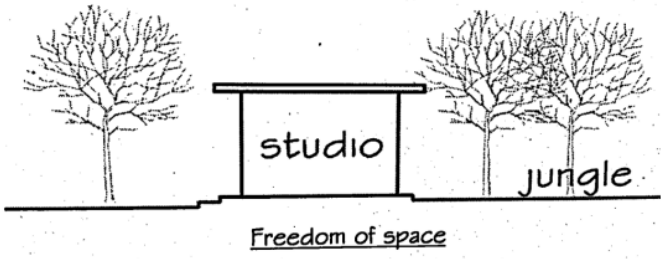


Figure 26- Freedom and Flexibility of space

B. Visual Environments

The Studios must have good amount of natural daylight, with high level windows equal to at least 25-30% of the floor area. Roof lighting is also preferred. Windows should have daylight control. Artificial light should be used in absence of natural daylight, where detail work and displayed images are to be focused. Lighting should be done in such a way that it doesnot produce any glare.

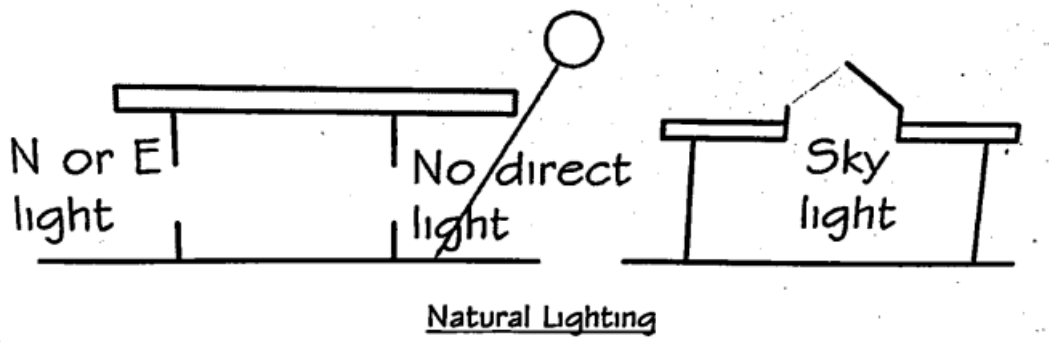


Figure 27- Provision of Natural Lighting

C. Buffer Zones

It is possible that noise producing in workspace can affect the other. So buffers are created by additions of the walls or vegetations.

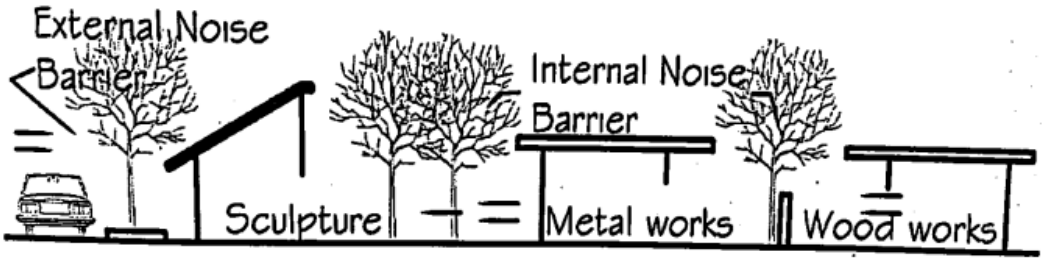


Figure 28- Buffer Zone

D. Locating Space with Respective to Activities

Spaces should be provided according to functional requirement. Work which requires huge machinery or supply of materials should be placed on the ground floor.

E. Safety Measures

Fire hazardous activities should be separated and isolated form other activities.

F. Thermal Comfort

A workspace should be thermally, mentally and physically comfortable. Thermal com-

forts can
also be gained by application of passive techniques. Use of proper ventilation, growing vegetation as shading devices, using double glazing can be the solutions.

G. Space Inter- Relation

Spaces should be inter related- studios, gallery, café, outdoor space should be interesting and inter- related. Need of transition and communication space is also needed, as one cannot sit alone for a long time.

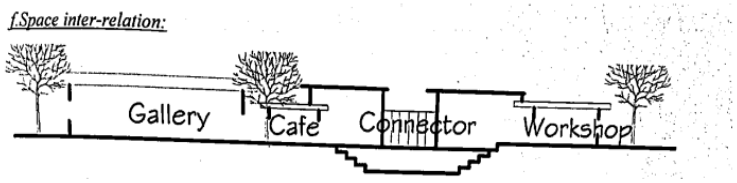


Figure 29- Interaction of Work and Recreational Spaces

2.18. DESIGN OF MULTI- FUNCTIONAL WORKSPACE

Generally, a multi field workspace consists of three basic units of accomodation:

- Workspace area: includes various workspace such as machine room, planning and designing,
- Storage area for the raw material, finished work, storage space for the tools and small moveable equipments, worker's belonging
- Service and amenities: Such as staff room, locker room and wash room
- The flow of sequence should be uninterrupted and carefully arranged such as in and out of the raw material from the store, to the workspace, to the finished store and out.
- The space provided should have comfortable working environment with thermal comfort, illumination, scale of furniture and fittings
- The workspaces mainly dealing with the machinery items, the construction of the building should be so as to allow admission of any sorts of machinery.

2.19 SPECIAL NEED CONSIDERATIONS

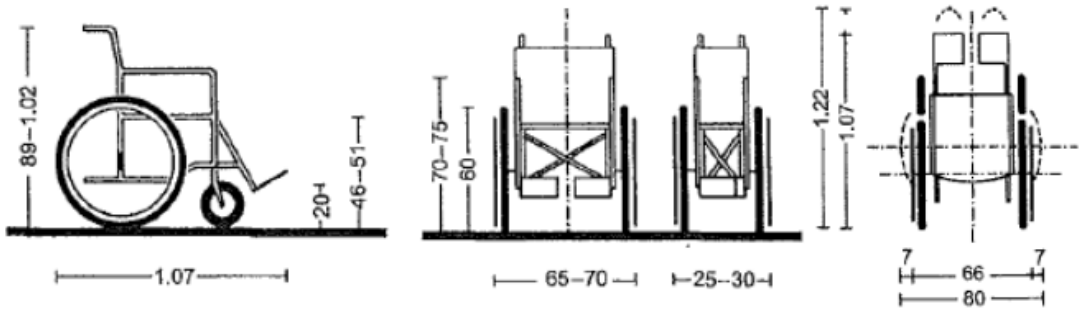


Figure 30- Dimension of wheelchair

- Maximum use of the ramps with maximum slope of 6% (1:12)
- Use of the different textures and materials to guide the people with special needs.
- The Movement area, of min 1.5m width and 1.5m depth.
- If ramps are longer than 6 m, an intermediate landing of min. 1.50 m length is required.
- Clear passage width of doors should be~0.90 m.

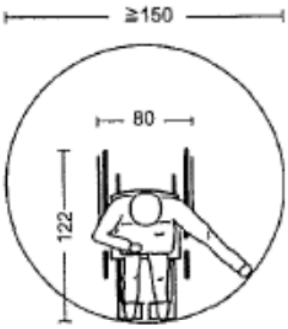


Figure 31- Minimum circulation of wheelchair

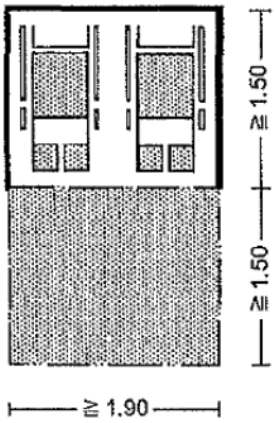


Figure 32 - wheelchair Parking

2.20 SPACES FOR LEARNING

These spaces offer people the chance of deepning their knowledge about certain subject and expand their perspectives regarding it. Examples of such spaces include such as libraries and classrooms.

A. Library
The library consist of three essential areas: the user,reading area, the storage area, and the administration area. The space allocation for each of these areas varies depending on the type of library.
Library Area: 0.35 -0.55 m2 / pupil
Reading place : 1.8-2.5 m2/ person
Clear distance between shelves : min. 1.3 m – 1.4 m
Staff space : 9 m2 per staff member
Seating spacings and area calculation

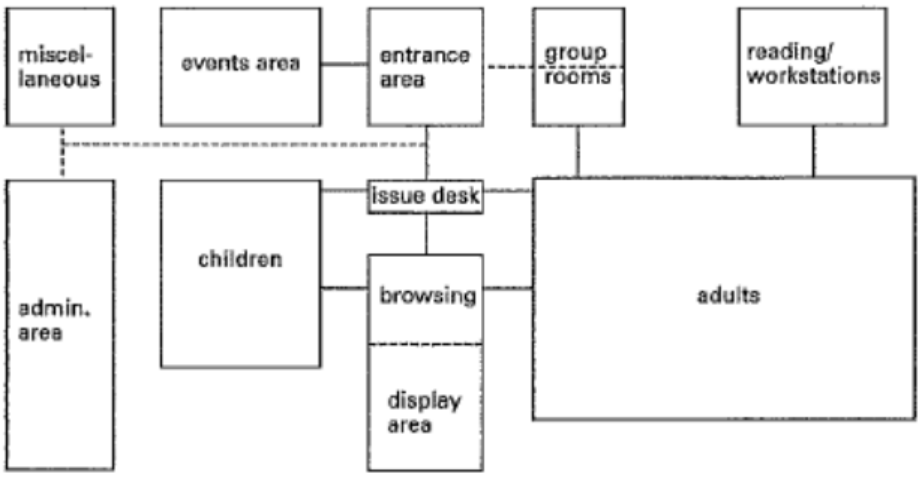


Figure 33- Functional chart of library

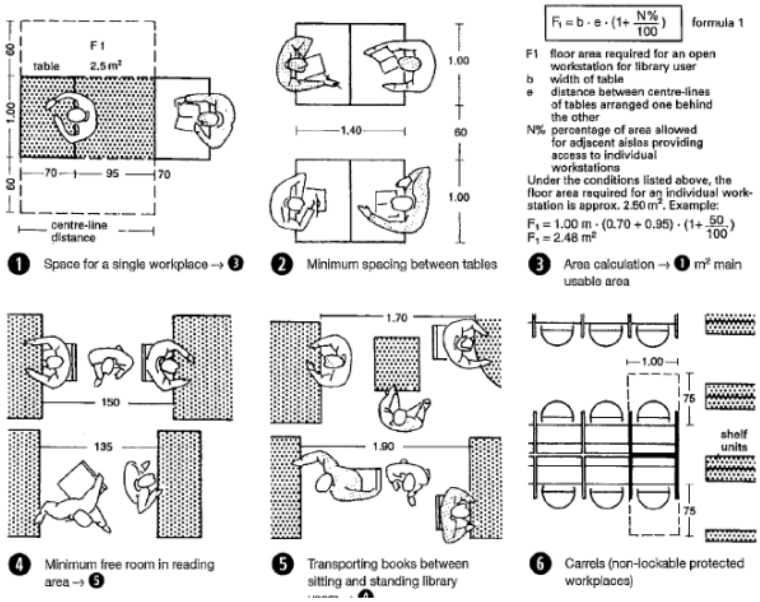


Figure 34- Space and area circulation

2.21 SPACES FOR DISCUSSION

These spaces provide an important role in a community by providing different venues for discussing local issues and events. it provide Important additions include a conference hall, community hall, and meeting room.

A. Conference Hall

- Should be directly accessible from the entrance area.
- Provision of sliding partitions, tables, seating, presentation media, store and pantry.
- Area requirement: 2.5 m2 per seat.
- Space requirement: 0.3-1.0 m2 per workstation.

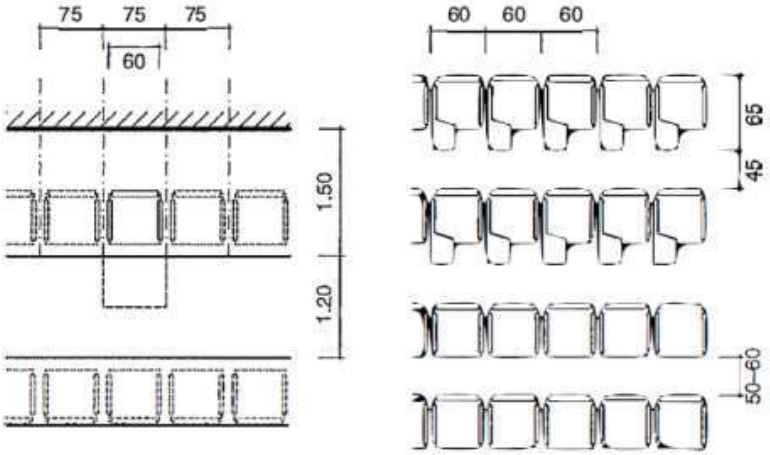


Figure 35 - Sitting space dimension

B. Administrative spaces

These spaces are provided to support the various function flow in place within the building.

These spaces include administration offices W/Cs, parking, etc.
A. Administration offices

S. No.	Spaces	Area
1	Top executive	35 m²
2	Junior executive	10-20 m²
3	Supervisors	8-10 m²
4	Operator	3.5-5 m²
5	Reception	35 m²
6	Waiting Room	20 m²

- There must be convenient routes from the main entrance to the administration section.
- There must be public as well as private areas for the visitor and workers.
-

B. Parking
Standard sizes

- Bicycle : 1.9m x 0.6m x 1m
- Motorcycle : 2.2m x 0.7m x1m
- Car : 4.74m x 1.76m x 1.5m
- Van : 6.89m x 2.17m x 2.7m
- 90° parking = approx. 20 m2
- 45° /60° parking = approx. 23m2
- 45° /60° oblique spaces, easy entry/exit to parking Space, for one way traffic 90° entry/exit to parking. Space, for two-way traffic Parking space needs small parking as shown in figure.

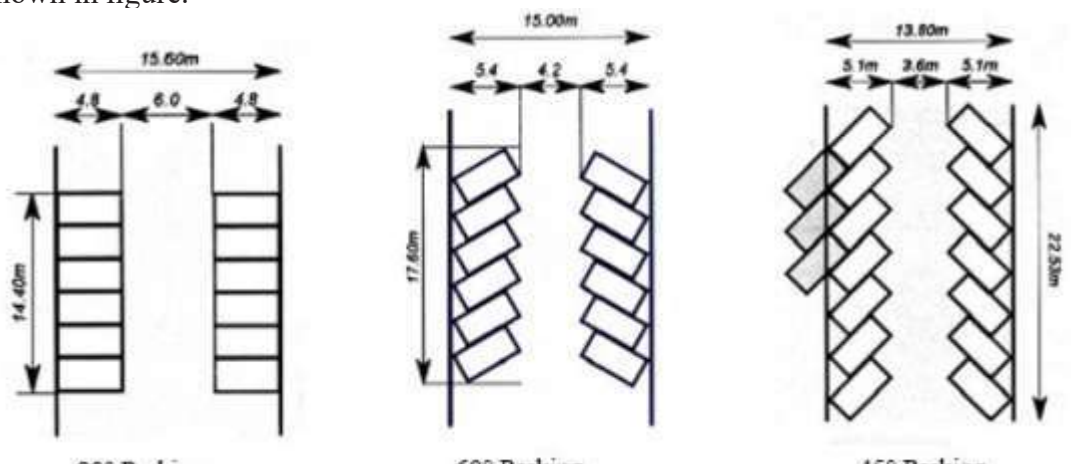


Figure 36- Typical Parking Layout

Types of Vehicles	Length(m)	Width(m)	Height(m)	Turning circle radius(m)
Motor Cycle	2.20	0.70	1.00	1.00
Car	4.70	1.75	1.50	5.00
Bus	11.40	2.50	3.30	6.50

C. Washroom
The ease of transferring from a wheelchair to a toilet seat or bidet depends on the ap-

proach. In general, there are four different approaches. The four approaches are:

- The parallel approach (easiest) while diagonal approach, perpendicular approach and the frontal approach are difficult ones as hsown in figure below.
- There should be At least one toilet accessible with a wheelchair for one user in institutional buildings or one toilet for every hundred users, should be allocated.
- The distance between the centerline of the washbasin and the adjacent sidewall should be at least 450mm.
- No shelves should be located above the washbasin.
- Washroom accessories such as paper towel dispensers, soap dispensers, waste bins, and others should have all controls, operating or dispensing components mounted no higher than 1,200mm from the floor.

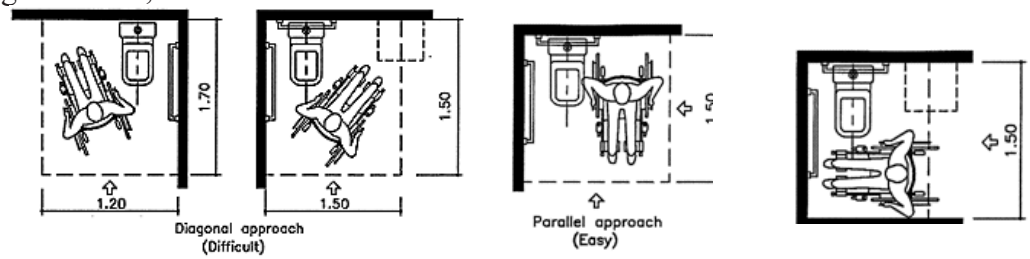


Figure 37- Toilet layout for Disable

2.22 VERTICAL CIRCULATION

The Vertical circulation is the movement of people between floors in a building,which is done usually using elevators, escalators, or staircase . It should be designed to meet the needs of everyone, including those with disabilities, and to ensure smooth movement of people and goods within the building.

A. Stairs

A stair is a set of steps that is used to move between different levels of a building. The staircase should be wide enough for the people to pass each other easily without bumping into one another as shown in figure below.

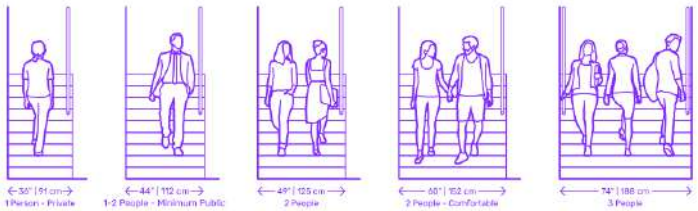


Figure 38- Staircase Dimensions

B. Ramps

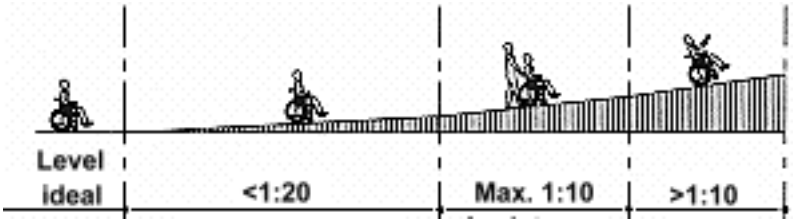


Figure 39- Ramp Dimensions

- Minimum width is 1.7m and flight length should not exceed 6.
- Maximum angle of ramp is 6 degrees

2.23 TRADITIONAL RESTAURANT

A traditional restaurant offers a place for dining, where customers can enjoy meals in a comfortable and often culturally themed environment. The design should reflect its cultural roots, with attention to décor, seating arrangements, and menu offerings that highlight traditional cuisine. Key considerations include creating a welcoming atmosphere, efficient layout for service, and accommodating various group sizes while maintaining the restaurant's character and charm.

Restaurant types and space allowance

• Traditional restaurant: 1.3 – 1.9m2 / person
• Specialty restaurant: 2.0m2 / person
• Snack bar service: 1.5 – 2.2m2 / person
• Café service: 0.83 – 1.5m2 / person
• Coffee bars: 1.2 – 1.4m2 / person
• Kitchen, cooking, storage, preparation, etc. 40% total area, 20% storage, employee 5%
• Aisle space between tables and chairs should be calculated to include passage area and that occupied by the person seated at the table. A minimum passage area is 18 in between chairs and, including chair area; tables should be spaced 4 to 5 ft apart.

Traffic aisle

- min 30" (without difficulties)
- min 42 inch: combined work (one person to pass & another person at the work place)

The key consideration while designing cafe are as follow:

- The food court should be prominently located, easily visible, and accessible from main pedestrian routes, with a striking and identifiable entrance.
- Public restrooms for the food court should be easily accessible, clearly marked, and sufficient in number.
- Cashiers should be positioned near the exit.

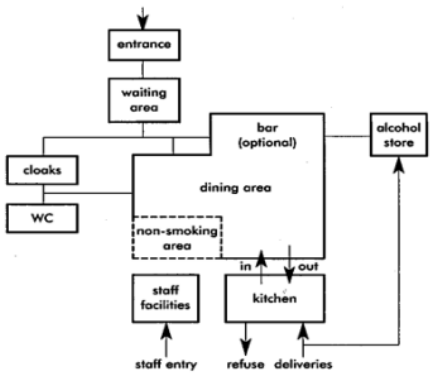


Figure 40- Flow Diagram of restaurant

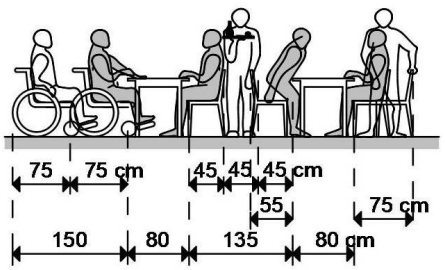


Figure 41- Sitting Dimension

AREA REQUIRED:

Per seat 1.5-2.15 sq.m
Net Kitchen 12-25%

Dining Room 40-60%
Main aisle width= min. 2m
Intermediate aisle width= 0.9m – 1.2m
Storage area for kitchen: Allow 50% extra for other facilities: changing room, staff facilities, toilets etc.

- Dry food storage: 30%
- Refrigerated food storage: 25%
- Frozen food storage: 10%
- Beverage storage: 15%
- Refrigerated beverage: 5%
- Non-food storage (paper, silvered): 15%

Approximate space planning for kitchen space is:

- Main restaurant kitchen area: 1.4m² per cover
- Banquet space and service area: 0.2m² per cover
- Coffee shop kitchen: 0.3m² per cover

Type	Shape	Minimum size (in)	Space
Tables for 1's or 2's	Square	24 x 24	30 x 30
	Rectangle	24 x 30	30 x 3
	Round	30	36
Tables for 3's or 4's	Square	30 x 30	42 x 42
	Rectangle	30 x 42	36 x 48
	Round	36	48
Tables for 5's or 6's	Rectangle	30 x 60	42 x 72
	Round	48	60

2.23 RECEPTION

Reception is the area at the entrance of a building,where visitors are greeted and assisted. It typically includes a reception desk staffed by personnel who provide relative information, manage check-ins, and handle inquiries. The reception area are often sets the first impression, so it is designed to be welcoming and functional, facilitating smooth and efficient interaction between visitors and the organization.

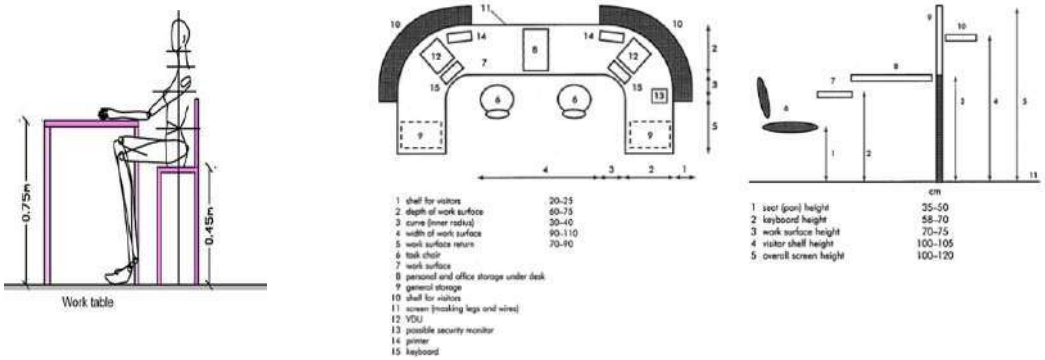


Figure 42- Reception desk Dimension

2.24 MEETING ROOM

Space guidelines for meeting rooms are based on the number of people they need to ac-

commodate. Typically, an area of 1.85 m² (20 sq. ft.) per person is used for table seating calculations as shown in the figure below..

- Small Meeting Rooms: Designed for 4-6 people, with enough space for a meeting table and chairs.
- Medium Meeting Rooms: Designed for 8-14 people, with space for a meeting table and chairs, possible storage for audio/visual equipment, and a horizontal surface for refreshments.
- Large Meeting Halls or Training Rooms: Designed for more than 20 people, with space for a meeting table and chairs.

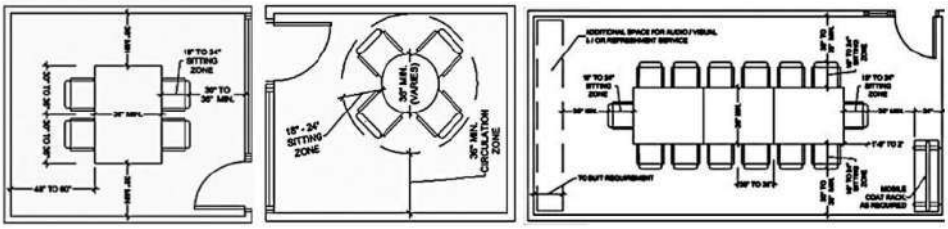


Figure 43- Dimension of meeting room layout

2.25 ART GALLERY & EXHIBITION SPACE

The primary goal of a gallery or exhibition space is to collect, preserve, study, and display of the significant objects of art and culture, while also providing educational services to enhance public knowledge and stimulate creativity. The space must be sufficiently diverse to allow each function to be carried out independently as shown in figure below, but also flexible enough to combine certain activities in a single area when it is needed.

A. Space Layout

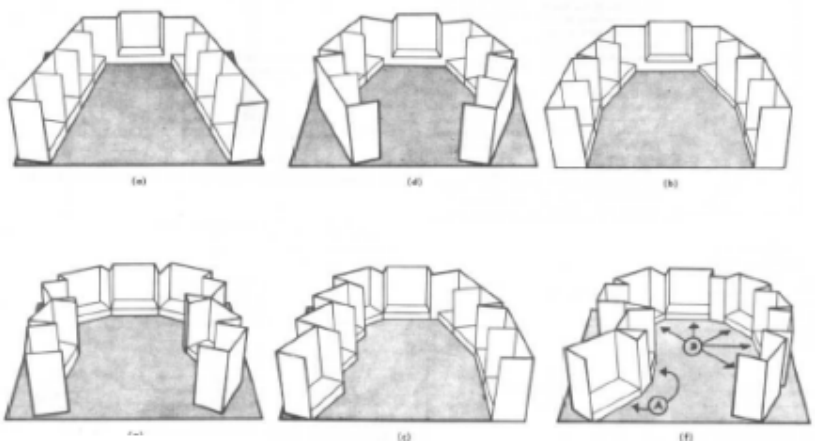


Figure 44- Possible s[ace layout

STANDARD AREA FOR MUSEUM ARCHITECTURE:

- Gallery: 40- 50 % of total built- up area
- Educational and promotional activities: 4-8 % of total built- up area
- Space for storage and collection: 10- 15 % of total built- up area
- Space for research and study: 3- 8 % of total built- up area
- Space for administration/ management: 7- 8 % of total built- up area

• Space for circulation: 20- 30 % of total area
• Ratio of gallery to non- gallery space ≤ 45%
• Ratio of permanent display gallery to non- gallery space ≤ 40%
• Provision of future expansion: 20- 25 % of total site area

STANDARD DESIGN DATA FOR MUSEUM ARCHITECTURE:
• Gallery height: Not less than 3m i.e., 3.6- 5.4 m
• Gallery length: 18.2- 24.4 m
• Gallery width: 5- 10 m
• Picture/ painting/ 2D display: 3- 5 m2 hanging surface to each with artificial lighting in darker space
• Sculpture/ 3D display: 6- 10 m2 areas with natural lighting

B. Circulation pattern
There are different types of circulation pattern. They are:

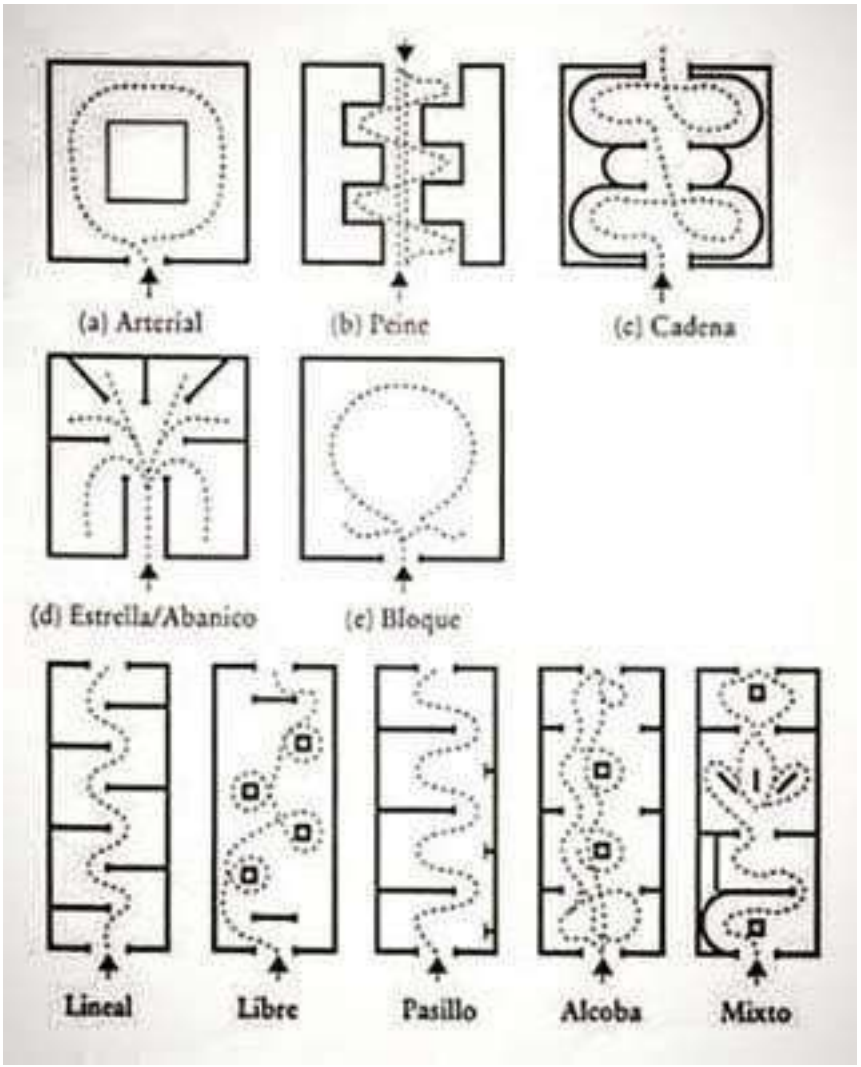


Figure 45- Circulation Pattern

CHAPTER 3. CASE STUDY

A. Background

Before entering into the site selection and design phase ,we have to study related case of the national and international scenario. A case study typically refers to the overall analysis of a specific or similar project or building. This analysis consist of various aspects such as design concept, spatial organization, structural systems, materials used, environmental considerations, cultural context, and user experience. It provide valuable insights into the design process, challenges faced, innovative solutions employed, and the overall impact of the built environment on society, the environment, and individuals. These studies are often used by architects, students, educators, and researchers to learn from past projects, inform future design decisions, and contribute to the advancement of architectural knowledge and practice.

Case study for this particular project were done on various different elements that are going to be incorporated in the sesign process .To understand the over all settlement of the tharu community i have also done the case study on the whole settlement of the tharu. The list of the different case study done are as listed below on the basis of the national ,Regional and International category.:

1. Unnati Cultural Village
Objective
- To understand the various activities in UCV relating to Tharu.
- To understand the inclusion of various programs in the cultural village.
- To understand Integrating traditional architectural styles with modern functionality.

2. Hariharpur Gadhi Saptari
Objective
- To understand the settlement pattern ,socioculture aspect of tharu.
- To understand the build form of tharu houses.
- Observe social structures and interactions.

3. Rohingya Cultural Memory Centre
Objective:
- To understand building use in the community,
- To understand the need for given spaces

4. Cultural Center, Sinthian, Senegal
Objective
- To understand the use of common space for different activities
- To understand the passive design method applied

3.1. UNNATI CULTURAL VILLAGE

3.1.1. PROJECT BRIEF:

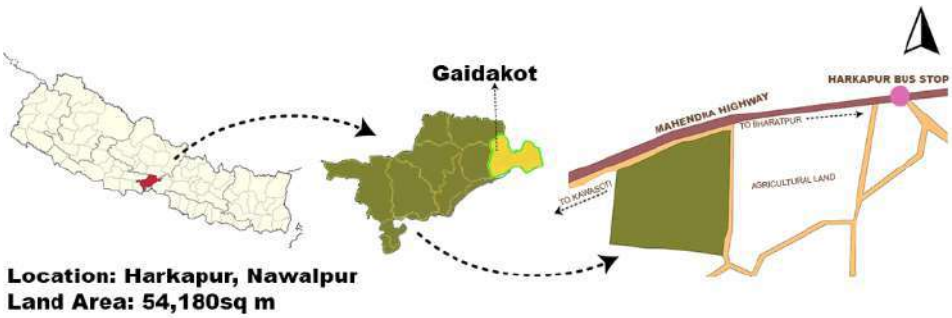


Figure 46- Location Map

Location: Harkapur, Nawalpur
Land Area: 54,180sq m
Target Population: local tourists, Artists, and Foreign tourists

3.1.2. OBJECTIVE:

- To understand the various activities in UCV relating to Tharu.
- To understand the inclusion of various programs in the cultural village.

3.1.3. SITE AND SURROUNDINGS:

Figure 47- Master plan of unnati cultural village

The site is amidst the field areas, while it's front entrance/east side is the E-W Highway.

Within the site, the landscape and gardens give way to lush litchi and mango plantations and scenic lily ponds. Various components related to the field of arts, crafts, culture, and cuisine have come together to celebrate the ethnic diversity of Nepal at Unnati Cultural Village. From an Art hotel that flaunts the beauty of traditional architecture to a Tharu village that encompasses several aspects of the Tharu livelihood, UCV also is integrally built around the idea of housing artists and hosting residencies, exhibitions, and events to promote the art and craft fraternity.

3.1.4. PLANNING AND DESIGNING

Every building block in UCV is single-storied with a CGI sheeting roof covered by local thatches that helps reduce internal temperature and resembles traditional houses. It has shown greater consideration in the landscape part too. Lighting in streets has used ceramic pots and bamboo posts. Permeable pathways and planned landscape activities like small ponds, lily and mango trees, organic garden and Zen Garden. The greeneries have an impact on the micro-level environment.

3.1.5. FACILITIES/ACTIVITIES:

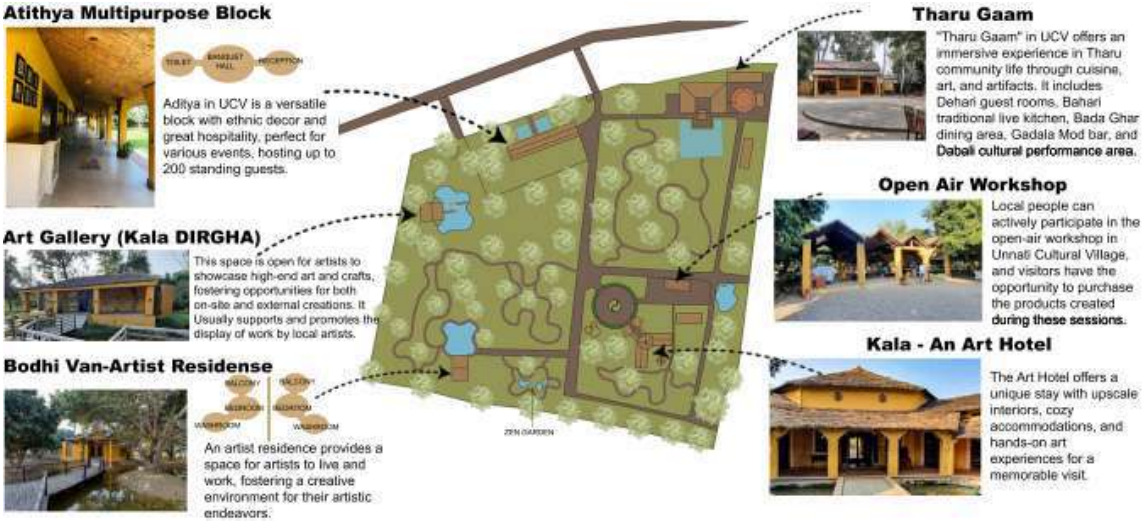


Figure 48- Spaces of unnati cultural village

The following activities take place in UCV:

A. Art Gallery(Kala Dirgha)

Artists can use this space to display high-end art and crafts developed either at the property or outside. This space creates an opportunity for artists to exhibit their work, especially encouraging Local artists.

Figure 49- Art Gallery of unnati cultural village

B. Leela - Amphitheater

Leela encompasses all forms of performance arts and experiences. The Amphitheatre is an open-air venue that is being used for various entertainment programs, cultural performances, and events.

Figure 50- Ampitheater of unnati cultural village

C. Tharu Gaam

The "Tharu Gaam" in UCV stands to deliver an experience with the intricacies of cuisine, art, and artefacts that integrally represent the life and livelihood of the Tharu community. A space created for immersive participation, enveloping the elements of culture and tradition. The village comprises the Dehari - Guest rooms, Bahari - Traditional live kitchen, Bada Ghar - Dining area, Gadala Mod - Bar, and Dabali - Cultural Performance Area.

Figure 51- Tharu Gaam of unnati cultural village

D. Dabali - Cultural Performances Area

Dabali is a platform for cultural performances, theatre, music, and dance. It is a space where ethnic, cultural, and traditional artists get promoted, showcased, and celebrated by tourists, families, and art enthusiasts.

Figure 52- Dabali of unnati cultural village

E. Kala - An Art Hotel

The Art Hotel is an exclusive hotel space with a special arrangement for experiencing the delights of Fine Arts. The high-end craft interiors, charming accommodations, and first-hand experience of creating one's masterpieces create a memorable experience for any traveller or art enthusiast.

Figure 53- Art hotel of unnati cultural village

F. Bodhi Van- Artists Residency

Bodhi Kunja provides a space for artists to be inspired and express themselves with freedom and creativity.

Figure 54- Artists Residency of unnati cultural village

G. Atithya Multipurpose Block

Aditya is a multipurpose block in UCV with rich ethnic decor, food, and hospitality to make any occasion special. This space is ideal for corporate retreats, festivities, ceremonies, and celebrations, with a standing capacity of 200 people.

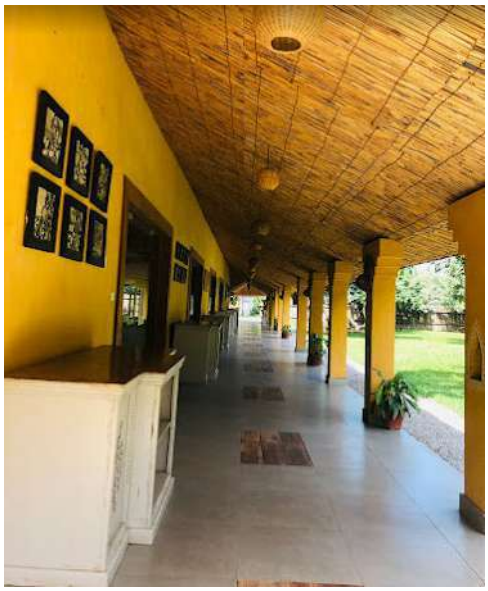


Figure 55- Multupurpose hall of unnati cultural village

3.1.6 INFERENCE

A. Access

In the given figure the red stripe shown the Public flow of the people.Whereas the green stripe shows the entry of the staff area and the yellow stripe shows the Buffr zone in the unnati cultural village.

Figure 56- Accesses in site

B. Build and open

Build is spread across the area with adequate open space.open space used for organic farming and greenary space. In the given figure the build spaces is show in black color while rest of the space is open space.

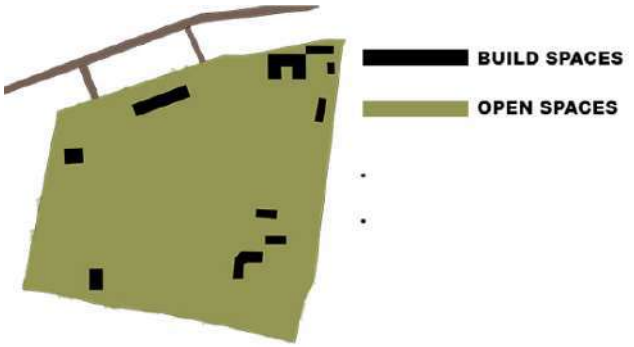


Figure 57- Build and Open space in site

C. Activity Nodes

The Rangamanch is an open-air venue that is used for various programmes which is indicated with pink color as shown in figure, cultural performances, and events. The walkways to both Rangamanch areas take visitors to an open-air museum .

Figure 58- Activity Nodes in the site

D. Strength

- Reinterpretation of traditional elements to suit the modern context,
- Sustainable development of traditional livelihood programs and employment for locals.
- It provides a variety of immersive cultural experiences.
- Commitment to organic farming reflects a dedication to eco-friendly and sustainable practices.

3.2. HARIHARPUR GADHI VILLAGE (Typical tharu village)

3.2.1. PROJECT BRIEF:

Figure 59- Location Map

Location: Agnisair krishnasavaran,saptari
Boundaries: River
East-South :agricultural land
North :Village
South :River

3.2.2 SETTLEMENT PATTERN

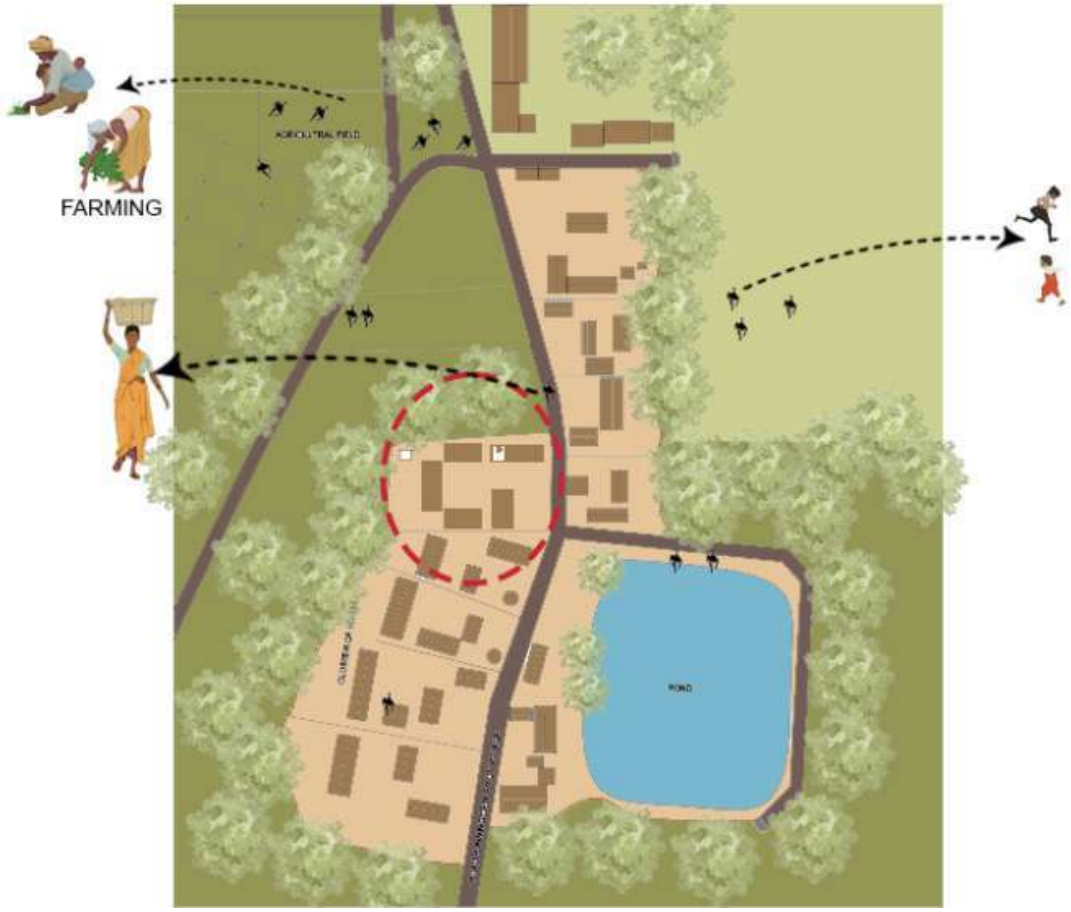


Figure 60-Settlement pattern of Saptarian Tharus

- Compact settlement with clearly defined borders.

- Houses are constructed on both sides of the central village lane, creating a linear arrangement that serves as the main thoroughfare through the community.
- Groupings of residences belonging to distinct clans within a community.
- "chautari" and open ground collectively serve as communal spaces within the community.
- A connected mud road that leads to the adjacent village.

3.2.3 HOUSES AND LAYOUT

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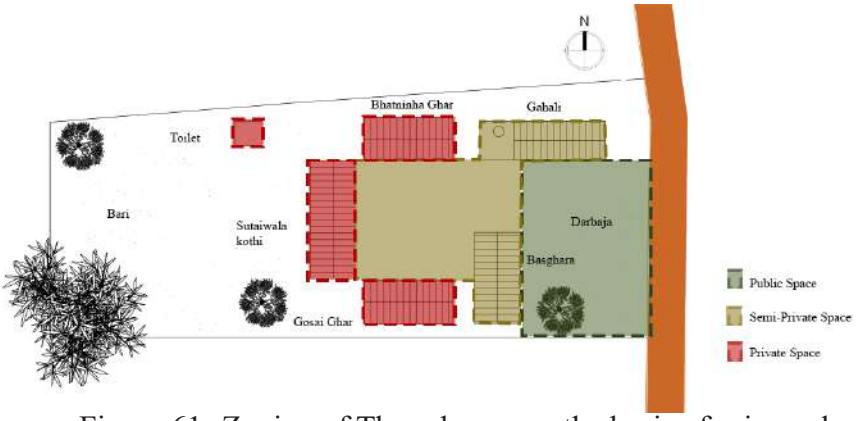

Figure 61- Zoning of Tharu house on the basis of privacy level

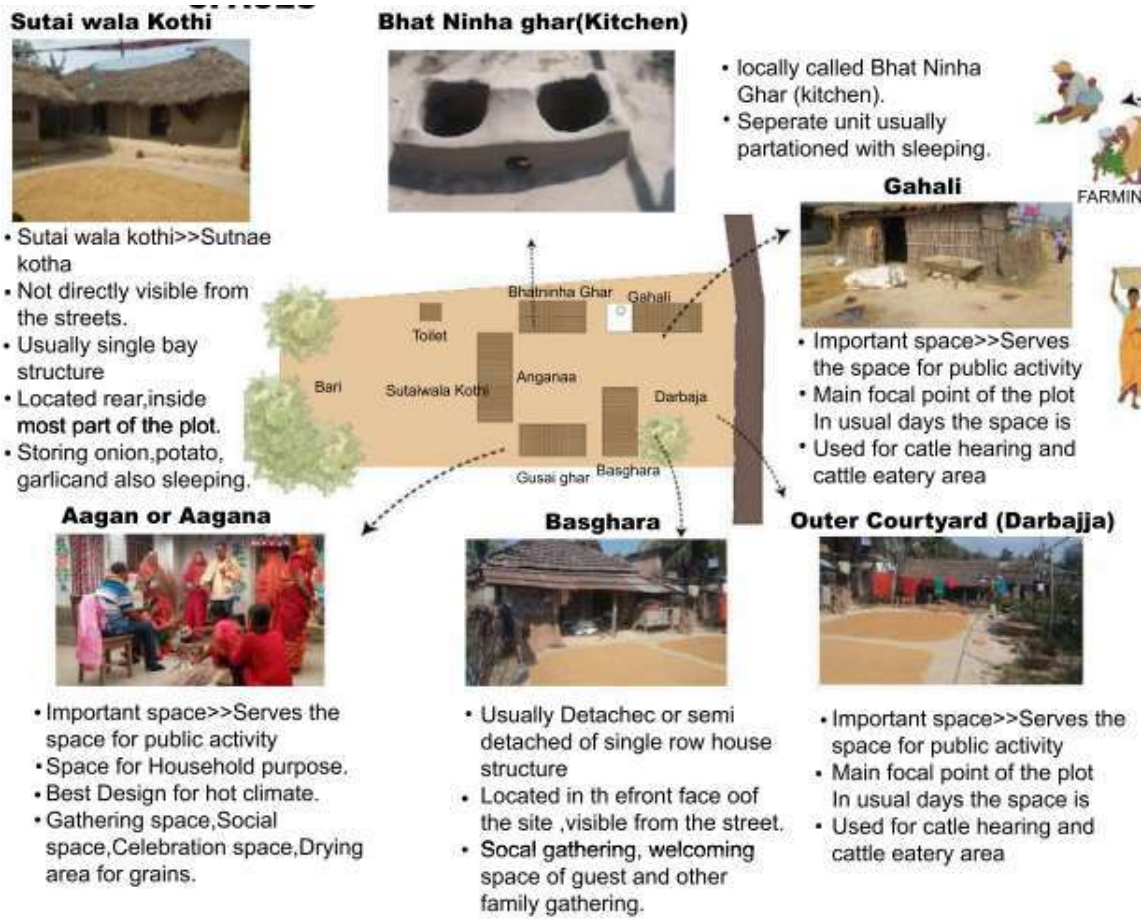

Figure 62: Build Environment of Tharu House

The Build environment of a typical Tharu house include Darbajja, Basghara, Osara, Angnaa, Gosai ghar, and Bhatninha ghar, which serve as the primary traditional areas. However, the presence of certain spaces may vary based on the household's social status within the community. The interior of the building also remains consistent, expect for the variation in size and numbers of the rooms.

3.2.4 ALLOCATION OF SPACES

1. Public space: Outer Courtyard (Darbajja)

Tharu houses in Saptari district typically have two kinds of courtyards: an outer courtyard known as "Darbajja" in the Tharu language, and an inner courtyard. The outer courtyard, or Darbajja, is a public space where various daily activities of the Tharu community take place. It serves as the main area for activities such as cattle herding and feeding. During special events like weddings, it becomes a gathering space for guests (Janti). The outer courtyard is directly connected to the guest hall and cattle shed. Sometimes, a large bamboo and mud vessel called Bhakari, used for storing grains, is placed near the outer courtyard.

A. Semi-private space: Cattle shed, Entrance Hall/Guest Hall, inner courtyard and verandah

i. Guest hall (Basghara)

In the Tharu language of Saptarian, "Basghara" refers to the main guest hall in a single-row house structure, which is typically detached or semi-detached. it is placed at the front of the house and visible from the street, Basghara is primarily used for welcoming guests and hosting family gatherings. Guests are initially entertained in this area before being guided to the inner courtyard and verandah spaces. It's common for Basghara to be separated from the main sleeping areas in most houses. In today's context, the concept of Basghara seems to have faded as the Tharu community has become more sociable. Unlike in the past when strangers or guests were not allowed directly into the inner courtyard or main sleeping rooms, present-day practices are more open.

ii. Cattle shed (Gahali)

In the local Tharu language, a cattle shed, known as "Gahali," is typically separate or partially attached to the main dwelling units. This structure serves as a shelter for cattle, including cows, buffaloes, and goats. Additionally, it is occasionally utilized for storing animal fodder. An interesting aspect is that one of the concluding funeral ceremonies is conducted by the deceased person's sons, along with a priest, inside the cattle shed.

Figure 63-View of Gahali from outer courtyard

iii. Inner courtyard (Angnaa)

In the Saptariya Tharu language, the Inner Courtyard, referred to as "Angnaa," holds a crucial role in the Kochila Tharu settlement, embodying social, cultural, and religious significance. It serves as the focal point for Tharu activities, acting as a gathering space for social and cultural events. The courtyard facilitates airflow in each dwelling and provides a cool resting place for members during the summer. With its cultural importance, major feasts and functions take place in the courtyard. It also serves as a recreational area for children and youth. Furthermore, the courtyard plays a role in agricultural activities by providing space for storing agricultural products and drying crops. Additionally, it is utilized for washing, bathing, sun-drying clothes, and often features a tulashi moth, reflecting the predominant Hindu religious practices of the community.

Figure 64- Marriage Ceremony preparation going on in Angnaa (Inner courtyard)

iv.Verandah (Oshra or Osara)

Figure 65- Verandah of the Tharu house

In the Saptariya Tharu language, "Oshra" is the equivalent of the verandah or "pidhi" in Nepali. It is an integral part of Kochila Tharu architecture, serving multiple purposes. Acting as a buffer zone, the verandah provides protection from direct sunlight. Typically, it has a width of 3-4 feet and serves for sleeping, storing agricultural products, and household goods. Many Tharu households use Oshra as a dining space on regular and occasional days. Additionally, the verandah is a versatile space where items like the grinding machine (Jato or Jatta in Tharu language), rice husking machine (Dhiki or Dheki), and chulo are sometimes placed. The veranda also functions as a family lounge, serving as a welcoming space for visitors and doubling as a living room.

B. Private space (Dwelling space): Sleeping spaces, Kitchen (Bhatninha ghar) and deity room (Gonsai ghar)

The home mainly has areas for sleeping, the kitchen, and a pooja (prayer) room. This part

is separate from the guest hall and the space for cattle. Normally, you can't see this section directly from the street.

i. Dwelling spaces (Sleeping spaces)

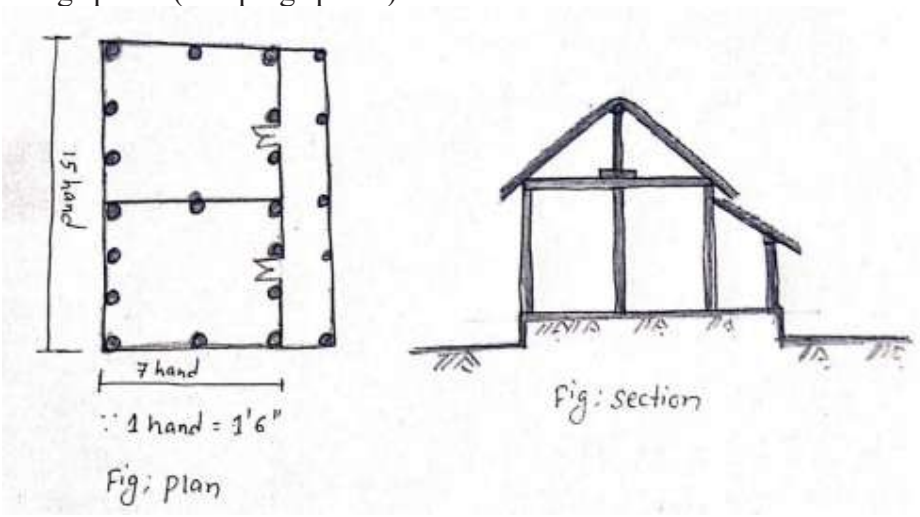

Figure 66- Plan and Section of the Tharu house

In the Saptariya Tharu language, there isn't a specific local name for dwelling spaces. The main sleeping areas are separate from the Basgarha and are situated at the back part of the Tharu house layout. The rooms are single bay structures accessed from the verandah. Sometimes, partitions are added if the family grows, but they don't go beyond 6 to 7 feet. Every couple gets its own room to ensure privacy. Everyone respects the house structure. Because of the slanted roof, there's a lot of space underneath the rooms. This allows good airflow in the summer and keeps the rooms cool. Small windows or holes are made in the walls for light. The width of all the houses stays the same, but the length can vary, with 4, 6, or 8 bays (rooms). Usually, sleeping spaces don't have an upper floor, but sometimes a mezzanine space called "Machha" (made of bamboo sheets) is added for storing onions, potatoes, and garlic. This helps keep grains and food safe from rats.

ii. Kitchen (Bhatninha ghar)

Figure 67- Chulo of the Tharu house

The kitchen, known as "Bhatninha ghar" in Saptariya Tharu language, is a separate or semi-detached part of the dwelling. It typically features 1 or 2 horseshoe-shaped stoves (Chulha) facing east or west. North-facing stoves are avoided. A small pit-hole for waste-water drainage is created near the western or southern wall, depending on the stove's orientation. Sometimes, a grain storage vessel called 'Kothi or Koith' is placed in the kitchen for storing rice, paddy, and wheat, made from mud and cow dung.

3.2.5 SOCIO-CULTURAL SYSTEM

Figure 68- Socio culture system of the Tharu house

- Tharu culture is rich and distinct,passed down through generations,fostering as trong sense of belonging.
- Family Units:Tharu typically have nuclear and extended (joint) family structures,often living together in large patriarchal jointfamilies.
- Marriage:Traditionally,arranged marriages are common,but love marriages are gradually gaining acceptance.
- Festivals:Tharus celebrate unique festivalssuchasShirwa,ChauthiChan,Jitiya,Holi,-Dashain,and Deepawali.
- KochilaTharus in eastern Nepal place special importance on Jitiya,symbolizing victory,and celebrate festivals like Sukhrat.
- Phaguwa(Holi) marks the end of the calendar year,and Shiruwa signifies the Tharu NewYear.
- Maaghi is a significant festival,celebrated as a harvest festival in the eastandasa symbolof liberation from bonded labor in the west.

3.2.6 Art and Symbolism

Figure 69- Art and symbolism

A. Mokha Art:

Mokha art is popular endemic of Tharu community. Tharu women perform their traditional

culture and spiritual expression through Mokha art over the walls, especially at the two sides of door. Tharu women of the eastern terai have transformed the verandahs and outer walls of their home into colorful outdoor canvasses dedicated to laxshmi the hindu goddess.

Some of pattern in Mokha painting like peacock and any other bird's Sanskrit literature.

Material used for Mokha Art

- Clay
- White mud
- Red mud
- Milk of cow or goat
- Juite fibe

B. Kobhar Art

Kobhar art has traditionally been done in the tharu culture to bless a newlywed couple. Originally the painting depicts a symbolic image of the lotus, the bamboo grove, fishes, birds and snakes in union. These images represent fertility and love of life.

Material used for Kobhar Art

- Pencil
- Compass
- Milk of cow
- Pieces of cloth used as brush
- Color

Ashtimki, an ancient tradition of painting the story of the evolution of life, holds great significance among the Tharus of western Nepal. While the Tharus in eastern Nepal draw Kohbar on their walls during marriages and other rituals, the Tharus in the west.

3.2.7 DENHARI, THE INDIGENOUS CRAFT OF THARUS

Figure 70- Art and symbolism

'Denhari', which has been traditionally used by the Tharu community for storing food grains as well as for the partation of the space in the building which, is on the verge of disappearance. Denhari is earthen structures constructed inside the house by using clay, paddy straw and rice husk. These structures are constructed in various shapes as round, rectangular, conical and others and can be used for many years. Moreover, this unique craftsmanship of the Tharus is disappearing as the youngsters are not interested in it while the seniors are also not keen to transfer this indigenous skill to them (Rastriya Samachar Samiti, 2020)

3.2.8 INFERENCE

A. Access

The division of the space according to the public, private and semipublic space or access is shown ingiven figure where red for public space,green for semi public access and orange for private Access to the people.

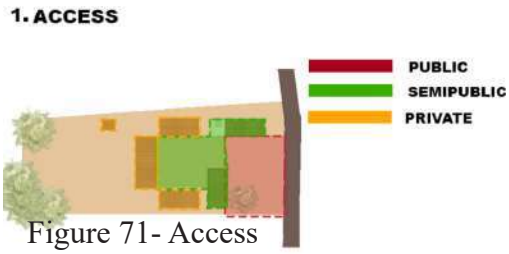

Figure 71- Access

B. Activity Nodes

The activity nodes is divided into two space where yellow Part is the space for the Household Activities and pink part is for space for public Activities.

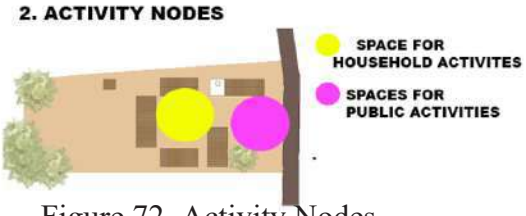

Figure 72- Activity Nodes

C. Building Materials

- Wood-used as structural member,post and beam.
- Bamboo-Bamboo lath are used to sandwich reeds,straw and to tie together.
- Mud-Mud are used Plastering materialsas well as binding.

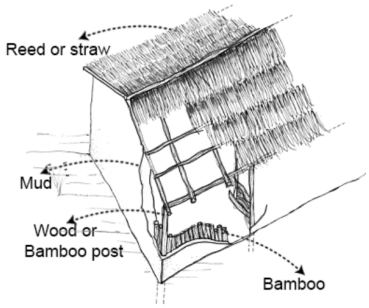

Figure 73- Building Materials

D. Conclusion

Parameters	Traditional kochila tharu house
Planning	Courtyard planning with single row detached dwelling unit
Building form	Elongated
Building materials	Mud, Bamboo, Timber, Thatch, Tiles-low embodied energy
Building height	Single storey, sometime with mezzanine space
Ventilation	Courtyard design to break the house into smaller with more walls opening onto the outdoors, much easier to encourage a gentle breeze into the home
Roof type	A sloped roof extending generously over the verandah, preventing excessive heat from entering the inner rooms
Roofing material	Thatch or tiles
Foundation	Earth/stone/brick plinth

INTERNATIONAL CASE STUDY

3.3. ROHINGYA CULTURAL MEMORY CENTRE

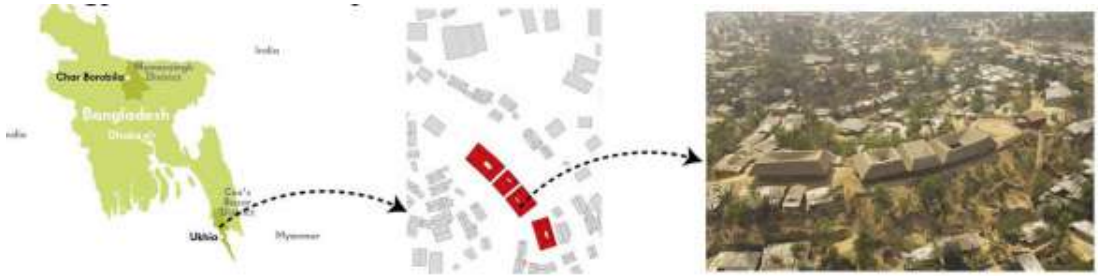

Figure 74- Location of Rohingya Cultural Memory Centre

3.3.1. PROJECT BRIEF:

Location: Bangladesh
Date of Establishment: 2022
Land Area: 501m2
Target Population: Rohingya Community
Architect: Rizvi Hassan

Figure 75- Arial View Of Rohingya Cultural Memory Centre

3.3.2. OBJECTIVE:

- To understand building use in the community,
- To understand the need for given spaces

3.3.3. Introduction:

The Rohingya community has gone through changes & unsettlement throughout their lives. The current situation, being in the largest refugee camps, has added a bit more uncertainty to their lifestyle, as it has influenced their culture & values. (Hassan, 2022) Rohingya Cultural Memory Centre aims to fight back for the lost identity of her communityand mental well-being through all the creative ways possible. It also aims to achieve the target of inclusiveness and a joyful event. It tries to collect, preserve and spread those knowledge & stories, to create goodwill among displaced communities even in the most unsettled situations. The elements that composed the space were the outcome of various design sessions and hands-on workshops. (Hassan, 2022)

Figure 76 - Exhibition Space Of Rohingya Cultural Memory Centre

Figure 77- Community Space Of Rohingya Cultural Memory Centre

The centre is situated on a hilltop in the middle of the camp area. (Hassan, 2022)

3.3.4. Planning and Designing

The building complex is designed for the community halls and workshop area for handicraft elements: ceramic and weaving. The four roofs are designed to catch and utilize rainwater if needed. They also create four courts inside that work as the source of light for the display. These courts also offer a serene ambience, that keeps the camp life outside. (Hassan, 2022)

The strong bamboo screen that creates the hall is perforated, to have the breathability of the space. It also ensures security but allows visible connection from outside. The planning of the centre ensured enough perforations in-between and within the halls, for rainwater to be absorbed by the hill soil. That will help the groundwater to be recharged continuously. (Hassan, 2022)

The extended shades allow free movement and spaces around the main hall for the community and users, offering more engaging spaces as show in the figure below (Hassan, 2022)

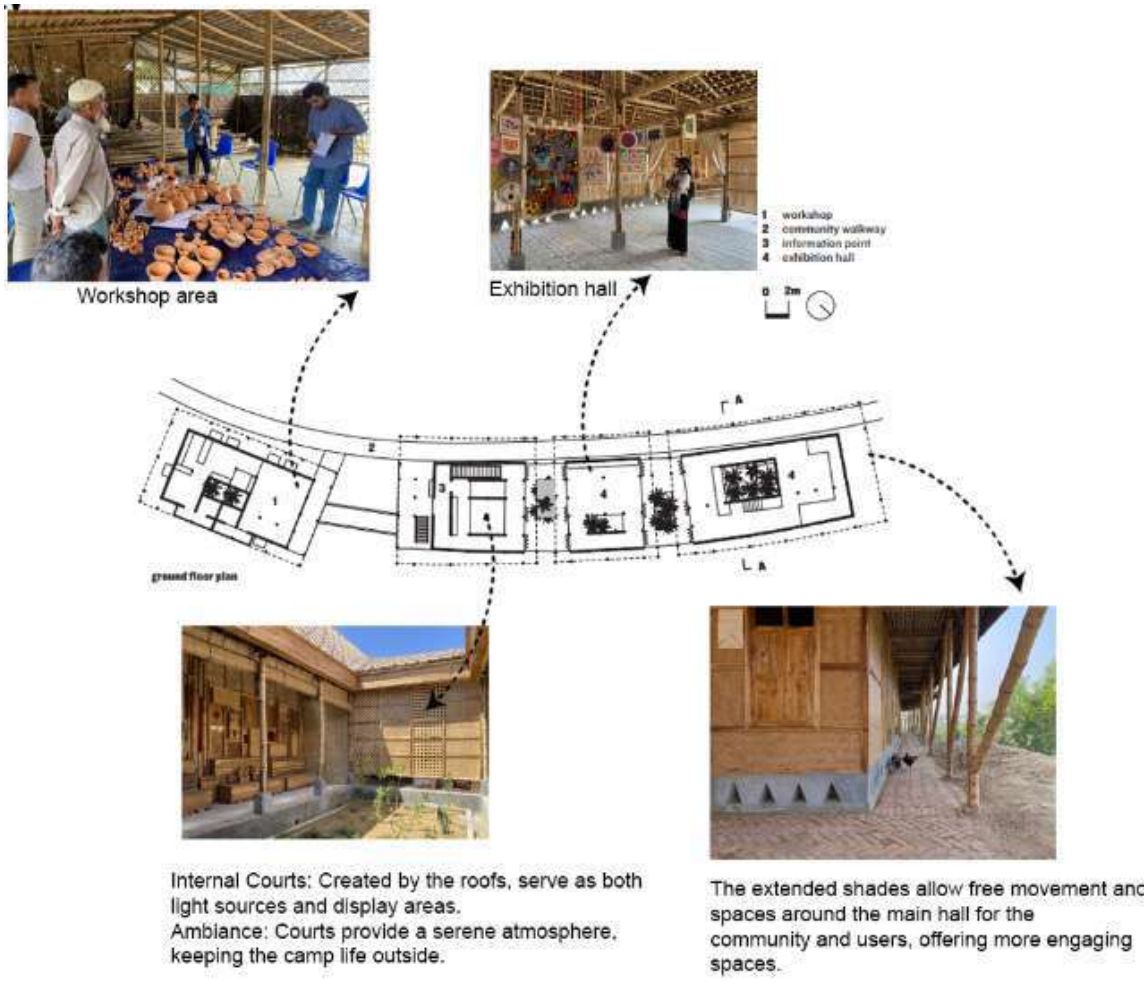

Figure 78- Master paln Of Rohingya Cultural Memory Centre

Figure 79- Interior Of Rohingya Cultural Memory Centre

3.3.5 MATERIALS AND CONSTRUCTION

The construction ensured flexibility to create a temporary scheme in the camp.

• Nipa palm leaf (om pata/gol pata) pallets for roofing as shown in figure below, various

bamboo weaving techniques, traditional doors-windows-household patterns, and all other information resulted in a continuous process.

• Easily removable pre-cast columns, blocks for flooring, nut bolt joints, etc. ensures the flexibility of the building. The extended shades all around the structure ensure protection from heavy rain (vertical & horizontal) in this region. (Hassan, 2022)

Figure 80- Interior Of Rohingya Cultural Memory Centre

The roofing material, Nipa palm pallets are one of the most common materials used to make Rohingya houses. The leaves were collected from nearby (Ramu) and used to create the roof that keeps the temperature down inside. Nipa leaf pallets for roofing, clay tiles & cement tiles for floor, bamboo modular partition etc.

3.3.6. INFERENCES:

• Public Participation in planning and design.
• Involving locals in recovery from traumatic past with the provision of interactive spaces and economic benefits.
• Use of local materials and passive design techniques.

3.4. CULTURAL CENTER, SINTHIAN, SENEGAL

Figure 81- Location of Cultural Centre,sinthian,Senegal

3.4.1. PROJECT BRIEF:

Location: Sinthian, Senegal
Date of Establishment: 2015
Land Area:1048 m2
Target Population: Locals and artists
Architect: Toshiko Mor

Figure 82- Arial View of Cultural Centre,sinthian,Senegal

3.4.2. OBJECTIVE

• To understand the use of common space for different activities
• To understand the passive design method applied

3.4.3. INTRODUCTION

Thread Center offers artist residencies a diverse range of programs that provide the people of Sinthian and the surrounding region with the opportunity to discover new forms of creativity and cultivate their skills. A venue for markets, education, performances and meetings, the centre is the hub for the local community and a place where the resident artists can have a truly meaningful experience of Sinthian society. The thread gives artists a place to practice their craft, for schoolchildren to learn, and for villagers to gather.

Also,within the priorities of the program was contemplated getting a source of drinking water safer for the population.

Figure 83- View of Cultural Centre,sinthian,Senegal

3.4.4. SITE AND SURROUNDINGS

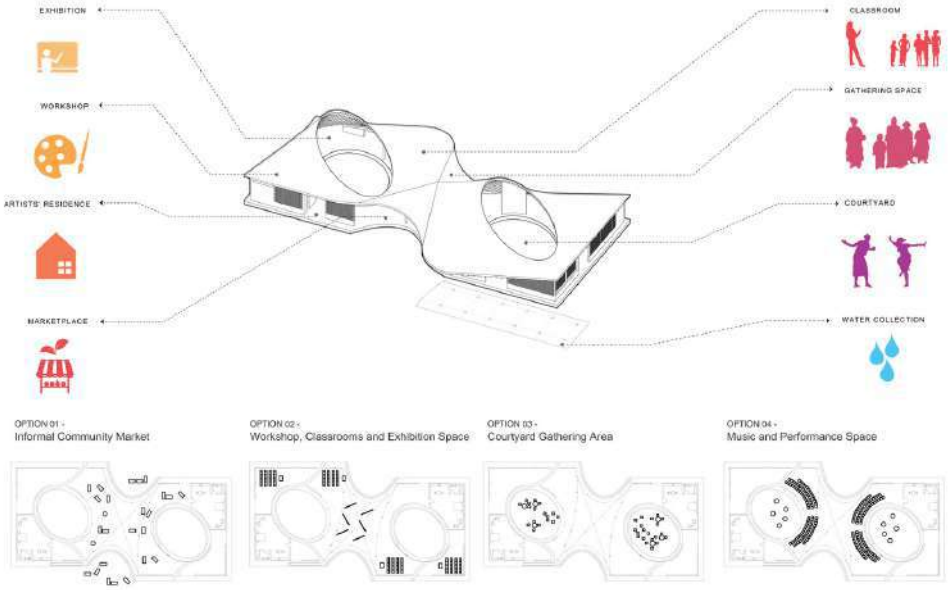

Figure 84- Master Plan of Cultural Centre,sinthian,Senegal

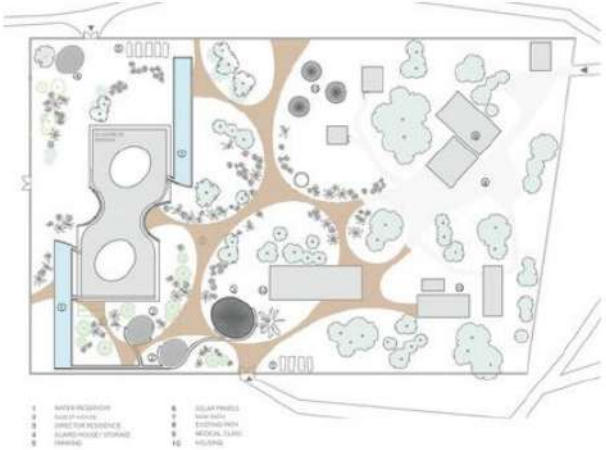

Figure 85- Build Environment of Cultural Centre,sinthian,Senega

3.4.5. PLANNING AND DESIGNING

Thread is a socio-cultural centre that houses two artists' dwellings and studio space for local and international artists. In the middle of the building a large common space, outdoors, with two patios protected from rain and intense heat on the sides, where general meetings, local performances or the market are made. The building is surrounded by fine channels open that flow into each collection tank located at the ends of the plant.

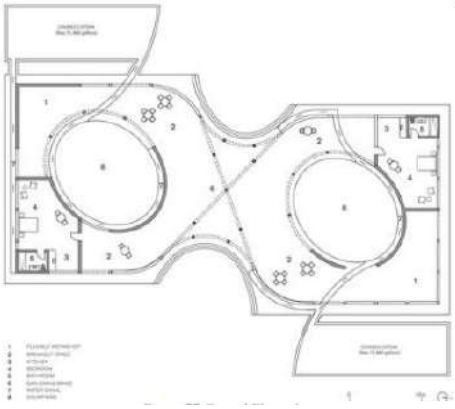

Figure 86- Plan of Cultural Centre,sinthian,Senega

The building is constructed using local materials and local builders have shared their sophisticated knowledge of working with bamboo, brick, and thatch as shown in figure Below .

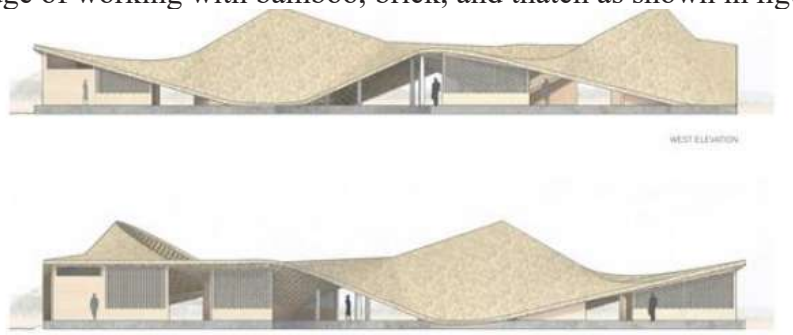

Figure 87- Elevation of Cultural Centre,sinthian,Senega

Local materials used in construction provide a low-cost and sustainable building solution. The thatch roof is laid over a bamboo roof structure. The whole roofing system is supported by brick walls and columns.

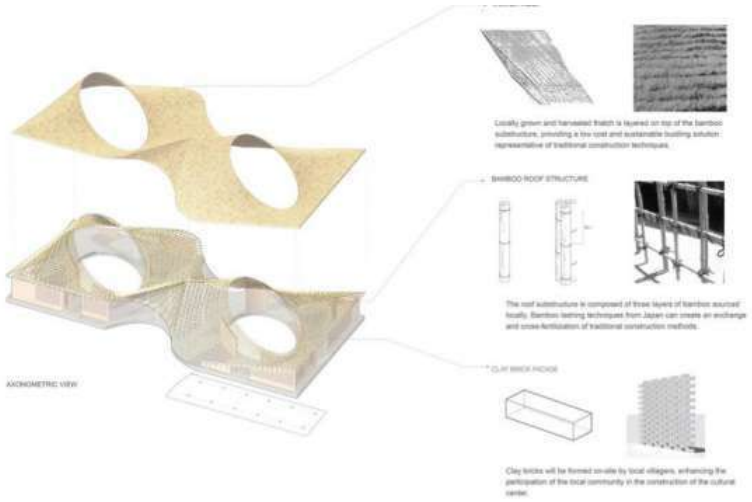

Figure 88- Isometric view of Centre,sinthian,Senega

The customary pitched roof is inverted and capable of collecting approximately 40% of the villagers' domestic water usage in fresh rainfall as shown in figure below.

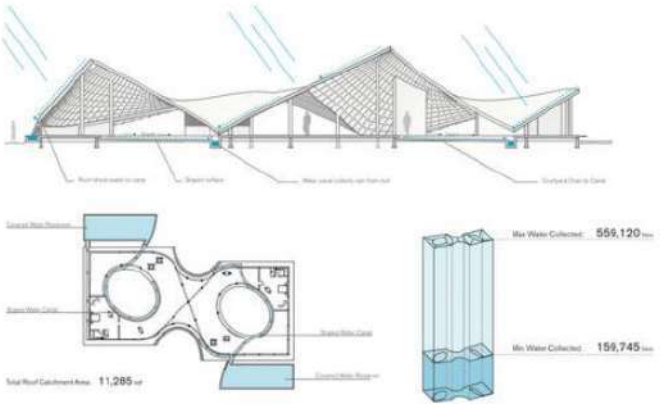

Figure 89- Water Storage System of Cultural Centre,sinthian,Senega

Perforated walls, voids and courtyards help in the stack effect, thus providing proper air circulation.

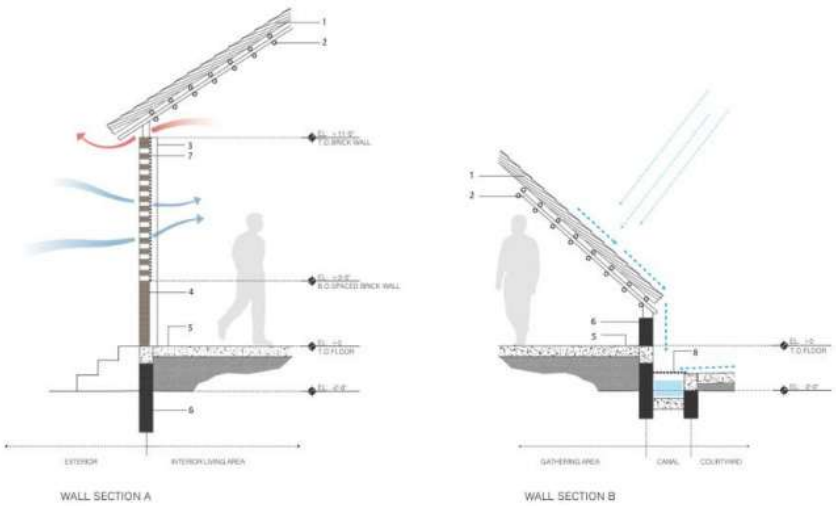

Figure 90- Wall Details of Cultural Centre,sinthian,Senega

Despite the unsettlement, they have many stories, knowledge, and wisdom that creates positivity and care. 'Rohingya Cultural Memory Centre' tries to collect, preserve, and spread those knowledge & stories, to create goodwill among displaced communities even in the most unsettled situations. Rohingya artisans and community members came forward with their indigenous knowledge, techniques, ways of life, and stories that helped visualize an appropriate approach for designing the space. Nipa palm leaf (om pata/gol pata) pallets for roofing, various bamboo weaving techniques, traditional doors-windows-household patterns, and all other information resulted in a continuous process.

3.4.6. Inferences

- Well-lit space for cultural exchange gatherings market,
- Perforated walls, courtyard and voids for good air circulation.

COMPARATIVE ANALYSIS

PARAMETERS OF ANALYSIS	HARIHAARPUR VILLAGE	UNNATI CULTURAL VILLAGE	ROHINGYA CULTURAL MEMORY CENTRE	SINTHIAN THREAD ARTS CULTURAL CENTRE
Site context	With in tharu community of saptari	With in rice field ,highway in entrance side of Harkapur	Within Refugee camp of Rohinga Community	With in a small village of sinthian
Project concept Project concept	Settlement of Tharu the people.	Focal Hub for Economic Growth and Upscaling National, Natural, Artistic, and Traditional Industries in Nepal	aims to keep Rohingya culture alive, boost mental well-being through creative activities, and bring different communities together, even in difficult situations.	Design that includes everyone and creates a space for community interaction
Programs	Sociocultural and economic aspect of tharu people	Art Gallery,Ceramic workshop,Amphitheater, Restaurants,Accomodation	Community hall,Weaving pottery,Carpentry,embroidery,	Flexible workshop Exhibition Space Breakout space Courtyard Artists' residency
Target group	Tharu Community	Local,Tourist	Rohinga Community	Sinthian, Local Artist
Spatial Character	zzz	Well lit spaces, efforts to connect with landscapes (sketch of Bodhiban)	Spaces arranged in one axis by extended shades and spaces lit by courtyard,	Spaces under same roof, proper lighting and air circulation with two courtyards
Landscapes	Agricultural land in north direction and river in rest of the direction	Buildings spread over mango and lichi trees, water bodies, organic farm, graveled pathways, mud utensil used in lighting street	One gathering space linear to building blocks, plantation in courtyards, ramps	Agricultural and sports space outside the building area
Climate consideration	Vernacular material suitable for hot climate,	Natural Ventilation,Sustainable Materials used in the building construction.	perforations help ground water recharge.	Rain water collection, thermal comfort through courtvards. openwork
Pedestrian Movement	Entry from All sides	Separate blocks, linked by graveled pathways	Movement through linear corridor axis and open access within halls	Entry from all 4 sides, with open connectivity
Build Structure	Bamboo,Mud as structural Element and in walls and support for thatch roof	Traditional roof above CGI used, mostly RCC columns, timber and bamboo used as structural element	Bamboo as structural Element and in walls and support for thatch roof	Parametric roof of thatch+bamboo, rammed earth blocks, concrete beams and columns

CHAPTER 4 : SITE ANALYSIS

4.1. SITE DESCRIPTION

Figure 91- Location of site

The site is located in Agnisaira Krishnasavaran rural municipality ward no. 2 in Saptari District in the Sagarmatha Zone of south-eastern Nepal. It is within the area of residential and agricultural lands.

- Location: Sitapur-o4,Agnisaira krishnasavaran
- Latitude (deg/ min): 26°37’34.7”N
- Longitude (deg/ min): 86°45’38.4”E
- Site area: 1030.48 Sq.m (approx.) 1-10-8.6 (B-K-D) 20-4-0-1.908 (R-A-P-D)
- Orientation: Along North - East
- Current Use: Open Unused field Proposed Area Usage: Residential, educational and industrial space

4.2 DEMOGRAPHIC STUDY OF AGNISAIRA KRISHNASAVARAN RURAL MUNICIPALITY

Agnisair Krishnasawaran is a Rural Municipality, which is located in Saptari district, Province No. 2 of Nepal. Agnisair Krishnasawaran has total 6 wards, which are scattered across 103 square kilometers of geographical area. According to 2021 Census conducted by Central Bureau of Statistics (CBS), It had total population of 27,129. As per 2021 population census, Agnisair Krishnasawaran Rural Municipality had total 27,129 population with 12,846 males and 14,283 females. Out of total wards, ward number 4 had the largest population 6,212, while ward number 6 had least number of populations with 6,212.With respect to number of households, Agnisair Krishnasawaran Rural Municipality had total 5,422 households. The ward number 4 had most households with total 1,226, while ward number 6 had least number of households with total 797 number of households as shown in the figure below.

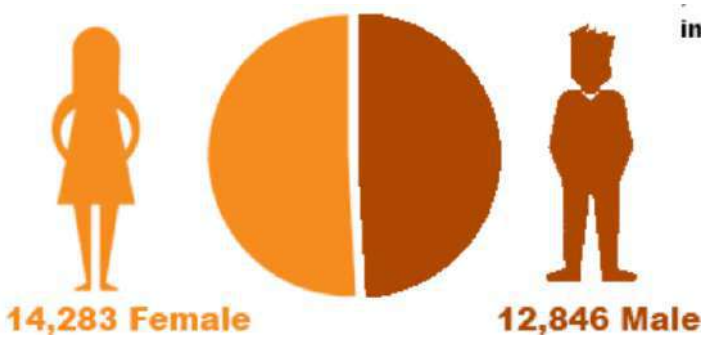

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Figure 92 - Total Population of Agnisair Krishnasawaran Rural Municipality

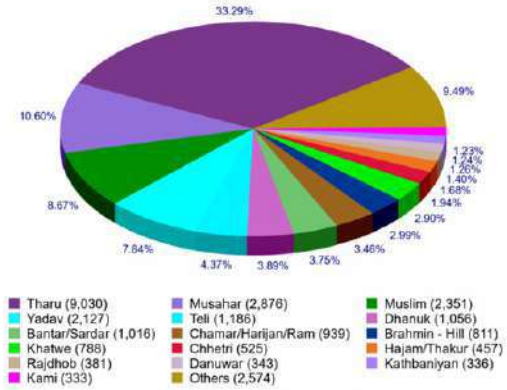

Figure 93- Demographic Study of the Municipality by ethinic group

4.2 SITE SELECTION CRITERIA

- Pond in the bank of site holds historical importance.
- The site is in an area with 33% Saptarian Tharu settlement, a significant proportion compared to other areas in the municipality.
- The site is close to popular destinations such as Homestays ,Koshitappu Wildlife Reserve, and many more which Attract both National and International tourists.

4.3 HOUSEHOLD DATA

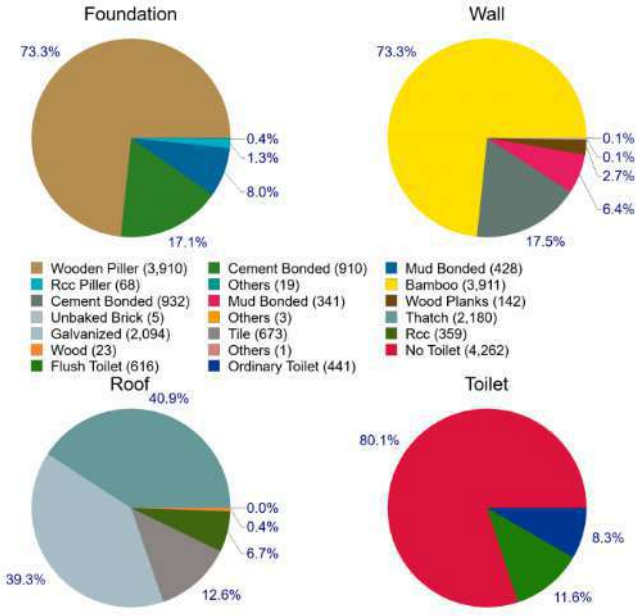

Figure 94- Graphical data of household

Out of total 5422 households in Agnisair Krishnasawaran Rural Municipality, there were 428 houses that were founded on mud bonded while 910 houses were cement bonded. Same as, 68 households were reported of being founded on RCC piller, 3,910houses were founded on wood.

With respect to wall of the houses, 341 houses were mud bonded, 932 houses were cement bonded, 142 houses were wood planks bonded, 3,911 houses were bamboo bonded and 5 houses had unbaked bricks on their outer walls.Rest of the houses were reported of having other types of outer wall, while some of them reported nothing of having the outer wall bonding.

4.4 THARU SETTLEMENT AROUND SITE

Figure 95- Tharu settlement around site

4.5 SCHOOLS AND COLLEGES

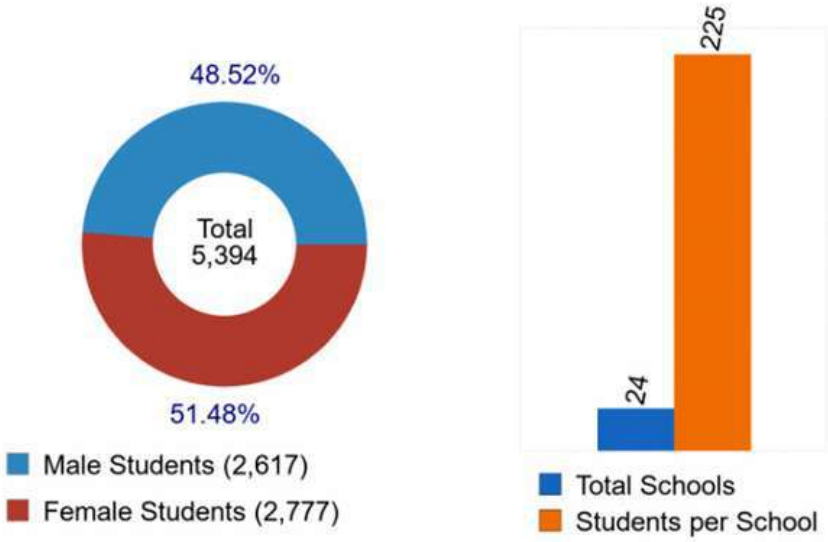

Figure 96- No. of schools in Agnisair Krishnasawaran

4.6. UTILITIES AND SERVICES

Water Supply:

In Agnisair Krishnasawaran Rural Municipality, there were total 70 houses, which were equiped with piped tap water resources while 4,911 houses were reported of having tubewell water facilities. Same as, 11 houses had covered well while 199 houses didn't have any cover on their tubewell. Other resources of water facilities were spout water and river stream, which were reported of the household's source of water.

Electricity and telecommunication:Electricity and communication services can be extracted from the lines supplied to nearby Tharu settlements.

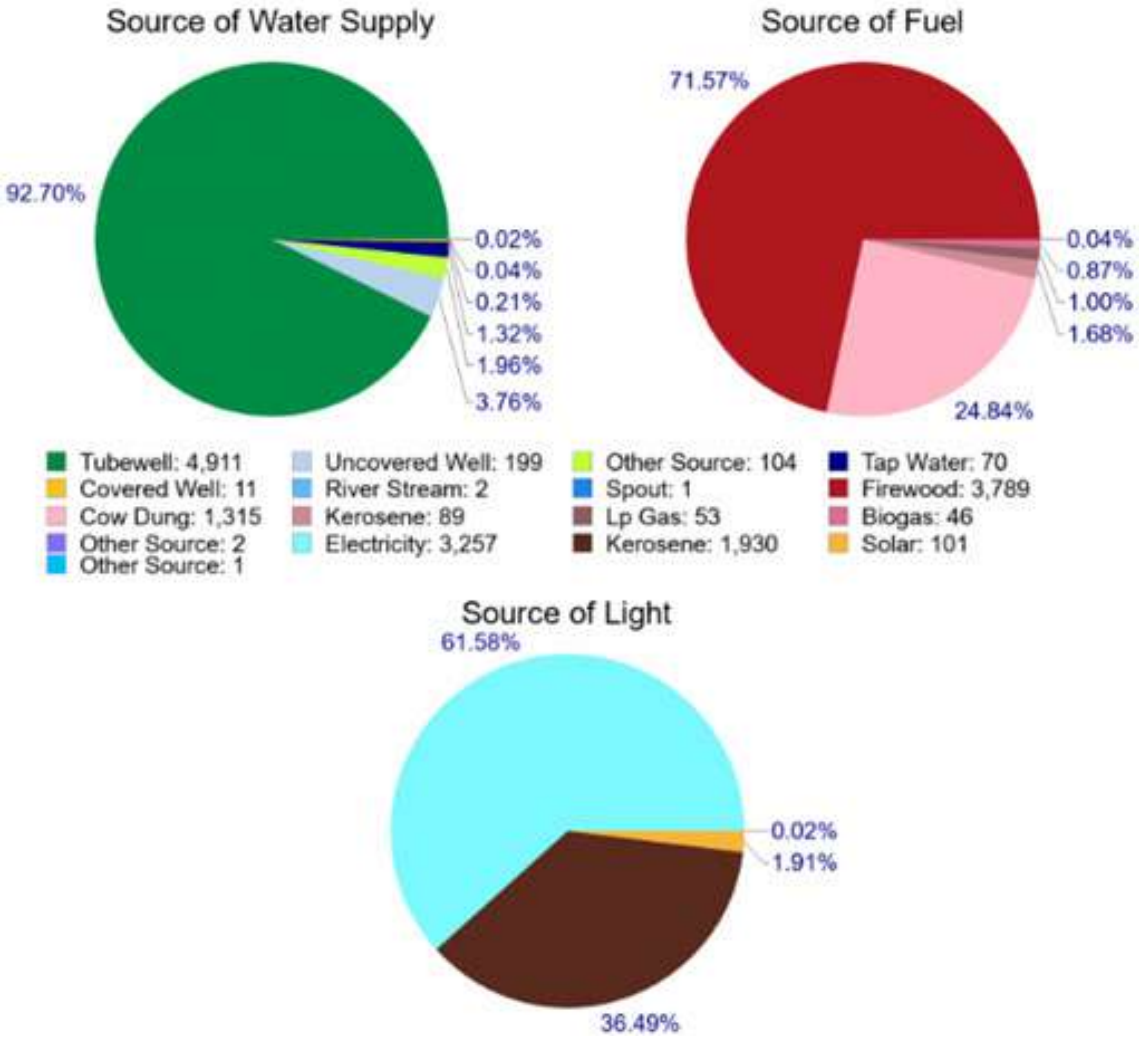

Figure 98- Data for source of fuel,water and light in Agnisair Krishnasawaran

4.7 SITE LOCATION AND SURROUNDING LANDMARKS AND SERVICES

Figure 99- site and surrounding landmarks

The notable Tourism places are:

- Lahorjara daha -8km
- Khodardevi cave-10 Km
- Koshitappu wildlifereserver-15.9km
- Dharapani -16.2 Km
- Chinmasta Bhagbati Temple -15.2 Km
- Krishnasabran Temple bakdhuwa-10.2 Km
- Bhagwati Mandir-6.2 km
- Vishnu Templ-20 Km
- Shambhunath Temple-15 km

4.8 ACCESS TO SITE

Figure - Access to site

The major access to the site is North of East-West Mahendra highway (8m width)which is 1.5 km from ths site and which is connected to, secondary road (5m width) and tertiary road (3m width) through site.The major road in Eastern side of site and secondary roads which are accessed to the site, both are pitched which is highly maintained and tertiary road is graveled.

4.9 GREEN AND BLUE IN SURROUNDING

Figure - Site Surrounding

4.10 PHYSICAL ASPECT OF SITE

• Orientation: The proposed site is oriented towards the northeast, This orientation ensures optimal exposure to sunlight throughout the day.

• Topography: The site features a flat terrain, providing a convenient foundation for development.

• Vegetation and Visual Aspect: Surrounding the site are expanses of cultivable land adorned with seasonal crops and vegetation. The flat terrain offers unobstructed visual

access through the site. Its northeast orientation maximizes visual accessibility from the secondary road. The presence of vegetation along the sides of the secondary road creates a welcoming ambiance, offering a sense of enclosure from two directions.

• Infrastructure: The site is well-equipped with essential infrastructure, including transportation services (bus, tempo, safari, etc.), telecommunication networks, electricity supply, hospitals, and health posts. Additionally, ongoing construction includes the installation of drainage systems alongside road development.

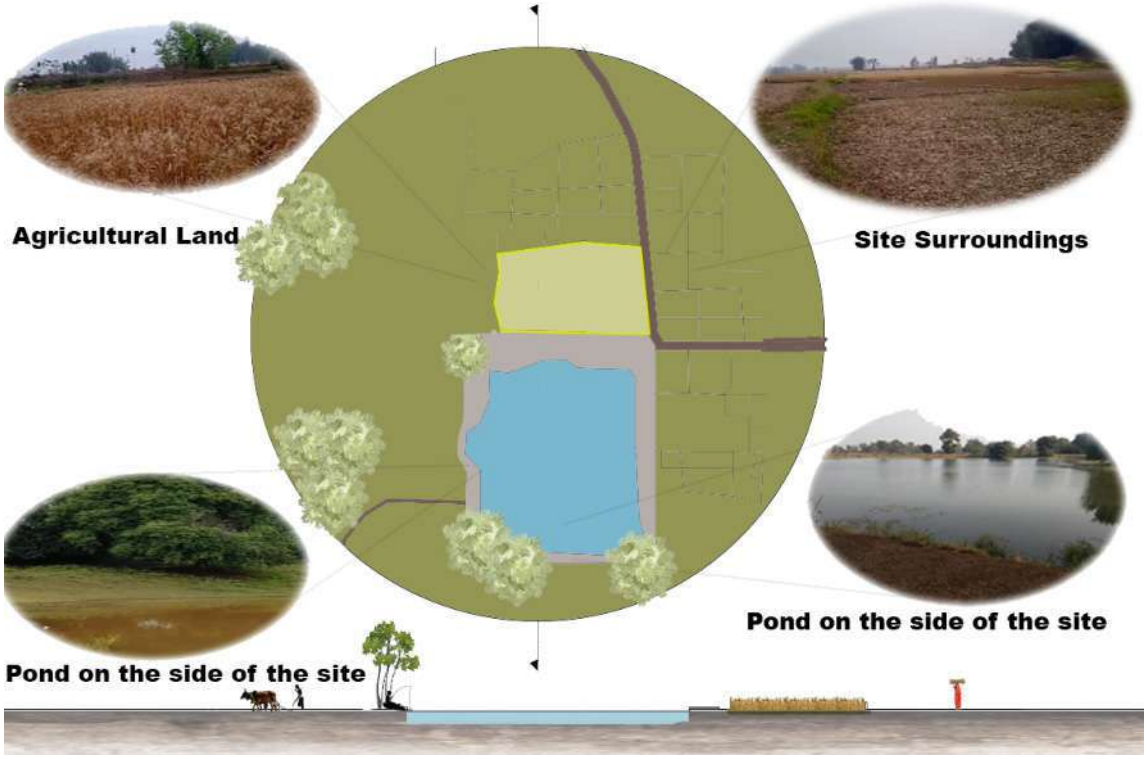

Figure - Site Surrounding and section

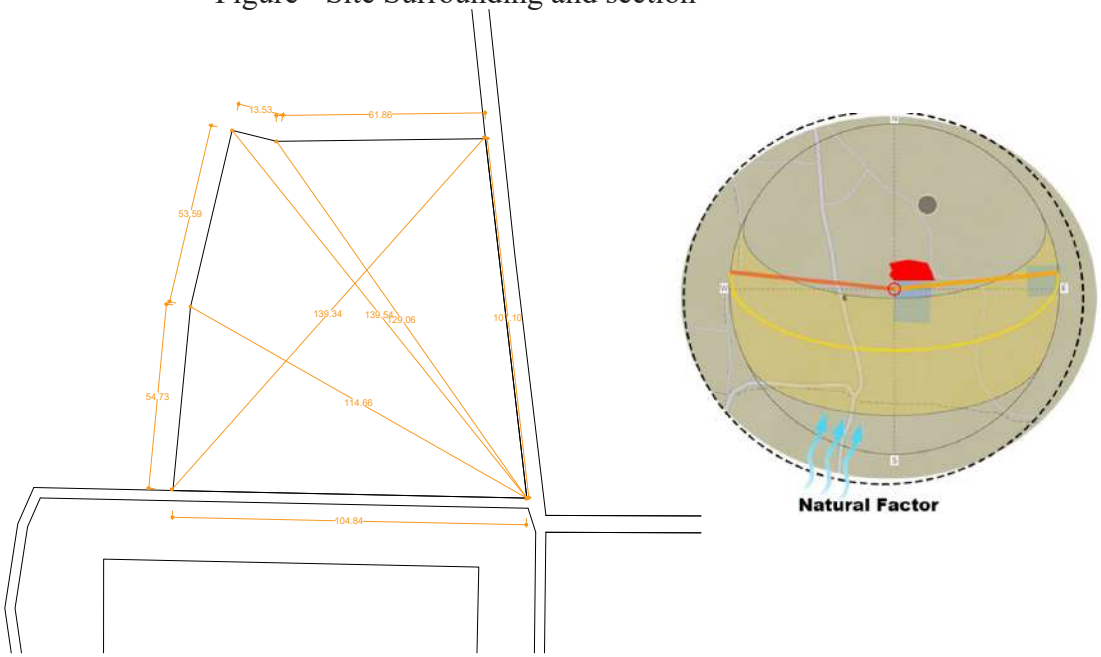

Figure - Site Dimension

4.11 SOCIOCULTURAL ASPECT OF SITE

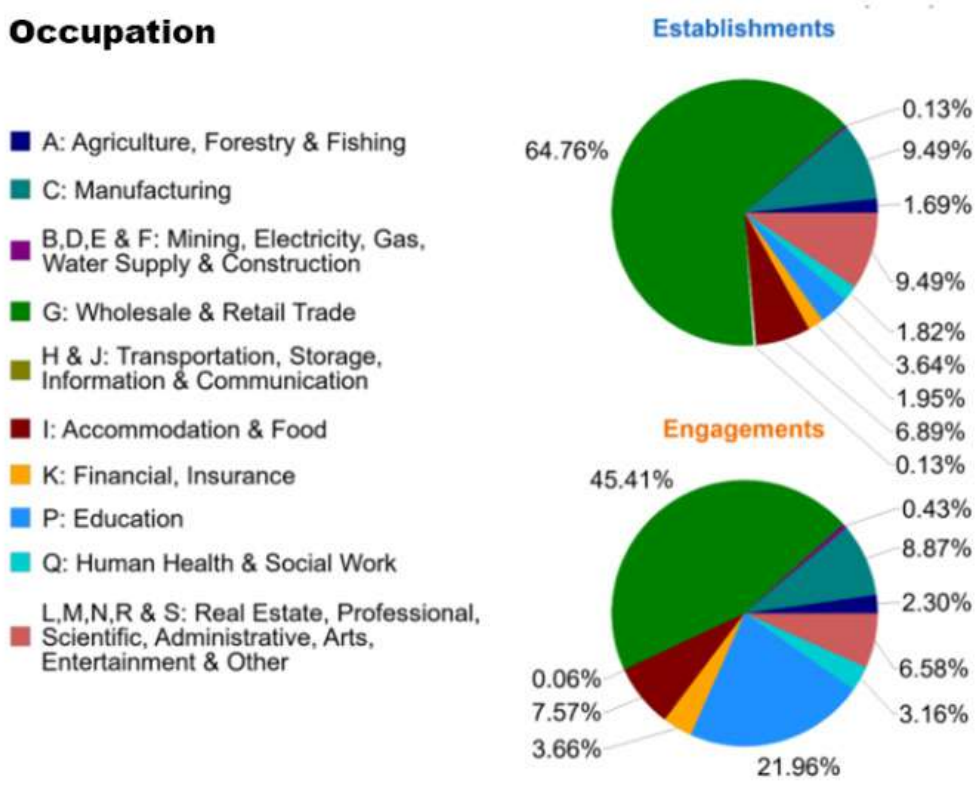

Figure - Economic Activities Data

According to 2018 Economic Census, there are total 769 establishments in Agnisair Krishnasawaran Rural Municipality that are involved in various economic activities. In those establishments, total 1,612 persons are engaged for the economic activities, as a self-employed or an employee, with total male engagement of 990 and female engagement of 622 persons.In every business, there were an average of 2.10 people engaged with average males are 1.29 and females are 0.81. The ratio of male to female engagement in the establishments are 1.59, which means as many as 1.59 males are enagement in the economic activities per female.

4.12 LANGUAGE SPOKEN

Mostly spoken language in Agnisair Krishnasawaran is Maithili, which is spoken by 12,259 people. The Agnisair Krishnasawaran has people who speak other languages, such as Tharu, Nepali, Urdu, Danuwar, Tamang, Rai, Magar, Bhujel, Hindi, Bhojpuri, Doteli, Bahing, Limbu, Newar, etc.

Figure - Language spoken data

4.13 CLIMETIC ASPECT

• Relative Humidity:
o Highest relative humidity = July (88.87 %)
o Lowest relative humidity = April (49.56 %)
• The month with the Highest and lowest number of rainy days
o The highest number of rainy days = July (28.73 days)
o The lowest number of rainy days = December (1.30 days)
• Precipitation:
o Driest month = November, with 13 mm | 0.5 inches of rainfall.
o Most rainfall = July, averaging 640 mm | 25.2 inches.
o The difference in precipitation between the driest month and the wettest month = 627 mm | 25 inches. (Climate-Data.org, n.d.)
• Average Temperature:
o Maximum Average Temperature: 28.1 °C | 82.5 °F (June)
o Minimum Average Temperature: 15.0 °C | 59.0 °F (January)
o Throughout the year, temperatures vary by 13.0 °C | 23.5 °F as shown in figure below. (ClimateData.org,)

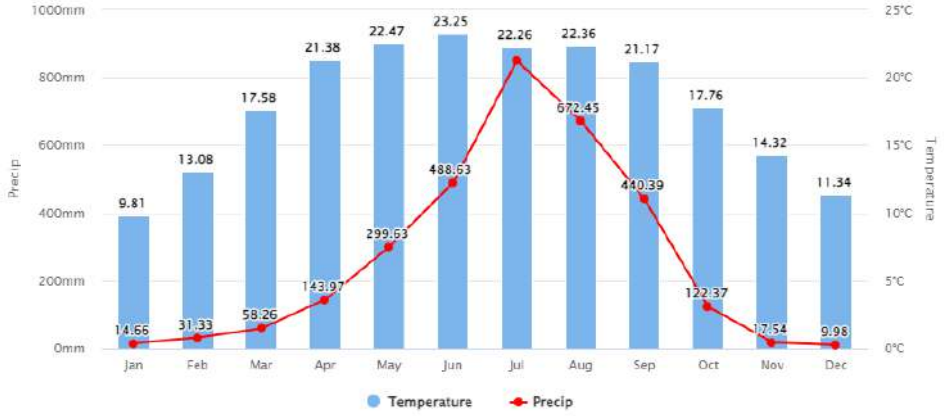

Figure - Temperature Data

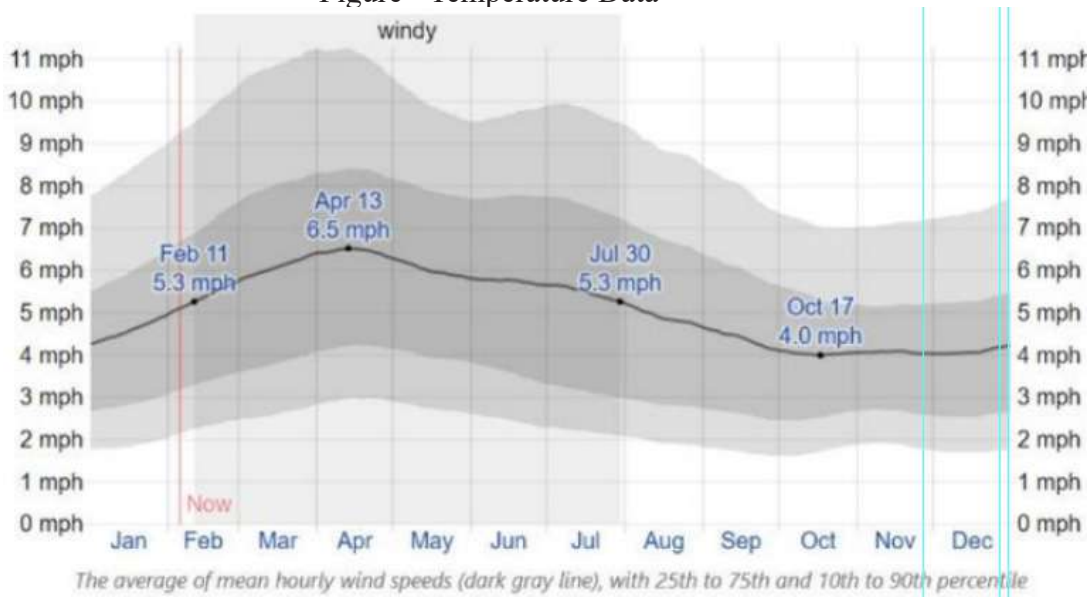

Figure - Wind Data

4.14 BY LAWS

According to the Agnisair Krishnasawaran Rural Municipality,
Building Type: Community Building
Ground coverage: 60%
FAR: 3.5
Setback: 3m

4.15. PHYSICAL FEATURES

A. Topography
• The site chosen has a flat terrain.
B. Vegetation
• The entire site is used as a paddy field while it remains barren in winter.

Figure - Different Plants found Near site

C. Land use pattern near site

Figure Land Use pattern Near site

D. Religious place near site

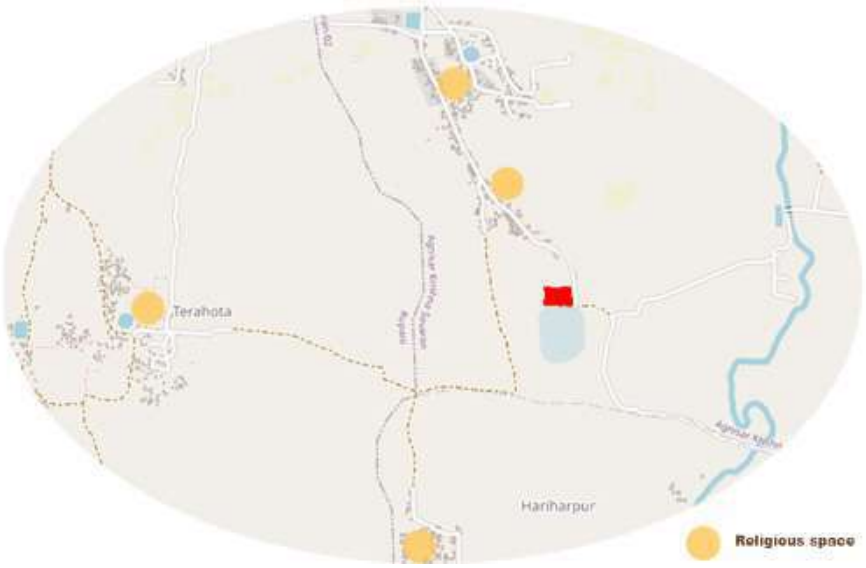

Figure -Religious place Near site

The provided figure illustrates the various nearby religious sites where different religious activities are conducted. These places of worship include temples, mosques, churches, and other sacred sites. Each location offers a unique opportunity for individuals to engage in spiritual practices, participate in communal worship, and observe religious ceremonies. The proximity of these sites highlights the diversity and accessibility of religious options available to the community, catering to the spiritual needs of people from different faiths and backgrounds.

4.16 .SWOT ANALYSIS:

Strength:
• Within Tharu Community
• Close to green forest
• Nearby small lake
• Easily accessible road
• Nearby Tourist destinations

Weakness:
• The existing site is arable land.
• The link road to the site has only gravel top.

Opportunity:
• Promotion of Tharu Culture.
• A place for interaction of people.
• Promotion of Vernacular Architecture.
• Small-scale production.

Threats:
• Chance of growing buildings in surrounding arable lands.
• Increase of public in a peaceful place.

CHAPTER 5 : PROGRAM FORMULATION

5.1. PROGRAMME FORMULATION AND AREA REQUIREMENTS

Program formulation involves the application of planning principles and design guidelines. Following an extensive literature review on the culture and traditions of the Tharu people, along with studies and observations from primary and secondary case studies, the preliminary requirements have been established. These requirements will serve as the foundation for the building's design in the next phase. Below is the provisional list of functions along with the corresponding required areas.

Types of spaces

s.n	space	number	Mini.stander	Area (m2)
1	Guard House	2	3	6
2	Transformer	1		15
3	CCTV Control Room	1	1	1
4	ATM	1	5	5
6	Circulation	40%		10.8
		TOTAL		37.8

Administrative space

s.n	Spaces	No. of users	Area per oerson (m2)	Total area (m2)
1	Reception	2	3.5	7
2	Waiting room	10	0.75	7.5
3	Director room	1	16	16
4	Accountant room	1	20	20
5	Meeting room	15	2	50
6	Pantry space	2	2	4
7	Staff Room	3	5	15
8	Restroom			
	Male	2	2.5	5
	Female	2	2.5	5
	Total			129.5
	Circulation			51.8(40%)
	G.Total			161.875

Cultural Space

s.n	Spaces	No. of users	Area per oerson (m2)	Total area (m2)
1	Pottery Section			
	Raw Material Storage			10
	Moulding Space			10
	Drying Space			30
	Working Area	15	2	30
	Colouring Space			15
	Store room			20
	Exhibition space	1		20
	Rest room	3	2.5	7.5
	Total	12		142.5
	Circulation			57(40%)
	G.Total			199.5

s.n	Spaces	No. of users	Area per oerson (m2)	Total area (m2)
1	Weaving			
	Straw/Korai(River grass)	2	10	20
	Weaving Area			
	Gundri	2	8	16
	Chakati	1	2.25	4
	Exhibition space	1	20	20
	Store			20
	Row material Storage			20.8
	Total			100.8
	Circulation (40%)			40.32
	G.Total			141.12
2	Basketry			
	Bamboo store		20	20
	Weaving Area			
	Row separation Material		10	10
	Weaving Area	15	2	30
	Exhibition space	1	20	20
	Store			20
	total			80
	circulation(40%)			32
	total			112
	total			253.12

s.n	Spaces	No. of users	Area per oerson (m2)	Total area (m2)
1	Painting			
	Row Material store		20	20
	Working Area	15	2	30
	Drying Space		10	10
	Store room			20
	Exhibition space	1	20	20
	Restroom	4	2.5	10
	total			110
	circulation(40%)			44
	total			110

Parking Area

s.n	space	number	Mini stander	Area (m2)
1	Bikes	75	2.5m²/Bik	187.5
2	cars	15	12.5 m²/Car	187.5
3	Service vehicle	5	40m²/Bus	200
4	Bicycle	20	1	20
6	Circulation	50%		297.5
		Total		892.5

Total cultural space= 562.62 sq.m
Total Administrative space=231.525 sq.m
Total parking space= 892.5 sq.m
Total 0ther space= 498.8 sq.m
Obtained built-up area= 2185.445 sq.m wall area
Open area= parking space + Children play area
= 892.5 sq.m + 80 sq.m
= 972.5 sq.m
According to Bye-laws, Ground coverage = 60%
60% of site area = Plinth area
Site area = Plinth area/60%
= 2185.445/0.6
= 3642.40 sq.m (Approx. 7 ropani)
Finally, considering bye-laws and setback
i.e. perimeter x setback = approx. 500m x 3m
= 1500 sq.m
Thus, total site area = initial site area + total open space + perimeter space
= 3642.40sq.m + 972.5 sq.m + 1500 sq.m
= 6114.9 sq.m (12 ropani)
Hence. Hence 17 ropani can be taken as site area for the design of the project.

CHAPTER 6 : CONCEPT DEVELOPMENT

6.1. CONCEPT

The primary concept for the design of the Tharu Cultural Center is to evoke the experience of entering an authentic Tharu village. Every element, from the architecture to the open spaces and gardens, will be crafted to reflect the look and feel of a traditional Tharu village.Zoning is done under the basis of the settlement patter or the basic household arrangement of the tharu hub is related or incorporated to the planning of the tharu settlement. such as Bhatninha ghar to bhansa kotha ,Darbaja as parking and so on.

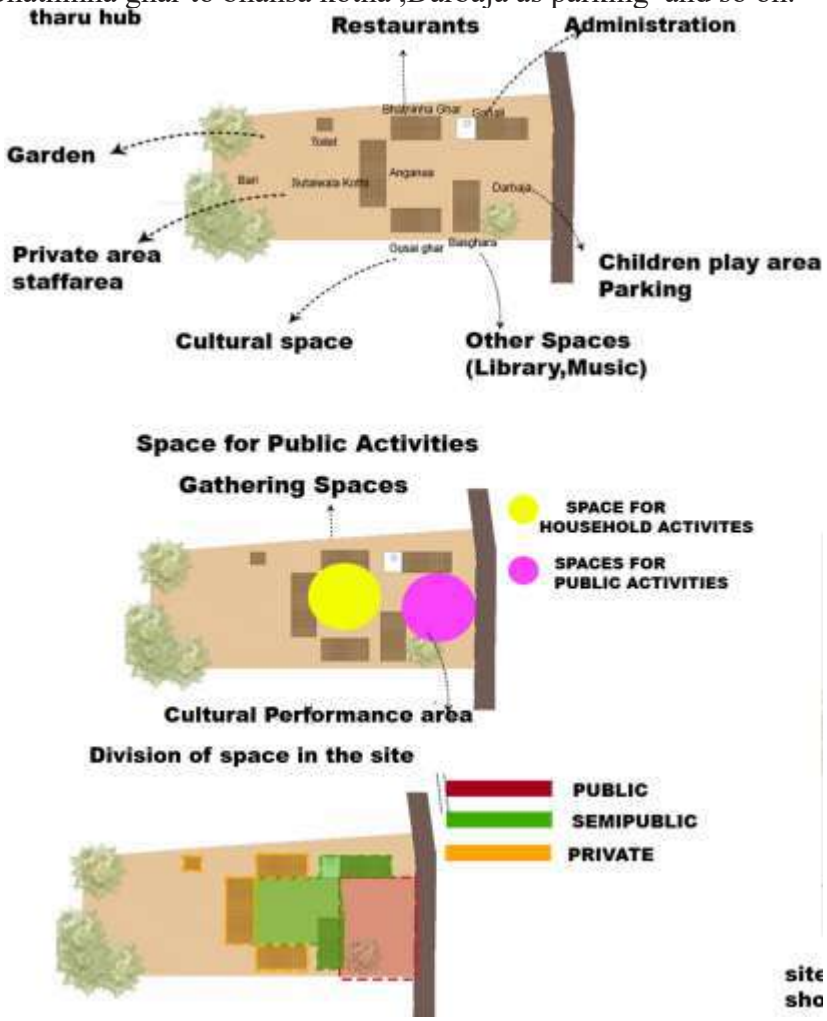

Figure -Zoning of the tharu house

where artists and visitors, both locals and tourists, can actively engage and participate in various events together. Enhancing active participation in water and get to participain local tradition and culture .

6.2. ZONING

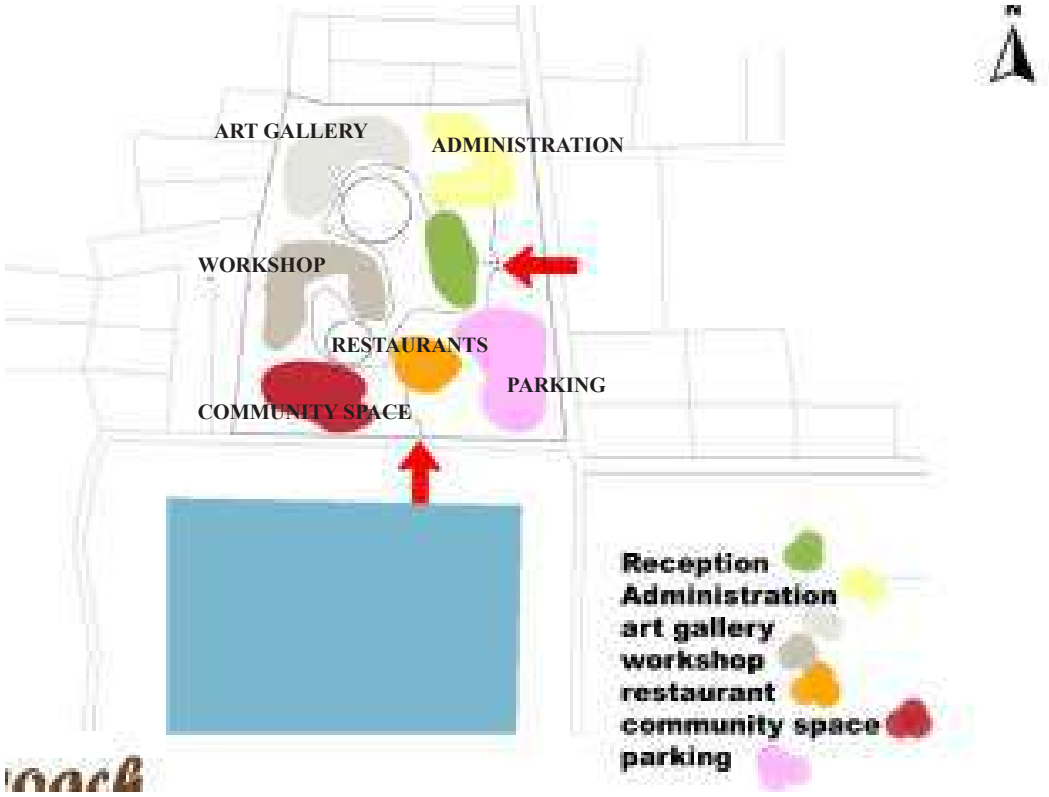

Figure -Zoning in response to site

6.3. DESIGN DEVELOPMENT

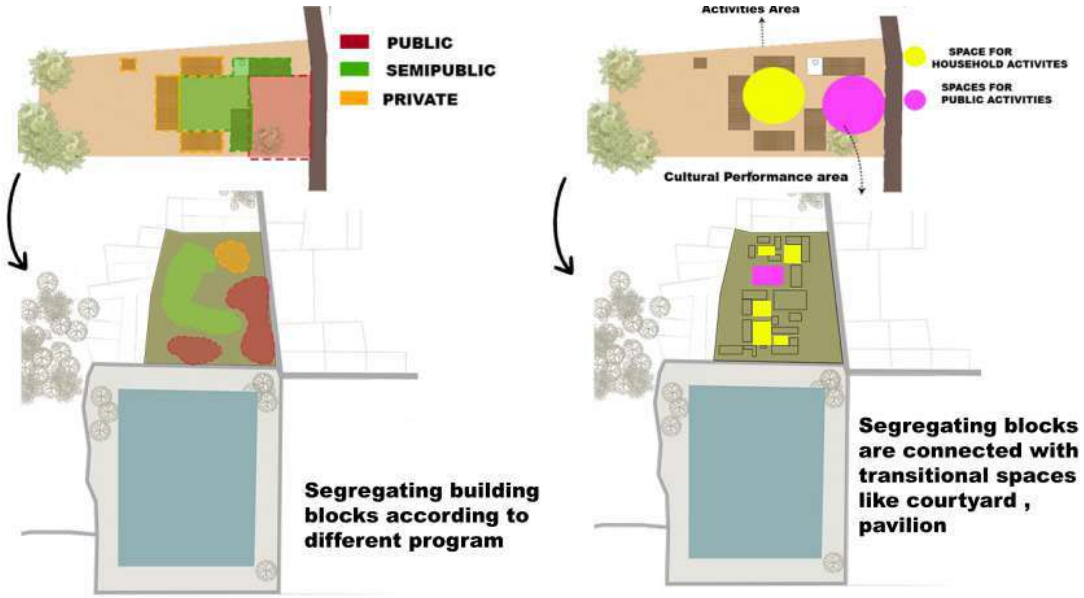

Figure -Design development in the site

The building blocks are carefully segregated based on their various functions, creating distinct areas for each program. These segregated blocks are interconnected through thoughtfully designed transitional spaces, such as courtyards and pavilions. These transitional spaces not only facilitate movement between different areas but also enhance the overall aesthetic and functionality of the site. The courtyards provide open, communal areas that encourage interaction and relaxation, while the pavilions serve as sheltered, multifunctional spaces that can be used for gatherings, activities, or as quiet retreats. This design approach ensures a seamless flow throughout the site, integrating the different functional areas into a cohesive and harmonious environment.

Unit are scooped out to introduce courtyard,where hot air are drought to cool the air.Development of program related to festival celebrated at pond side

Addition of slope roof tonnign with traditionall contex and tropical trees to render the Environment.

CHAPTER 7 : MASTER PLAN

7.1. MASTER PLAN

In my design the building form are designed to response the site character and open space are also responding to the building and site character while playing the tharu distinct character and form.open space are scattered at different places but linked to each building and are designed to response the different activities and at different times .
The buildings are scattered around the entire site but are interlinked with eachother with the help courtyard,The building form are typically up to the second floor, following the architectural principles of Tharu architecture. Which use natural or local materials i.e Bamboo,and mud with brick structures at the base to protect against flooding.

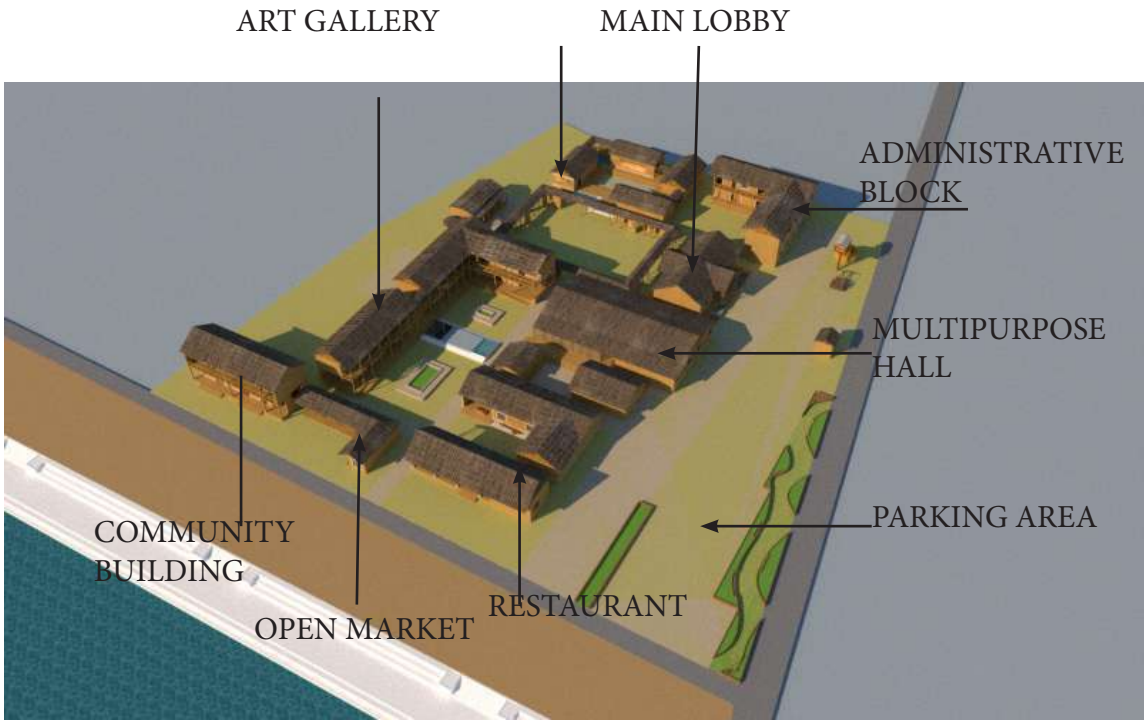

Figure -master plan of the tharu hub

7.1.1. CIRCULATION

The Center is designed as a public space accessible to all, serving as a community hub where people can freely roam, observe, gather, meet others, learn, and recreate. To encourage greater foot traffic, the design is intentionally porous and inclusive. Visitors enter through the main entrance into a central communal space, from which they can access various sections of the Center.
The pedestrian path on the northern side allows locals to walk and enjoy the water bodies and greenery. This design engages people with the landscape, creating a vibrant space.

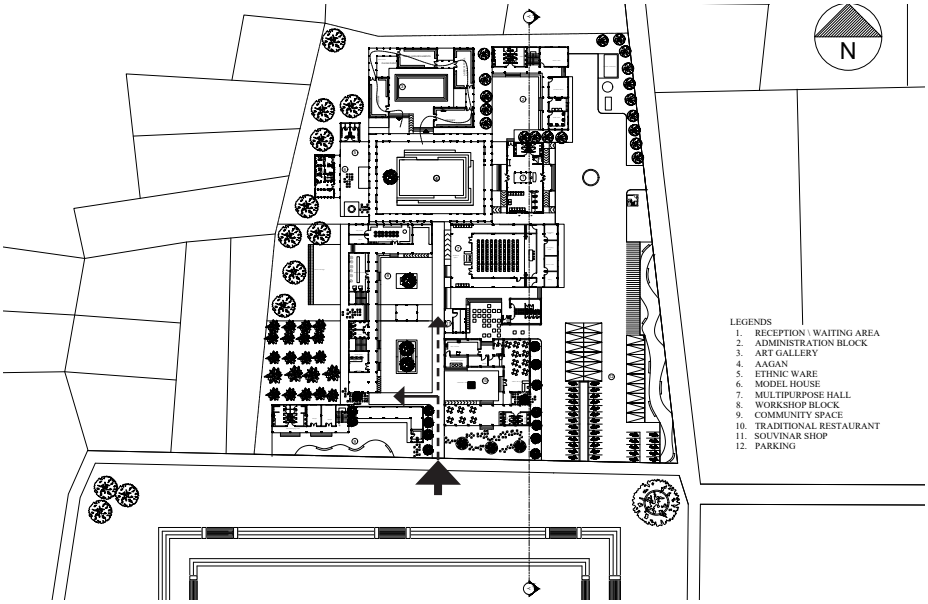

Figure -Pedestrian circulation

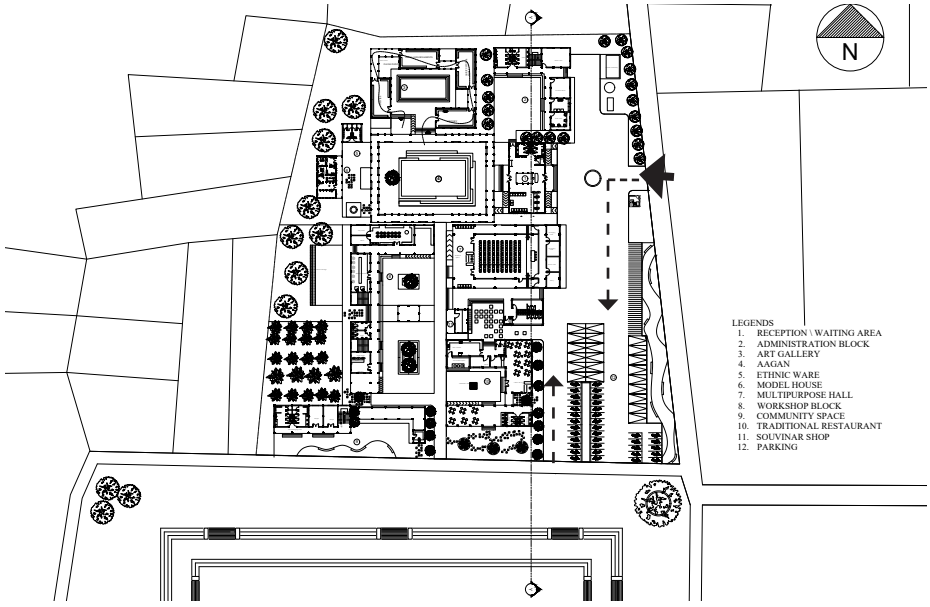

Figure -Vehicular circulation

7.2. INDIVIDUAL BUILDING CHARACTER

Each of the building block has its own character and is designed according to the user group and their requirements.

7.2.1 THE RECEPTION BLOCK

The main entrance is situated on the east side of the site, facing a 5-meter-wide secondary road. This placement was chosen to ensure direct exposure to sunlight and to align with the natural east-to-west wind flow, promoting better ventilation.which includes a reception area, ticket counter, waiting area, and washroom.

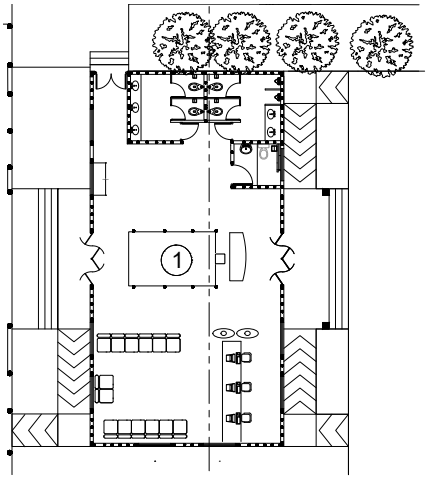

Figure -Plan of reception block

7.2.2 ADMINISTRATION BLOCK

The administrative room is located adjacent to the lobby block, ensuring easy access for unloading goods to the curator's room and other areas of the museum for the inspection. The administration block spans up to the second floor and includes essential areas such as storage, staff rooms, a pantry, the director's office, meeting rooms, the manager's office, an accounts room, and other spaces necessary for the efficient operation of the Tharu Hub. . It is an enclosed building made of wattle and daub.

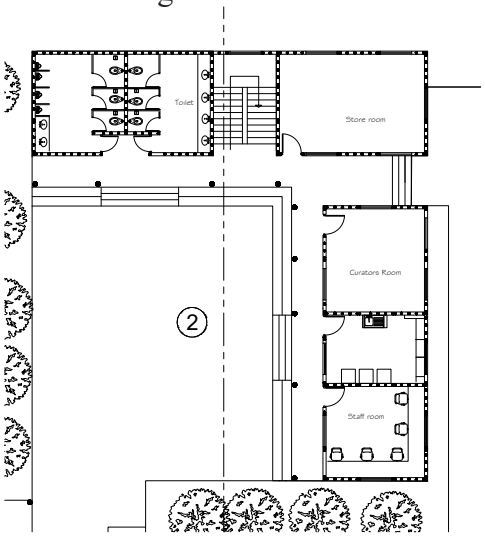

Figure -Plan of Administration block

7.2.3 MULTIPURPOSE HALL

A multipurpose hall with a capacity of 130 people is located adjacent to the main entrance and parking area, providing easy access for visitors. This hall is intended for cultural performances, such as Tharu songs and dances on special occasions. It features three exits that open onto a verandah, leading to an open space in the courtyard. The hall also includes facilities such as a green room and storage, with the washroom conveniently situated just outside the block, in front of the parking area.

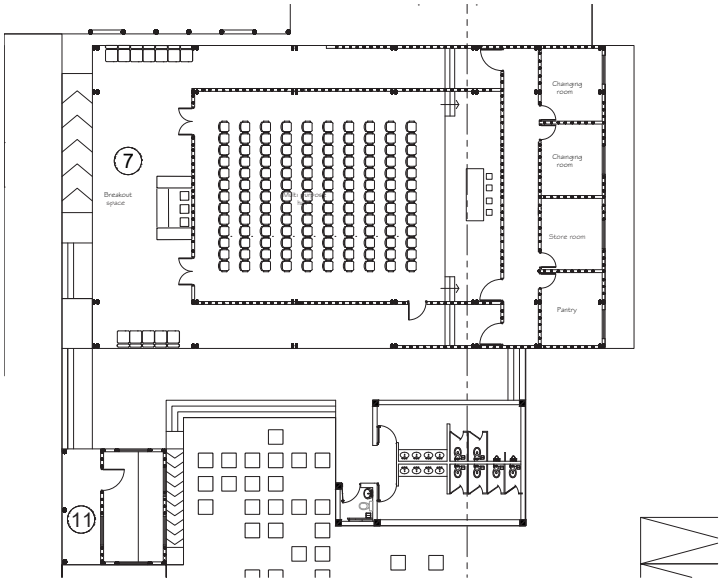

Figure -Plan of Multipurpose hall

7.2.4 COVER PATHWAY

The main lobby leads to the covered pathway which surrounds the central courtyard and connects all the buildings. It also serves as a display area for paintings on the walls, leading to various blocks such as the gallery, multipurpose hall, administrative block, Tharu model house, and more.

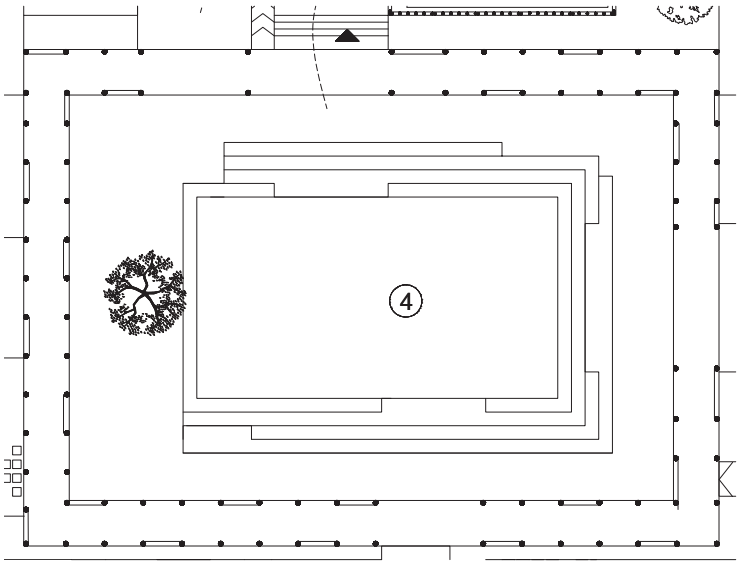

Figure -Plan of Covered hall

7.2.5 ART GALLERY AND THARU MODEL HOUSE

The art gallery is arranged in a circular layout around the courtyard, maintaining the architectural features of Tharu design. The courtyard serves as an exhibition or relaxation space, while the gallery is dedicated to showcasing various elements of Tharu culture that are on the verge of extinction.

After exiting the art gallery, visitors will find the Tharu model house, which features traditional Tharu elements and the essential aspects of a Tharu home. The area also in-

cludes a dress trial room for trying on traditional Tharu attire.

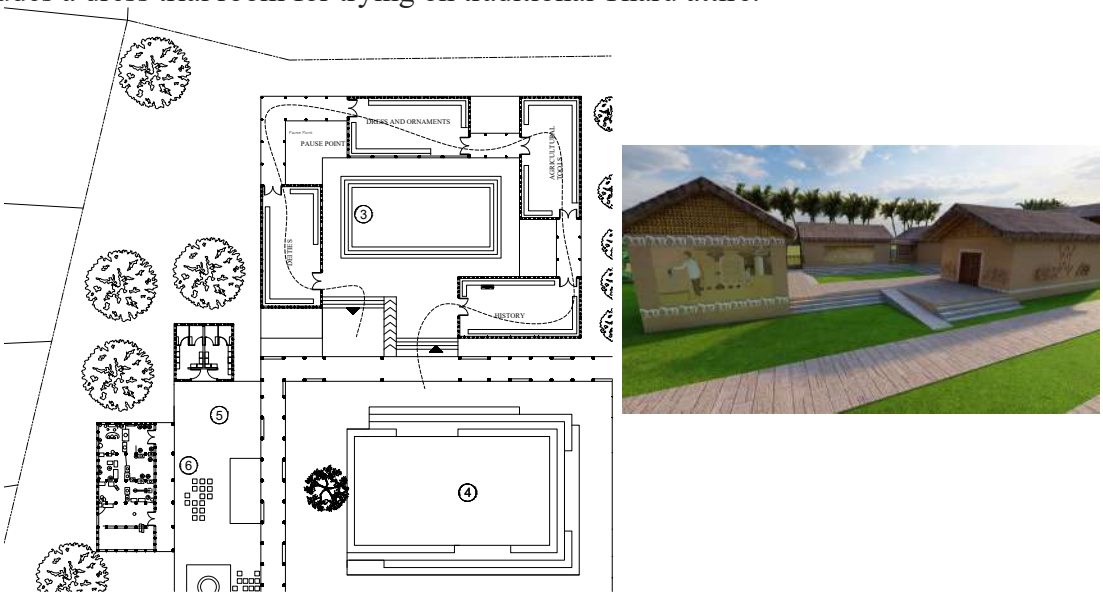

Figure -Plan of Art gallery and tharu model house

7.2.6 PRODUCTION BLOCK

The production block is located in the western part of the site, with a discreet approach from the entrance to avoid disrupting its activities. Positioned facing east, it aligns with Vaastu principles. It includes programs such as pottery, basket weaving, bamboo workshops, a library, painting, and training classes, among others.

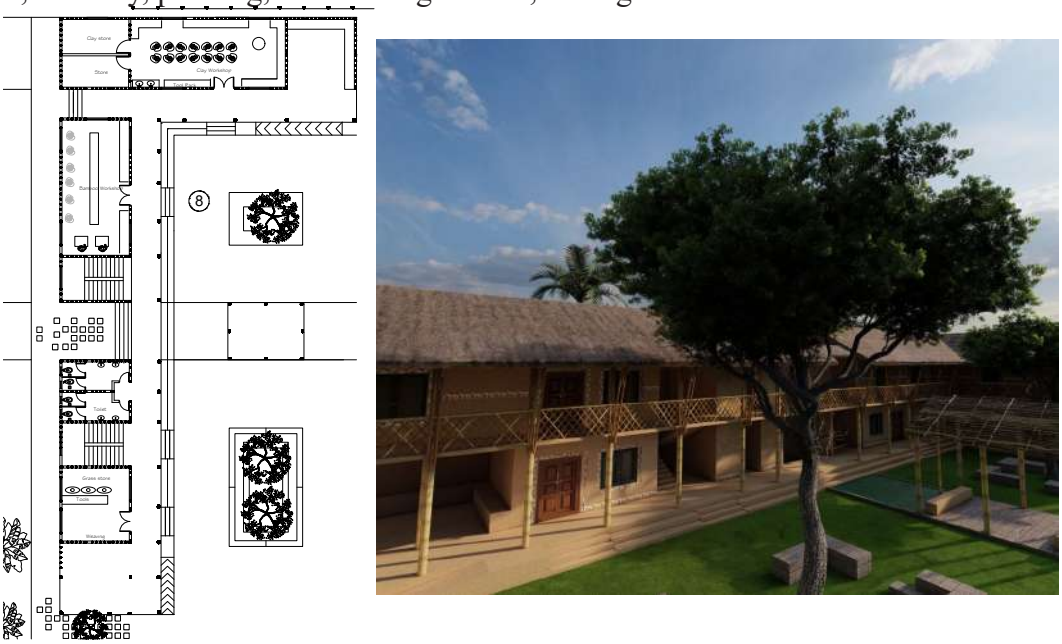

Figure -Plan of Production Block

7.2.7 TRADITIONAL RESTAURANT

The traditional restaurant area is positioned directly opposite the production unit. It is designed so that the live kitchen, which uses traditional cooking methods, is visible to diners inside the restaurant and also visible from the outside. This setup allows people coming from the pond-side area to use the restaurant as a relaxing space.

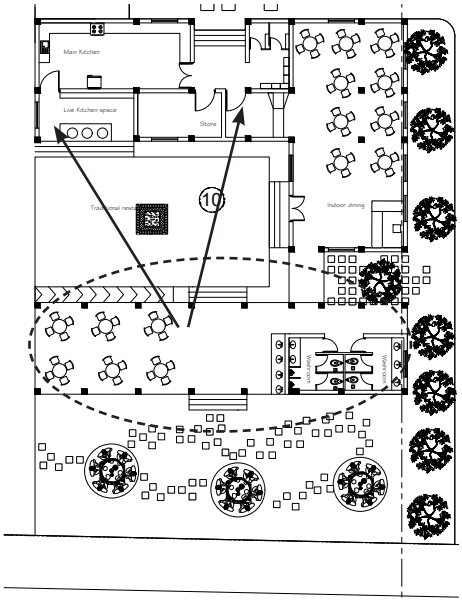

Figure -Plan of Traditional Restaurant

7.2.8 COMMUNITY BLOCK AND MARKET AREA

The community block and market area are located on the north side of the site, with direct access from the pond area. This space features open areas with seating, shops for the local community, and changing rooms for those using the pond for festival celebrations. Designed in response to the pond and its visitors, these blocks include facilities such as a cooperative office, changing rooms, and a ticket counter for fishing and boating.

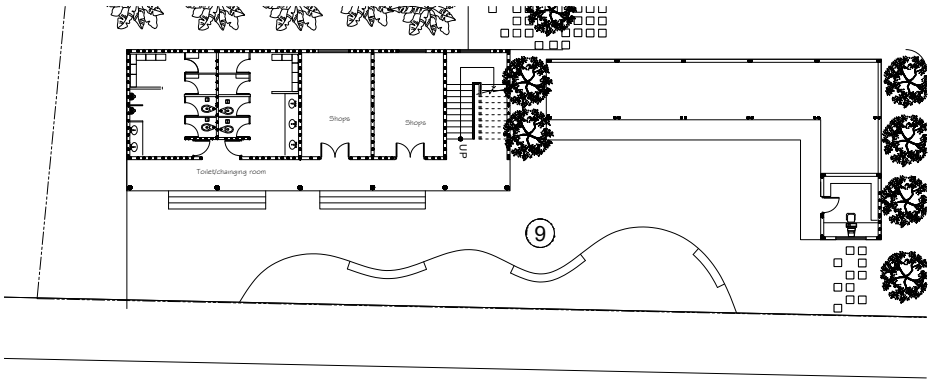

Figure -Plan of Community block and market area

CHAPTER 7 CONCLUSION

The Saptariya tharu hub is a place dedicated to preserving, showcasing, and educating people about Tharu traditions, art, and way of life. It helps preserve Tharu heritage and encourages cultural understanding and appreciation.

The hub can also bring social and economic benefits by boosting cultural tourism and supporting sustainable development in the region.

In summary, establishing a Saptariya tharu hub is essential for the cultural survival and growth of the Tharu community. The findings and recommendations of this thesis offer valuable insights for policymakers, cultural organizations, and architects focused on cultural preservation and community development. Investing in the Tharu Cultural Centre will help ensure that this unique and vibrant culture is preserved for future generations.

This project includes the various spaces required to explore tharu culture such as; tharu gallery to preserve their materials and culture, Workshop and souvenir shops to explore their art, Tharu architectural characteristics in built form, different tharu elements i.e bamboo, slope roof, thatch, wooden baskets, parewa ghar, etc. to give the essence of tharu village Thus, with all this approach this project is good for exploring the tharu culture and art.

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Appendix
(Project Drawing)

THE SAPTARIYAN THARU HUB

SOCIO-CULTURAL SYSTEM OF KOCHILA THARU

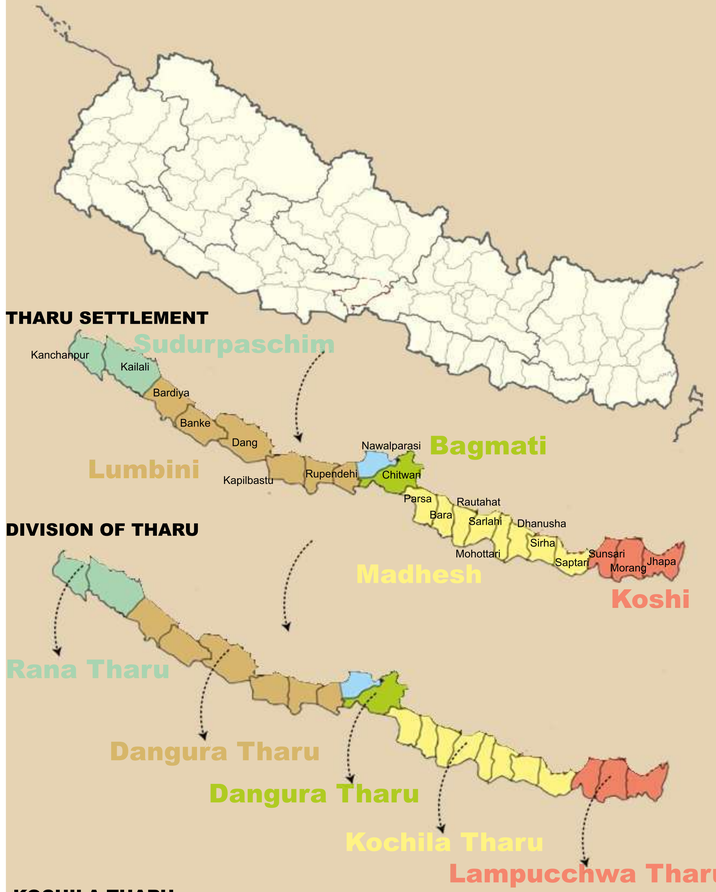
LITERATURE REVIEW

INTRODUCTION

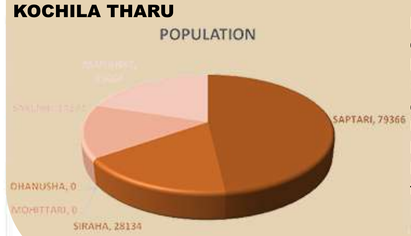
ORIGIN OF THARUS IN NEPAL

Tharu community: Native to Nepal's Terai, exhibiting diverse cultural practices and traditions.

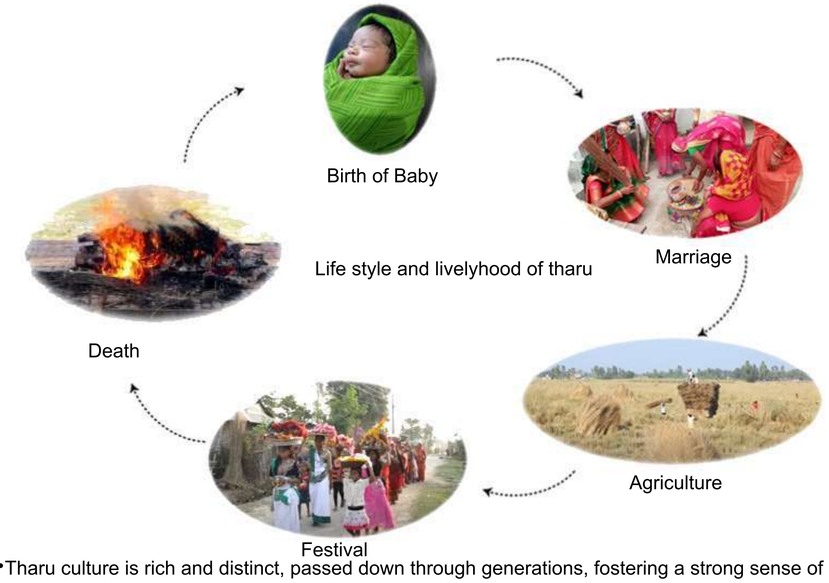
- Spread across the entire Terai region, considered indigenous to the area.
- Ancestry debate: Legend suggests migration from the Thar Desert, tracing back to Rajput women and their lower caste servants.
- At least 26 Tharu groups, with some activists claiming around 60 distinct groups.
- Strong belief in their native identity, supported by the Nepali State.
- Most extensive and ancient ethnic group in the Terai, developing a unique culture over centuries.
- Mulki Ain in 1854 established a caste system, placing Tharus at the lowest social rank.



KOCHILA THARU

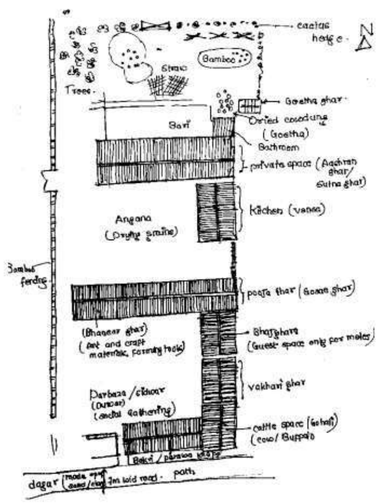


People residing at the boundary of koshi river are called kochila Tharus. Further, they are found migrated from boundary of koshi river to various districts of Nepal like Morang, Sunsari, Siraha, Udayapur, Mahottari, Dhanusha, Sarlahi, Rautahat, Bara,ParsaBut generally, Kochila tharu is also known as Saptariya tharu, since dominant Kochila Tharu live in the saptari. district.



- Tharu culture is rich and distinct, passed down through generations, fostering a strong sense of belonging.
- Family Units: Tharus typically have nuclear and extended (joint) family structures, often living together in large patriarchal joint families.
- Marriage: Traditionally, arranged marriages are common, but love marriages are gradually gaining acceptance.
- Festivals: Tharus celebrate unique festivals such as Shirwa, Chauthi Chan, Jitiya, Holi, Dashain, and Deepawali.
- Kochila Tharus in eastern Nepal place special importance on Jitiya, symbolizing victory, and celebrate festivals like Sukhrat.
- Phaguwa (Holi) marks the end of the calendar year, and Shiruwa signifies the Tharu New Year.
- Maaghi is a significant festival, celebrated as a harvest festival in the east and as a symbol of liberation from bonded labor in the west

BUILD ENVIRONMENT



. (Source: Man and his House in Himalayas: A Tharu Houses in The Dang Valley: Camille Milliet-Mondon ; Edited by Gerard Toffin)

- The dwelling unit includes a cattle shade and habitation area, with separate zones for specific activities.
- The main construction is surrounded by an open space, partially enclosed by a cactus hedge.
- The "Angana and Sidwar" area, spanning 3.20 sqm, connects to the road via a rectangular passage.
- A portion of this space is designated for animals, including a pigsty kept separate from the family dwelling.
- "Angana and Sidwar" is used for storing straws and dung, drying grains and vegetables, and houses an oil crusher.
- Another space at the back forms a small courtyard enclosed by branch partitions for domestic tasks and temporary activities.
- This courtyard is utilized for washing, cleaning, and various tasks like basketwork, weaving, and alcohol preparation.
- Adjacent to the courtyard is a storage area "Chapra" for wood, agricultural tools, fishing implements, and distillation vessels.
- The kitchen garden "Bari" is enclosed by a hedge and

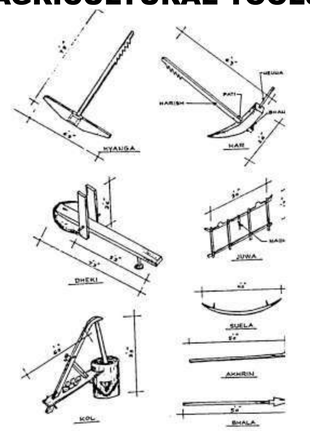
CONSTRUCTION MATERIALS

Tharu houses utilize natural materials—wood, bamboo, soil, and cow dung. The design prioritizes thermal comfort and energy efficiency, with features like a two-way slope, overhangs for weather protection, and careful solar orientation.

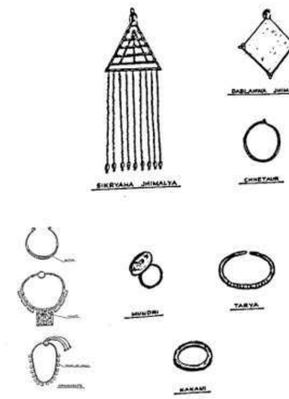
ART AND SYMBOLISM

Mokha art, practiced by Tharu women, adorns homes in the eastern Terai, symbolizing luck and prosperity. Houses without this art, according to Tharu belief, incur a daily loss of half a kilogram of rice.

AGRICULTURAL TOOLS & ORNAMENTATION

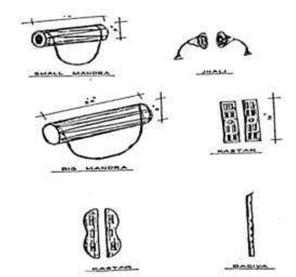


Agricultural tools



ornaments

MUSIC INSTRUMENTS



DANCE

Jhumra Nach(Dhumara),Maghauta nritya, Sakhiya Nach Related to Krishna Lila. performed in Dashain Tihar,Laruhawa ,Kathghori Nach

FOOD AND DRINKS

Tharu traditional cuisine centers on rice, wheat, and fermented grain drinks. They incorporate fish, shells, and distinguish between daily foods and feast dishes. Notable dishes include Ghungi (snail), Til ko Laddu (during Maghi), Bhuja, Laai Dallo, Andik ko Bhat (resembling millet 'kodo'), Kerako Taruwa (made from banana outer layers), and Crab 'Gagato' enjoyed in the rainy season.

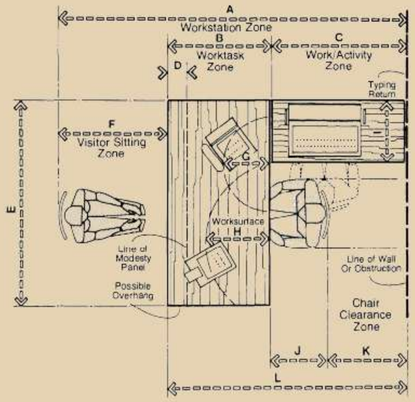
THE SAPTARIYAN THARU HUB

SPACES IN CULTURAL CENTRE

1. ADMINISTRATION / OFFICE

An office is a dedicated space within an organization or business where clerical and administrative tasks are carried out.
Primary Spaces: Workstation, personal office and meeting rooms
Support Spaces: Reception areas, resource centres, reprographic centres

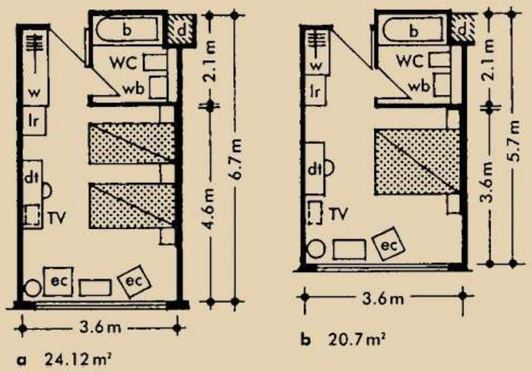
- Space Planning: Meet functional needs.
- Building Fabric: Ensure clear visibility in entry zones.
- Floors: Coordinate with adjacent spaces, considering the environment.
- Ceilings: Special treatment for arrival, with a minimum height of 2400mm.
- Openings: Provide windows for limited privacy, glazed doors for entry.
- Signage: Clearly mark adjoining office entries.
- Ventilation: Prioritize natural with conditioning.
- Illumination: Aim for 300-500 lux



	in	cm
A	90–126	228.6–320.0
B	30–36	76.2–91.4
C	30–48	76.2–121.9
D	6–12	15.2–30.5
E	60–72	152.4–182.9
F	30–42	76.2–106.7
G	14–18	35.6–45.7
H	16–20	40.6–50.8
I	18–22	45.7–55.9
J	18–24	45.7–61.0
K	6–24	15.2–61.0
L	60–84	152.4–213.4
M	24–30	61.0–76.2
N	29–30	73.7–76.2
O	15–18	38.1–45.7

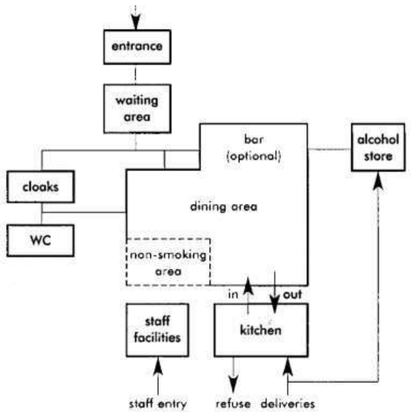
2. ACCOMMODATION -GUEST ROOMS

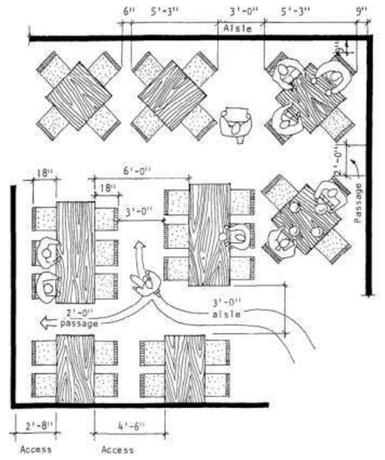
- Internal room dimensions determined by market needs, hotel standards, and furniture requirements.
- Standard floor-to-ceiling height: 2.5m (minimum 2.3m), lowered to 2.0m in the lobby for mechanical services.
- Critical plan dimension is room width: 3.6m is efficient, accommodating furniture and a lobby wardrobe.
- Staggered wardrobes can reduce width to 3.4m.
- Minimum room width for a narrow frontage is 3.0m.
- Increased room width creates a more spacious feel and allows for alternative bed and bathroom layouts.
- Room length is flexible, may extend to a balcony or angled window for directional views.



3. RESTAURANTS

The cultural center's restaurant intends to offer services for visitors and accommodations. It will particularly cater to guests, providing them with local foods and drinks.





Planning Factors in Restaurant

- Good location
- Public access: inviting
- Branding
- Interior: Suitable Atmosphere
- Ambience
- Lighting
- During the day, at a higher level and spread more
- At night, lower background.
- Seating – Flexibility and comfortable
- Waiter Stations
- Bars

typical areas	(m²/cover)
high-class restaurant	2.0–2.4
coffee shop	1.6–1.8
banquet	1.1–1.3
smaller function	1.6–1.8
foyer	0.3–0.5
service areas	**(m²/cover)**
main kitchen	0.9–1.0
banquet kitchen	0.2–0.3
satellite service kitchen	0.3–0.4
furniture stores (ballroom)	0.2

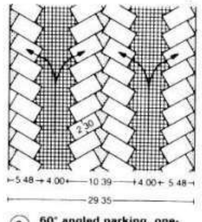
4. PARKING

The type, size and shape of a turning and parking place in a road depend on the road use in that particular area and the size of the vehicles. Separation of moving and stationary traffic is necessary due to the growth of the transportation .

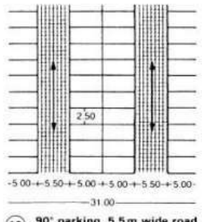
- Use paints and guide rails for parking demarcation.
- Provide signs, barriers, and stop rails.
- Design wider spaces for disabled parking.
- Ensure a 12m turning circle for large vehicles.
- Establish separate entrances and exits for large parking.
- Focus on safety, visibility, and well-marked spaces in multi-story car parks.
- Consider natural lighting, ventilation, and clear views for optimal design.

(5) 90° entry/exit to parking spaces for two-way traffic Parking space 2.50 m wide

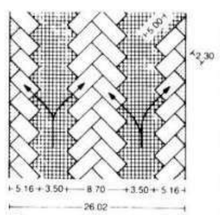
(6) 90° entry/exit to parking spaces, for two-way traffic Parking space 2.30 m wide



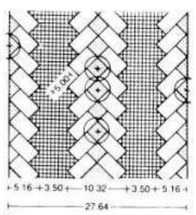
(9) 60° angled parking, one-way traffic



(10) 90° parking, 5.5 m wide road Parking spaces 2.5 m wide



(7) 45°-angled parking, one-way traffic only



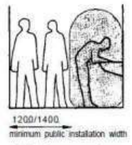
(8) Parking for one-way traffic (with spaces for plants)

LITERATURE REVIEW

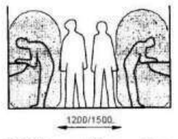
5. TOILET

Toilet, urinal, and wash-basin quantities are determined by the total number of pupils, segregated by gender.
Prefer sanitary installations with direct daylight and ventilation.
Horizontal and vertical circulations serve as emergency escape routes.
Ensure escape routes have a clear width of at least 1m per 150 people.

No. (male)	Water closet	Urinal	Washbasin
1 - 15	1	1	1
16 - 20	1	1	1
21 – 30	2	1	2
31 – 45	2	2	2
46 – 60	3	2	2
61 – 75	3	3	2
76 – 90	4	3	3
91 – 100	4	4	3
Over 100	4	4	3



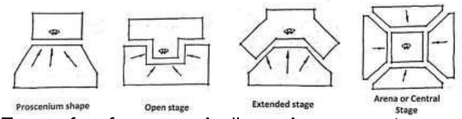
3.49 Minimum width in a public in a public installation with appliances on one side



3.50 Minimum width in a public in a public installation with appliances on both sides

6. PERFORMANCE SPACE

Dabali is an elevated platform, approximately 2 feet above ground level, typically square or rectangular. Found near temples or inside royal areas, these platforms serve as open-air stages and originated as the starting point for the first theatrical traditions.



Types of performance -Audience Arrangements space

7. MUSEUM AND GALLEERY

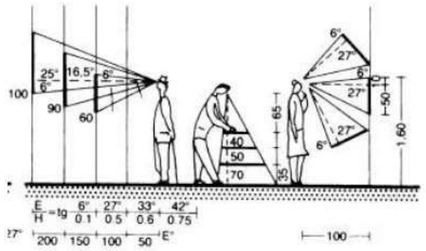
Open air exhibition space

Open spaces

- Allocate 30% of each lot for open areas and greenery.
- The Open-air Exhibition Space, excluding setbacks, constitutes approximately 50% of each lot.

Covered Space

- Covered Exhibition Spaces are enclosed structures with exhibition areas and overhanging floors.

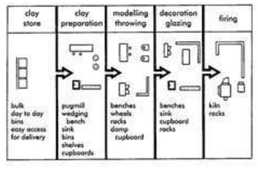


Field of Vision; Height/ Size and Distance

8. WORKSHOP

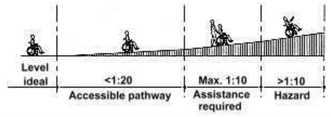
Workshops are small-scale spaces for producing and repairing goods, commonly found in residences for craft hobbies and small businesses.It includes:

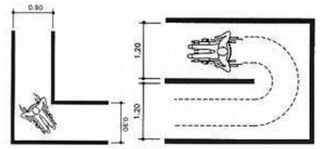
- Workspace area.
- Storage for tools, raw materials, finished products, equipment, workers' belongings, etc.
- Services and amenities: staff room, washroom, utility room, etc



9. Ramps

- Minimum width is 1.7m and flight length should not exceed 6.
- Maximum angle of ramp is 6 degrees





THE SAPTARIYAN THARU HUB

LIVE CASE STUDY

HARIHARPUR GADHI VILLAGE

Typical Tharu village

N

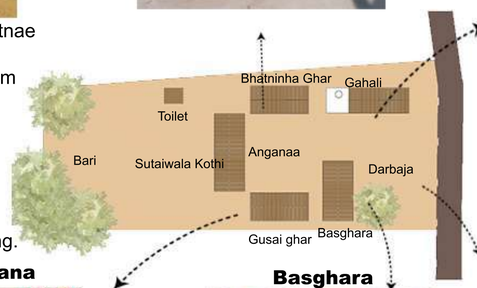
SPACES

Sutai wala Kothi

- Sutai wala kothi>>Sutnae kotha
- Not directly visible from the streets.
- Usually single bay structure
- Located rear,inside most part of the plot.
- Storing onion,potato, garlicand also sleeping.

Bhat Ninha ghar(Kitchen)

- locally called Bhat Ninha Ghar (kitchen).
- Seperate unit usually partationed with sleeping.



Gahali

- Important space>>Serves the space for public activity
- Main focal point of the plot In usual days the space is
- Used for catle hearing and cattle eatery area

Aagan or Aagana

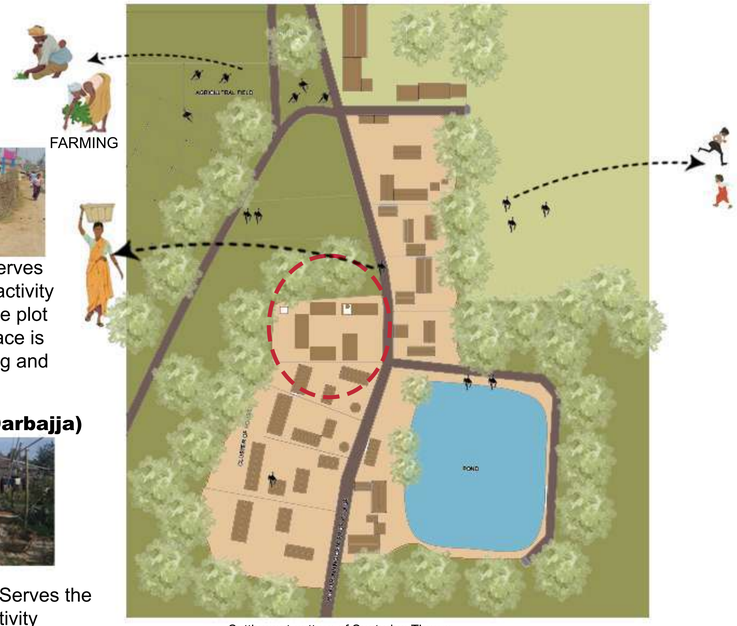
- Important space>>Serves the space for public activity
- Space for Household purpose.
- Best Design for hot climate.
- Gathering space,Social space,Celebration space,Drying area for grains.

Basghara

- Usually Detachec or semi detached of single row house structure
- Located in th efront face oof the site ,visible from the street.
- Socal gathering, welcoming space of guest and other family gathering.

Outer Courtyard (Darbajja)

- Important space>>Serves the space for public activity
- Main focal point of the plot In usual days the space is
- Used for catle hearing and cattle eatery area



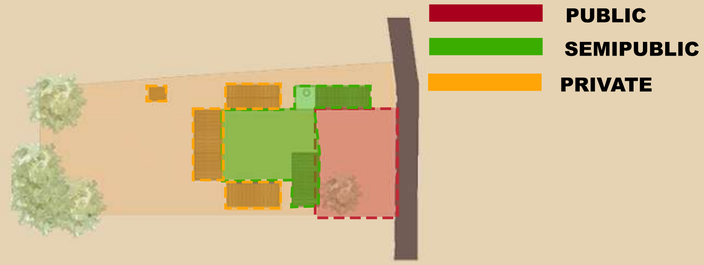
Settlement pattern of Saptarian Tharus

- Compact settlement with clearly defined borders.
- Linear street pattern in North-South Axis
- Groupings of residences belonging to distinct clans within a community.
- “chautari” and open ground collectively serve as communal spaces within the community.
- A connected mud road that leads to the adjacent village.

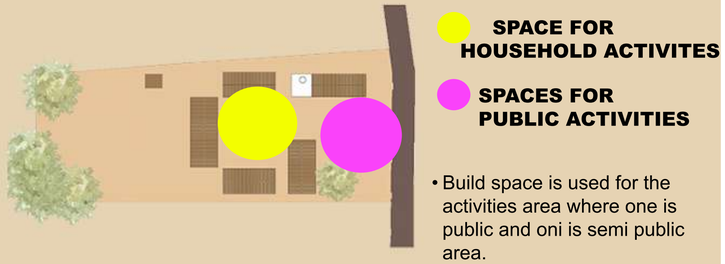
LANDSCAPE ELEMENTS

INFERENCES

1. ACCESS

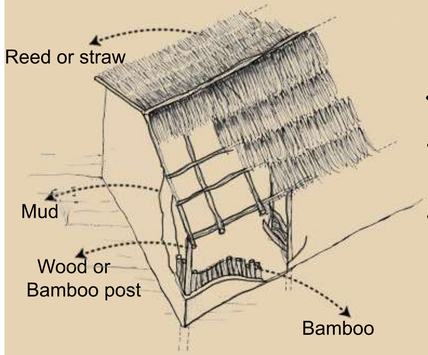


2. ACTIVITY NODES



- Build space is used for the activities area where one is public and oni is semi public area.

3. BUILDING MAETERIALS



- Wood-used as structural member,post and beam.
- Bamboo-Bamboo lath are used to sandwich reeds,straw and to tie together.
- Mud-Mud are used Plastering materialsas well as binding.

4. CONCLUSION

Parameters	Traditional kochila tharu house
Planning	Courtyard planning with single row detached dwelling unit
Building form	Elongated
Building materials	Mud, Bamboo, Timber, Thatch, Tiles-low embodied energy
Building height	Single storey, sometime with mezzanine space
Ventilation	Courtyard design to break the house into smaller with more walls opening onto the outdoors, much easier to encourage a gentle breeze into the home
Roof type	A sloped roof extending generously over the verandah, preventing excessive heat from entering the inner rooms
Roofing material	Thatch or tiles
Foundation	Earth/stone/brick plinth
Floor	Compacted mud flooring
Natural lights	Equal dispersion of natural light in all room in courtyard house

THE SAPTARIYAN THARU HUB

LIVE CASE STUDY

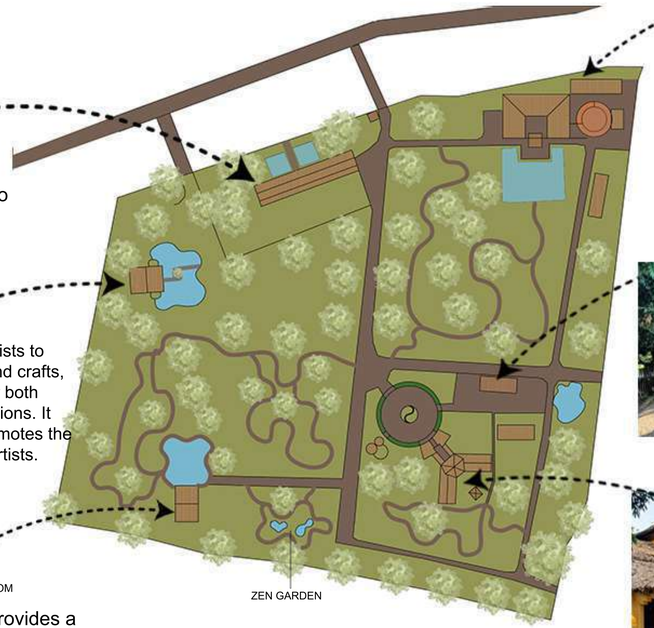
UNNATI CULTURAL VILLAGE

Location: Harkapur, Nawalpur
Land Area: 54,180sq m

SPACES

Atithya Multipurpose Block

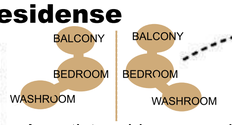
Aditya in UCV is a versatile block with ethnic decor and great hospitality, perfect for various events, hosting up to 200 standing guests.



Art Gallery (Kala DIRGHA)

This space is open for artists to showcase high-end art and crafts, fostering opportunities for both on-site and external creations. It Usually supports and promotes the display of work by local artists.

Bodhi Van-Artist Residense



An artist residence provides a space for artists to live and work, fostering a creative environment for their artistic endeavors.

Tharu Gaam

"Tharu Gaam" in UCV offers an immersive experience in Tharu community life through cuisine, art, and artifacts. It includes Dehari guest rooms, Bahari traditional live kitchen, Bada Ghar dining area, Gadala Mod bar, and Dabali cultural performance area.

Open Air Workshop

Local people can actively participate in the open-air workshop in Unnati Cultural Village, and visitors have the opportunity to purchase the products created during these sessions.

Kala - An Art Hotel

The Art Hotel offers a unique stay with upscale interiors, cozy accommodations, and hands-on art experiences for a memorable visit.

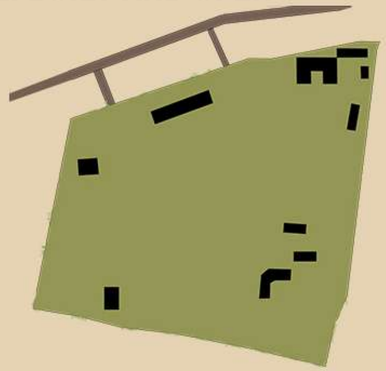
LANDSCAPE ELEMENTS

INFERENCES

1. ACCESS

PUBLIC
STAFF
BUFFER ZONE

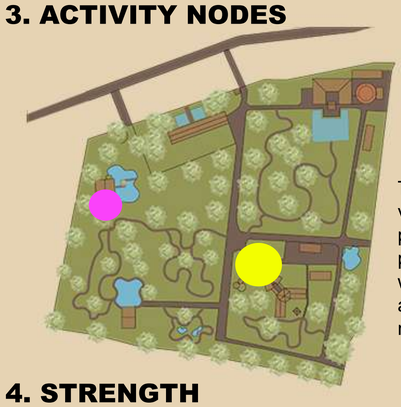
2. BUILT AND OPEN



BUILD SPACES
OPEN SPACES

- Build is spread across the area with adequate open space.
- open space used for organic farming and greenary spacee

3. ACTIVITY NODES



LEELA RANGAMANCHA
KALA GHAR RANGAMANCHA

The Rangamanch is an open-air venue that is used for various programmes, cultural performances, and events. The walkways to both Rangamanch areas take visitors to an open-air museum .

4. STRENGTH

- Reinterpretation of traditional elements to suit the modern context,
- Sustainable development of traditional livelihood programs and employment for locals.
- It provides a variety of immersive cultural experiences.
- Commitment to organic farming reflects a dedication to eco-friendly and sustainable practices.

5. WEAKNESS

- Expensive for domestic tourists.
- No links and easy access for the public

AFFILIATED TO PURBANCHAL UNIVERSITY
KHWOPA ENGINEERING COLLEGE
DEPARTMENT OF ARCHITECTURE

SUBJECT : THE SAPTARIYAN THARU HUB
TITLE : CASE STUDY

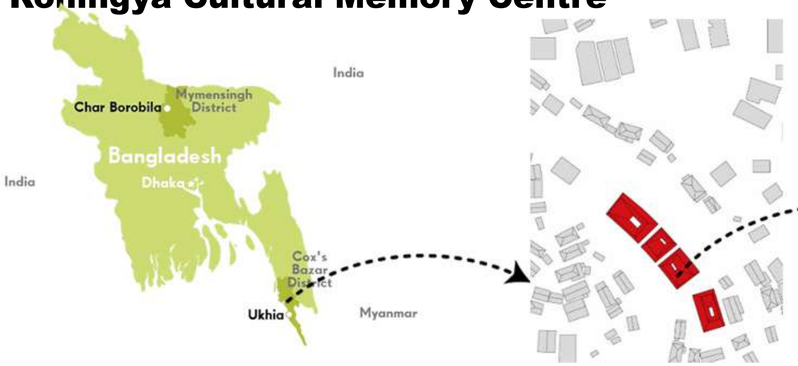
NAME :SWASTIKA CHAUDNARY
ROLL NO. :750147

DATE:2080/10/24

THE SAPTARIYAN THARU HUB

INTERNATIONAL CASE STUDY

Rohingya Cultural Memory Centre



Location: Gundum,Bangladesh
Date of Establishment: 2022
Land Area: 501m2
Target Population: Rohingya Community
Architect: Rizvi Hassan

Purpose of study

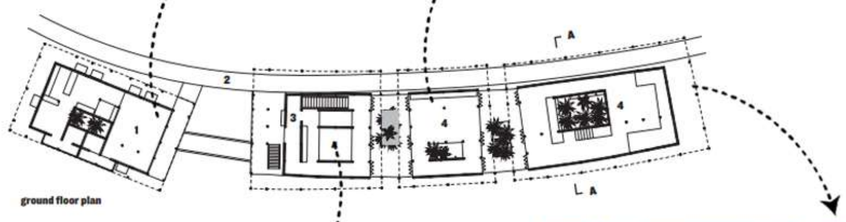
- To understang the buildinguse in the community.
- To understand the need of the given space.

Workshop area

Exhibition hall

1 workshop
2 community walkway
3 information point
4 exhibition hall

0 2m



Introduction

- Rohingya Cultural Memory Centre addresses uncertainties in the largest refugee camps.
- Goal: Restore lost identity and mental well-being through creative means.
- Objective: Promote inclusiveness and joy through knowledge and story preservation.
- Approach: Collection, preservation, and dissemination of cultural knowledge.
- Impact: Fostering goodwill among displaced communities in challenging situations.
- Process: Space design evolved from collaborative design sessions and hands-on workshops

Planning And Design

- Purpose: Building complex for community halls and handicraft workshops (ceramic and weaving).
- Sustainability: Four roofs designed for rainwater catchment and utilization.
- Functionality: Roofs create four internal courts, serving as both light sources and display areas.
- Atmosphere: Internal courts provide a serene ambiance, creating a contrast with the camp life outside.
- Design Feature: Strong bamboo screen forms the hall, perforated for breathability.
- Functionality: Ensures security while allowing visible connection from outside.
- Planning Consideration: Adequate perforations for rainwater absorption by the hill soil.
- Sustainability: Facilitates continuous groundwater recharge through effective permeability.

Internal Courts: Created by the roofs, serve as both light sources and display areas.
Ambiance: Courts provide a serene atmosphere, keeping the camp life outside.

The extended shades allow free movement and spaces around the main hall for the community and users, offering more engaging spaces.

LEARNING

2. PURPOSE

- Construction Flexibility: Easily removable pre-cast columns, flooring blocks, nut bolt joints, etc.
- Purpose: Enables the creation of a temporary scheme in the camp.
- Rain Protection: Extended shades provide protection from heavy vertical and horizontal rain.
- Functional Benefit: Allows free movement and spaces around the main hall.
- Community Engagement: Enhances user experience with more engaging spaces.

3. BUILDING MAETERIALS

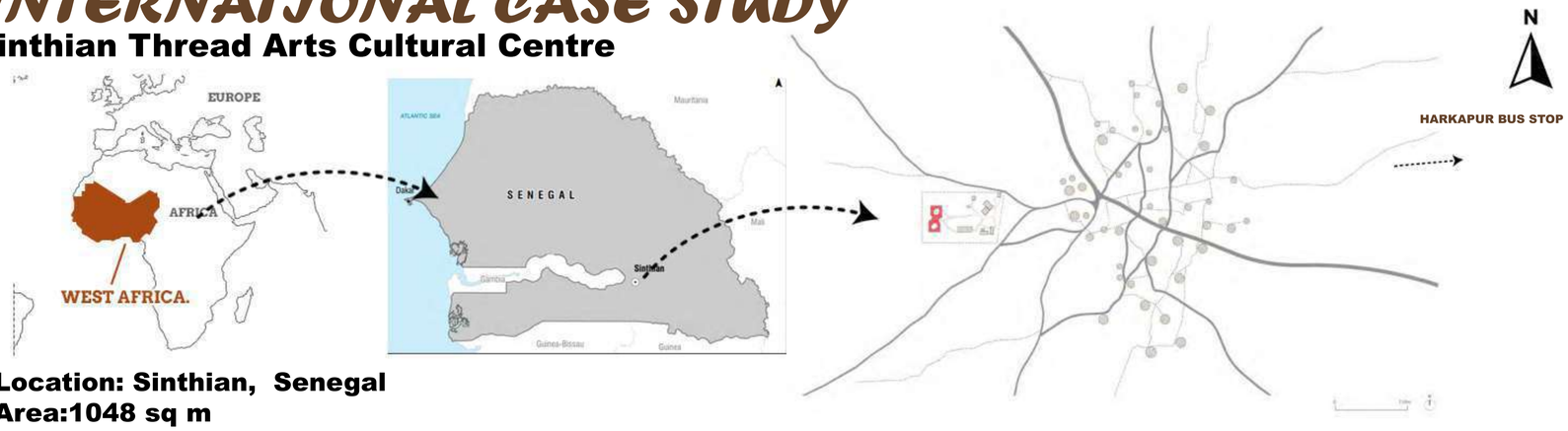
The roofing material, Nipa palm pallets are one of the most common materials used to make Rohingya houses. The leaves were collected from nearby (Ramu) and used to create the roof that keeps the temperature down inside. Nipa leaf pallets for roofing, clay tiles & cement tiles for floor, bamboo modular partition etc.

4. CRAFTS

THE SAPTARIYAN THARU HUB

INTERNATIONAL CASE STUDY

Sinthian Thread Arts Cultural Centre



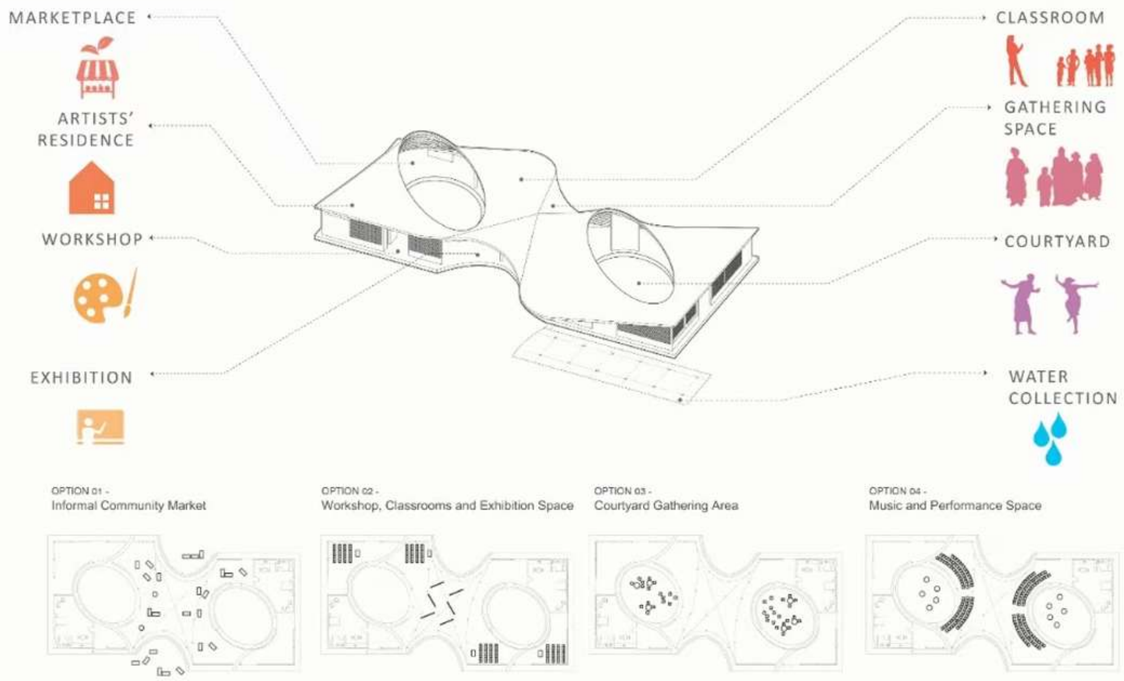
Location: Sinthian, Senegal
Area:1048 sq m
Architects: Tashiko Mori
Target Population: Locals and artists

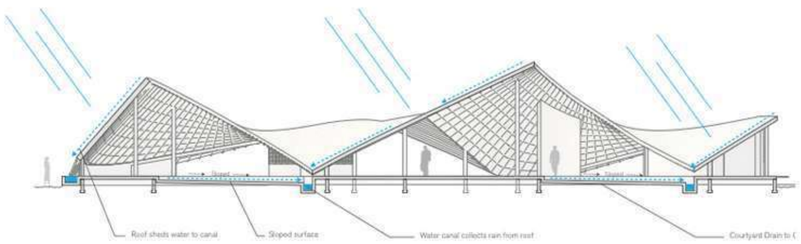
Purpose of study

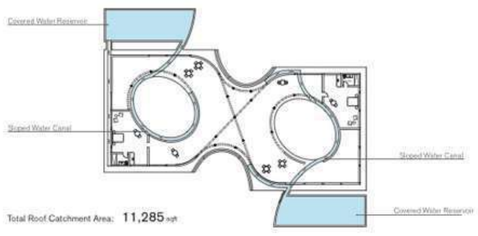
- provides insights into community engagement, preservation of traditional arts, architectural design, sustainable practices, cultural exchange, educational programs.
- To understand the passive design method applied.

Introduction

- Name: Thread
- Architect: Toshiko Mori Architects (TMA)
- Year: Designed in 2012, completed in 2015
- Purpose: Cultural center and artists' residency
- Location: Sinthian village, Tambacounda region, Senegal
- Adjacency: Next to the only health center with a doctor within a 60-kilometer range
- Integration: Holistic approach to health, education, nutrition, and entrepreneurship
- Construction: Local materials, limited resources
- Design: Flexible space under a large rainwater-catchment thatched roof
- Layout: Two open courtyards
- Activities: Hosts local and international artists, supports education and agriculture





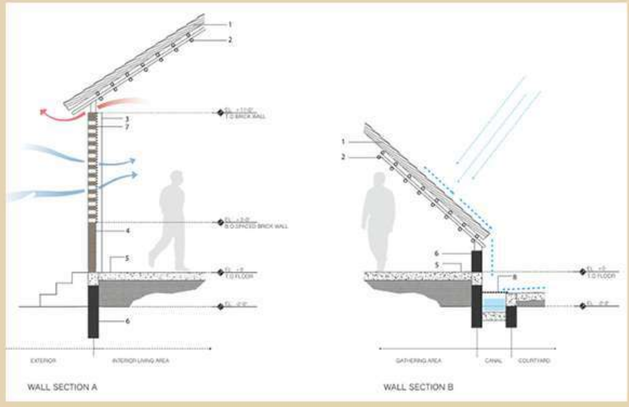


LEARNING

2. PURPOSE

Artist Residencies: Offers diverse programs for artists to discover new forms of creativity and cultivate skills.
Community Hub: Serves as a venue for markets, education, performances, and meetings, acting as the central hub for the local community.
Meaningful Interaction: Provides resident artists with a meaningful experience of Sinthian society by offering them a space to practice their craft.
Educational Space: A place for schoolchildren to learn and villagers to gather, fostering a sense of community.
Priority on Water Safety: As part of the program priorities, addresses the need for a safer drinking water source for the local population.

3. PASSIVE DESIGN METHOD



3. BUILDING MAETERIALS

Thatch and Bamboo roof

Clay brick made in site by local

THE SAPTARIYAN THARU HUB

COMPARATIVE ANALYSIS SHEET

PARAMETERS OF ANALYSIS	HARIHAARPUR VILLAGE	UNNATI CULTURAL VILLAGE	ROHINGYA CULTURAL MEMORY CENTRE	SINTHIAN THREAD ARTS CULTURAL CENTRE
Site context	With in tharu community of saptari	With in rice field ,highway in entrance side of Harkapur	Within Refugee camp of Rohinga Community	With in a small village of sinthian
Project concept Project concept	Settlement of Tharu the people.	Focal Hub for Economic Growth and Upscaling National, Natural, Artistic, and Traditional Industries in Nepal	aims to keep Rohingya culture alive, boost mental well-being through creative activities, and bring different communities together, even in difficult situations.	Design that includes everyone and creates a space for community interaction
Programs	Sociocultural and economic aspect of tharu people	Art Gallery,Ceramic workshop,Amphitheater, Restaurants,Accomodation	Community hall,Weaving pottery,Carpentry,embroidery,	Flexible workshop Exhibition Space Breakout space Courtyard Artists' residency
Target group	Tharu Community	Local,Tourist	Rohinga Community	Sinthian, Local Artist
Spatial Character	Courtyard planning with single row Detached Dwelling unit.	Well lit spaces, efforts to connect with landscapes (sketch of Bodhiban)	Spaces arranged in one axis by extended shades and spaces lit by courtyard,	Spaces under same roof, proper lighting and air circulation with two courtyards
Landscapes	Agricultural land in north direction and river in rest of the direction	Buildings spread over mango and lichi trees, water bodies, organic farm, graveled pathways, mud utensil used in lighting street	One gathering space linear to building blocks, plantation in courtyards, ramps	Agricultural and sports space outside the building area
Climate consideration	Vernacular material suitable for hot climate,	Natural Ventilation,Sustainable Materials used in the building construction.	perforations help ground water recharge.	Rain water collection, thermal comfort through courtvards. openwork
Pedestrian Movement	Entry from All sides	Separate blocks, linked by graveled pathways	Movement through linear corridor axis and open access within halls	Entry from all 4 sides, with open connectivity
Build Structure	Bamboo,Mud as structural Element and in walls and support for thatch roof	Traditional roof above CGI used, mostly RCC columns, timber and bamboo used as structural element.	Bamboo as structural Element and in walls and support for thatch roof	Parametric roof of thatch+bamboo, rammed earth blocks, concrete beams and columns

PROGRAM FORMULATION

Administration BlocK

1.Entry Plaza
2.Reception
3.Director’s Room
4.Staff Room

Market And Restaurant

1. Market Stall
2. Restaurant
   Cash Counter
   Dinning
   Kitchen
   Store
9.Restroom
   Male
   Female

WORKSHOP

1. Pottery
   Mud Storage
   Mixing Area
   Molding Area
   Drying Area
   Kiln
2. Weaving/Basket
   Weaving
   Straw/Korai(river grass)
   Weaving Area
   Exhibition Space
   Raw material Storage

ACCOMODATION

1. BEDROOM
   WASHROOM

THE SAPTARIYAN THARU HUB

Program Formulation

Some Major different spaces
1.Administrative space
2.Cultural space
3.common space
4.parking space
5.Service area

Types of spaces

s.n	space	number	Mini.stander	Area (m2)
1	Guard House	2	3	6
2	Transformer	1		15
3	CCTV Control Room	1	1	1
4	ATM	1	5	5
6	Circulation	40%		10.8
		TOTAL		37.8

Administrative space

s.n	Spaces	No. of users	Area per oerson (m2)	Total area (m2)
1	Reception	2	3.5	7
2	Waiting room	10	0.75	7.5
3	Director room	1	16	16
4	Accountant room	1	20	20
5	Meeting room	15	2	50
6	Pantry space	2	2	4
7	Staff Room	3	5	15
8	Restroom			
	Male	2	2.5	5
	Female	2	2.5	5
	Total			129.5
	Circulation			51.8(40%)
	G.Total			161.875

s.n	Spaces	No. of users	Area per oerson (m2)	Total area (m2)
1	Wating Area	5	0.75	3.75
2	Information Counter	2	3	6
3	Ticket Counter	1	3	3
4	Rest Room			
	Male	2	2.5	5
	Female	2	2.5	5
	total			22.75
	Circulation			9.1(40%)
	G.Total			31.85

Cultural Space

s.n	Spaces	No. of users	Area per oerson (m2)	Total area (m2)
1	Pottery Section			
	Raw Material Storage			10
	Moulding Space			10
	Drying Space			30
	Working Area	15	2	30
	Colouring Space			15
	Store room			20
	Exhibition space	1		20
	Rest room	3	2.5	7.5
	Total	12		142.5
	Circulation			57(40%)
	G.Total			199.5

s.n	Spaces	No. of users	Area per oerson (m2)	Total area (m2)
1	Weaving			
	Straw/Korai(River grass)	2	10	20
	Weaving Area			
	Gundri	2	8	16
	Chakati	1	2.25	4
	Exhibition space	1	20	20
	Store			20
	Row material Storage			20.8
	Total			100.8
	Circulation (40%)			40.32
	G.Total			141.12
2	Basketry			
	Bamboo store		20	20
	Weaving Area			
	Row separation Material		10	10
	Weaving Area	15	2	30
	Exhibition space	1	20	20
	Store			20
	total			80
	circulation(40%)			32
	total			112
	total			253.12

s.n	Spaces	No. of users	Area per oerson (m2)	Total area (m2)
1	Painting			
	Row Material store		20	20
	Working Area	15	2	30
	Drying Space		10	10
	Store room			20
	Exhibition space	1	20	20
	Restroom	4	2.5	10
	total			110
	circulation(40%)			44
	total			110

Other Spaces

s.n	Spaces	No. of users	Area per oerson (m2)	Total area (m2)
1	Traditional dress trying section			
	Ladies			15
	Gents			15
2	Flexiable hall	150	1.5	225
	Stage			43.8
	Music instrument			15
	Chainging room	10	1.5	30
	toilet		2.25	9
	Storage			20
3	Library			
	Main stock area			30
	Reading area (outdoor+Indoor)	30	1.5-2.15	45
	Issue Counter		10	10
	Rest room	2	2.5	5
	Total			90
	circulation(40%)			36
	G.total			498.8

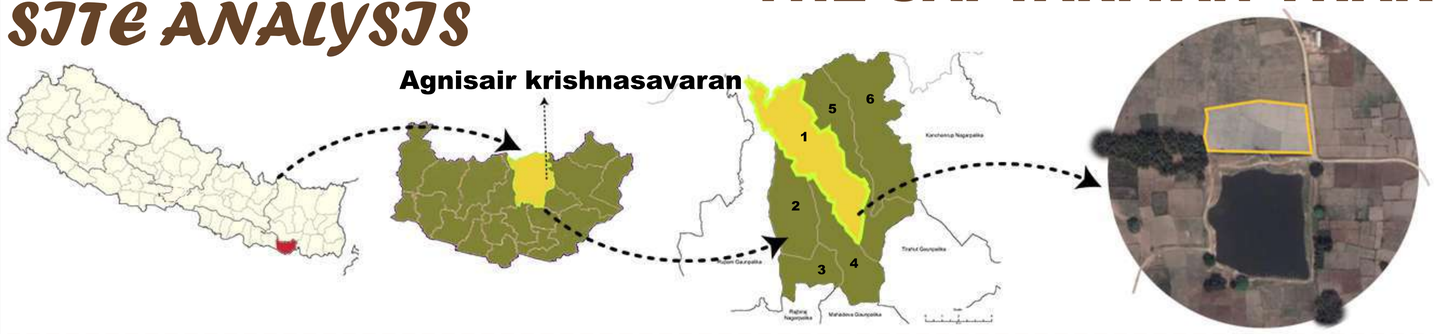
Parking Area

s.n	space	number	Mini.stander	Area (m2)
1	Bikes	75	2.5m²/Bik	187.5
2	cars	15	12.5 m²/Car	187.5
3	Service vehicle	5	40m²/Bus	200
4	Bicycle	20	1	20
6	Circulation	50%		297.5
		Total		892.5

Total cultural space= 562.62 sq.m
Total Administrative space=231.525 sq.m
Total parking space= 892.5 sq.m
Total 0ther space= 498.8 sq.m
Obtained built-up area= 2185.445 sq.m wall area
Open area= parking space + Children play area
= 892.5 sq.m + 80 sq.m
= 972.5 sq.m
According to Bye-laws, Ground coverage = 60%
60% of site area = Plinth area
Site area = Plinth area/60%
= 2185.445/0.6
= 3642.40 sq.m (Approx. 7 ropani)
Finally, considering bye-laws and setback
i.e. perimeter x setback = approx. 500m x 3m
= 1500 sq.m
Thus, total site area = initial site area + total open space + perimeter space
= 3642.40sq.m + 972.5 sq.m + 1500 sq.m
= 6114.9 sq.m (12 ropani)
Hence. Hence 17 ropani can be taken as site area for the design of project.

THE SAPTARIYAN THARU HUB

SITE ANALYSIS



General Information

- **Location:** Sitapur-04, Saptari
- **Latitude (deg/ min):** 26°34'23" N
- **Longitude (deg/ min):** 86°15'47"E
- **Site area:** 17296.32 Sq.m (approx.)
- **Orientation:** Along North - South
- **Access:** 2 Km from Mahendra Highway
- **Current Use**: Agriculture
- **Proposed Area Usage:** Agriculture ,Residential, educational and industrial space

Site Selection Criteria

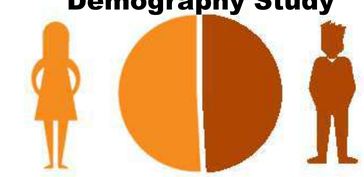
Suburban area | Near Tharu Settlements | Near Tourism sector | Near Waterbody

- Pond in the bank of site holds historical importance.
- The site is in an area with 33% Saptarian Tharu settlement, a significant proportion compared to other areas in the municipality.
- The site is close to popular destinations such as Homestays ,Koshitappu Wildlife Reserve, attracting both national and international tourists.

Target Group

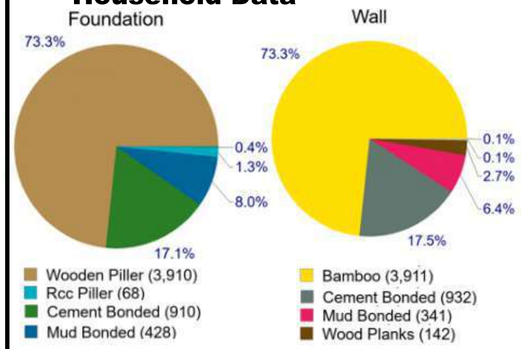
Tharu people | National and International Tourist

Demography Study

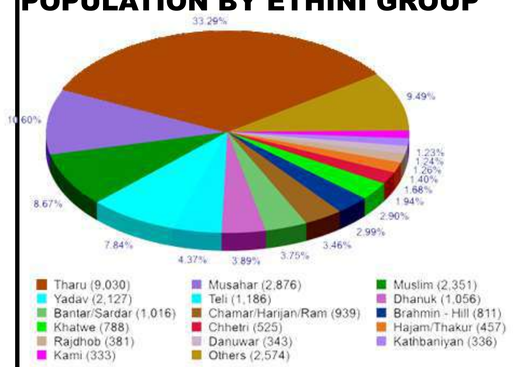


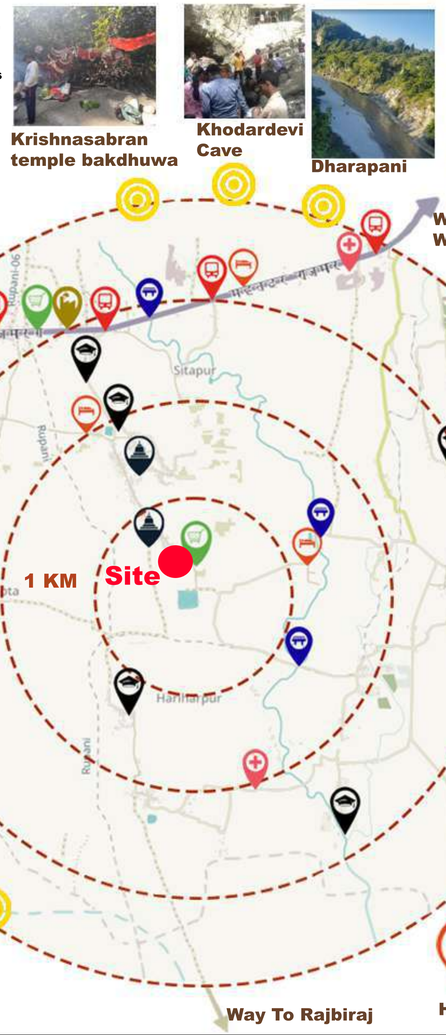
14,283 Female | 12,846 Male

Household Data

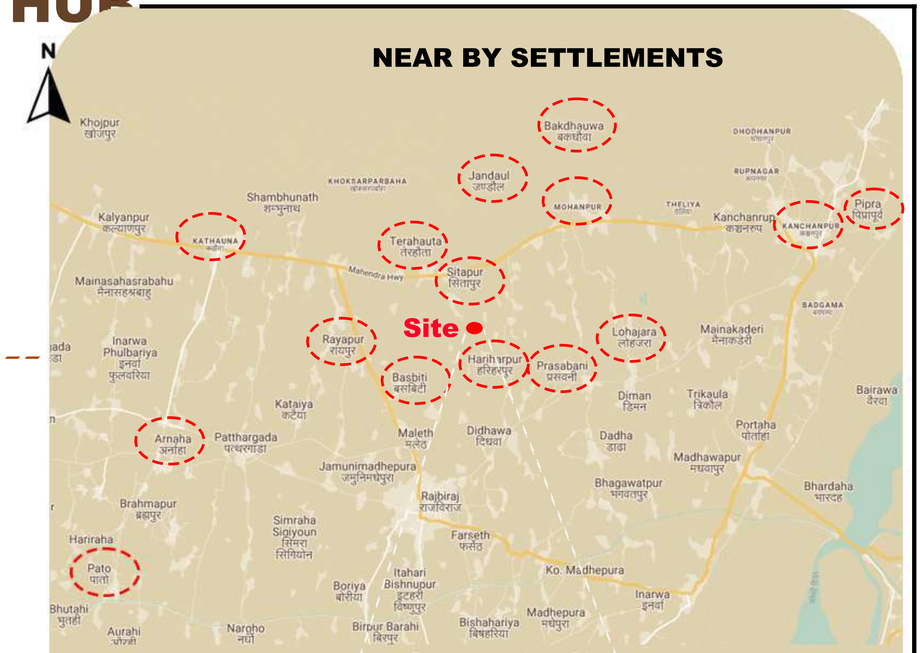


POPULATION BY ETHINI GROUP





NEAR BY SETTLEMENTS



Access to site

Green and Blue in Surroundings

AFFILIATED TO PURBANCHAL UNIVERSITY KHWOPA ENGINEERING COLLEGE DEPARTMENT OF ARCHITECTURE	SUBJECT : THE SAPTARIYAN THARU HUB TITLE : SITE ANALYSIS	NAME :SWASTIKA CHAUDNARY ROLL NO. :750147 DATE:2080/12/21	01

THE SAPTARIYAN THARU HUB

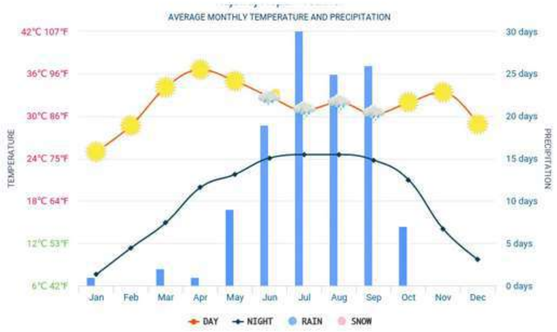
SITE ANALYSIS

By Laws

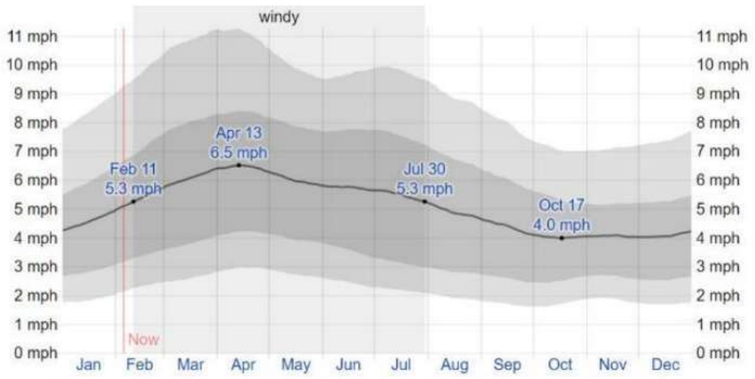
According to the Agnisair Krishnasawaran Rural Municipality,
Building Type: Community Building
Ground coverage: 60%
FAR: 3.5
Setback: 3m

Climate Analysis

Average Monthly temperature and precipitation

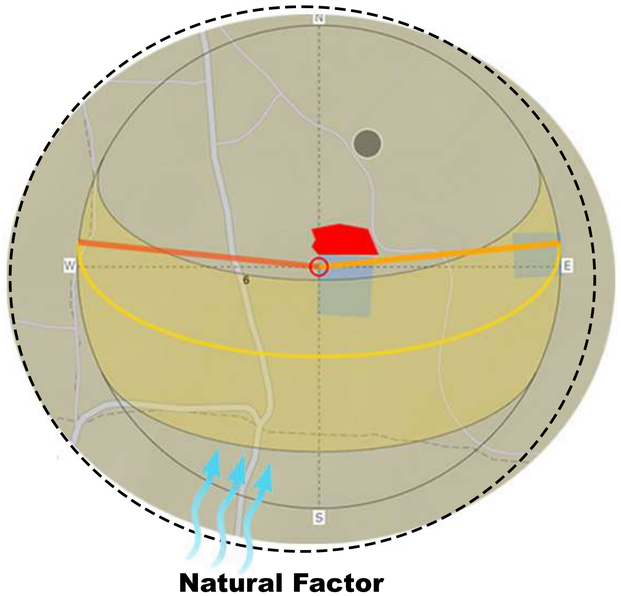


Average Wind speed



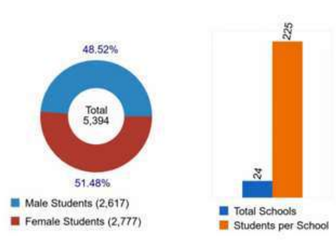
The average of mean hourly wind speeds (dark gray line), with 25th to 75th and 10th to 90th percentile bands.

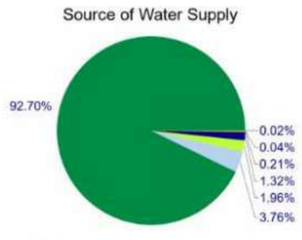
Site Plan

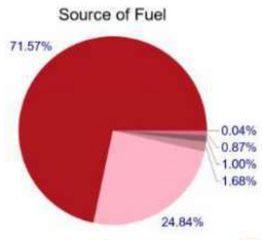


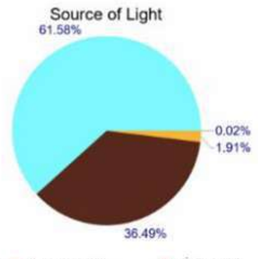
Natural Factor

Utility and Services in the site

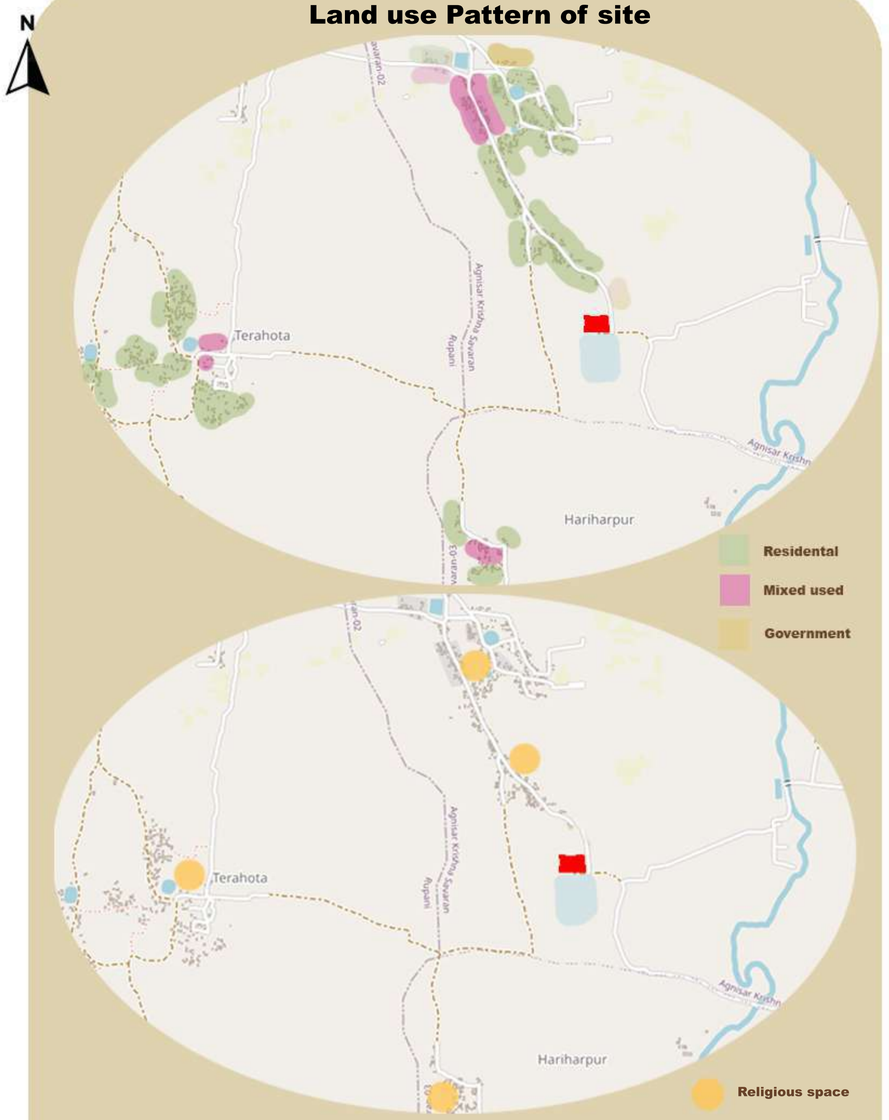








School and collages



Religious Spaces

- **Within Tharu Community**
- **Nearby lake**
- **Easily accessible road**
- **Nearby Tourist destinations**

S **W**

- **The existing site is arable land.**

- **Chance of growing buildings in surrounding arable lands.**
- **Increase of public in a peaceful place.**

O **T**

- **Promotion of Tharu Culture.**
- **A place for interaction of people.**
- **Promotion of Vernacular Architecture.**
- **Small-scale production.**

THE SAPTARIYAN THARU HUB

SITE ANALYSIS

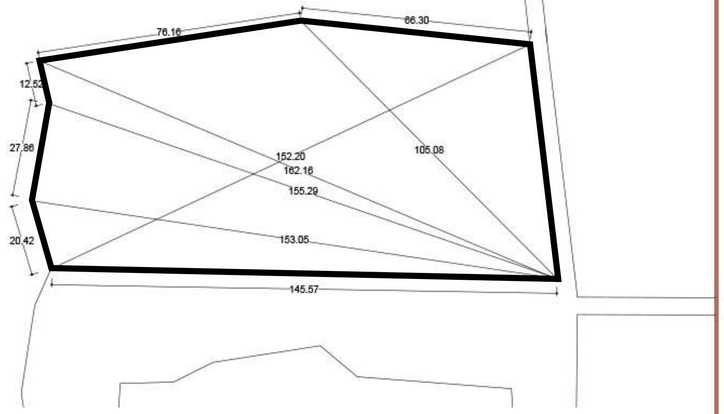
Physical Aspect of Site

• Orientation: The proposed site is oriented towards the northeast, This orientation ensures optimal exposure to sunlight throughout the day.

• Topography: The site features a flat terrain, providing a convenient foundation for development.

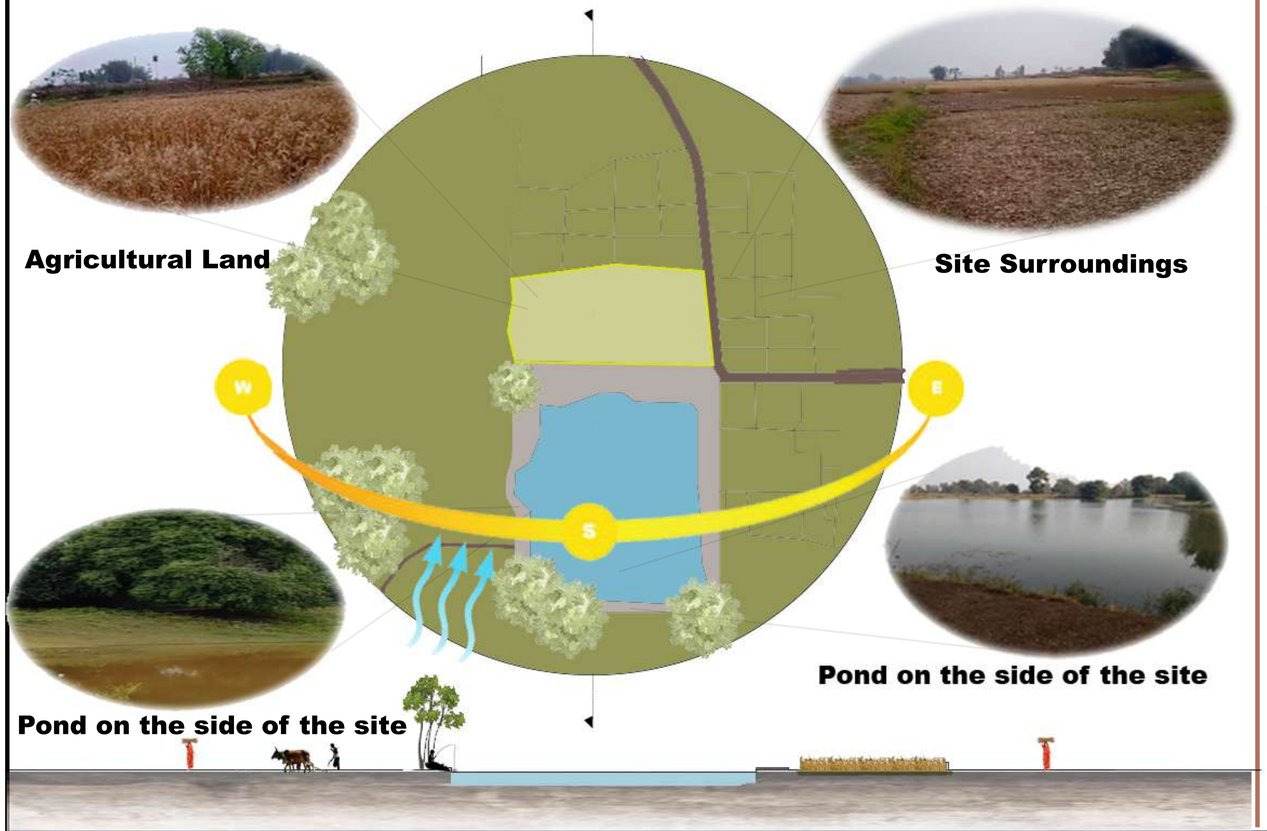
• Vegetation and Visual Aspect: Surrounding the site are expanses of cultivable land adorned with seasonal crops and vegetation. The flat terrain offers unobstructed visual access through the site. Its northeast orientation maximizes visual accessibility from the secondary road. The presence of vegetation along the sides of the secondary road creates a welcoming ambiance, offering a sense of enclosure from two directions.

• Infrastructure: The site is well-equipped with essential infrastructure, including transportation services (bus, tempo, safari, etc.), telecommunication networks, electricity supply, hospitals, and health posts. Additionally, ongoing construction includes the installation of drainage systems alongside road development



Site Diagram With Dimension

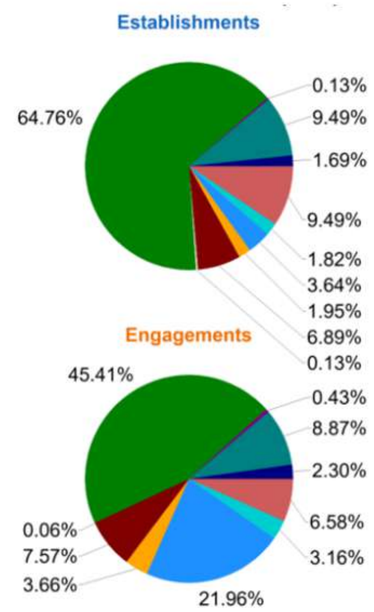
Site Surroundings



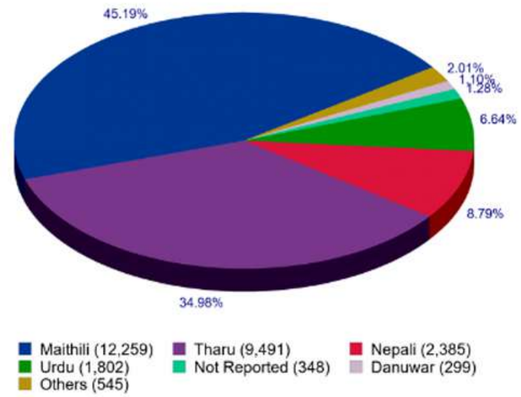
Socio-Cultural Aspects

Occupation

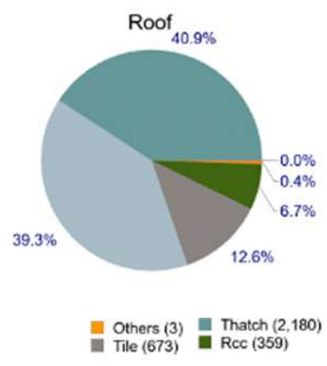
- A: Agriculture, Forestry & Fishing
- C: Manufacturing
- B,D,E & F: Mining, Electricity, Gas, Water Supply & Construction
- G: Wholesale & Retail Trade
- H & J: Transportation, Storage, Information & Communication
- I: Accommodation & Food
- K: Financial, Insurance
- P: Education
- Q: Human Health & Social Work
- L,M,N,R & S: Real Estate, Professional, Scientific, Administrative, Arts, Entertainment & Other



Spoken Language



Buildingng



Festival

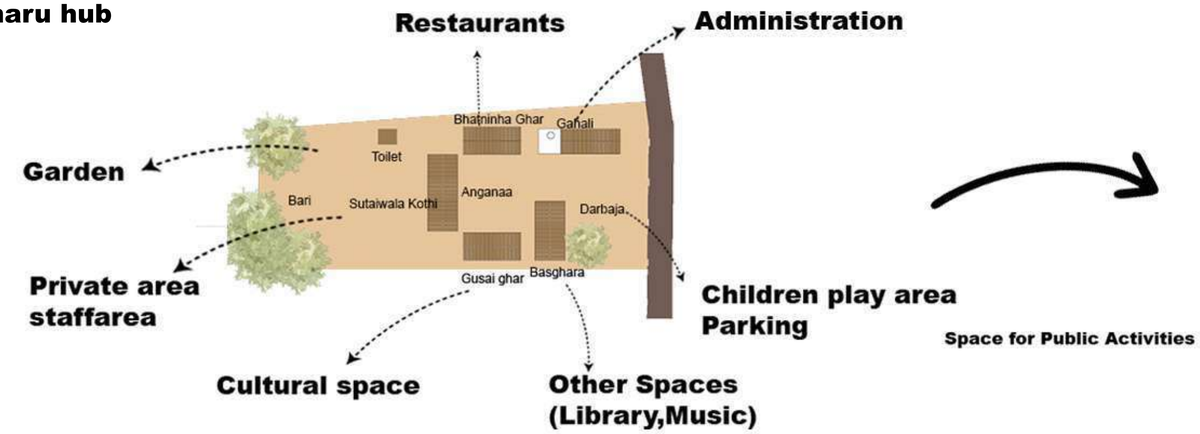
Food

THE SAPTARIYA THARU HUB

Concept and Zoning

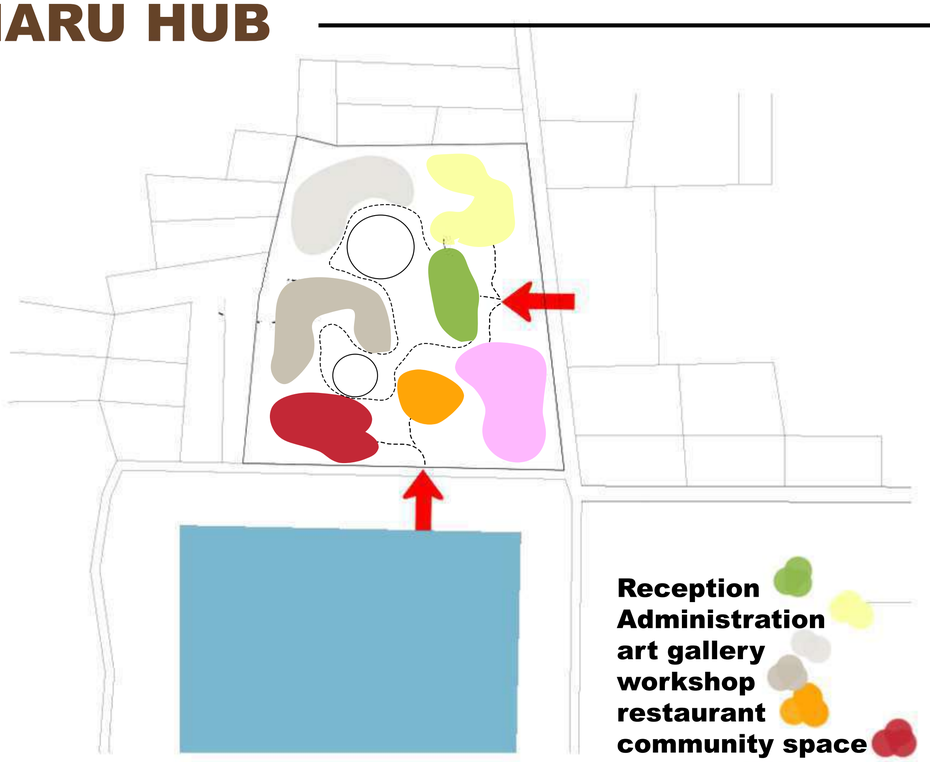
The main idea behind the design of the Tharu Cultural Center is to make it feel like you're stepping into a real Tharu village. Everything from the buildings to the open spaces and gardens will remind you of what a Tharu village looks and feels like.

Relating the Build form of tharu settlemet and tharu hub

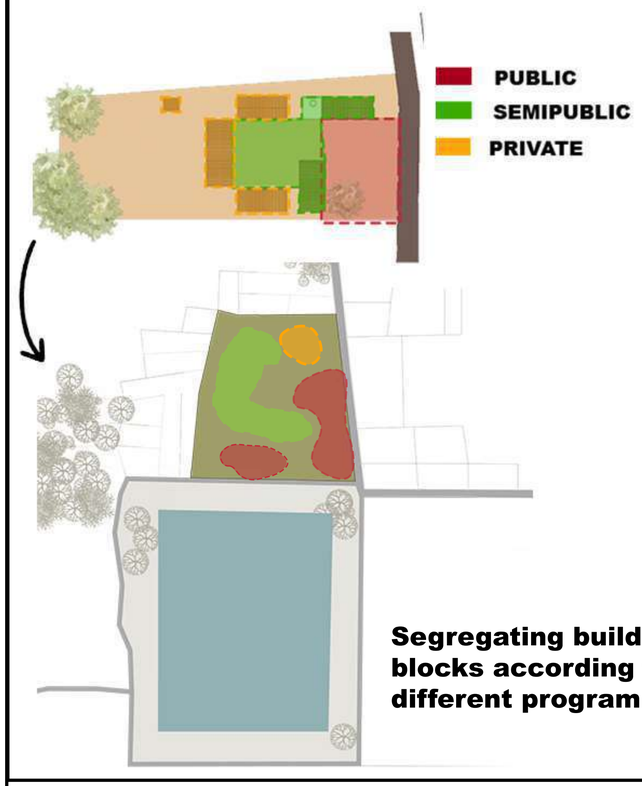


Space for Public Activities

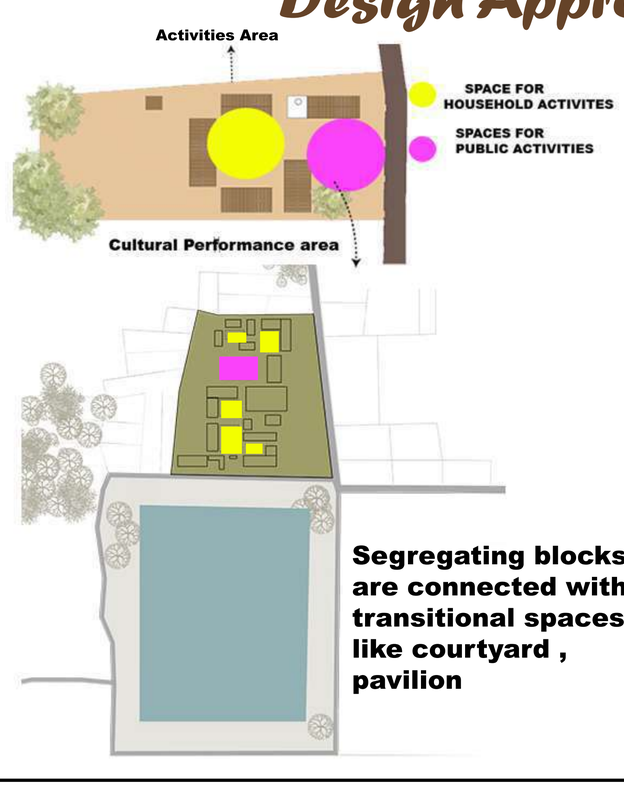
Division of space in the site



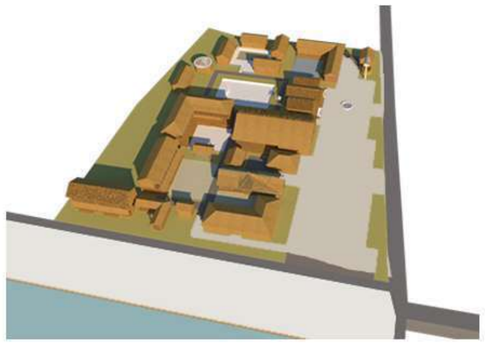
Design Approach



Segregating building blocks according to different program



Segregating blocks are connected with transitional spaces like courtyard , pavilion



Unit are scooped out to introduce courtyard,where hot air are drought to cool the air.Development of program related to festival celebrated at pond side

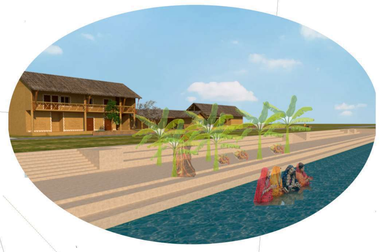
Addition of slope roof tonnign with traditionall contex and tropical trees to render the Environment.

पहिचान :THE SAPTARIYA THARU HUB

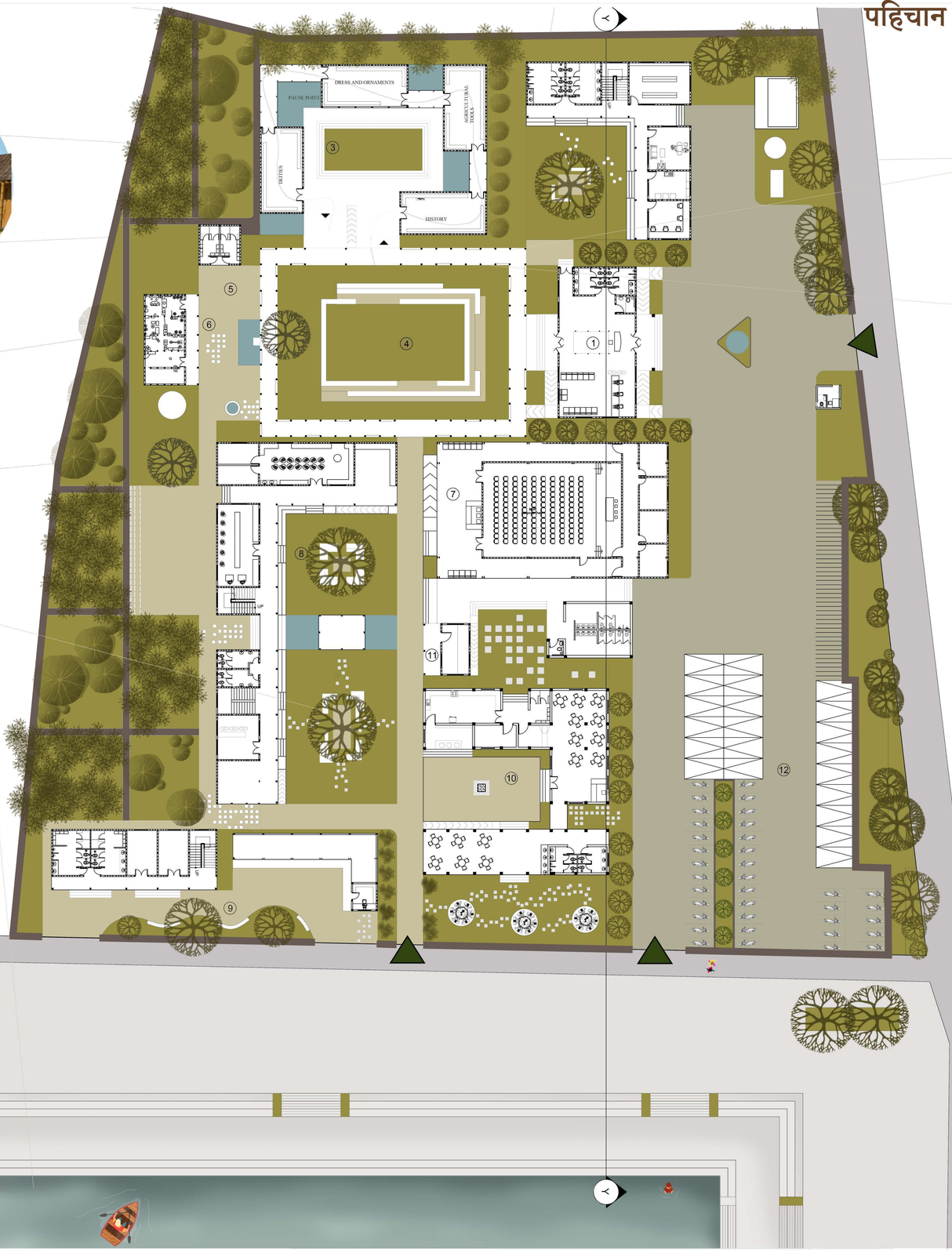
N

AAGAN

COURTYARD



POND SIDE



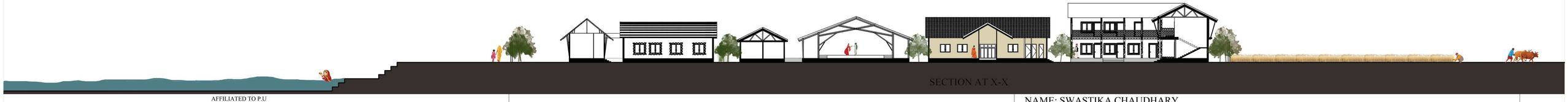
COVERED PATHWAY

LEGENDS

1. RECEPTION \ WAITING AREA
2. ADMINISTRATION BLOCK
3. ART GALLERY
4. AAGAN
5. ETHNIC WARE
6. MODEL HOUSE
7. MULTIPURPOSE HALL
8. WORKSHOP BLOCK
9. COMMUNITY SPACE
10. TRADITIONAL RESTAURANT
11. SOUVINAR SHOP
12. PARKING

MASTER PLAN

SITE AREA : 9679 SQ.M \19-0-1-2(R-A-P-D)
TOTAL BUILD UP AREA :1677 SQ.M
TOTAL GROUND COVERAGE: 17.32 %



SECTION AT X-X

AFFILIATED TO P.U
KHWOPA ENGINEERING COLLEGE
DEPARTMENT OF ARCHITECTURE
LIBALI, BHAKTAPUR

SUBJECT: DESIGN STUDIO X (THESIS)
TITLE: MASTER PLAN

NAME: SWASTIKA CHAUDHARY
ROLL NO: 750147
SCALE: 1:200

DATE: 2081/04/02

DRESS AND ORNAMENTS

AGRICULTURAL TOOLS

DEITIES

HISTORY

UP

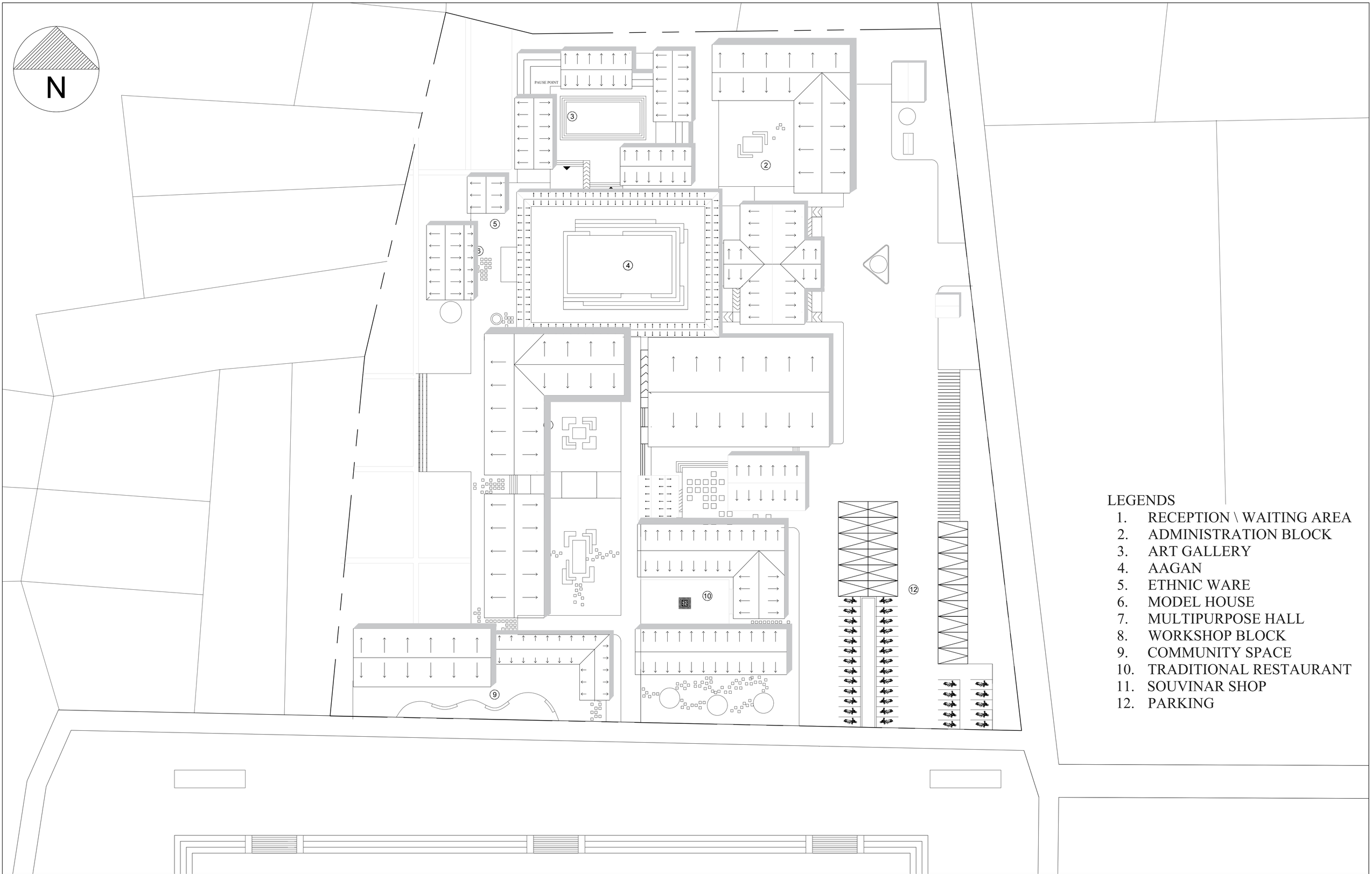
4

1

7

11

9



LEGENDS

1. RECEPTION \ WAITING AREA
2. ADMINISTRATION BLOCK
3. ART GALLERY
4. AAGAN
5. ETHNIC WARE
6. MODEL HOUSE
7. MULTIPURPOSE HALL
8. WORKSHOP BLOCK
9. COMMUNITY SPACE
10. TRADITIONAL RESTAURANT
11. SOUVINAR SHOP
12. PARKING

AFFILIATED TO P.U
KHWOPA ENGINEERING COLLEGE
DEPARTMENT OF ARCHITECTURE
LIBALI, BHAKTAPUR

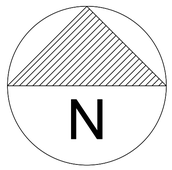
SUBJECT: DESIGN STUDIO X (THESIS)
TITLE: ROOF PLAN

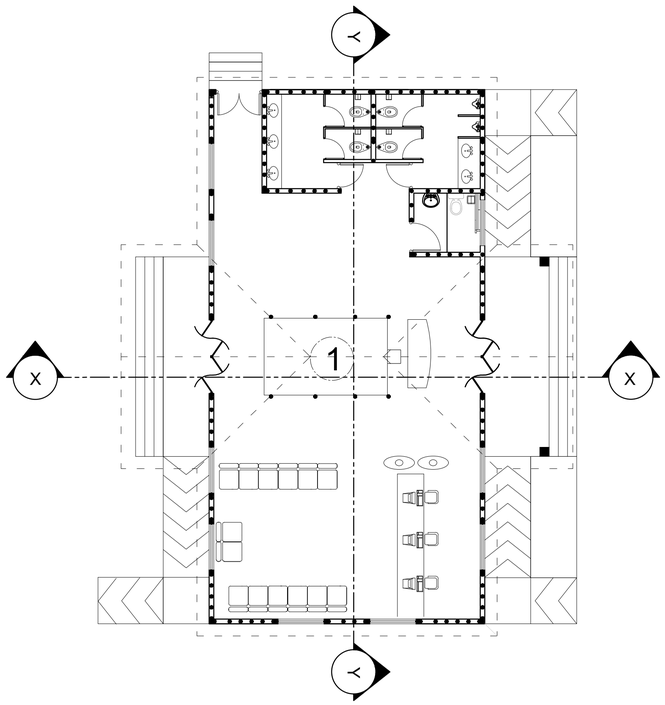
NAME: SWASTIKA CHAUDHARY
ROLL NO: 750147
SCALE: 1:250

DATE: 2081/05/06

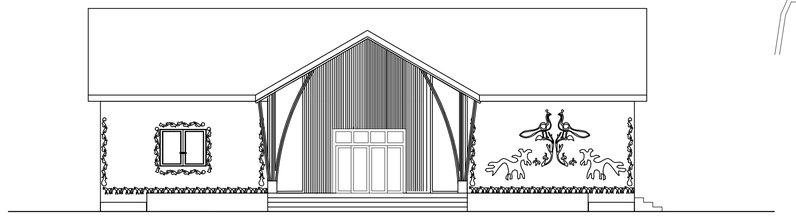
THE SAPTARIYA THARUHUB

RECEPTION\ WAITING AREA

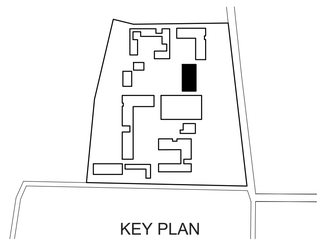




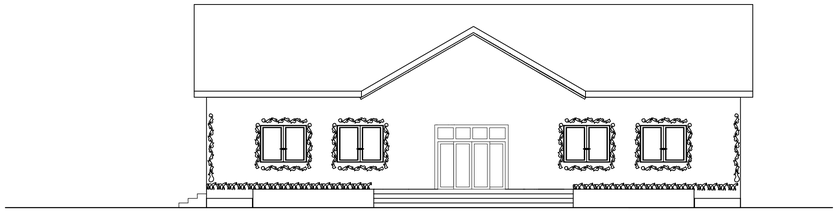
GROUND FLOOR PLAN (157 SQ.M)
SCALE:1:100



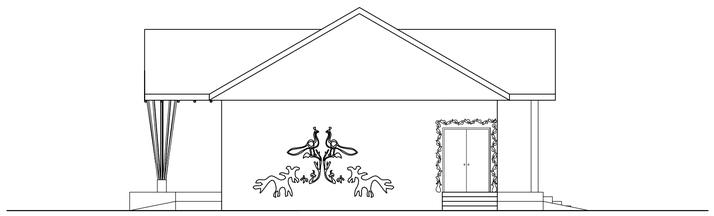
EAST ELEVATION



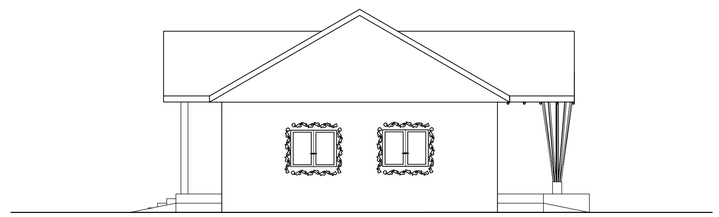
KEY PLAN



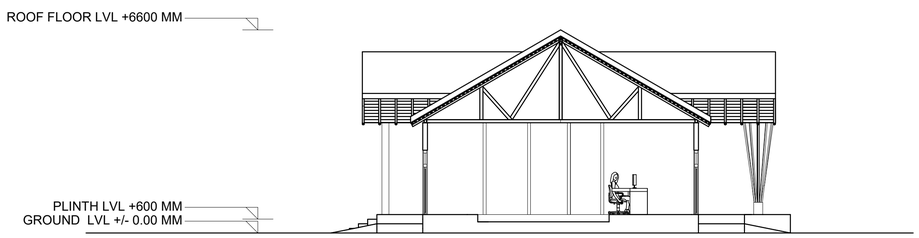
WEST ELEVATION



SOUTH ELEVATION



NORTH ELEVATION



SECTION AT X-X

SECTION AT Y-Y

AFFILIATED TO P.U
KHWOPA ENGINEERING COLLEGE
DEPARTMENT OF ARCHITECTURE
LIBALI, BHAKTAPUR

SUBJECT: DESIGN STUDIO X (THESIS)
TITLE: PLAN AND ELEVATIONS

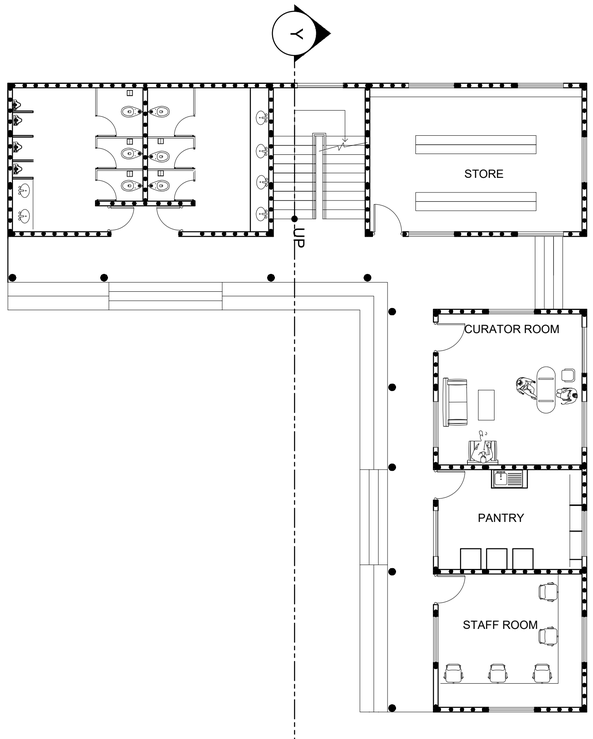
NAME: SWASTIKA CHAUDHARY
ROLL NO: 750147
SCALE: 100

DATE: 2081/05/06

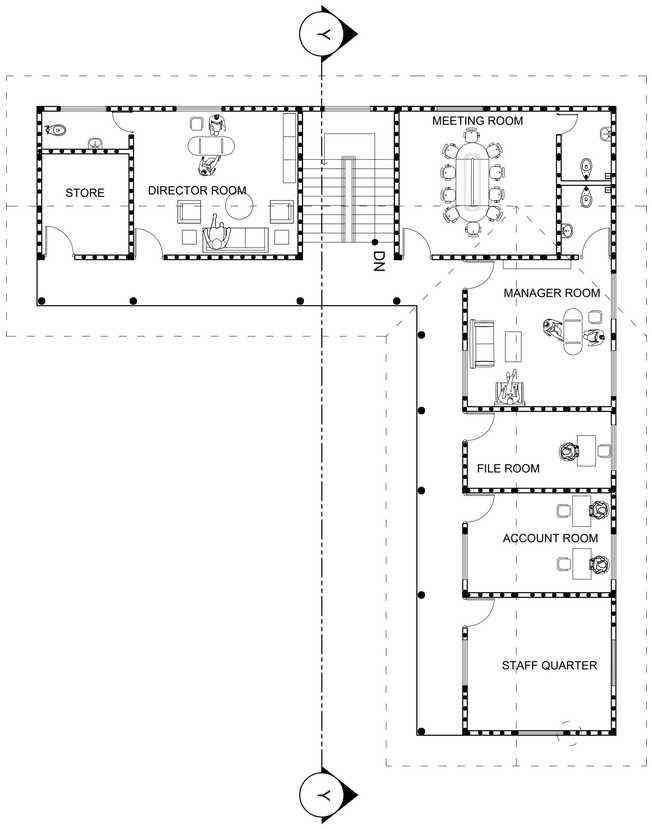
THE SAPTARIYA THARUHUB

ADMINISTRATION BLOCK

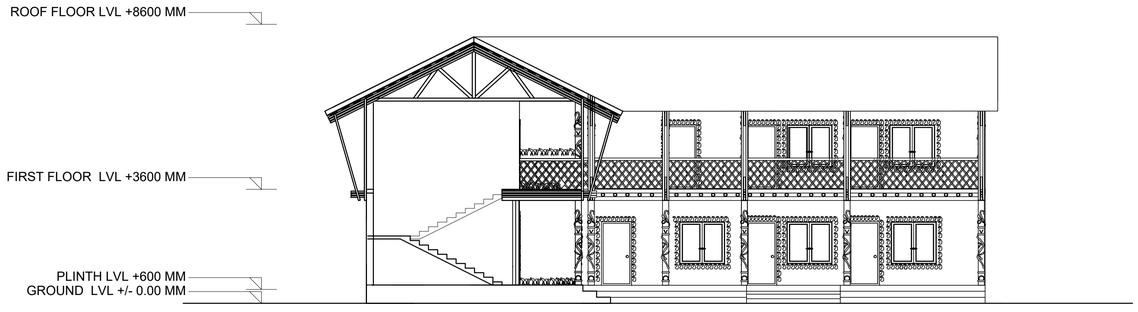
N



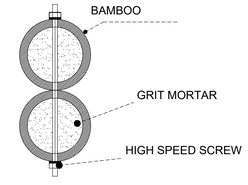
GROUND FLOOR PLAN(214 SQ.M)
SCALE :1:100



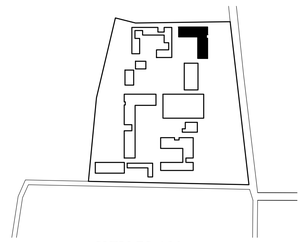
FIRST FLOOR PLAN (214 SQM)
SCALE :1:100



SECTION AT Y-Y



BAMBOO DETAILS



KEY PLAN

AFFILIATED TO P.U
KHWOPA ENGINEERING COLLEGE
DEPARTMENT OF ARCHITECTURE
LIBALI, BHAKTAPUR

SUBJECT: DESIGN STUDIO X (THESIS)
TITLE: PLANS ,SECTION

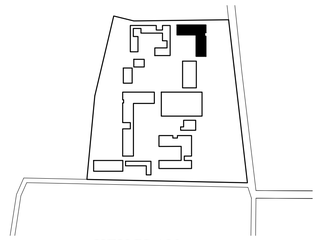
NAME: SWASTIKA CHAUDHARY
ROLL NO: 750147
SCALE: 1:100

DATE: 2081/05/06

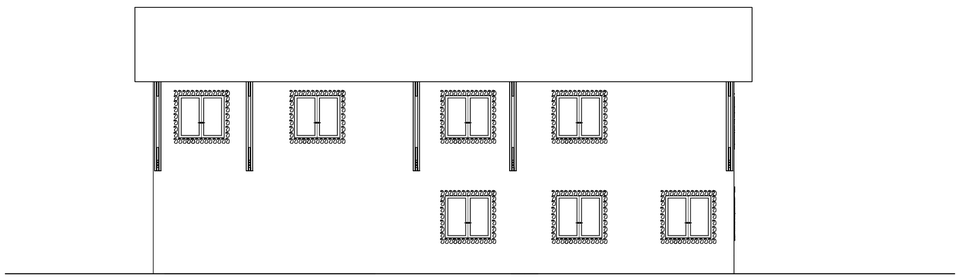
THE SAPTARIYA THARUHUB

N

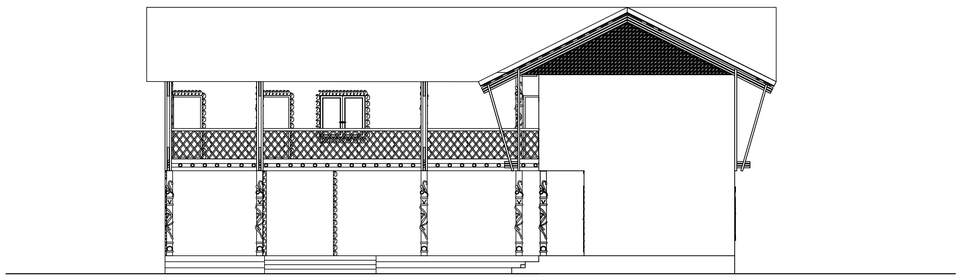
ADMINISTRATION BLOCK



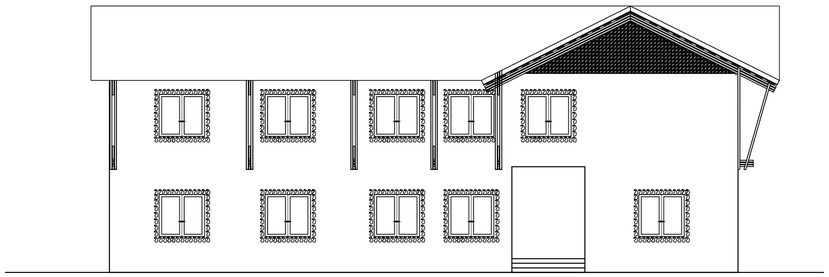
KEY PLAN



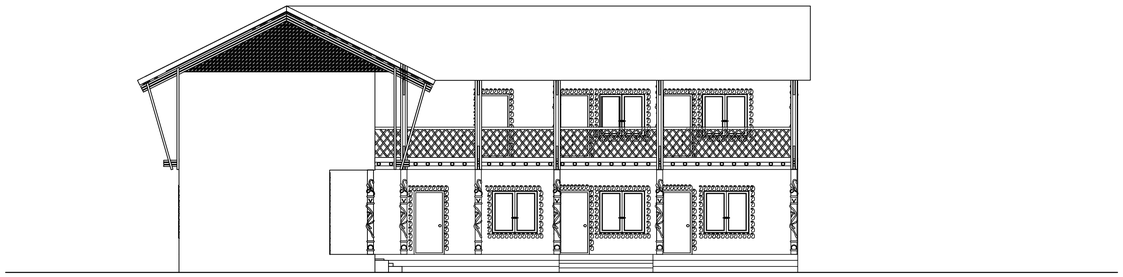
NORTH ELEVATION



SOUTH ELEVATION



EAST ELEVATION



WEST ELEVATION

AFFILIATED TO P.U
KHWOPA ENGINEERING COLLEGE
DEPARTMENT OF ARCHITECTURE
LIBALI, BHAKTAPUR

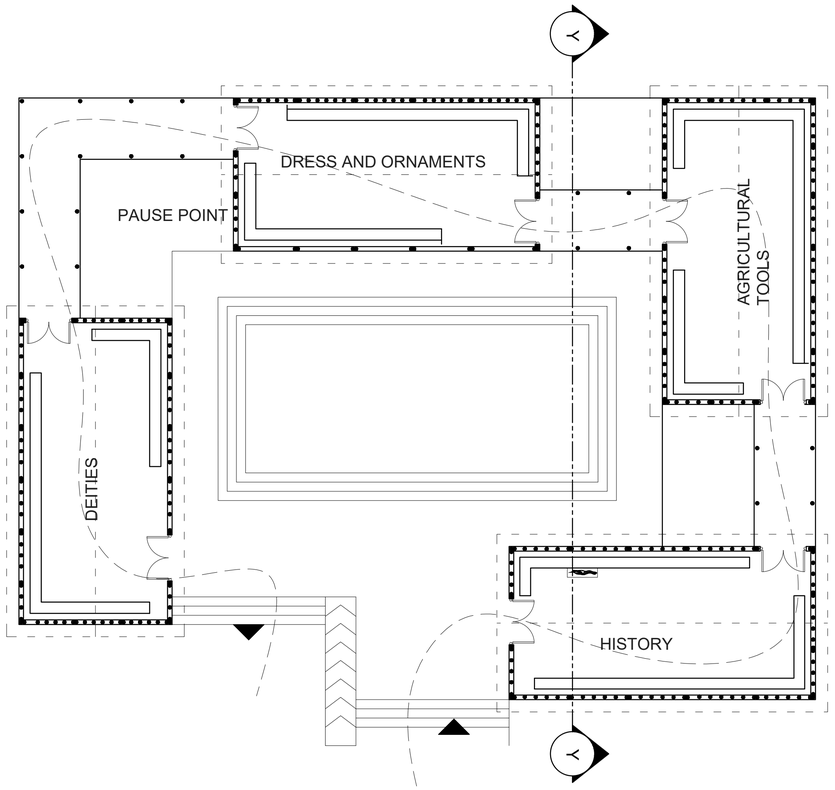
SUBJECT: DESIGN STUDIO X (THESIS)
TITLE: ELEVATIONS

NAME: SWASTIKA CHAUDHARY
ROLL NO: 750147
SCALE: 1:100

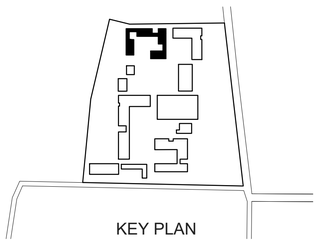
DATE: 2081/05/06

THE SAPTARIYA THARUHUB

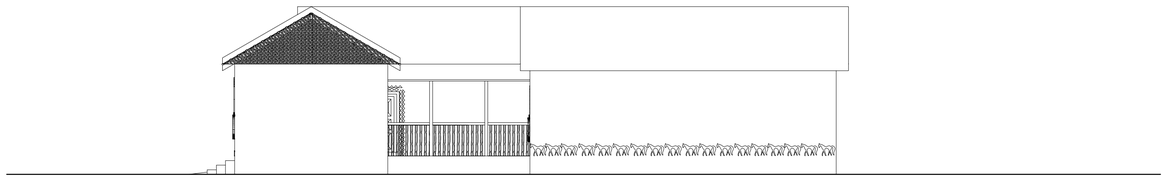
ART GALLERY



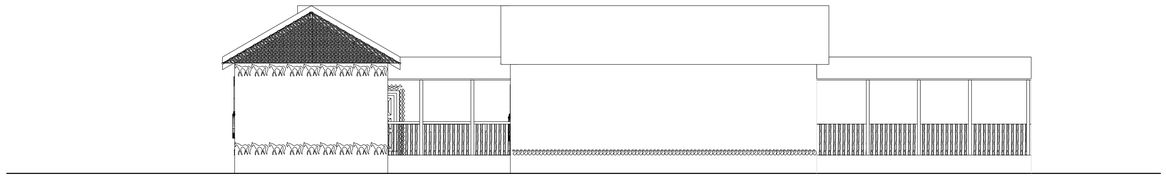
GROUND FLOOR PLAN (242 SQ.M)
SCALE :1:100



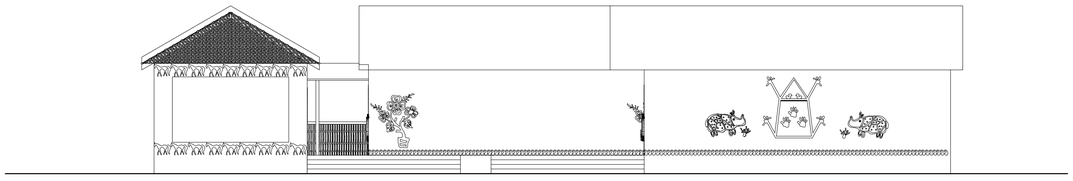
KEY PLAN



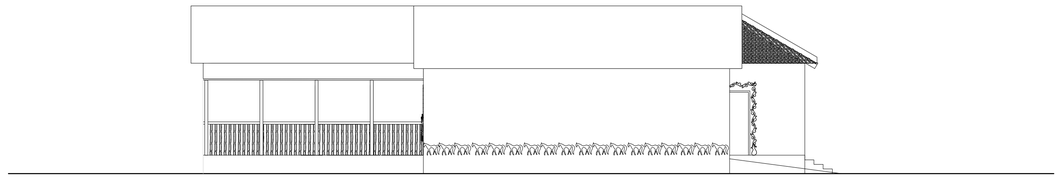
EAST ELEVATION



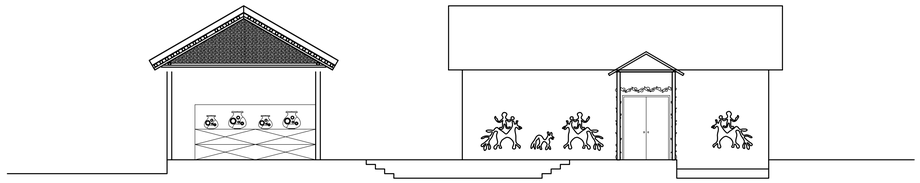
NORTH ELEVATION



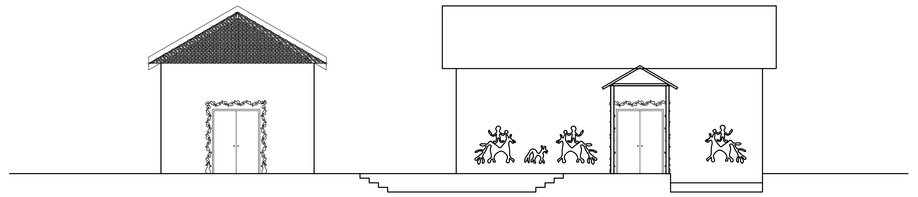
SOUTH ELEVATION



WEST ELEVATION



SECTION AT X-X



SIDE ELEVATION

AFFILIATED TO P.U
KHWOPA ENGINEERING COLLEGE
DEPARTMENT OF ARCHITECTURE
LIBALI, BHAKTAPUR

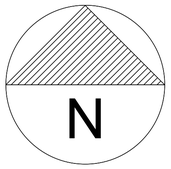
SUBJECT: DESIGN STUDIO X (THESIS)
TITLE: PLANS , ELEVATIONS

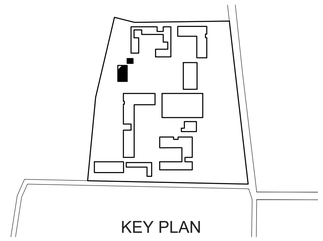
NAME: SWASTIKA CHAUDHARY
ROLL NO: 750147
SCALE: 1:100

DATE: 2081/05/06

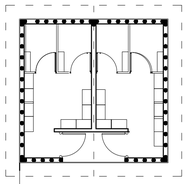
THE SAPTARIYA THARUHUB

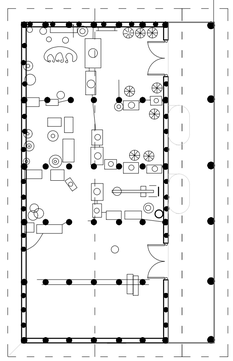
MODEL HOUSE AND ETHINIC WEAR



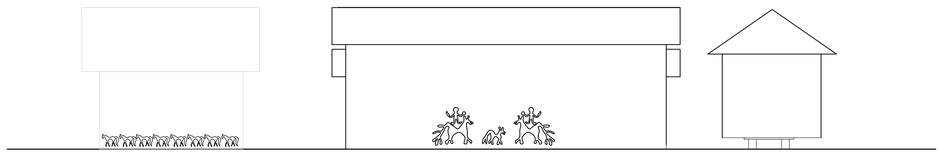


KEY PLAN

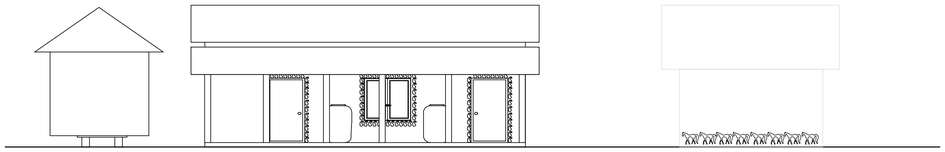




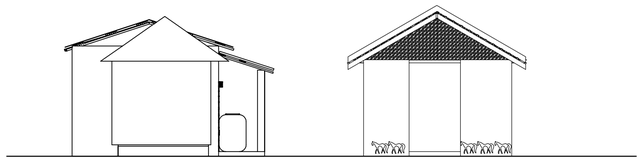
GROUND FLOOR PLAN (90 SQ.M)
SCALE :1 :100



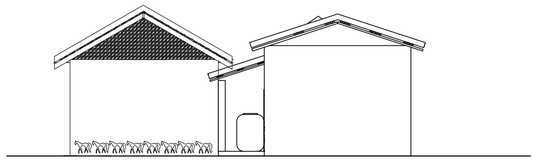
WEST ELEVATION



EAST ELEVATION



SOUTH ELEVATION



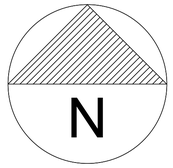
NORTH ELEVATION

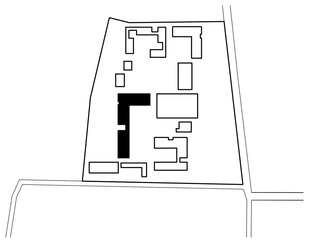
3D VIEWS

AFFILIATED TO P.U KHWOPA ENGINEERING COLLEGE DEPARTMENT OF ARCHITECTURE LIBALI, BHAKTAPUR	SUBJECT: DESIGN STUDIO X (THESIS) TITLE: PLAN,SECTIONS	NAME: SWASTIKA CHAUDHARY ROLL NO: 750147 SCALE: 1:100 DATE: 2081/05/06

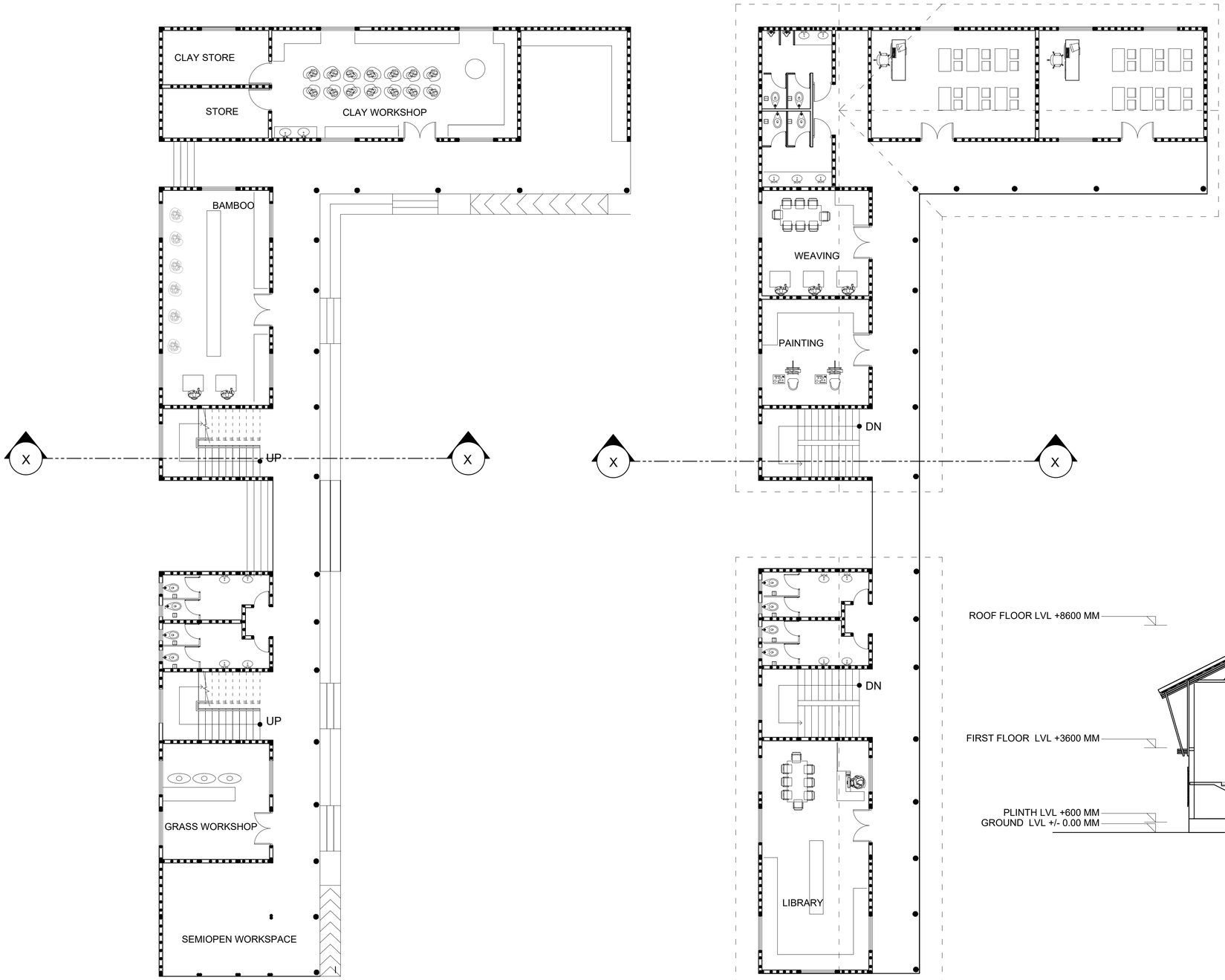
THE SAPTARIYA THARU HUB

PRODUCTION BLOCK



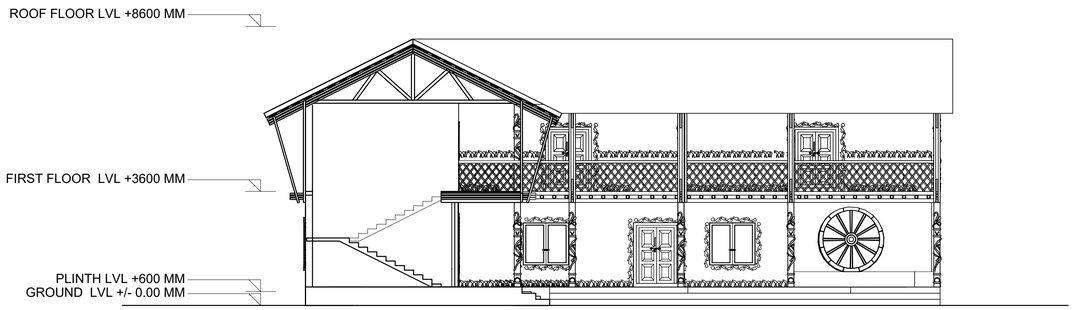


KEY PLAN



GROUND FLOOR PLAN (214 SQ.M)
SCALE (1:100)

FIRST FLOOR PLAN(214 SQ.M)
SCALE(1:100)



SECTION AT X-X

AFFILIATED TO P.U
KHWOPA ENGINEERING COLLEGE
DEPARTMENT OF ARCHITECTURE
LIBALI, BHAKTAPUR

SUBJECT: DESIGN STUDIO X (THESIS)
TITLE: PLAN AND SECTIONS

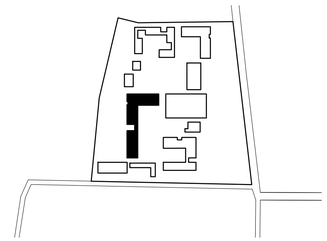
NAME: SWASTIKA CHAUDHARY
ROLL NO: 750147
SCALE: 100

DATE: 2081/05/06

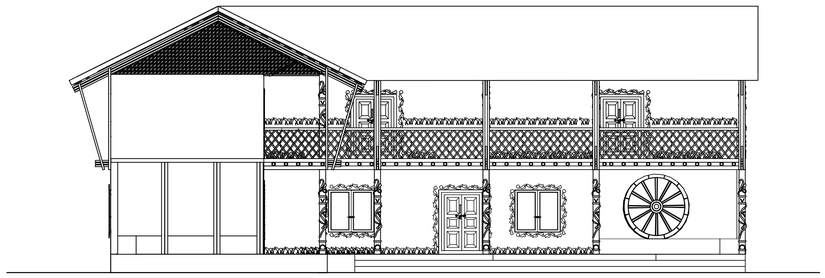
THE SAPTARIYA THARU HUB

N

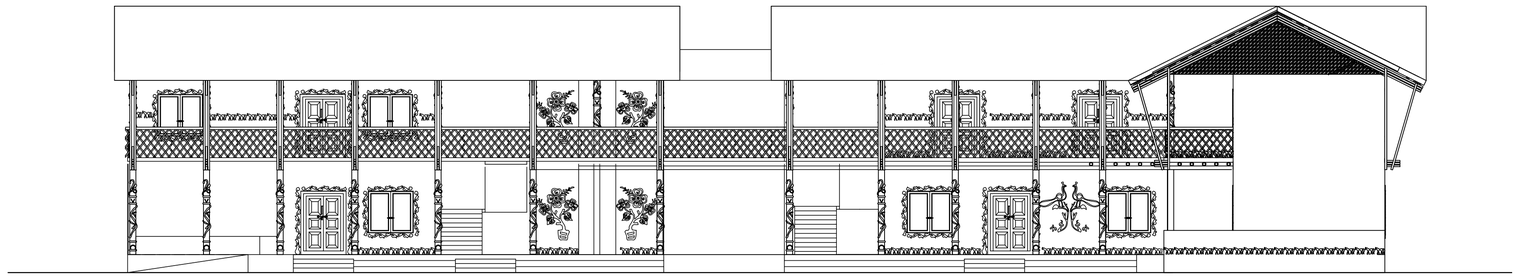
PRODUCTION BLOCK



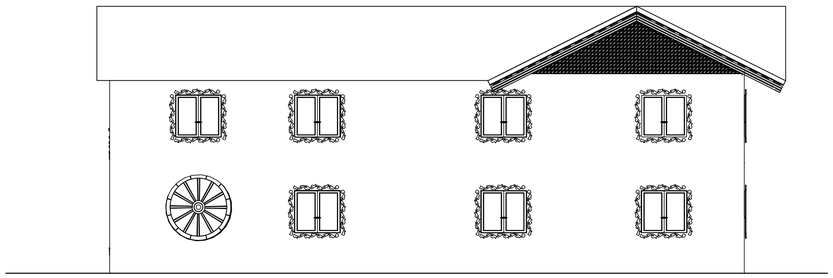
KEY PLAN



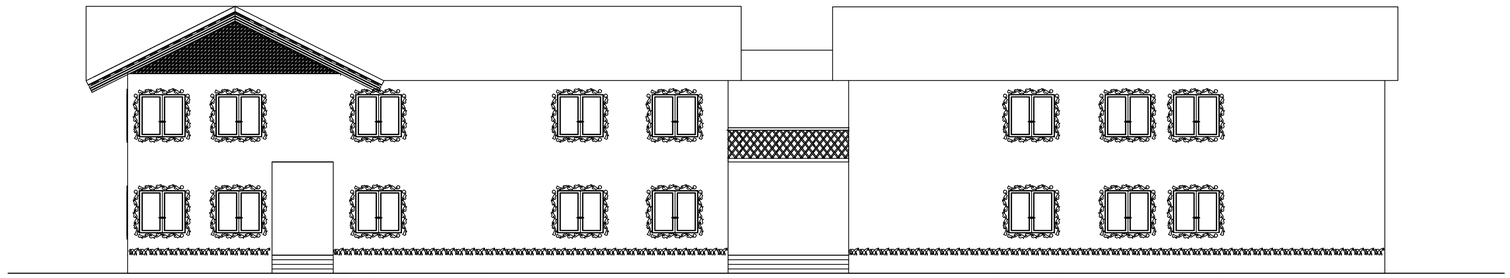
SOUTH ELEVATION



EAST ELEVATION



NORTH ELEVATION



WEST ELEVATION

AFFILIATED TO P.U
KHWOPA ENGINEERING COLLEGE
DEPARTMENT OF ARCHITECTURE
LIBALI, BHAKTAPUR

SUBJECT: DESIGN STUDIO X (THESIS)
TITLE: ELEVATION

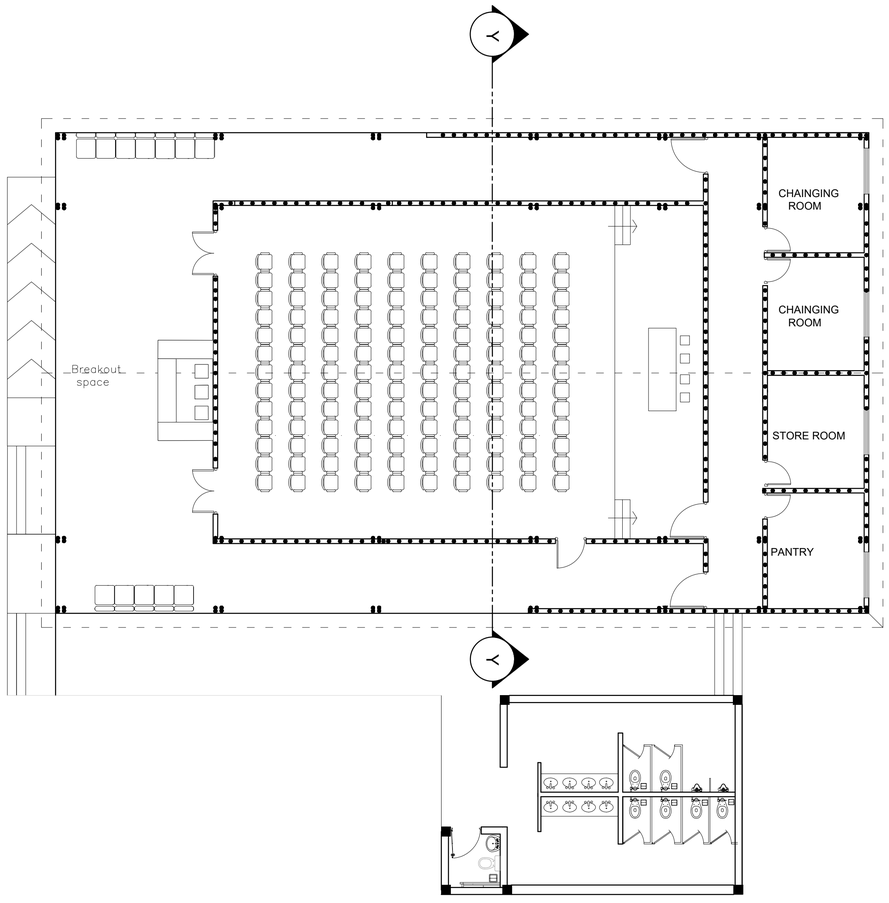
NAME: SWASTIKA CHAUDHARY
ROLL NO: 750147
SCALE: 100

DATE: 2081/05/06

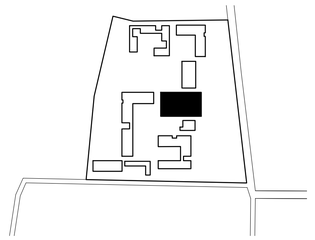
THE SAPTARIYA THARUHUB

N

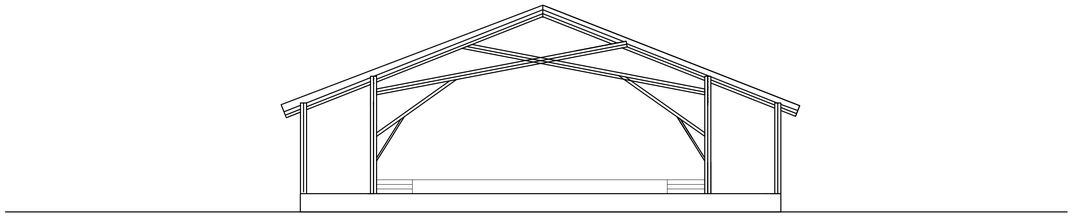
MULTIPURPOSE HALL



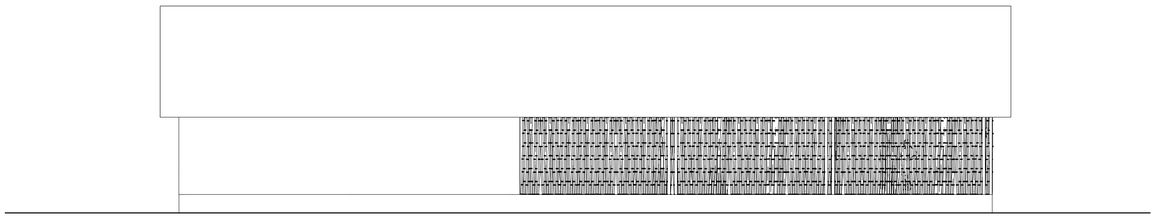
GROUND FLOOR PLAN (416.5 SQ.M)
SCALE:1:100



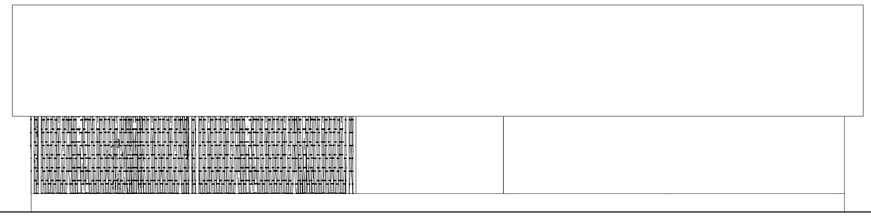
KEY PLAN



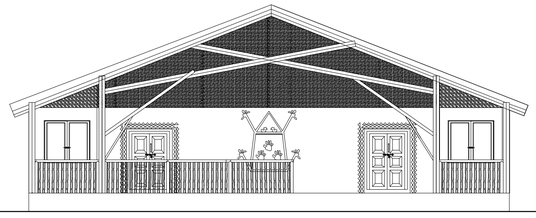
SECTION AT Y-Y



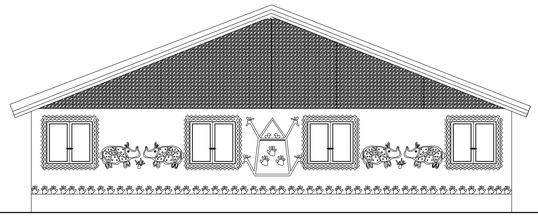
NORTH ELEVATION



SOUTH ELEVATION



WEST ELEVATION



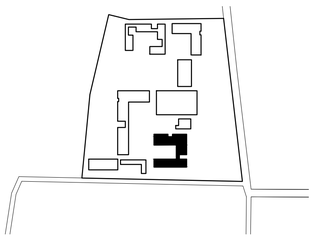
EAST ELEVATION

AFFILIATED TO P.U KHWOPA ENGINEERING COLLEGE DEPARTMENT OF ARCHITECTURE LIBALI, BHAKTAPUR	SUBJECT: DESIGN STUDIO X (THESIS) TITLE: PLANS ,SECTION	NAME: SWASTIKA CHAUDHARY ROLL NO: 750147 SCALE: 1:100 DATE: 2081/05/06

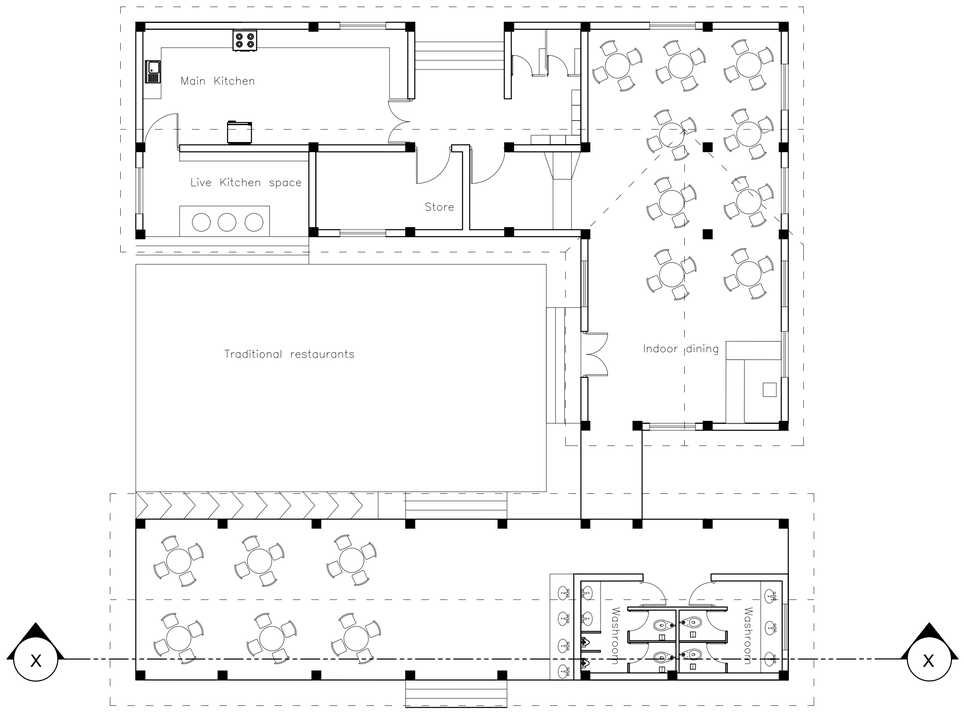
THE SAPTARIYA THARUHUB

N

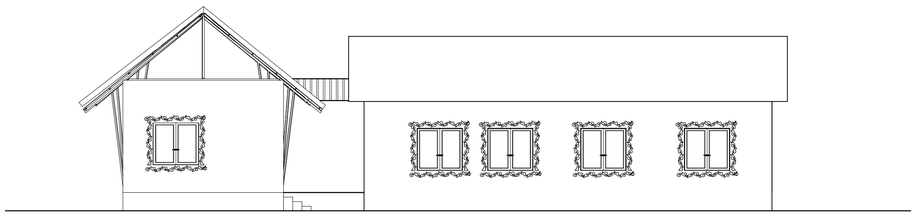
TRADITIONAL RESTAURANT



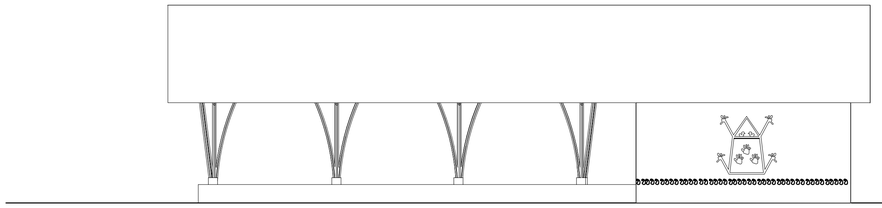
KEY PLAN



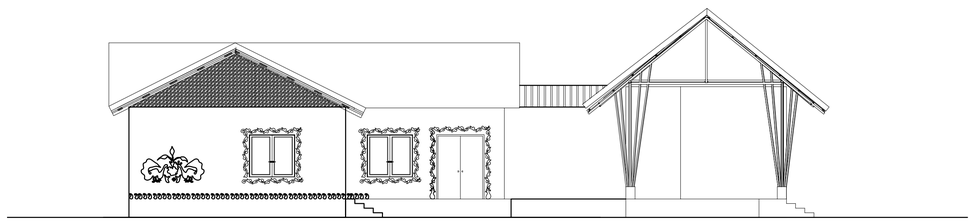
GROUND FLOOR PLAN (305.5 SQ.M)
SCALE:1:100



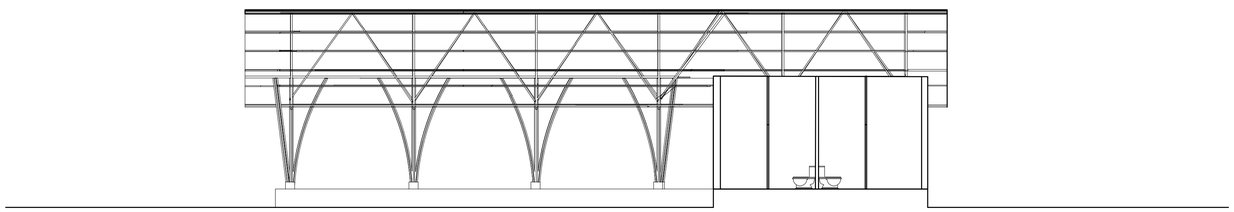
EAST ELEVATION



SOUTH ELEVATION



WEST ELEVATION



SECTION AT X-X

AFFILIATED TO P.U
KHWOPA ENGINEERING COLLEGE
DEPARTMENT OF ARCHITECTURE
LIBALI, BHAKTAPUR

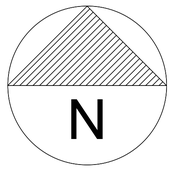
SUBJECT: DESIGN STUDIO X (THESIS)
TITLE: PLANS ,SECTION

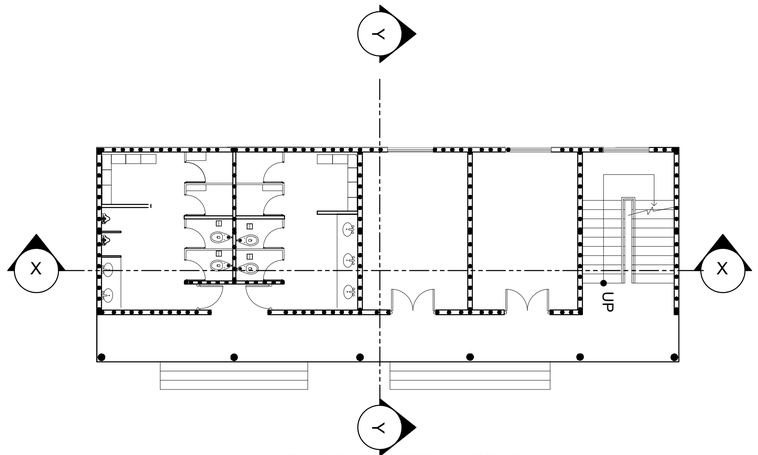
NAME: SWASTIKA CHAUDHARY
ROLL NO: 750147
SCALE: 1:100

DATE: 2081/05/06

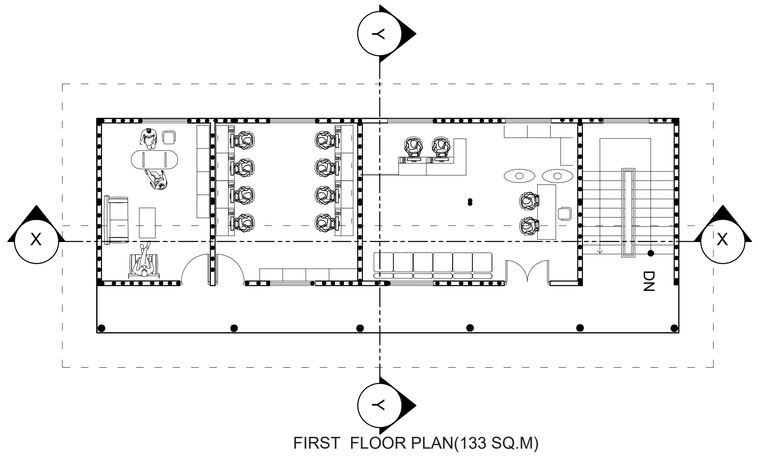
THE SAPTARIYA THARUHUB

COMMUNITY BLOCK

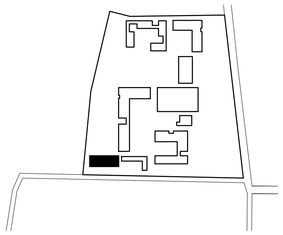




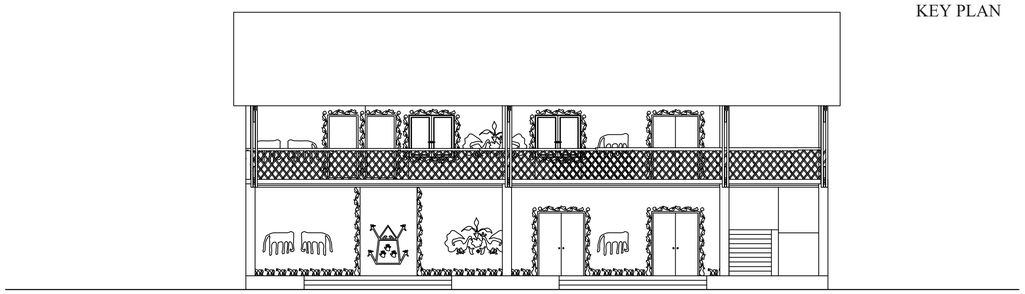
GROUND FLOOR PLAN(133 SQ.M)
SCALE:1:100



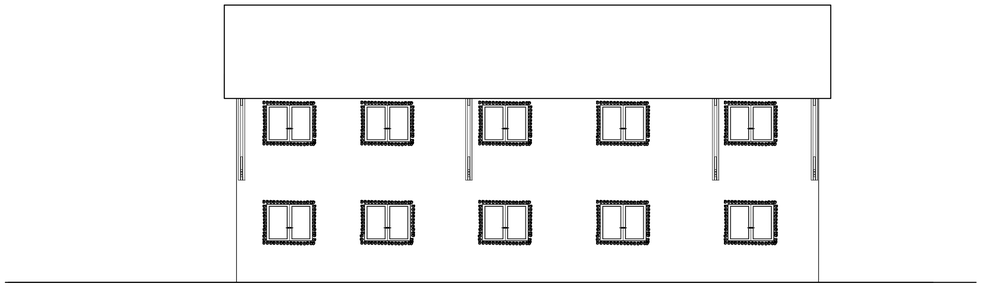
FIRST FLOOR PLAN(133 SQ.M)
SCALE:1:100



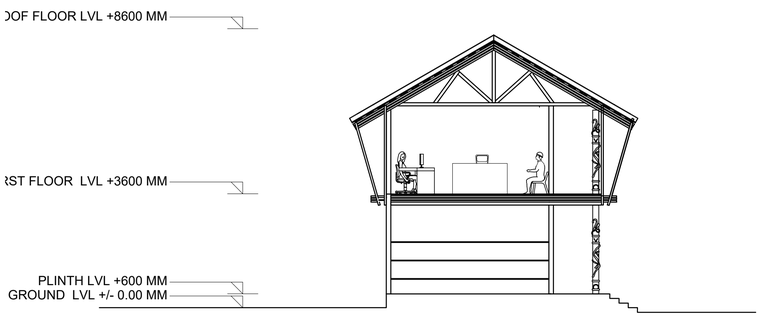
KEY PLAN



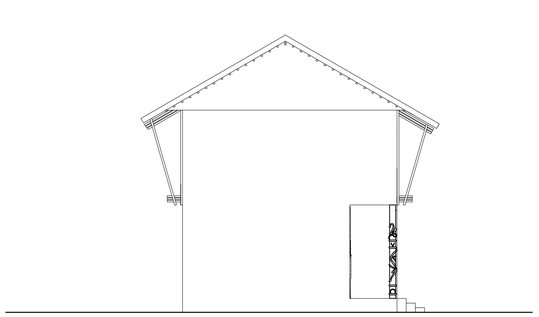
SOUTH ELEVATION



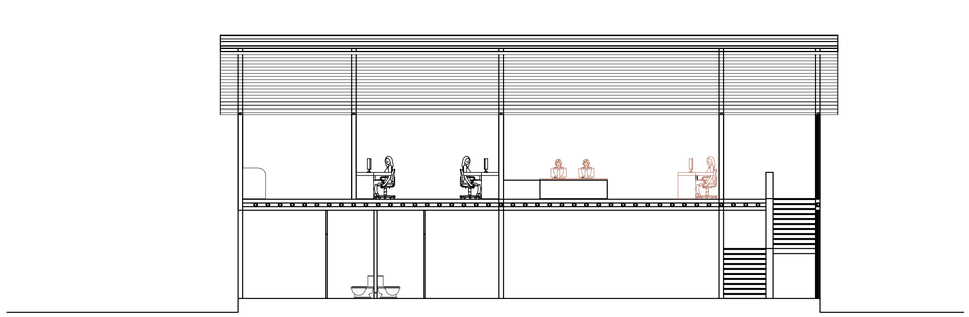
NORTH ELEVATION



SECTION AT Y-Y



WEST ELEVATION



SECTION AT X-X

AFFILIATED TO P.U
KHWOPA ENGINEERING COLLEGE
DEPARTMENT OF ARCHITECTURE
LIBALI, BHAKTAPUR

SUBJECT: DESIGN STUDIO X (THESIS)
TITLE: PLANS ,SECTION

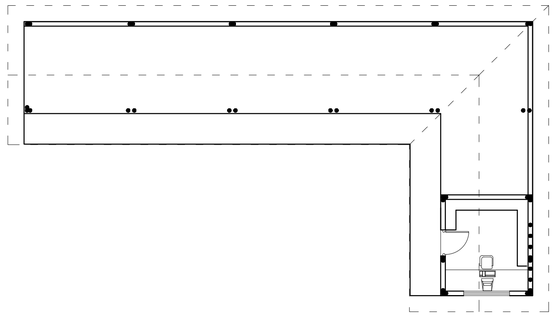
NAME: SWASTIKA CHAUDHARY
ROLL NO: 750147
SCALE: 1:100

DATE: 2081/05/06

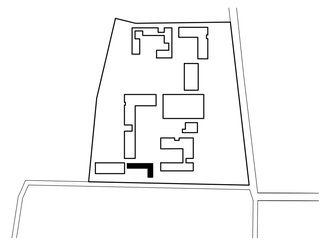
THE SAPTARIYA THARUHUB

N

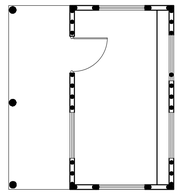
HAAT



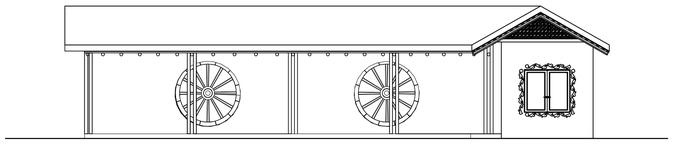
HAAT
GROUND FLOOR PLAN 86 SQ.M
SCALE :1:100



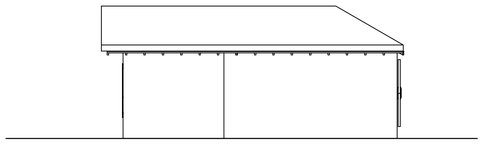
KEY PLAN



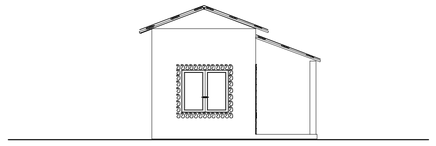
SOUVENIR SHOP
GROUND FLOOR PLAN 32 SQ.M
SCALE :1:100



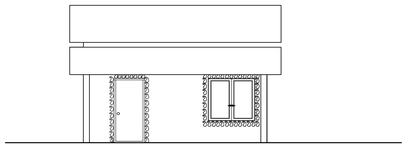
SOUTH ELEVATION



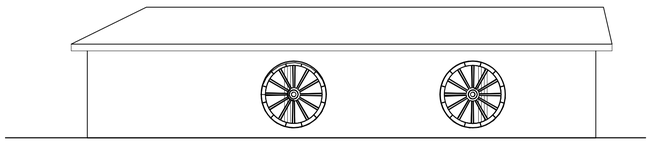
EAST ELEVATION



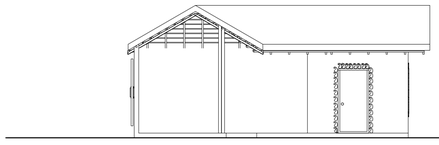
NORTH ELEVATION



WEST ELEVATION



NORTH ELEVATION



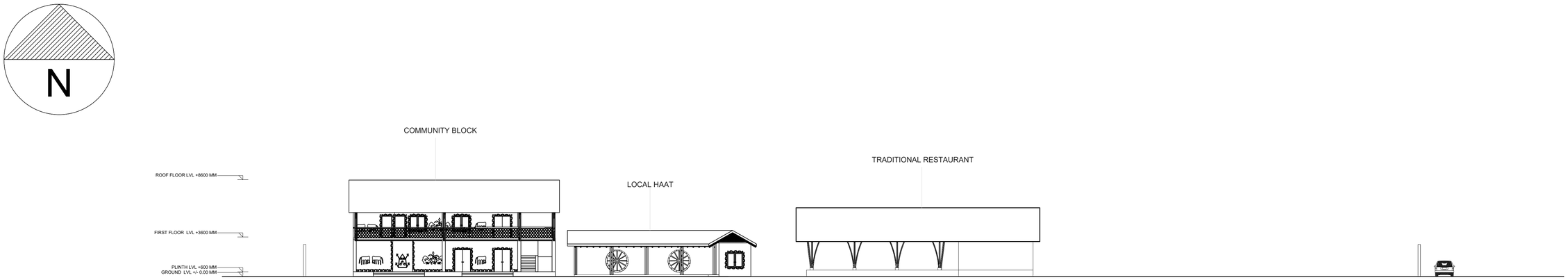
WEST ELEVATION

AFFILIATED TO P.U
KHWOPA ENGINEERING COLLEGE
DEPARTMENT OF ARCHITECTURE
LIBALI, BHAKTAPUR

SUBJECT: DESIGN STUDIO X (THESIS)
TITLE: PLANS ,SECTION

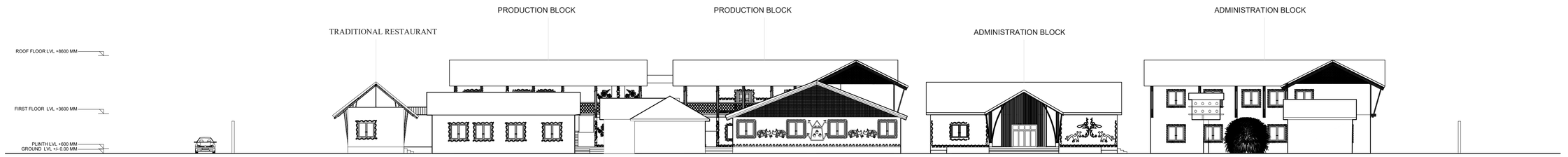
NAME: SWASTIKA CHAUDHARY
ROLL NO: 750147
SCALE: 1:100

DATE: 2081/05/06



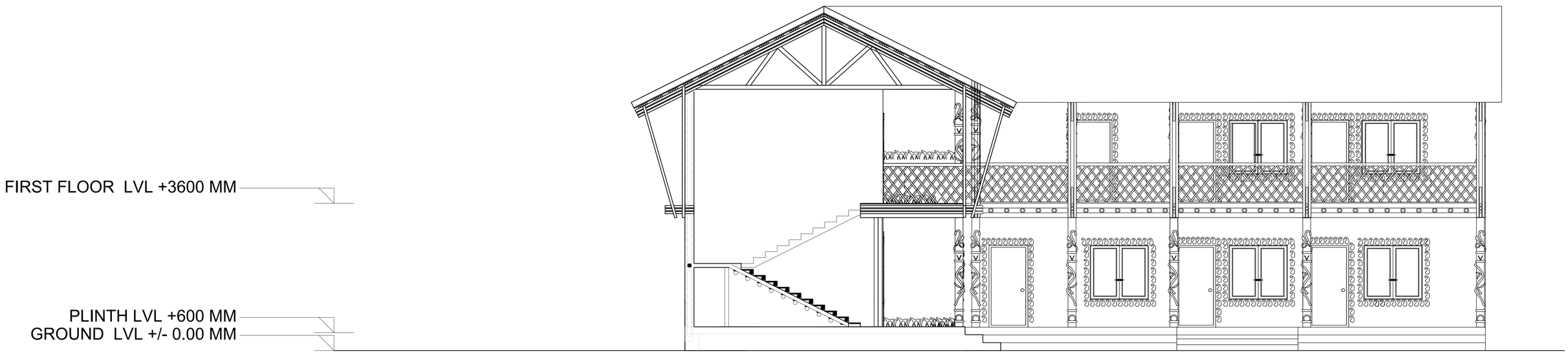
SOUTH PROFILE ELEVATION

SCALE:1:200



EAST PROFILE ELEVATION

SCALE:1:200



SPLIT SECTION

SCALE:1:200

AFFILIATED TO P.U
KHWOPA ENGINEERING COLLEGE
DEPARTMENT OF ARCHITECTURE
LIBALI, BHAKTAPUR

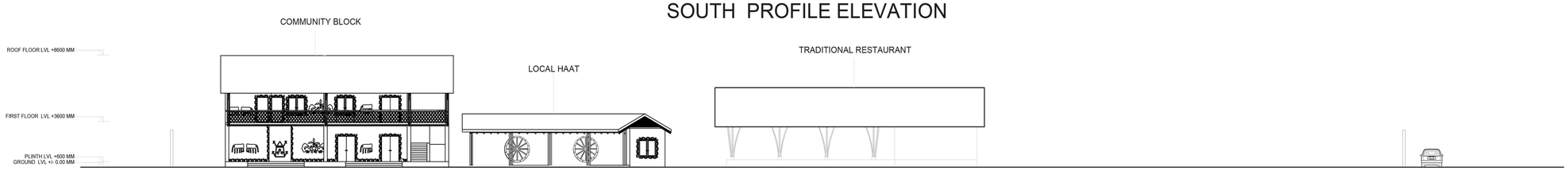
SUBJECT: DESIGN STUDIO X (THESIS)
TITLE: PROFILE ELEVATIONS

NAME: SWASTIKA CHAUDHARY
ROLL NO: 750147
SCALE:

DATE: 2081/05/06

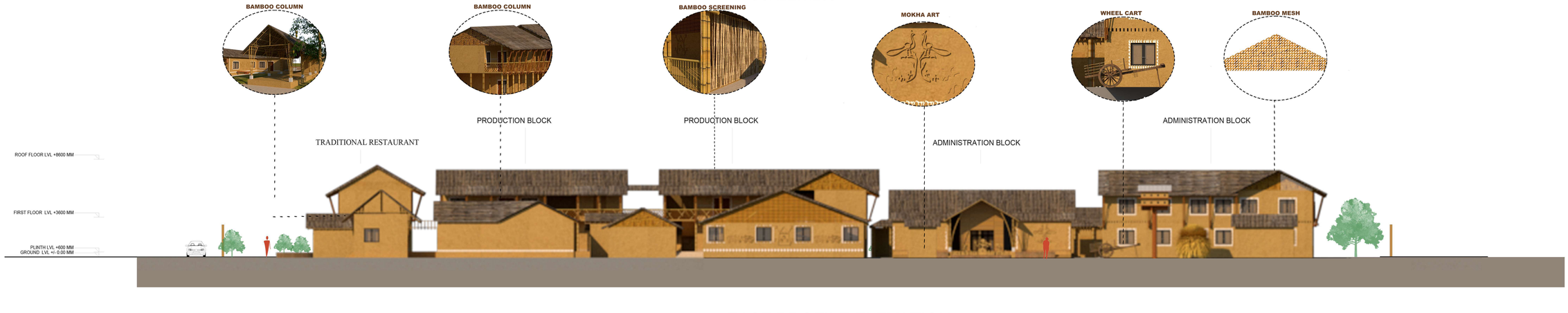
N

SOUTH PROFILE ELEVATION



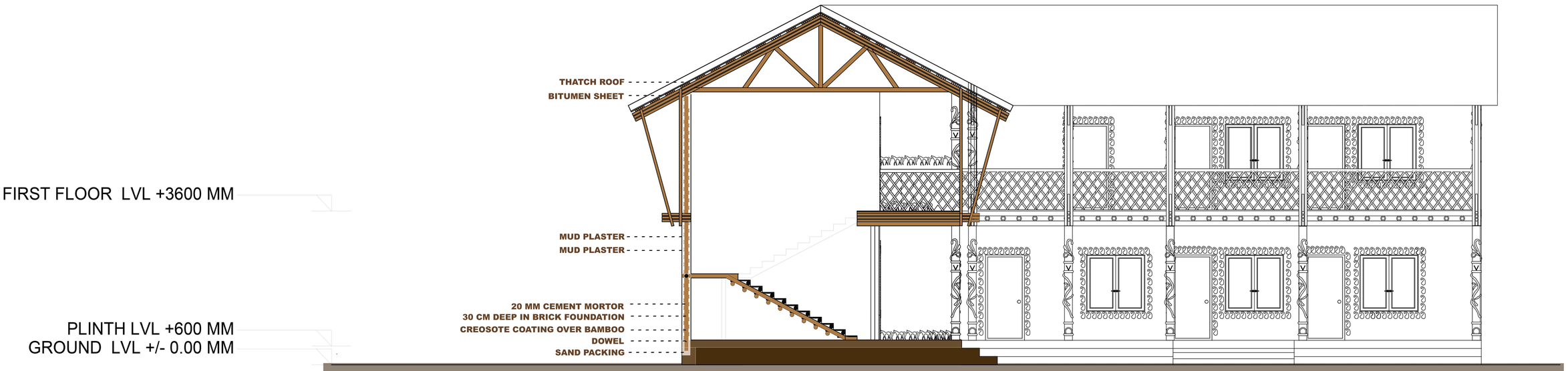
SOUTH PROFILE ELEVATION

SCALE:1:200



EAST PROFILE ELEVATION

SCALE:1:200



SPLIT SECTION

SCALE:1:100

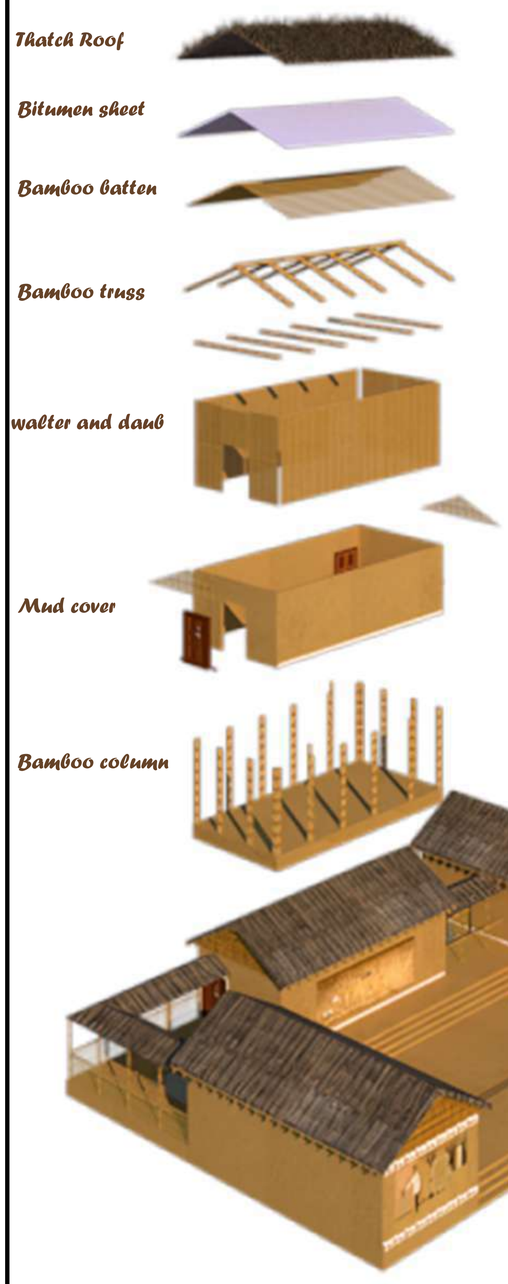
AFFILIATED TO P.U
KHWOPA ENGINEERING COLLEGE
DEPARTMENT OF ARCHITECTURE
LIBALI, BHAKTAPUR

SUBJECT: DESIGN STUDIO X (THESIS)
TITLE: PROFILE ELEVATIONS

NAME: SWASTIKA CHAUDHARY
ROLL NO: 750147
SCALE:

DATE: 2081/05/06

THE SAPTARIYA THARU HUB

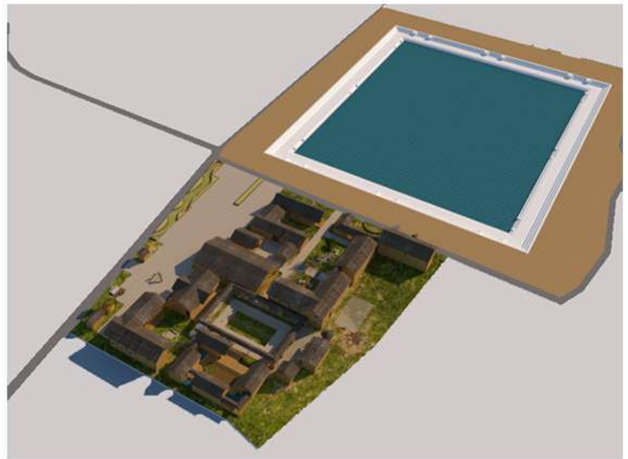


AXNOMETRIC OF ART GALLERY

Main Entry Lobby

Workshop corridor

Covered pathway



3D View

Traiditional Restaurant

Workshop block

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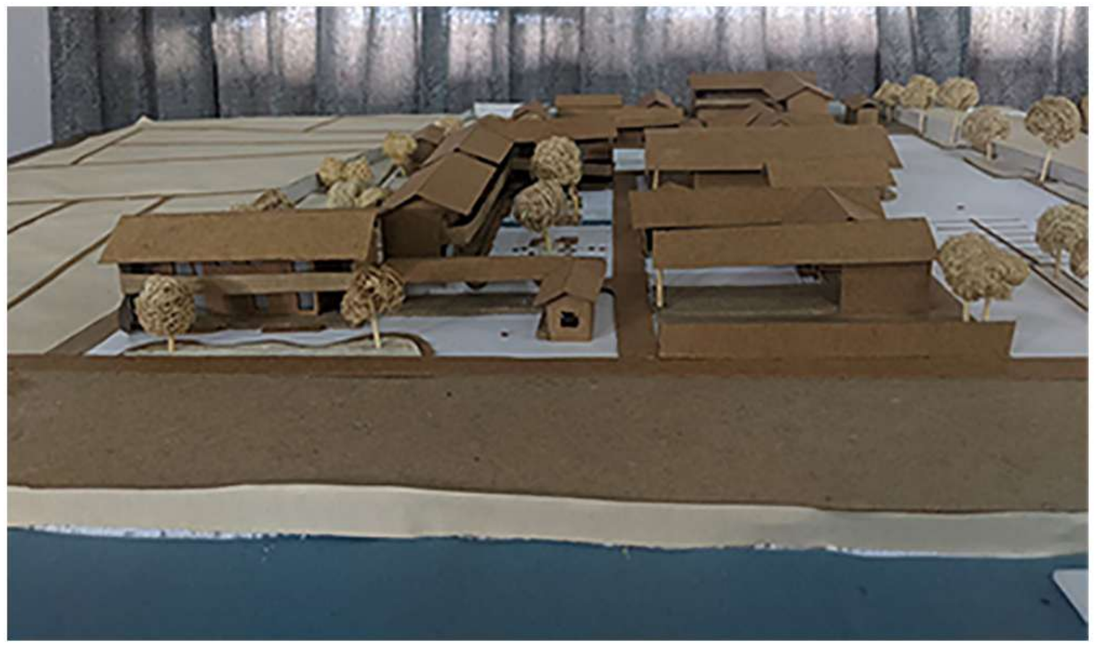
KHWOPA ENGINEERING COLLEGE
DEPARTMENT OF ARCHITECTURE

SUBJECT : THE SAPTARIYA THARU HUB
TITLE : 3D

NAME :SWASTIKA CHAUDNARY
ROLL NO. :750147 DATE:2080

THE SAPTARIYA THARU HUB



3D MODEL VIEW

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SUBJECT : THE SAPTARIYA THARU HUB
TITLE : 3D MODEL

NAME :SWASTIKA CHAUDHARY
ROLL NO. :750147 DATE:2080