TRIBHUWAN UNIVERSITY

INSTITUTE OF ENGINEERING

DEPARTMENT OF ARCHITECTURE

PULCHOWK CAMPUS

A THESIS REPORT ON

Tharu Cultural Centre

SUBMITTED IN

PARTIAL FULFILLMENT OF THE REQUIREMENT OF

A DEGREE OF BACHELOR IN ARCHITECTURE

SUBMITTED BY:

DIWAS BHATTARAI

074BAE213

2080/02/04

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CERTIFICATE

This is to certify that this thesis entitled "Tharu Cultural Centre" at Kawasoti, Nawalpur, submitted by Mr. Diwas Bhattarai has been examined and has been declared successful for the fulfilment of the academic requirement for the completion of the Degree of Bachelor of Architecture.

....

Asst. Prof. Pratiksha Shrestha

(Thesis Supervisor)

Date: ....

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DECLARATION

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

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 Date: ....

ABSTRACT

The Tharu community, an indigenous group residing primarily in the Terai region of Nepal, possesses a rich cultural heritage deeply rooted in their history and traditions. However, in recent years, the Tharu culture has faced numerous challenges and threats due to factors such as urbanization, globalization, and cultural assimilation. In order to safeguard and promote the Tharu ethnic heritage, this thesis explores the concept and design of a Tharu Cultural Centre.

The main objective of this study is to develop a comprehensive understanding of the Tharu community's cultural significance and to propose an architectural solution that serves as a hub for preserving, showcasing, and educating locals and visitors about Tharu traditions, art forms, and way of life. This research draws upon a combination of qualitative and quantitative research methods, including interviews, surveys, and site visits, to gather data on the Tharu culture and its current state. This project focuses on the Tharu community of Kawasoti, Nawalpur. The present case of Tharu in Kawasoti, Nawalpur was studied to understand the need to preserve and promote their culture. As a result, the program was developed that could sustain within the Tharu community.

The findings reveal the urgent need for a dedicated Tharu Cultural Centre that can provide a platform for the Tharu community to express and celebrate their cultural identity. Furthermore, this thesis highlights the potential social, economic, and tourism-related benefits that the Tharu Cultural Centre can bring to the local community and the broader region.

In conclusion, this thesis emphasizes the significance of establishing a Tharu Cultural Centre as a means to safeguard and promote the Tharu ethnic heritage. By providing a dedicated space for preserving and sharing Tharu traditions, the Centre has the potential to revitalize and invigorate the Tharu community, while also creating a platform for cross-cultural understanding and appreciation. The findings and recommendations of this study can serve as a valuable resource for policymakers, cultural organizations, and architects interested in cultural preservation and community development.

ACKNOWLEDGEMENT

TABLE OF CONTENTS

LIST OF FIGURES

xi

CHAPTER I.   INTRODUCTION

1.1. Background
Culture

Culture is a sphere revealing human evolution. A human being cannot exist in an uncultured environment. Culture as an effective social power has always come under the spotlight. In specific areas of research, cultural status is mostly related to creative activities; however, it may also be researched in the sphere of education, promotion, and expression of sociality. Culture has been called *"the way of life for an entire society."* As such, it includes codes of manners, dress, language, religion, rituals, norms of behaviour, and systems of belief (Jary, 1991; Bauman, 2001)

Every society's fabric is woven with culture. It could also be somewhat unconscious, such as mealtime routines, time management, or family festivals. The culture of a given location is influenced by topographical features, climate, accessible resources, historical background, and surrounding influences, among other factors. That is why there are cultural differences from one location to the next. Cultural absorption and mingling occur frequently in a variety of circumstances.

Cultural Centre

A cultural centre is an organization, building, or complex that promotes the culture and art of some particular place, social group, or community.

One of the most important roles of community centres is developing the social intellectuality of individuals. Culture centres are not formal centres of community education, but at an informal level, they can fulfil their functions successfully. The activities of the cultural centres are needed for communities. Increasingly, recognition of indigenous people's intellectual properties has usefulness which could be developed into lucrative commodities.

Culture in Context of Nepal

Nepal is a very diverse country in cultures and traditions. There are 123 languages spoken as the mother tongue by 126 caste/ethnic groups reported in the census 2011. Nepali is spoken as the mother tongue by 44.6 % of the total population This multi-dimensional heritage encompasses the diversities of Nepal's ethnic, tribal, and social groups, and it manifests in music and dance; art and craft; folklore and folktales; languages and literature; philosophy and religion; festivals and celebration; foods and drinks.

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. Also, there is the trend of homestays that provides an opportunity to experience diverse cultures and landscapes while creating meaningful memories. Living with locals can help travellers have an authentic hands-on local travel experience. For cultural promotions, dance, and other forms of art are shown

to visitors. But, the cultural centre to promote the culture of a specific group, with public access and use is not properly established.

1.2. Statement of the problems
Nepal is a diversified country where members of numerous ethnic groups coexist in harmony. They share the same temples, celebrations, and even gods and goddesses. One of the Terai's most ancient tribes is probably the Tharus. The Tharu culture is extremely eco-friendly from east to west; all of this tribe's cultural customs and pursuits are firmly based on nature. They come from a variety of social groups with distinctive customs, ways of life, handicrafts, and architectural designs. Everyone aspires to better their living conditions as a result of modernization, and this has a stronger impact on the adoption of contemporary technology. Most individuals are urged to go to cities for a higher standard of living and to adopt different cultures.

Nawalpur, located in the Terai region of Gandaki province is a residence for various ethnic groups like Brahmin, Chhetri, Magar, Tharu, Bhojpuri, Gurung, and a few others. With the unplanned urbanization in this beautiful place, the emerging city is sure to be in a chaotic condition in a decade. The adoption of new building construction methods and also changing professions from agriculture have led to changes in culture, loss of traditional houses, and lifestyle. The use of concrete has made the traditional houses of those ethnic groups to the phase of disappearance. People are unaware of the traditions, culture, and previous lifestyles of their ancestors. Kawasoti, being the centre of all services and facilities in this emerging town is now a modern place without the life of traditional values. Mostly, the indigenous Tharu cultures and traditions are in a slow phase of disappearing.

1.3. Need identification/justification
The observation of the present context of the cultures of those various groups reveals the utmost need to reflect, preserve and promote their history. Old society developed its lifestyle, culture, and tradition by coping with the environment, climate, geographical location, and other factors. It is now important to preserve them.

A cultural centre is a key mechanism for preserving community relationships and group integrity, as well as restoring harmony and unity among community members. Until now, no such projects considering the public and their culture have been developed till now. Kawasoti is going to make a face of urban form from the village shortly, but it is missing its soul. This cultural centre aims to provide this missing part. The projects not only play important roles in preserving traditional culture and arts but also engage people with the environment and revive the cultural tradition. Tharu Culture Centre will feature a variety of open, semi-open, and private areas, as well as a variety of entertainment, to foster a positive interaction between people and their culture. Also, it helps in the economic upliftment of the community by fostering tourism.

1.4. Importance of research

In the growing city, the problem created by the shift of paradigm from traditional to modern is real. As we see in the valley, the indigenous Newars are struggling for their identity and the preservation of their heritage and cultures. This way, the terai has their own identity of culture. Awareness and immediate start for preservation are needed for those disappearing cultures so we know the history, the life of ancestors, and the science behind it.

The research sought to be beneficial for those who are interested to understand the life of various ethnic groups and their cultures. This can be helpful for those planners and responsible stakeholders to understand the importance of the culture and lifestyle of people residing nearby their design site.

1.5. Objectives
1. To design a built-up space that promotes capacity building,
2. To provide space for social cohesion where generational knowledge is passed.
3. To create a communal space to train/host/preserve Tharu's cultural activities and hence promote tourism

1.6. Methodology

To get the right results, the procedures we follow must be correct. For any project to be carried out the first step would be the selection of proper methodology. Following research methods will be pursued out of which required facts, data, codes of conduct, and standards will be gathered, analyzed, and employed in designing a cultural centre.

Literature review

For theoretical understanding, the information for the project is collected through the literature review of books, reports, articles, research works, and other related documents regarding the data of the project. The study has made it easy to understand what to know more from the case studies and what is required for the project.

Case studies

A case study helps to analyze the existing case and design a better space to solve the shortcomings of the existing buildings. The materials required for the research on main objectives and their physical transformation of the ideas into architectural spaces are studied from various national, regional, and international case studies related to the project.

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        SELECTION AND CONFIRMATION OF TOPIC
                          ↓
  IDENTIFY THE PROBLEM STATEMENT, OBJECTIVE AND SCOPE OF STUDY
                          ↓
                  LITERATURE REVIEW
                          ↓
                     CASE STUDY
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          DATA COLLECTION FROM CASE STUDY
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              DATA ANALYSIS AND RESULT
                          ↓
         DISCUSSION, CONCLUSION AND
                RECOMMENDATION
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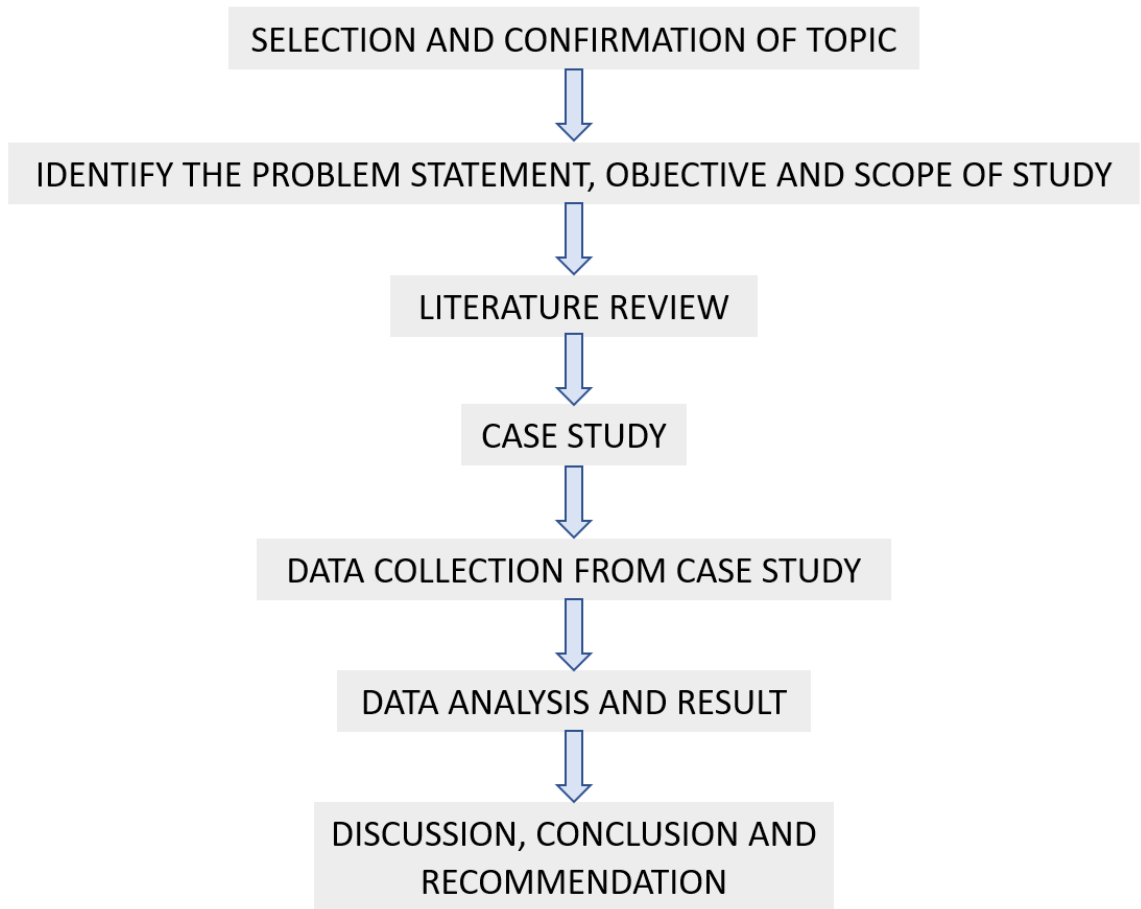
Tentative site

The proposed site for the cultural centre is in Kawasoti, Nawalpur, close to the densely populated area.

1.7. Expected output

The following are the expected results from my architectural thesis project:

- Promotion of the culture of indigenous people, ethnic groups, and their necessities.
- A common space for interaction and gatherings.

CHAPTER II. LITERATURE REVIEW

2.1. Demographic Study of Kawasoti, Nawalpur

Kawasoti, one of the 8 municipalities in Nawalpur District is the headquarters of Nawalpur District. Thus, government offices relating to the whole district are located here, so there is a trend of increasing population every year. Not only, but infrastructures and environment are favourable for settlement and agricultural activities. The south of Kawasoti lies the Chitwan National Park and Narayani River. It holds a population of 87,176 (2021 census) which is 1.3 times the population of 2011(62421 number of people).
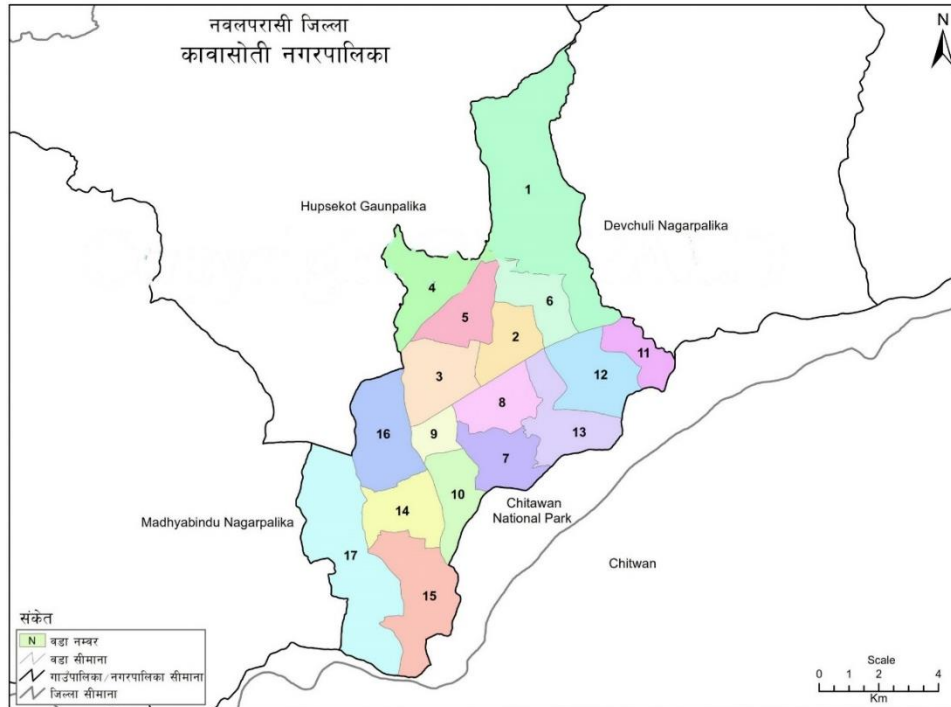
Figure 1 Map of Kawasoti Municipality
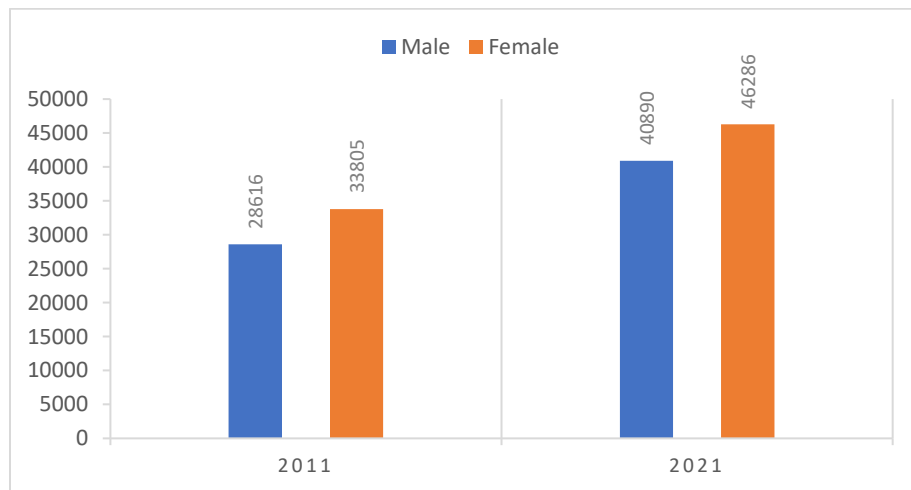
Figure 2 Male and Female Population

2.1.1. Population by Language Spoken

Mostly spoken language in Kawasoti is Nepali, which is spoken by 37,058 people. The Kawasoti has people who speak other languages, such as Tharu, Magar, Gurung, Newar, Maithili, Bote, Tamang, Bhojpuri, Hindi, Kham, Rai, Majhi, Kumal, Urdu, Darai, Sign Language, Bhujel, Limbu, etc.
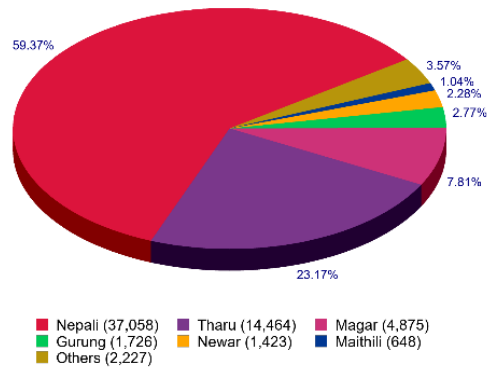
Figure 3 Population by Language Spoken

2.1.2. Population By Castes

According to the 2011 census conducted by the Central Bureau of Statistics (CBS), Kawasoti Municipality was inhabited by mostly the people of Brahmin - Hill caste with a total population of 17,872. Tharu holds the second-highest population of 15577. They are the indigenous people living in this terai for centuries. People of several other castes who live in Kawasoti are Magar, Chhetri, Kami, Gurung, Newar, Damai, Tamang, Kumal, Sanyasi/Dashnami, Thakuri, Bote, Sarki, etc.
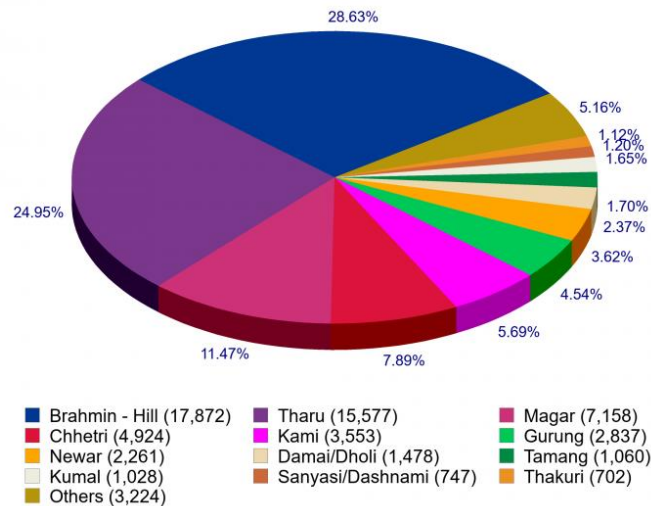
Figure 4 Population By Castes

2.1.3. Tharu

Tharu of Kawasoti, Nawalpur are called Nawalpuriya Tharu. The naming of Tharu is different as we move from west to east like Dangaura Tharu in Dang, Kochila, and Khas Tharu in Saptari, Morang, and Jhapa. (Bista, 1973). Traditionally, they have their life in agriculture and fishing. Now, they are involved in all professions as in other communities.

2.1.4. Non-Tharu

Observing the history of the Terai, the trend of migrating ethnic groups from the hills to the Terai can be seen. Tharu, the indigenous tribe of terai was in contact with the other communities. In the context of Nawalpur, the population is now mixed among most ethnic communities. Brahmin, Chhetri, Magar, Kami, Gurung, and many others are been residing.

Socio-Cultural Aspect

The settlement is mixed with every community. Traditionally, the settlement of Tharu villages can still be seen with the slow pace of mixing of other communities. Now, the settlement is based on economic factors. People with good economic backgrounds tend to reside in those areas with more access to public roads and other services. Tharu communities of Kawasoti, being a bit far from the East-West Highway is one of the factors that the other communities are not migrating on a greater scale. The incorporated acculturation has made communities of different backgrounds involved in the social and cultural activities of another to some extent. Also, in the employment sector, there is the involvement of all communities.

The commonly celebrated major festivals of Hindu background communities are Dashain, Tihar, Teej, Holi, Maghe Sankranti, etc. While the other indigenous background communities like Magar, Gurung, and Newar have their major festivals.

2.2. Tharu

2.2.1. History of Tharu

The Tharus are the oldest known inhabitants of southern Nepal. Tharu are the 4th largest ethnic group in Nepal and their population was censused as 6.6% of the total population of Nepal according to the 2011 census. Following the Unification in the late 18th century, Tharu became bonded labourers (Kamaiya) by the members of ruling families who received land in terai as birta. During the Rana regime, Muluki Ain(1984) was enforced by Junga Bahadur Rana. Tharu were categorized as 'Pani Chalne Masinya Matwali' (touchable enslavable alcohol drinking group and can be killed) together with other ethnic minorities. After the 1960s, when the hilly people migrated to Terai, Tharu were subjected to work as Kamaiya. Only in July 2000, the Kamaiya system was abolished.

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- 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. The Tharus are well versed in the manufacture of basketwork articles used for agricultural purposes, food preparation, and storing of clothes and personal objects. (Milliet-Mondon, 2016)

2.2.2. Tharu Village

Tharu villages are situated at a distance of about 20 minutes by foot from each other and are connected by a network of mud paths. In winter, they form an oasis of greenery amidst the parched rice fields. These units contrast sharply with the non-Tharu. The villages are closed on all sides with tall bamboo hedges. The number of houses varies from 15 to 20 and the construction pattern is identical- long low houses with an adjoining kitchen garden. (Milliet-Mondon, 2016)

Figure 5 Tharu people in the courtyard, in front of the Longhouse

Houses lie on both sides of the road, traditionally oriented north-south and running across the entire length of the settlement. Traditionally, one of the facades under the roof should face the east to bring prosperity to the family. The four wooden stakes which mark the cardinal points are supposed to keep prosperity within the precincts of the village. Villages differ from each other in the arrangement of community equipment such as wells, ponds for the animals, oil crushers, threshing grounds places of worship, and also in the number of constructions, the dimensions of the houses which vary according to the size of the family.

Figure 6 Tharu Villages in Kawasoti, Chitwan National Park Buffer zone in South

2.2.3. The Dwelling Unit - House

Based on data from 14 villages of the Dang Valley and taking into account a large number of houses, it was concluded that dwelling units are of identical design. The pattern of construction is the same though the building size can vary according to the number of inhabitants or following a scheme. (Milliet-Mondon, 2016) About the example of Tharu typical residential building in Gaurigon Village of Dang Valley done by Camille Milliet-Mondon, we can conclude that the dwelling unit can be divided into 3 categories;

an open space giving on to the road, the dwelling building which occupies the entire width of the plot, an enclosed courtyard, and a kitchen garden.

The open spaces in front of the dwelling building communicate with each other but the courtyard and gardens are approached through the house and are enclosed by cactus hedges on the sides and bamboos at the end of the garden.

Figure 7 Traditinal Tharu House and its Surroundings

In the dwelling, the ancestral spirits or 'Kul Deuta' are symbolized by a large decorated silo placed at the northeastern angle of the house in the 'deurhar' or 'dura kunti', the room for the deities. In case of illness, the guruva mediates with the 'Kul Deuta' also on the occasion of birth marriage, or funeral in the family. (Milliet-Mondon, 2016)
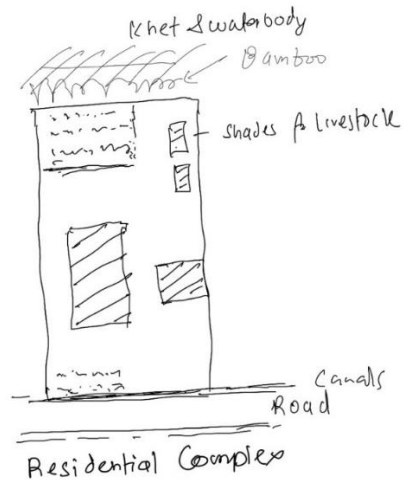
Figure 8:Traditional Tharu House and its Surroundings in Taruwa Nawalpur

Variations in House Dimensions

The size of the house is proportional to the number of inhabitants, the dwelling building being capable of sheltering 4-25 people. However, the three-dimension height, width, and length vary. The height of the building above the platform is determined by the height of the framework poles placed on the axis. The figure shown shows the survey of three different dimensions of a building by Mondon. Generally, whatever the size of the building, the hall or the bahi occupies only a single space left between 2 rows of poles, whereas the cattle shed is on the left and the dwelling area and equipment are on the right.
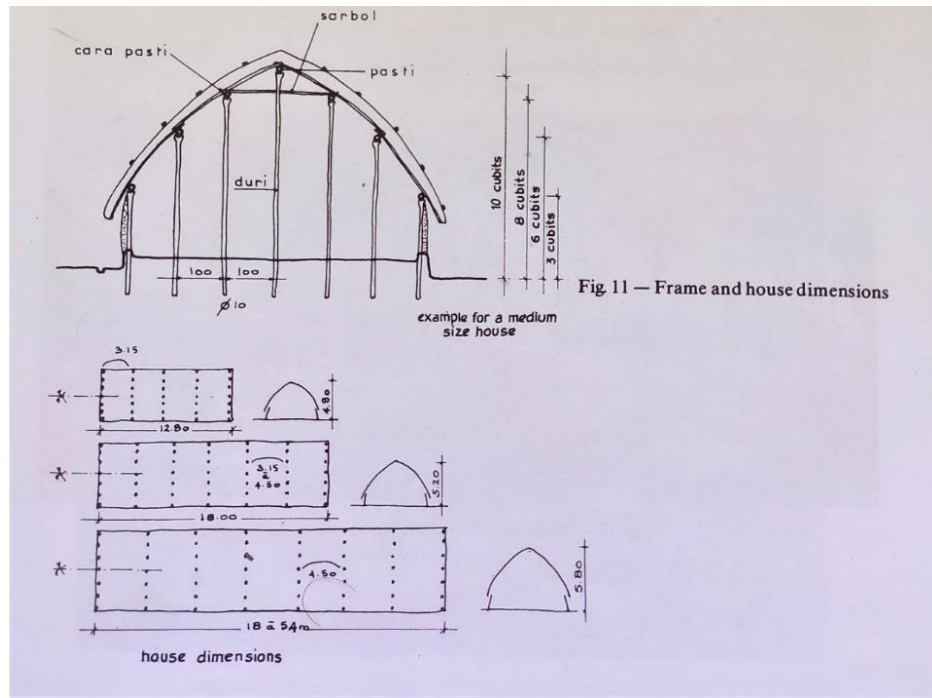
Fig. 11 — Frame and house dimensions
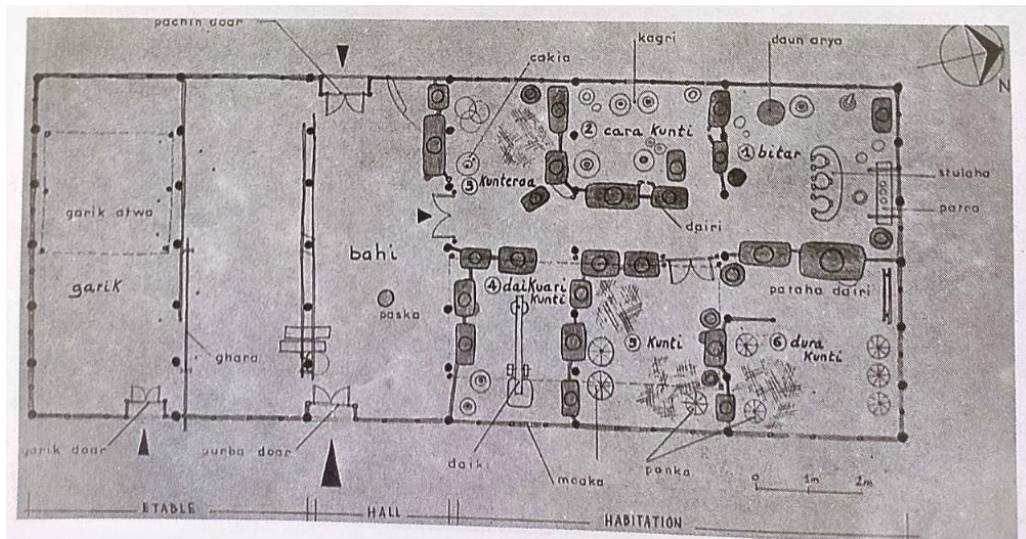
Figure 9Tharu Long House Plan

The figure showing the plan of Tharu bada ghar shows the following:

11

- Garik: Cattle shed
- Garik Atwa: The raised floor of the Cattle Shed
- Ghara: bamboo barrier
- Bahi: hall
- Paska: a place for the game
- Kunteroa: cell near the entrance, a place for meals
- Dai Kuari Kunti: cell for grain work containing the husking machine
- Cara Kunti: cell for storing liquids
- Kunti: cell
- Bitar: Kitchen
- Dura Kunti: room of the deities, place of worship of ancestors
- Stulaha: Mud furnace
- Patna: Wooden Bench
- Pataha dairi- silos of the ancestor (Milliet-Mondon, 2016)

Purba door is the entrance door while as pachin door is the door in the west connecting the back courtyard and kitchen garden.

Case of Traditional Houses in Kawasoti Nawalpur

A residence in Rataul, one of Tharu village in Nawalpur was studied to understand the spatial organization.
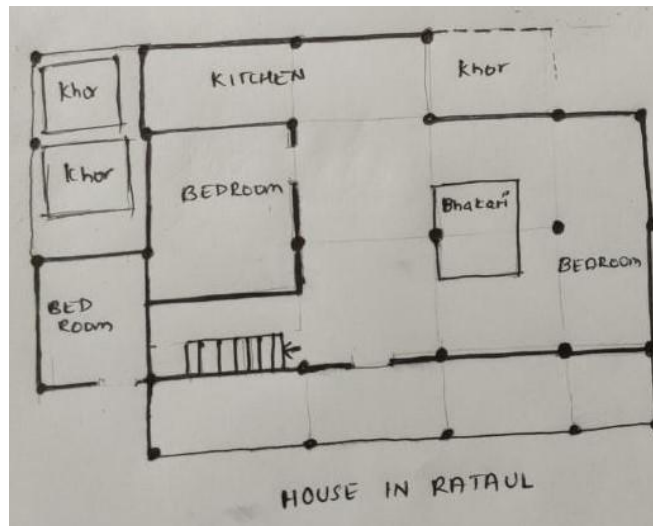
Figure 10 House in Ratau
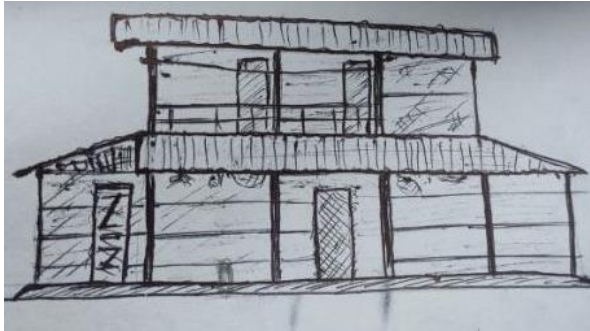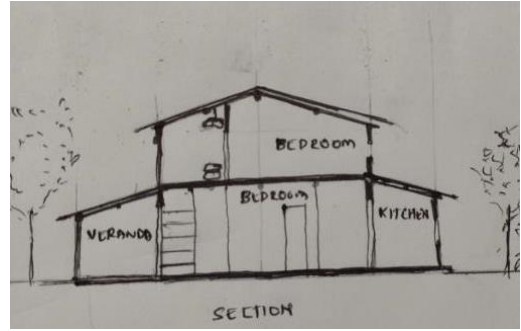
(a)   (b)

Figure 11 (a) Elevation and (b) Section of House in Rataul
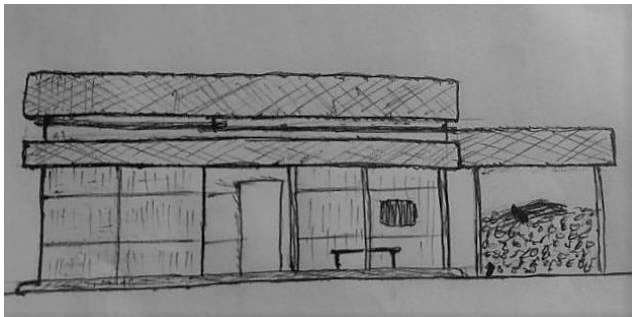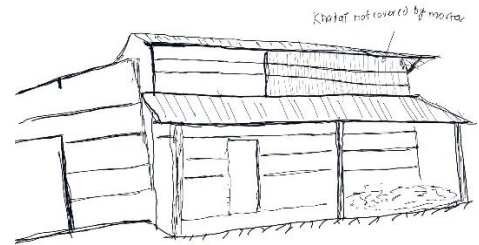
(a)   (b)

Figure 12 a,b Front Façade of Houses in Rataul

Landscape Element

In the landscape of Tharu village. The houses are seen in a linear pattern. Behind, the house, the kitchen garden, shed for livestock, tools of fishing and agricultural products were commonly observed. While visiting, the Machan(tower for alarming and terrifying wild animals) was observed in Khet. The pigeon house with a separate tower or embedded in the house side facade was observed.

(a)   (b)

Figure 13 (a) Machan in khet in Rataul   (b) Pigeon House

13

Following images shows the observations from the site and surroundings visit.

<center>(a)   (b)</center>

Figure 14 (a) Traditional and modern house (b) Machan in Khet in Magarkot

<center>(a)   (b)</center>

Figure 15 (a) Fish pond near site (b) Street and Tharu houses

<center>(a)   (b)</center>

Figure 16 (a) Waterbody near site (b) Cooking tool to dry fish

Figure 17 (a) Woman fishing and kids swimming (b) Tower for an elephant ride

2.2.4. 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. 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

2.2.5. 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:

- Two-way slope 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.

2.2.6.   Tharu Culture, Tradition, and Lifestyle

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 people 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.   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.

3.   Major Festivals:
1.   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 'गण' 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)
2.   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)
3.   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)

4. 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 away in a nearby river or pond. (Shrestha, 1333 Nepal Sambat)

4. Dance:

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

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

3. 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.

4. 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.

(a)   (b)

Figure 18 (a) Sakhiya Nach (b) Laruhawa Nach

5. 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.

6. 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.

7. 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.

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. Tharu foods can be classified into ordinary food and special foods which are consumed in daily life and feasts and festivals, respectively.

Figure 19 Tharu foods during Maghi

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:

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)

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)

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.

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.

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)

2.3. Considerations in designing Cultural Centre

2.3.1. 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)

2.3.4. Link and Place Theory

Figure 20 Link and Place

As a Link, a street provides a conduit for through movement; it forms an integral part of the whole urban street network and other, more specialised, urban transport networks (e.g. on-street light rail network, or cycle network). Link users may travel by a variety of modes, from private cars or trucks to buses, bicycles or on foot. Their primary requirement is to follow a continuous, linear path through the street network, with minimum disruption and a seamless connection from one street to the next, from the beginning to the end of their journey. In general, they are seeking to minimise travel time along each section of the street.

In contrast, as a Place, a street is a destination in its own right: a location where activities occur on or adjacent to the street. A Place user is someone wishing to make use of certain facilities that are provided on or alongside that particular street, and will usually access them on foot. While such people are normally classified as 'pedestrians', they are not passing through the area – they are spending time in the area, and maybe carrying out a wide variety of activities (e.g. shopping, working, eating, talking, waiting, resting. (Jones, 2011)

2.3.5. Public Space

To have effective design and management of public spaces, it is essential to understand the role that those places play in people's lives, and why spaces are used or ignored. Places are proposed, built, and assessed with assumptions about what should be done in them. Functionally, the usefulness of a site provides a simple explanation of its success. Most people go to public spaces for specific reasons. It reflects many aspects of life, especially urban life.

Five types of Needs in public space

    a. Comfort

Comfort is a basic need. The need for food, drink, shelter, or a place to rest when tired all require some degree of comfort to be satisfied.

    b. Relaxation

Relaxation is distinguished from comfort by the level of release it describes. It is a more developed state with the body and mind at ease. A sense of psychological comfort may be a prerequisite of relaxation – a lifting of physical strains, moving the person to a sense of repose.

c. Passive Engagement

Passive engagement with the environment could lead to a sense of relaxation but it differs in that it involves the need for an encounter with the setting, although without becoming actively involved. This category includes the frequently observed interest and enjoyment people derive from watching the passing scene. This kind of encounter is indirect or passive because it involves looking rather than talking or doing.

d. Active Engagement

Active engagement represents a more direct experience with a place and the people within it. This function has several components. First, although some people find satisfaction in people-watching, others desire more direct contact with people whether they are strangers on a site or members of their group. Public spaces also play a crucial role as a setting for socializing with relatives, neighbours, acquaintances, and friends. Also, the complex cultural and economic factors cannot be ignored.

e. Discovery

Discovery is the fifth reason for people's presence in public spaces and represents the desire for stimulation and the delight we all have in new, pleasurable experiences. Exploration is a human need. Forcing people to remain in a confined, bare setting is a form of torture or punishment. For children, being deprived of stimulation can permanently stunt their intellectual and social development. It is the opportunity to observe the different things that people are doing when moving through a site. (Stephen Carr, Mark Francis, 1992)

2.3.6. Community Participation

It is commonly associated with the idea of involving local people in social development. it contributes to the sense of belonging. Community participation can take place during any of the following activities:

- Needs assessment:
  - Expressing opinions about desirable improvements, prioritising goals, and negotiating with agencies.
- Planning:
  - Formulating objectives, setting goals, and criticising plans.
- Mobilising
  - Raising awareness in a community about needs, establishing or supporting organisational structures within the community.
- Training

- o participation in formal or informal training activities to enhance communication, construction, maintenance, and financial management skills.
- Implementing
  - o Engaging in management activities; contributing directly to construction, operation, and maintenance with labour and materials.

2.3.7. Sustainability

Sustainability means meeting our own needs without compromising the ability of future generations to meet their own needs. In addition to natural resources, we also need social and economic resources. Sustainability is not just environmentalism. Embedded in most definitions of sustainability we also find concerns for social equity and economic development.
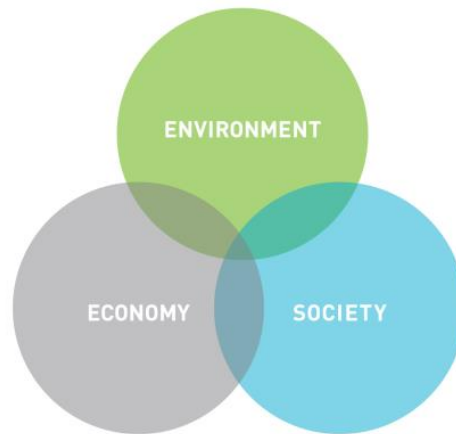
Figure 21 Three Pillars of Sustainability

Three pillars of Sustainability

Environmental Sustainability

Ecological integrity is maintained, and all of earth's environmental systems are kept in balance while natural resources within them are consumed by humans at a rate where they can replenish themselves.

Economic Sustainability

 Human communities across the globe can maintain their independence and have access to the resources that they require, financial and other, to meet their needs. Economic systems are intact and activities are available to everyone, such as secure sources of livelihood.

Social Sustainability

Universal human rights and necessities are attainable by all people, who have access to enough resources to keep their families and communities healthy and secure. Healthy

communities have just leaders who ensure personal, labor, and cultural rights are respected and all people are protected from discrimination. (McGill University, n.d.)

2.3.8. Biophilic design

Biophilic design is the practice of reconnecting people and nature within the built environment. Biophilic design involves translating elements derived from nature, into design outcomes that ultimately improve the health and wellbeing of occupants and foster a connection with nature.

The Fourteen Patterns of Biophilic Design: Nature in the space

- Visual Connection with Nature
- Non-visual Connection to Nature
- Non-Rhythmic Sensory Stimuli
- Thermal & Airflow Variability
- Presence of Water
- Dynamic & Diffuse Light
- Connection with Natural Systems
- Biomorphic Forms & Patterns
- Material Connection with Nature
- Complexity & Order
- Prospect
- Refuge
- Mystery
- Risk/Peril (The biophilic designer, n.d.)

2.4. Spaces in Cultural Centre

2.4.1. Administration/Office

An office is a place or room in an organization or business where clerical and administration works are done.

Considerations.

- Space Planning – Required Functional Requirements
- Building Fabric – Entry zones should clear visibility to nearby office, reception, and lobby areas.
- Floors – suit adjoining office and corridor spaces with the outdoor environment
- Ceilings- special treatment for arrival experience, Min 2400mm above, 2700+ preferred.
- Openings:
- Windows: limited visual privacy inside adjoining offices.
- Doors: glazed doors suitable for entry zones, side lights suitable for entry zones.
- Signage: Indicate entry to adjoining office
- Ventilation: Natural ventilation, and provision of conditioning

- Illumination: 300-500 lux desirable

Spaces in the office:

Primary Spaces: Workstation, personal office and meeting rooms

Support Spaces: Reception areas, resource centres, reprographic centres
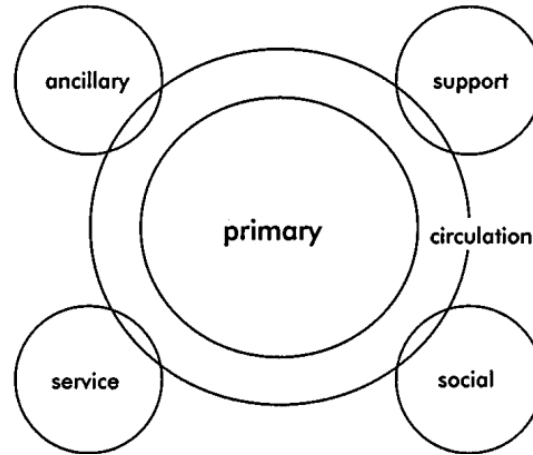
Figure 22 Types of Space in the Office

	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
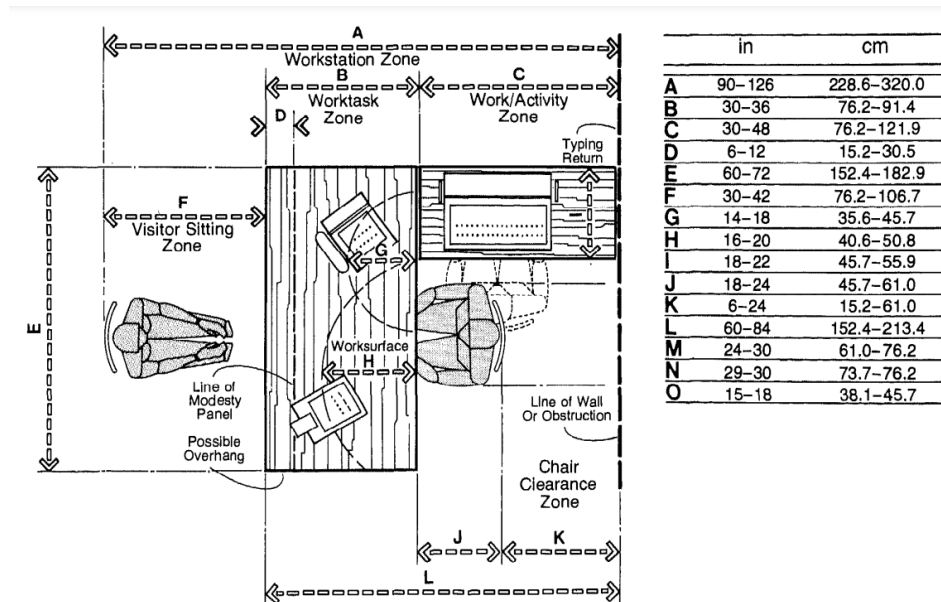
Figure 23 Basic Workstation with Visitor Seating

2.4.2. Space for Performing Arts

Dabali- Cultural Performance 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 24 (a) Dabali In UCV (b) Tharu Dance in Open Courtyard

Figure 25 Tharu Stick Dance

2.4.3. Workshop

Workshops are spaces designated for the production and repairing of manufactured goods to take place. They are much smaller in scale relative to large industrial factories and common among residences for supporting craft hobbies and small businesses.

A workspace includes three basic units of accommodation:

• Workspace area
• Storage for tools, raw materials, finished products, equipment, workers' belongings, etc.
• Services and amenities such as staff room, wash room, utility room, etc.

Basic Considerations for workshops:

- Siting
  This will depend on the type of work being done. Light work associated with graphics, silver and jewellery, photography and fashion may be placed on a higher

floor; metal, wood and plastics workshops, where large machines may be installed, are best sited on the ground.

- Health and Safety
Good workshop layout must conform to work flow and safety. Provide ample space round machines and for gangways to allow necessary movement without incursion on a workspace.
- Ancillary accommodation
This will include offices for teaching staff, a common room (consider for both staff and students), toilets and possibly showers.

clay store	clay preparation	modelling throwing	decoration glazing	firing
bulk day to day bins easy access for delivery	pugmill wedging bench sink bins shelves cupboards	benches wheels racks damp cupboard	benches sink cupboard racks	kiln racks
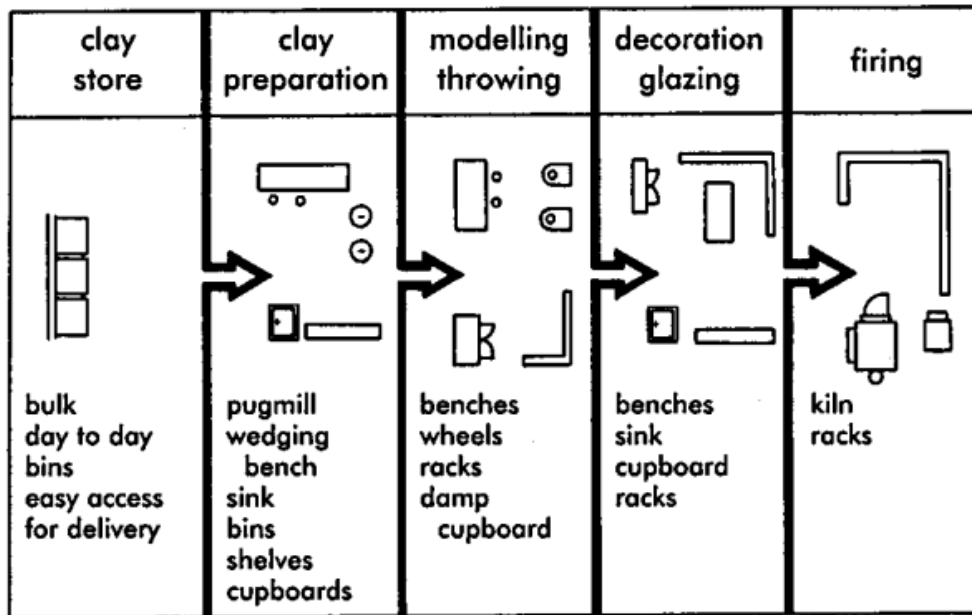
Figure 26 Sequence of operation: clay modelling and pottery

(a)   (b)
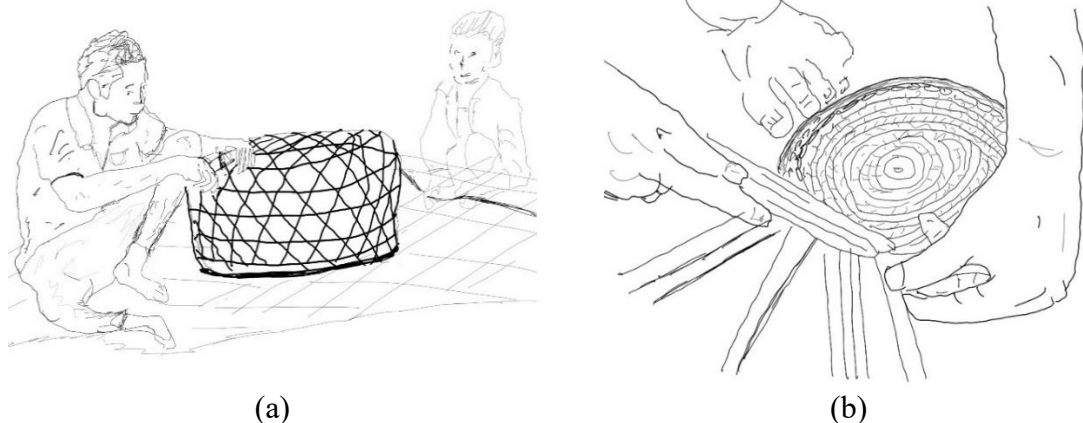
Figure 27 (a) Basketery, Making Taap(in local language) (b) Weaving chakati using straw

27
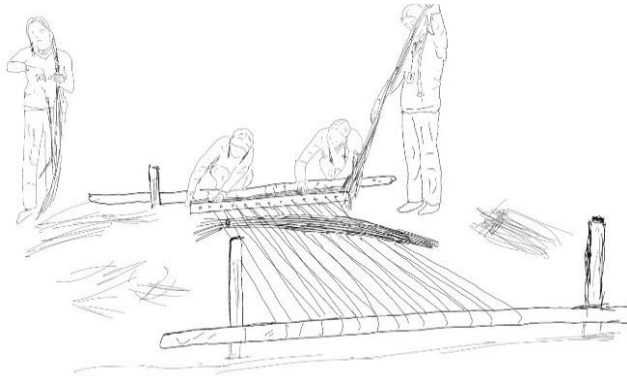
(a)   (b)

Figure 28 (a) Gundri Making (b) Pottery in Bhaktapur

2.4.4. Accommodations-Guest Rooms

Considerations for guest rooms

- Internal room dimensions are dictated by the market requirements, standards of the hotel, and the number and sizes of beds and furniture.
- Floor-to-ceiling heights are usually 2.5 m (minimum 2.3m), lowered to 2.0m in the room lobby to allow for mechanical services.
- The most critical plan dimension is room width: 3.6m (12ft) is efficient, an owing a wardrobe in the lobby and furniture along the party wall.
- With staggered wardrobes and minimum space, the width can be reduced to 3.4m.
- For a narrow frontage, the minimum room width is 3.0m.
- Increased room width allows more spacious impressions and alternative bed and bathroom layouts.
- Room length is usually more flexible and may extend to a balcony or angled window for a directional view. (Pickard, 2002)
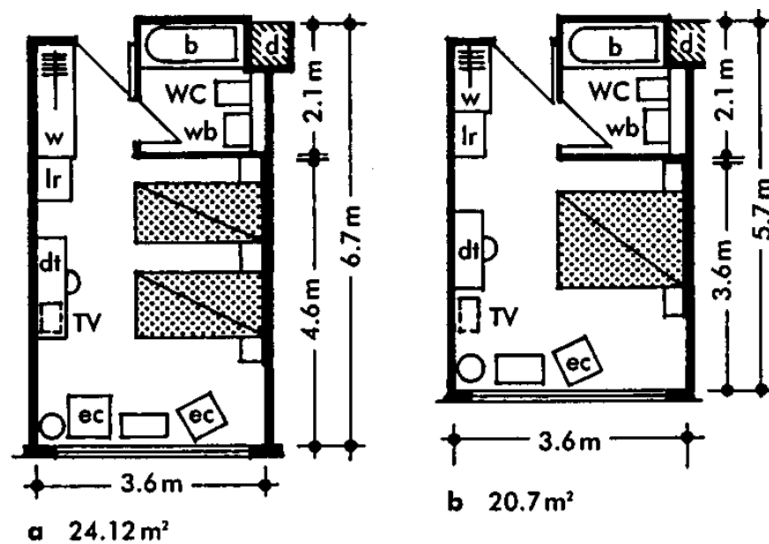
Figure 29 Different bedroom sizes

2.4.5. Restaurants

The restaurant in the cultural centre aims to provide services for visitors and accommodations. The restaurant will provide especially, the guests with local foods and drinks.

Space requirements

- Speciality or themed restaurant: 2m2 per person
- Traditional Restaurant: 1.3-9 m2 per person

The basic layout of the restaurant is shown below:
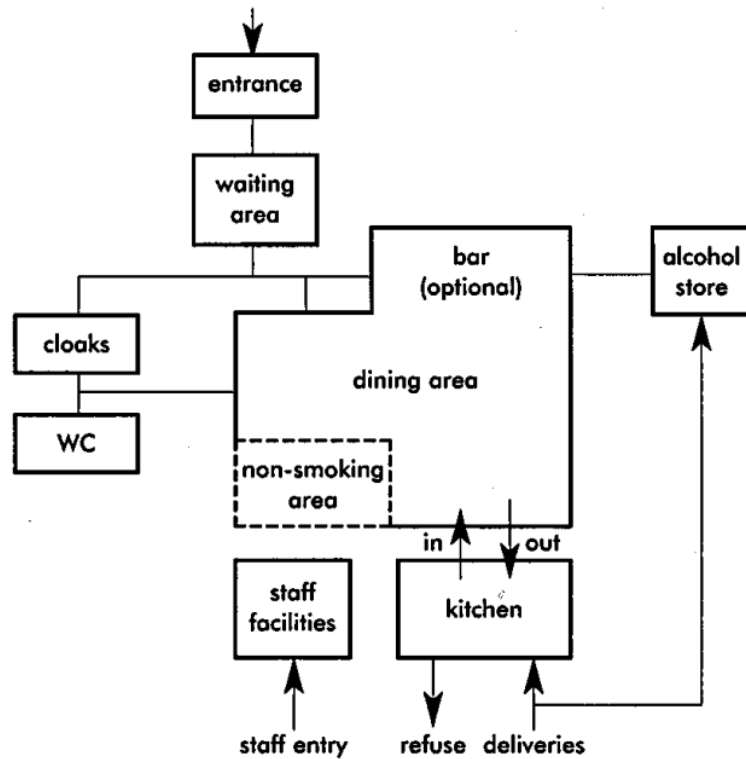
Figure 30 Circulation Diagram in Restaurant

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

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

Drawings
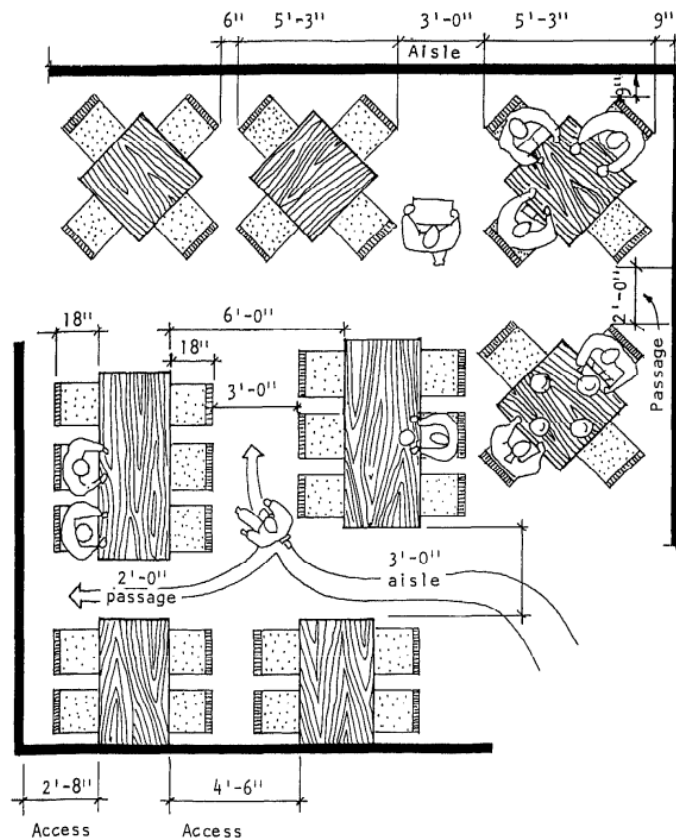
Figure 31 Seating dimension considerations in Restaurant

CHAPTER III. CASE STUDIES

3.1. Indigenous And Tharu Museum

3.1.1. Project Brief:

Location: Kawasoti-15, Nawalpur
Date of Establishment: 2068 B.S.
Target Population: Local and Foreign Tourists

Figure 32 Museum Interior

3.1.2. Objective:

- To understand the traditional lifestyle of Tharu.
- To understand the relation of the building with the site surroundings.

3.1.3. Introduction:

The Tharu museum is in Godar village of Kawasoti built by locals with the realization to promote their traditional culture.

3.1.4. Site and Surroundings:

The site is on residential and agricultural land within Tharu village. This is targeted mainly at tourist visiting Tharu village and Chitwan National Park. The visitors hold their stay in a nearby Homestay run by the community, Tharu Lodge and resort on the Narayani River bank.

3.1.5. Planning and Designing

The building complex includes 4 blocks, three are museum blocks, and one block is for Curator's residence. Proper care and utilization are lacking.
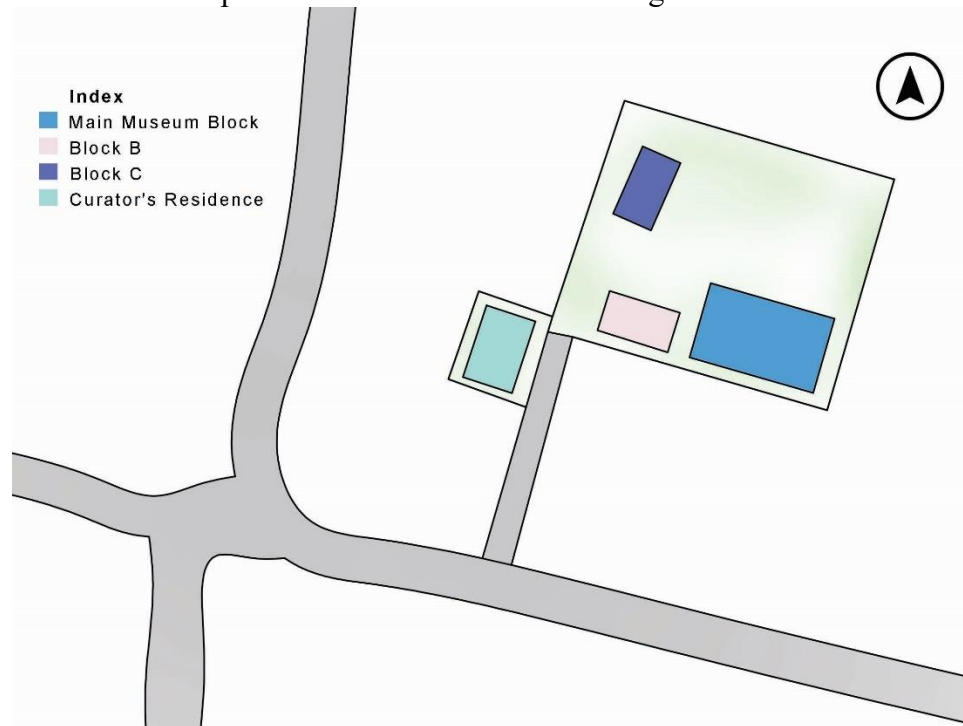
Figure 33 Site Plan

3.1.6. Environment:

The internal environment of the site is mostly landscape, though not maintained. The Museum blocks have tools outside of it too for demonstration of their traditional lifestyle. This case study was mainly focused to study materials of Indigenous Tharu. The considerations of hot climate were not made. The use of CGI sheets made the building hotter, though big windows are placed.

Photo Galleries:

| (a) | (b) | © |
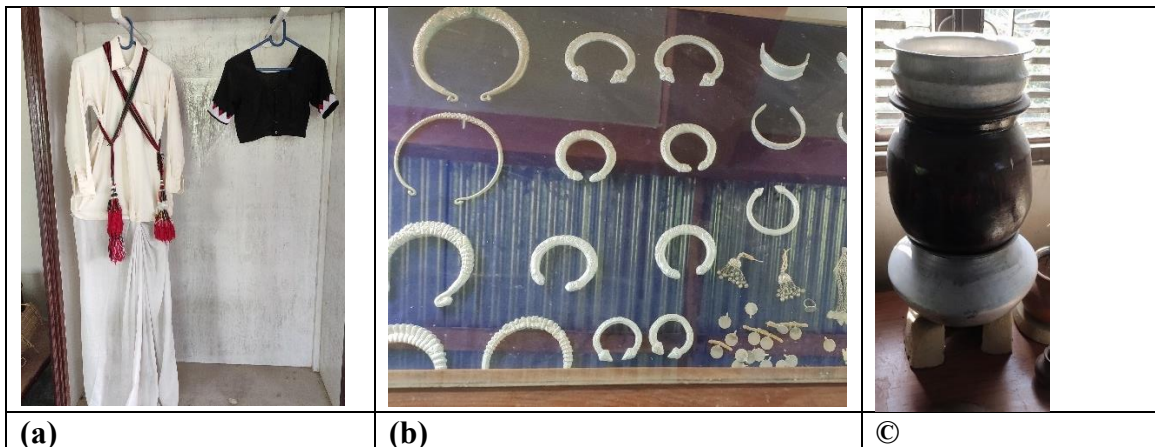
Figure 34 (a) Tharu Dress (b) Ornaments (c) Brewery Utensil

<div align="center">(a)   (b)</div>

Figure 35 (a) Traditional cart model (b) Storing tools

Figure 36 Various agricultural and fishing tools

3.1.7. Inferences:

- Naming and the purpose of a tool in signage help, but to understand better explanation is needed.
- Building Irresponsive to climate.
- Lack of care and management of the museum.

3.2. Tharu Community Lodge

3.2.1. Project Brief:

Location: Kawasoti-15, Nawalpur
Land Area: 7540 sqm
Target Population: Domestic and Foreign Tourists

Figure 37 Tharu Community Lodge

3.2.2. Objective:

- To understand how a lodge, opened at an individual level contributes to cultural promotion,
- To understand the cultural activities on the site.

3.2.3. Introduction:

Tharu Community Lodge is a private property run by locals in the Tharu village of Kawasoti with the objective of economic improvement through reviving their own disappearing culture. Such a pattern of income generation is common in this Tharu village, where there are numerous lodges and homestays, some offering cultural performances for guests.

3.2.4. Site and Surroundings:

The site is in the Tharu community which is near Narayani Riverside and Chitwan National Park. The surroundings are residential buildings and fields. Many lodges and homestays are located in this area.

3.2.5. Planning and Designing
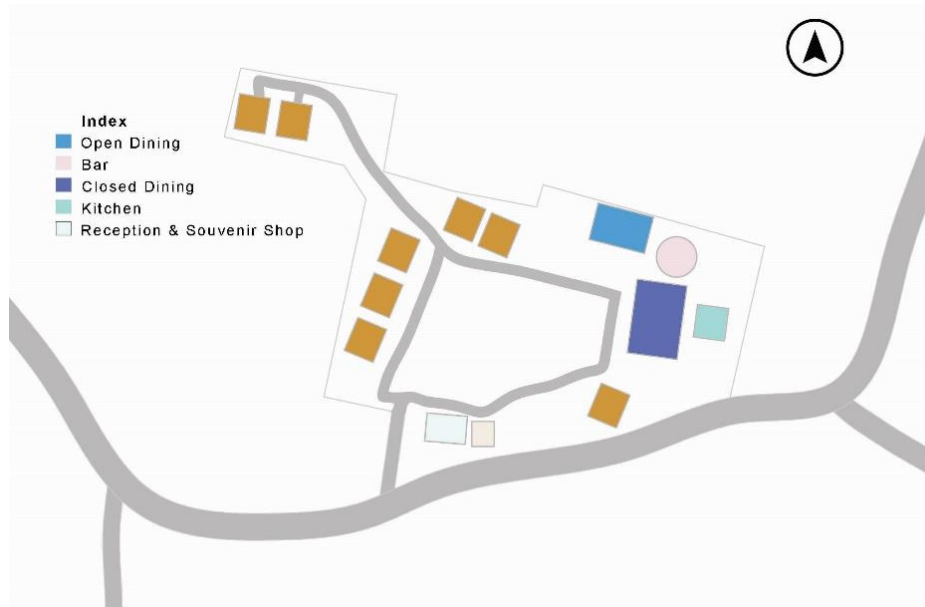
Figure 38 Site Plan

Different blocks of various purposes are placed at distances. There is a mixing of landscape parts and buildings that shows the vernacular architecture of Tharu to some extent. The walls are painted with mud and decorations are made showing the lifestyle of Tharu. The windows are surrounded by their traditional pattern of art on a wall. The shape is the opposite side of the thumb finger of the hand when the fist is made. The building blocks are located at the periphery of the site leaving the courtyard in the centre, which is the place for different cultural performances. In the dining hall, the windows show the pattern of a wheel of the traditional cart which beautifies the building. The pigeon nest and cart in the landscape evoke the traditional life style. The building exposes traditional materials like roof tiles, wooden posts, mud-coloured walls and false ceilings made of local materials. The tiles from above and the false ceiling from below hide the CGI sheet roof.

Figure 40 Wall Art

Figure 39 Pigeon Nest in Courtyard

Figure 41 False ceiling

(a)   (b)

Figure 52 (a) Souvenir Shop and counter (b) Traditional Tiles- Khadai

(a)   (b)

Figure 54 Wall art and Cart wheel as window (b) Bar area

(a)   (b)

Figure 42 (a) Dining Hall (b) Guest Rooms

3.2.6. Facilities

- Small Souvenir Shop
- Semi-Open and closed dining
- Guest Houses (8 blocks with 2 rooms in each)
- Cultural Performances for guest (pre-notice and fee is necessary)

3.2.7. Inferences:

- Building and landscape elements of the Tharu background make it local.
- Cultural performances for visitors help to preserve their art.
- Landscape plays an important part.

3.3. Unnati Cultural Village

3.3.1. Project Brief:

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

Figure 43 Aerial View of UCV

3.3.2. Objective:

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

3.3.3. Introduction:

Unnati Cultural Village sits amidst the idyllic setting of the Devchuli & Barchuli Hills of Nawalpur, Nepal.

3.3.4. Site and Surroundings:

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. (UCV, n.d.)

3.3.5. 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. (UCV, n.d.)

Figure 44 Master Plan of UCV

3.3.6. Facilities/Activities:

The following activities take place in UCV:

Art Gallery
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. (UCV, n.d.)

Figure 45 Art Gallery

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. (UCV, n.d.)

Figure 46 Amphitheatre

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. (UCV, n.d.)

(a)   (b)

Figure 47 (a) Live Kitchen (b) Bada Ghar- Dining

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. (UCV, n.d.)

Figure 48 Dabali, Outdoor Dining and Live Kitchen

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. (UCV, n.d.)

Figure 49 Art Hote

Bodhi Van- Artists Residency

Bodhi Kunja provides a space for artists to be inspired and express themselves with freedom and creativity. (UCV, n.d.)

Figure 50 Artist Residency

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. (UCV, n.d.)

Figure 51 Athithya hall

Ceramic Workshop and Souvenir Shop

<p align="center">(a)   (b)</p>

Figure 52(a) Ceramic Workshop (b) Souvenir Shop

3.3.7. Inferences:

- Reinterpretation of traditional elements to suit the modern context,
- Sustainable development of traditional livelihood programs and employment for locals.
- Environment responsive design.
- Expensive for domestic tourists.
- No links and easy access for the public.

3.4. Community Centre in Cam Thanh

3.4.1. Project Brief

Location: South East of Hoi An, Vietnam
Date of Establishment: 2015
Land Area: 550m2
Target Population:
Architects: 1+1>2 Architects (1+1>2 Architects, 2015)

Figure 53 Community Centre

3.4.2. Objective:

- To understand local material use responsive to environment and community,
- To know about passive design ideas used,

3.4.3. Introduction:

Despite having such great potential due to naturally diverse ecology and local handicraft business, Cam Thanh remains a poor area with a low living standard. The lack of connection between Cam Thanh and the old quarter – the centre attracting both domestic and foreign tourists has made it difficult to promote tourism and foster the local economy. (1+1>2 Architects, 2015)

Cam Thanh is also affected by climate change's consequences: heat-wave, typhoons and rising sea levels. These have raised the need for a physical platform acting as a community hub to provide linkage between the local and different social, scientific and economic groups which are interested in strengthening the connection with Cam Thanh, creating more tourist opportunities and contributing to the sustainable development of the commune. The Cam Thanh Community Centre was designed to fulfil this requirement. (1+1>2 Architects, 2015)

(a)   (b)

Figure 54(a) Aerial view (b) Entrance and Outdoor Surrounding

A tourism destination in the middle of Vietnam with an ancient quarter and breathtaking seashore, Cam Thanh is known for its mangrove forests, crisscrossed waterways, coconut forests and small looming villages. The cultural centre is located in the commune's core. (1+1>2 Architects, 2015)

3.4.4. Planning and Designing

Inspired by the traditional courtyard of the ancient house, areca garden and featured vines of the rural area, Cam Thanh Community Centre – the embodiment of Hoi An culture – creates a symphony of shades and voids. It includes 3 buildings providing a continuous zoning flow. By using flexible partitions, the space can be modified to adapt to different requirements: meetings, exhibitions, and events, combined with a library, training courses and cafeteria. (1+1>2 Architects, 2015)
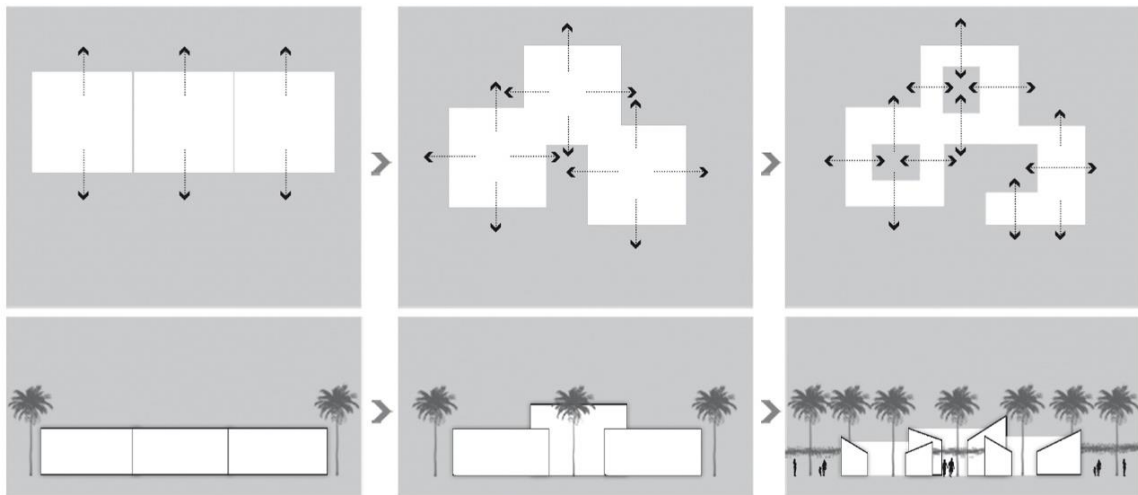
Figure 55 Form Development
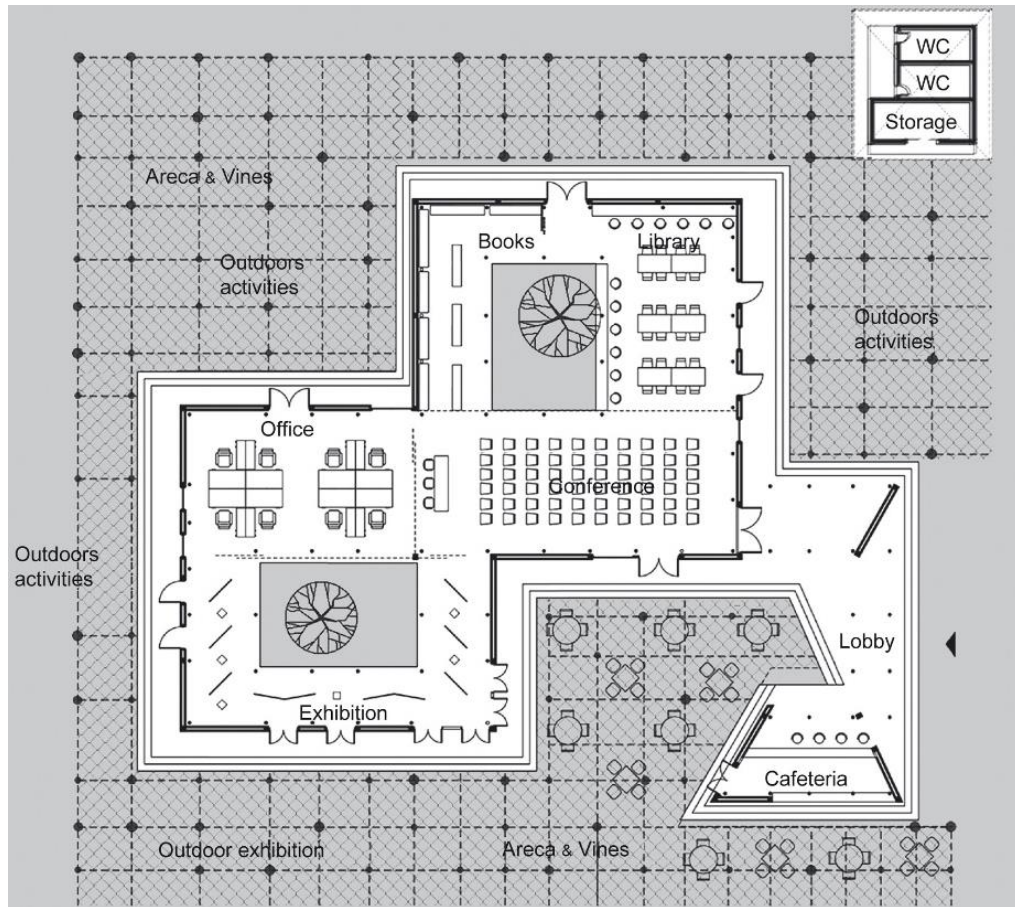
Figure 56 Ground Floor Plan
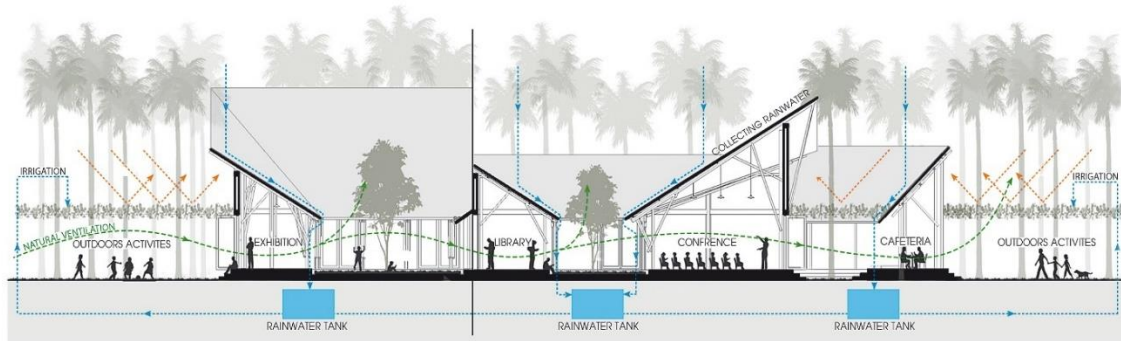
Figure 57 Section showing storm water drainage and air circulation

Besides protecting against the sun, pitched roofs facilitate the collection of rainwater in tanks placed in the courtyard, and give the living spaces a ceiling height good for hot air to stratify and move in.

Passive Design

The open courts resemble Hoi An's ancient quarter houses, using convection ventilation.

- Vines hanging across the areca garden, together with the coconut leaves roof, can drastically reduce solar radiation and provide shade.

- Surrounding walls, made of double-layer adobe brick, create air cushions and insulation. (1+1>2 Architects, 2015)

Material and Construction

The structure is simple with the efficient usage of local resources and materials. Strong wood columns and bamboo frames support the large and sloping-in roof, collecting rainwater for reuse in irrigation and daily activities. Thick walls and slope roof structures can help the building withstand windstorms. (1+1>2 Architects, 2015)

3.4.5. Environment:

Besides, the built environment, The complex also has a playground, organic vegetable farm, areca garden and sports field. (1+1>2 Architects, 2015)

3.4.6. Inferences:

- The development of this Community house shapes the architectural identity of new development areas in Hoi An.
- The single building provides various programs to help social interactions and economic benefits.
- Various passive design techniques are used, making the building sustainable.

3.5. Rohingya Cultural Memory Centre

3.5.1. Project Brief:

Location: Bangladesh
Date of Establishment: 2022
Land Area: 501m^2
Target Population: Rohingya Community
Architect: Rizvi Hassan

Figure 58 Rohingya Cultural Memory Centre

3.5.2. Objective:

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

3.5.3. 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 community and 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)

(a)   (b)

Figure 59(a) Weaving (b) Pottery

(a)   (b)

Figure 60 (a) Community Hall (b) Interior

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

3.5.4. 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)
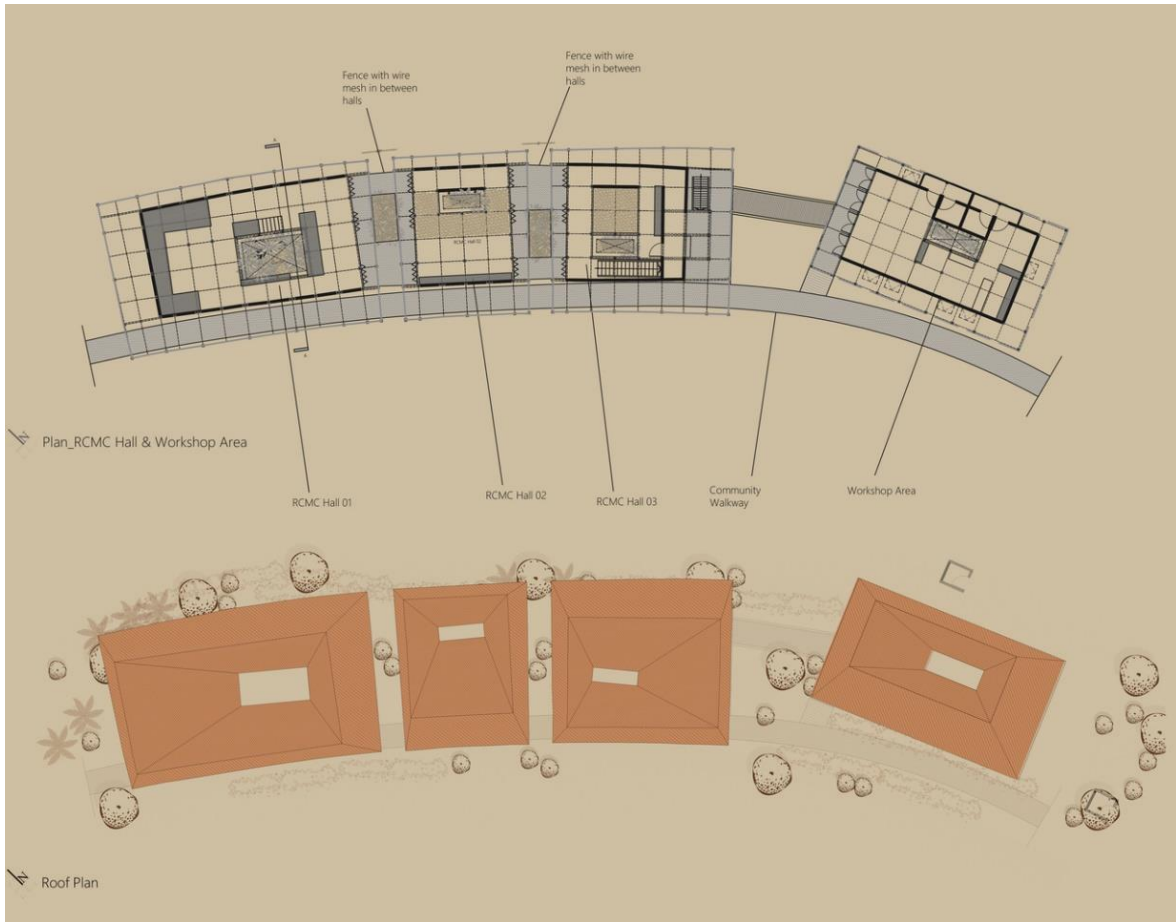
Figure 61 Ground Floor Plan and Roof Plan

The extended shades allow free movement and spaces around the main hall for the community and users, offering more engaging spaces. (Hassan, 2022)

(a)   (b)

Figure 62 (a) Courtyard (b) Corridor

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, 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)

3.5.5. 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.

3.6. Pani Community Center, Bangladesh

3.6.1. Project Brief:

Location: North Bengal Bangladesh
Date of Establishment: 2014
Land Area: 910m^2
Target Population: locals (toddlers to elder people)
Architect: Schilder Scholte architects

Figure 63 Pani Community Center

3.6.2. Objective

- To understand the space used in the community centre.
- To understand the use of tall bamboo as a structure.

3.6.3. Introduction

The building serves as a community centre for folks from the region of, the north Bengal town of Rajarhat. The drive was to encourage locals to become aware of the basic principles of sustainability and durable building concepts. In effect close to zero electricity or fossil fuels were used during construction and other necessities required for erecting this building. Thus realizing an environmentally friendly building that contributes to the community in a significant way. (SchilderScholte architects, 2015)

3.6.4. Site and surrounding

The site is surrounded by vegetation and a pond within the community.

3.6.5. Planning and designing

The plan (79x105 ft) is East-West oriented and consists of two volumes under a large bamboo roof construction. The classrooms and lavatories are positioned on the South side and the workshop with the store on the North side.

Figure 64 Ground Floor Plan

The composition of volumes housed under one big U-shaped roof creates interspaces that are open for public use. On the ground floor, there is a covered plaza with adjacent collective lavatories. At the first level, on top of the workshop, there is a freely accessible assembly floor for public meetings. This part of the building is connected by a footbridge coming from the classrooms. Bicycle frames are made in the workshop and the final assembly of the bikes takes place at the backside under the roof. The front of the workshop faces the main road and houses the bicycle shop. (SchilderScholte architects, 2015)

11 assembly floor
12 foodbridge
13 classroom
14 storage + water tank
15 landing
16 storage + water tank
17 classroom
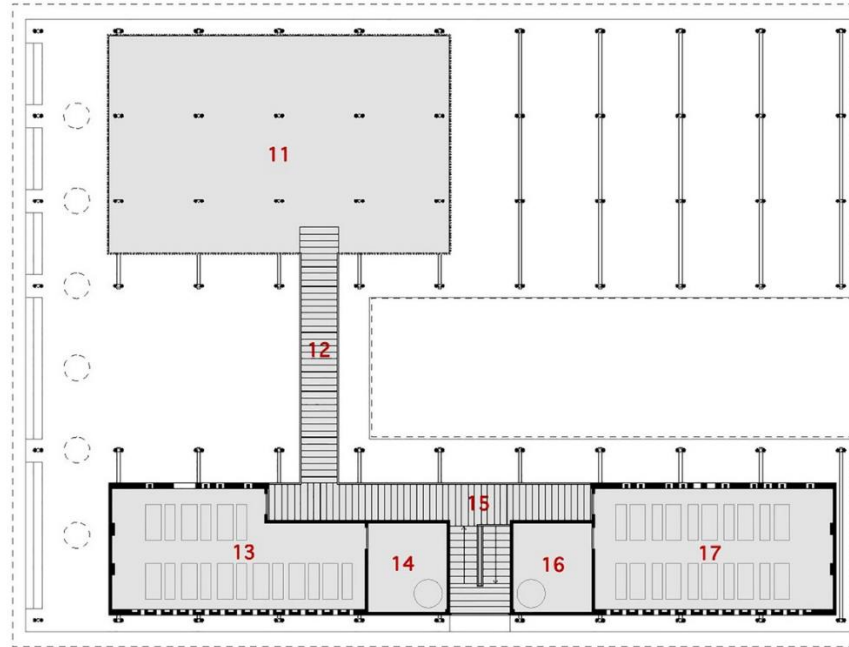
Figure 65 First Floor Plan

The lifting of the roof high above the volumes has achieved a considerable reduction of heat build-up within the spaces. Further cooling is provided by cross ventilation, surrounding vegetation and the nearby pond. (SchilderScholte architects, 2015)

Figure 66 Section

Bamboo, hand-shaped brick, Mango wood, reused steel, local mortar and wafer-thin recycled corrugated panels are the main materials used in the building. (SchilderScholte architects, 2015)

Sustainable Features

From a bioclimatic point of view, the orientation of the building allows for emphasis on the natural cross ventilation. The roof of the building is suspended to both sides (East and West) providing shade, protecting the biggest openings against rain and collecting rainwater into the courtyard. (SchilderScholte architects, 2015)

(a)   (b)

Figure 67 (a) Connecting Bridge (b) Nearby pond

The dimensions are chosen with great care, in such a way that direct sunlight into the classrooms is minimized while still providing optimal daylight illumination. Also, the use of nearby ponds for natural drafts to cool the classrooms was taken into account in the design. (SchilderScholte architects, 2015)

Some biomimicry elements are used in this building. The brick-built volumes are all plastered and partly painted. The interior walls are coloured light blue, a hue that flies shun. The splay of the classroom windows is painted yellow, a hue that specific insects dislike. Yellow has opted as the dominant colour. It refers to the flowers of the mustard plant, a crop that colours large parts of the country from December to January. Grey and black are the other shades, which in turn refer to the colour of the Bengal earth before and after rainfall. (SchilderScholte architects, 2015)

3.6.6. Inferences:

- Creating interactive open public spaces within U-shaped roofs.
- Lifting of light CGI roof with the use of Bamboo as structure.

3.7. Anandaloy Center, Bangladesh

3.7.1. Project Brief:

Location: Rudrapur, Bangladesh
Date of Establishment: 2019
Land Area: 253m^2
Target Population: Disable people and women involved in textile production.
Architect: Studio Anna Heringer

Figure 68 Anandaloy Center

3.7.2. Objective

- To understand the bamboo and mud structure
- To know the service that the building gives to the community

3.7.3. Introduction

'Anandaloy' means 'the place of deep joy' in the local dialect of Bangla/Bengali. The Anandaloy Building hosts a centre for people with disabilities combined with a small studio for the production of fair textiles. The concept was also not only to provide treatment for people with disabilities but also to provide an opportunity to learn and work in that building and engage in the community there.

3.7.4. Site and Surrounding

The site is within the client's property, where there are other public buildings. The whole site is surrounded by fields and residences.

Figure 69Site map showing Anandaloy Center and surroundings

3.7.5. Planning and designing

The two-storey building contains a therapy centre for people with disabilities at ground level and a fair-trade textile manufacturing workshop for local women on the first floor. below a big ramp that connects the two levels, protective cave-like spaces provide settings for recreation or solitude.

As a visible sign of this inclusion, a big ramp winds up the first floor. It is the only ramp in that larger area. It dances in curves, the ramp winds playfully around its inner structure.
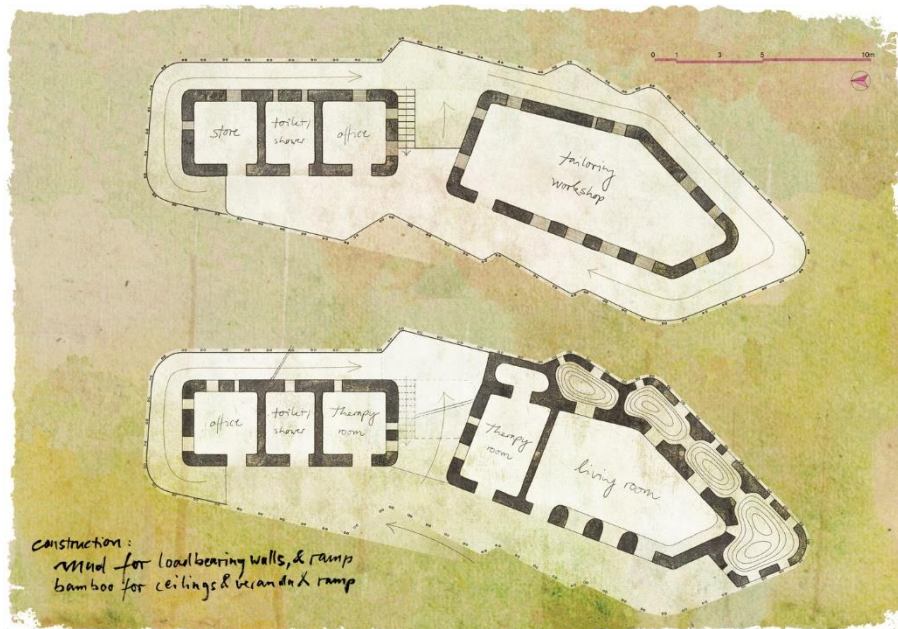
Figure 70 Ground and First Floor

The materials used in construction are mud and bamboo. Using a particular mud technique called cob, no formwork was needed for the erection of walls. The curve walls were easy to make as straight walls.

Figure 71 Building Elevation

(a)   (b)

Figure 72 (a) Building facade and surroundings   (b) Corridors on the first floor
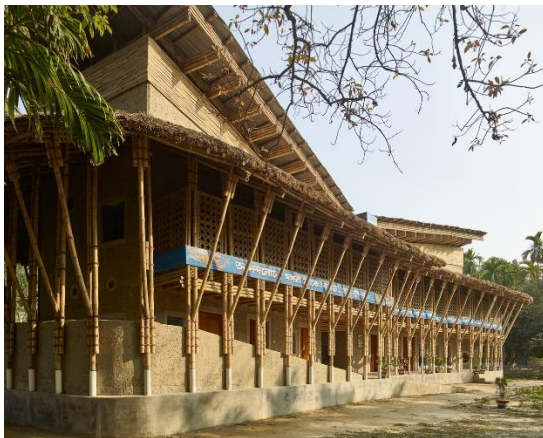
(a)   (b)

Figure 73 (a) Bamboo and Rammed earth in structure (b) Textile Products

3.7.6. Inferences:

- Inclusive design and space for community interaction,
- Design of caves in the classroom- a place for recreation and exploration.

3.8. Cultural Center, Sinthian, Senegal

3.8.1.   Project Brief:

Location: Sinthian, Senegal
Date of Establishment: 2015
Land Area:1048 m^2
Target Population: Locals and artists
Architect: Toshiko Mori

Figure 74 Sinthian Thread Centre

3.8.2.   Objective

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

3.8.3.   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.

(a)   (b)
Figure 75 (a) Outdoor Playground (b) Sinthian Cultural Center

3.8.4. Site and Surroundings

1	WATER RESERVOIR	6	SOLAR PANELS
2	GUEST HOUSE	7	NEW PATH
3	DIRECTOR RESIDENCE	8	EXISTING PATH
4	GUARD HOUSE / STORAGE	9	MEDICAL CLINIC
5	PARKING	10	HOUSING

Figure 76 Site Plan

3.8.5. 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.

1	FLEXIBLE WORKSHOP
2	BREAKOUT SPACE
3	KITCHEN
4	BEDROOM
5	BATHROOM
6	GATHERING SPACE
7	WATER CANAL
8	COURTYARD
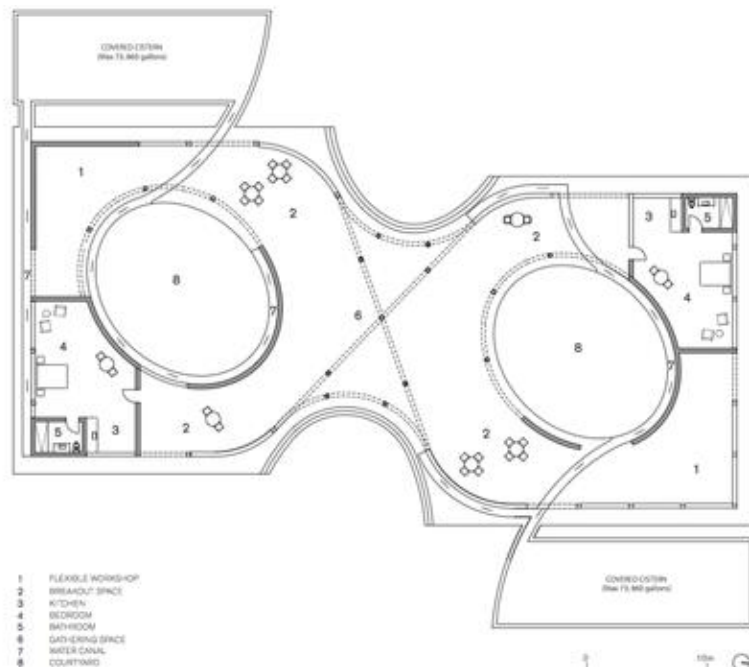
Figure 77 Ground Floor plan

The building is constructed using local materials and local builders have shared their sophisticated knowledge of working with bamboo, brick, and thatch.
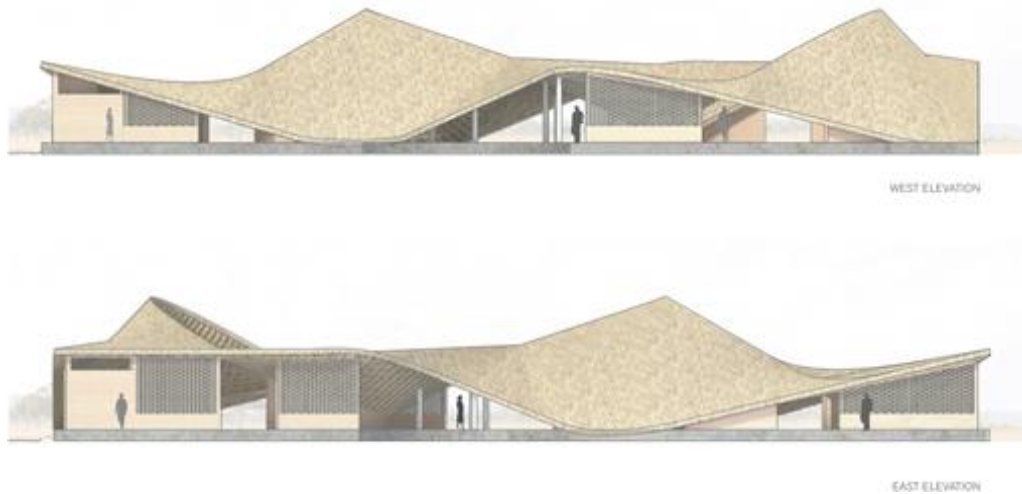
Figure 78 East and West Elevations

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.
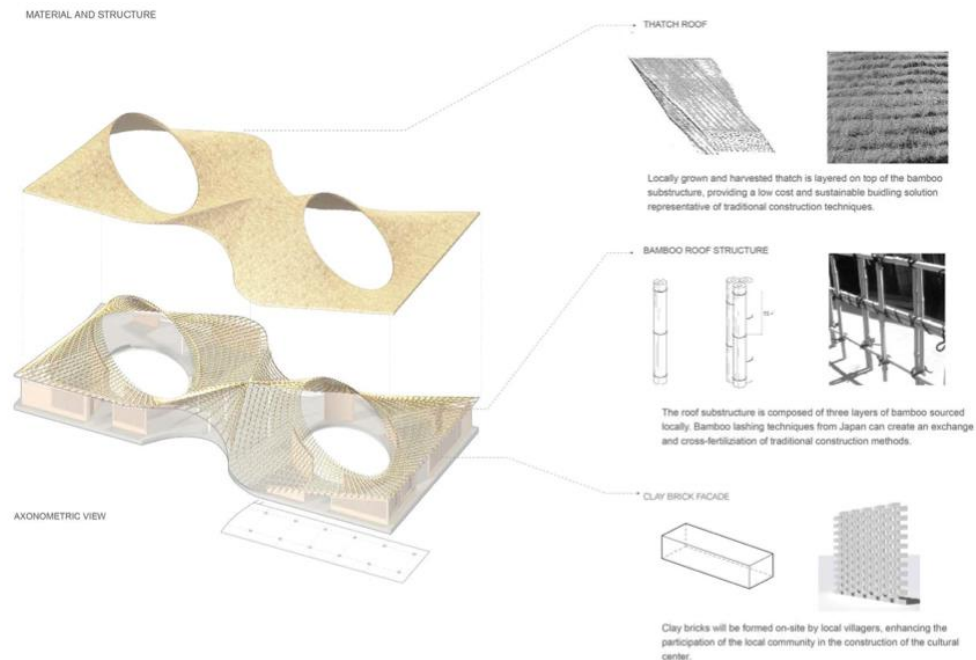
Figure 79 Use of thatch, bamboo and clay

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

Figure 80 Rain Collection from the roof

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

Figure 81 Perforated Walls for ventilation

3.8.6. Inferences

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

3.9. Comparative Analysis from the Case Studies

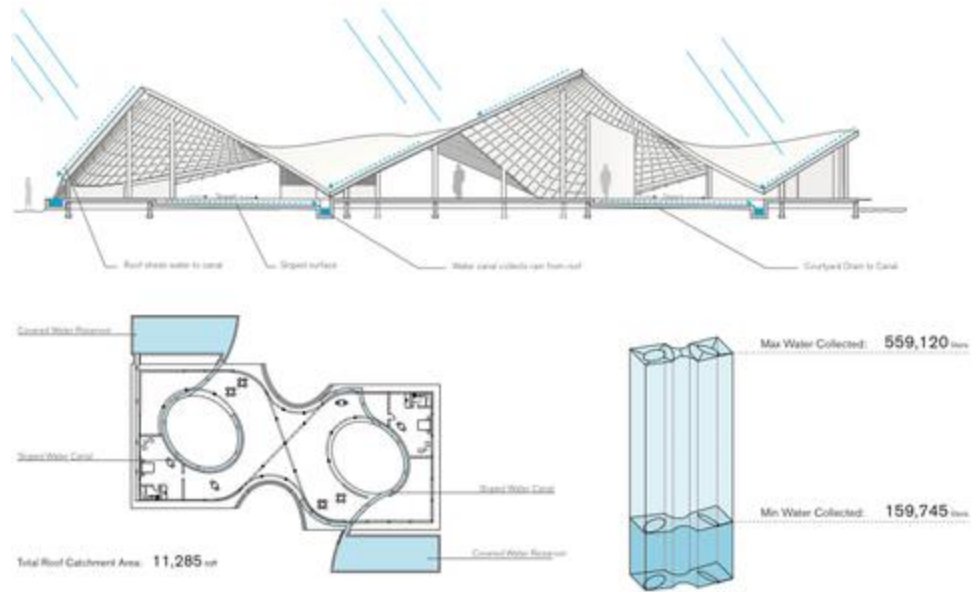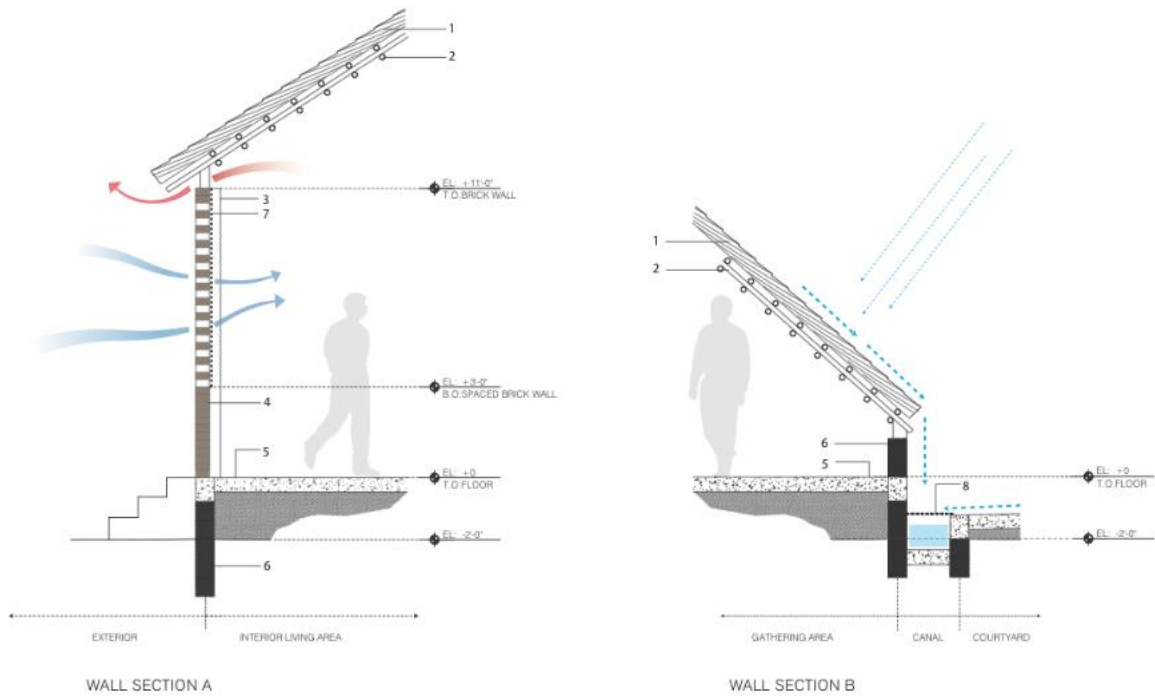| Parameters for Analysis	Sinthian Thread Arts Cultural Centre	Unnati Cultural Village	Rohinga Cultural Memory Centre	Anandaloy Center	Cam Thanh	Pani Community Centre
Site Context	Within a remote village of Sinthian, open to all	Within rice field, highway on entrance side in Harkapur	Within Refugee camps of Rohinga Community	Rudrapur Village, Bangladesh	Around mangrove forests, crisscrossed waterways, coconut forests and small looming villages.	
Project Vision/ Concept	space for gatherings and cultural exchange	to revive cottage industries and indigenous livelihood practices.	preserve identity of community and mental well-being.	Inclusive design and space for community interaction	community hub to provide linkage between the local and different social, scientific and economic groups	Community center for all aged groups
Programs(no need)	Flexible workshop Exhibition Space Breakout space Courtyard Artists' residency	Art Gallery, Amphitheater, Restaurant Accommodations, Artist's residency Ceramic workshop	Weaving, Pottery, carpentry, embroidery, Community Hall	Therapy center for disabilities, tailoring workshop	meetings, exhibitions, events, training courses and cafeteria. Using flexible partition	Bamboo bycycle Workshop and classroom and gathering space
Spatial Character	Spaces under same roof, proper lighting and air circulation with two courtyards	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 designed for disabled, Small caves in classrooms.	3 blocks with courtyard and continuous zoning flow, Design of spaces in shades and voids	Volumes under U shaped roof creating interactive public spaces
Landscapes	Agricultural and sports space outside the building area	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	Handmade school and training center	open courts for convection ventilation, vegetables farm, areca garden together with playground and sport field.	Surrounding vegetation and nearby pond.
Pedestrian Movement and Funtional Relationship	Entry from all 4 sides, with open connectivity	Separate blocks, linked by graveled pathways	Movement through linear corridor axis and open access within halls	Big ramp and staircase connect to upper floor,	Voids and doors making multifunctional space access from all sides	Easy movement in inner corridor in u shape, open to corridor
Target Group	Sinthians and foreign artists	Tourists	Rohinga Community	People with disabilities and workplace for women	Community	Toddlers to aged locals
AE:Built Language (Structure/Materials)	Parametric roof of thatch+bamboo, rammed earth blocks, concrete beams and columns	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	Bamboo, rammed earth	Cocoanut leaf for roof, timber, concrete, adobe brick and bamboo	Bamboo, brick, thin concrete floors,
Climatic considerations	Rain water collection, thermal comfort through courtyards, openwork wall and	Graveled pathways	perforations help ground water recharge,		Double layer walls, vines helping in reducing solar gain	Biomimicry elements, Roof

61

CHAPTER IV. SITE ANALYSIS

The intended site for Tharu Cultural Centre is in Taruwa, Kawasoti, Municipality, Nawalpur. Kawasoti is the place of indigenous Tharu and non-Tharu who later migrated from the hills. There are Tharu villages in these plains of Kawasoti.

4.1. Site Description
The site is located in Kawasoti, Ward 07. It is within the area of residential and agricultural lands.

Lumbini lies 107km west of the site, while the Sauraha, Chitwan National Park lies 55km east of the site.

- o Site Location:
    - o Latitude: 27.628518° N
    - o Longitude: 84.128988° E
- o Altitude: 528' above sea level. 161m
- o Area: 6250 m^2
- o Shape: Irregular
- o Orientation: Towards South

Figure 82 Site and Surrounding

4.2. Bye-Laws

The site lies in Kawasoti Municipality of Nawalpur District. The bye-laws for the project is taken from 'Basti Bikas, Sahari Yojana Tatha Bhawan Nirwan Sambandhi Aadharbhut Nirwan Mapdanda, 2072' provided by the Ministry of Urban Development.

- Building Type: Community Building
- Maximum Ground Coverage: 50%
- Floor Area Ratio: 1.5
- Width of the road: 8m and 6m
- Set Back: 3m

4.3. Site Surroundings

Figure 83 Site, Water Bodies and Tharu Settlement

East:

- o Immediate: Road Running N-S and agricultural land
- o Distant: Agricultural land

West:

- o Immediate: Road and Settlement
- o Distant: Residential and agricultural land in Magarkot

North:

- o Immediate: Kulo and agricultural land
- o Distant: Dense Settlement Area of Kawasoti 08

South:

- o Immediate: Agricultural Land and a few Tharu Houses
- o Distant: Tharu Village of Saand and Badruwa

Figure 84 Residential buildings near site within 2 minutes

Current Use

The site lies in agricultural land behind the residential areas which are used to grow paddy during monsoon while in winter, some grow mustard or else, it remains barren.

Figure 85 Site Section through N-S
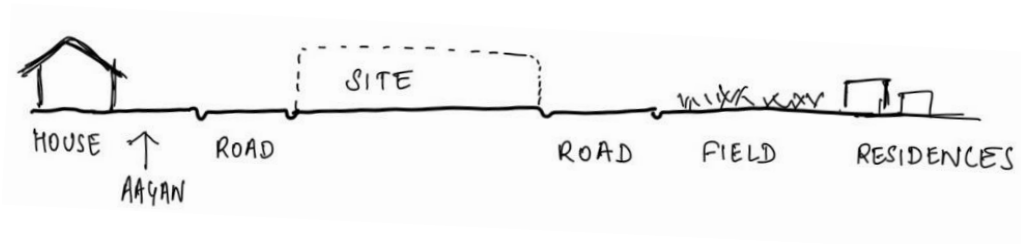
Figure 86 Site section through E-W

Figure 87 Photo showing Kulo and Site (left) (b) South road and site

Sun Path through the Site

Figure 88 Solar Path in Site

4.4. Access and approach
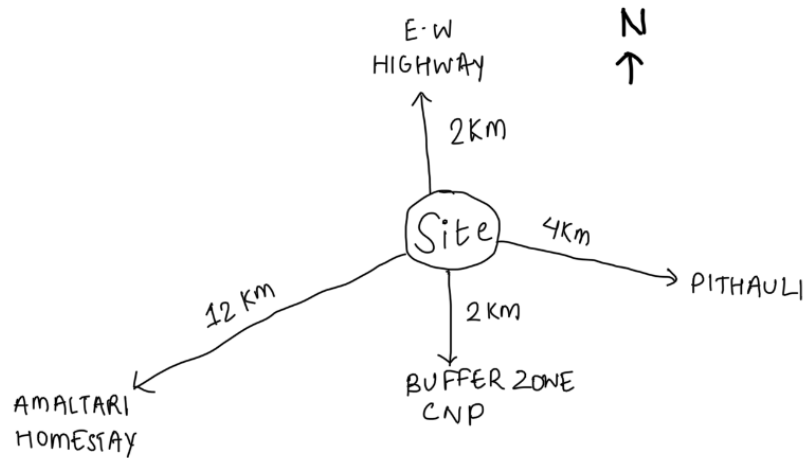
Figure 89 Nearby access to primary locations

4.5. Physical Features
Topography

- The site chosen has a flat terrain.

Vegetation

- The entire site is used as a paddy field while it remains barren in winter.

4.6. Utilities and services

Water Supply:

In Kawasoti, the water is supplied through pipelines by Kawasoti Khanepani Tatha Sarsafai Upabhokta Sansthan. It provides water from the tap during the morning and evening.

Sanitation and Drainage:

There is no separate provision for a drainage facility in Kawasoti. However, the traditional route of kulo, where water flows during monsoon is located on the northern road.

Electricity and telecommunication:

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

Schools and colleges
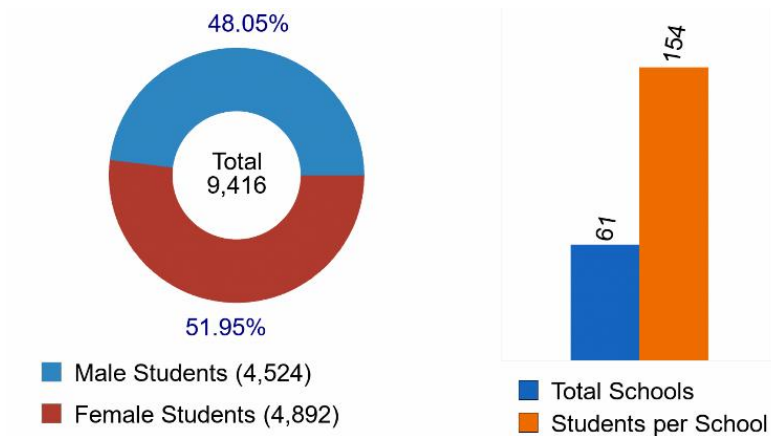
Figure 90 No of Schools in Kawasoti (2017)
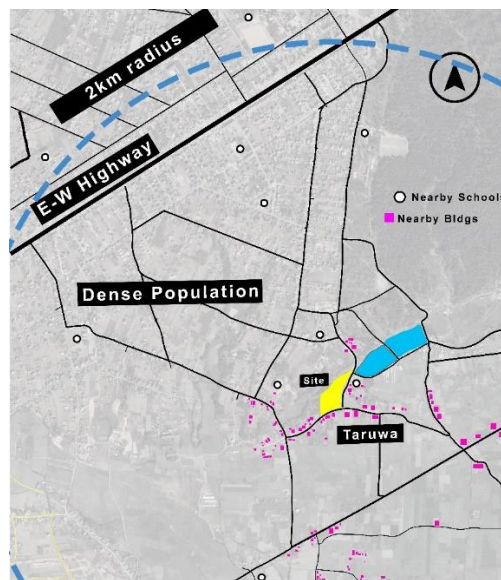
Figure 91 Site and Surrounding Schools within 2 km

4.7. Climatic Analysis

Kawasoti is in the northern hemisphere. The climate is warm and temperate in Kawasoti. The summers here have a good deal of rainfall, while the winters have very little. This climate is considered to be Cwa according to the Köppen-Geiger climate classification. The average annual temperature is 23.5 °C | 74.2 °F in Kawasoti. Precipitation here is about 2541 mm | 100.0 inches per year. (Climate-Data.org, n.d.)
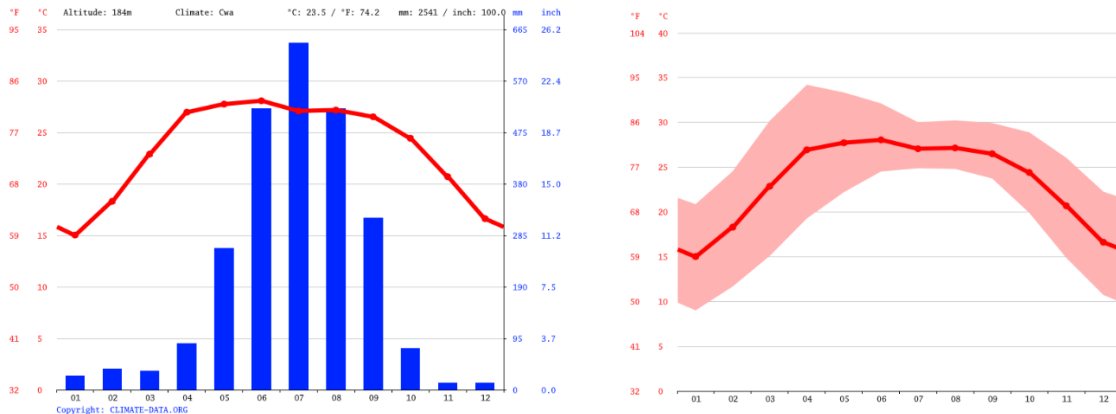
Figure 92 Climatic Data

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

4.8. Socio-Cultural Analysis

As the site is located in agricultural land area, the street is used by mainly, locals who go to work or school using the route. This route is daily used by farmers. Also, being a quiet and less crowded place, the route linking to the site is daily used by joggers.

The notable and nearby temples and churches are:

- Radha Krishna Temple (1km)
- Manakamana Temple (2.2km)
- Kawasoti Vision Church (1.6km)
- Shivalaya Temple (3.5km)
- Chapgosai Temple (0.65km)

4.9. 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.

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.

4.10. Site Selection Justification
The Tharu cultural centre aims to promote indigenous culture along with providing spaces for other communities of the locality. The following reasons for selecting a site for mentioned objectives can justify my site selection:

- Easily reachable from nearby communities
- The site is around Tharu village, so the main targeted group to use and operate the centre is close.
- The site is near other destination places like Homestays, Resorts, Narayani Riverside, and Chitwan National Park

CHAPTER V.   PROGRAM FORMULATION:

The proposed Cultural Center targets the local tharu as the primary focus while visitors and tourists as secondary. The programs are justified after the observation of the community, its activities, and disappearing cultural and traditional activities.

Since the target is to build a community/cultural centre in the local context, the programs are public spaces except for accommodation provided for guests.

1. Administration Block

S.N.	Program	Nos.	Area/Unit	Persons	Total
1.	Entry Plaza	1	1.5	30	45
2.	Reception	1	1.75	9	16.8
3.	Director's Room	1	16	5	16
4.	Staff Room	1	2.5	5	12.5
	Grand Total:				90.3

2. Community Hall

S.N.	Program	Nos.	Area/Unit	Persons	Total
1.	Flexible Hall	1	1.5	100	150
	Stage	1			43.8
	Musical Instruments	1			15
	Changing rooms	2	1.5	10	30
5.	Rest Room	4	2.25	4	9
	Total:				247.8
	Storage (10%)				24.7
	Total Area				272.5

Market and Restaurant

S.N.	Program	Nos.	Area/Unit	Persons	Total

1.	Market Stall	6	16		96
	Total				96
2.	Restaurant				
	Cash Counter	1	1.78	2	3.56
	Dinning	1	2.5	60	150
	Kitchen	1	40%		60
	Store	1			7.5
9.	Restroom				
	Male	1w/c, 3U	2.25	4	9
	Female	4	2.25	4	9
	Total				335.06

Pottery Workshop

S.N.	Program	Nos.	Area/Unit	Persons	Total
1.	Pottery				
	Mud Storage	2	8		8
	Mixing Area	1	5		5
	Molding Area	3	5	3	15
	Drying Area	1	50		50
	Kiln	1	60		60
	Total:				158
	Storage (30%)				47.4
	Total Area				343.4

Weaving/Basketry Workshop

S.N.	Program	Nos.	Area/Unit	Persons	Total
1	Weaving				
	Straw/Korai(river grass)	2	10		20
	Weaving Area				
	Gundri	2	8	2	16
	Chakati	1	2.25	1	4
	Exhibition Space	1	20		20
	Total				56
	Storage	1	30%		16.8
	Raw material Storage	1			20.8
	G.Total	1			153.6
2	Basketry				
	Bamboo Storage	1	30		30
	Raw Separation Material		10		10
	Weaving Area	1	4	5	20
	Exhibition Space	1	20		20
	Product Storage	1			30
	Total Area				110

Accommodations

S.N.	Program	Nos.	Area/Unit	Persons	Total
	Double Bedroom	6	17		102
	Restroom	6	2.8		16.8
	Baranda	3	23		69
	Total:				187.8

Total Area Calculation

S.N	Programs	Area(m^2)
1.	Administration	90.3
2.	Community Hall	272.5
3.	Market	96
4.	Restaurant	239.06
5.	Pottery Workshop	343.4
6.	Weaving/Basketry Workshop	263.6
7.	Accommodations	187.8
	Total:	**1512.66**
	20% for circulation	302.532
	Grand Total	**1812.19** (28.9%)

Site Division

Built-up Space 29%

Open Space 71%

■ Built-up Space ■ Open Space
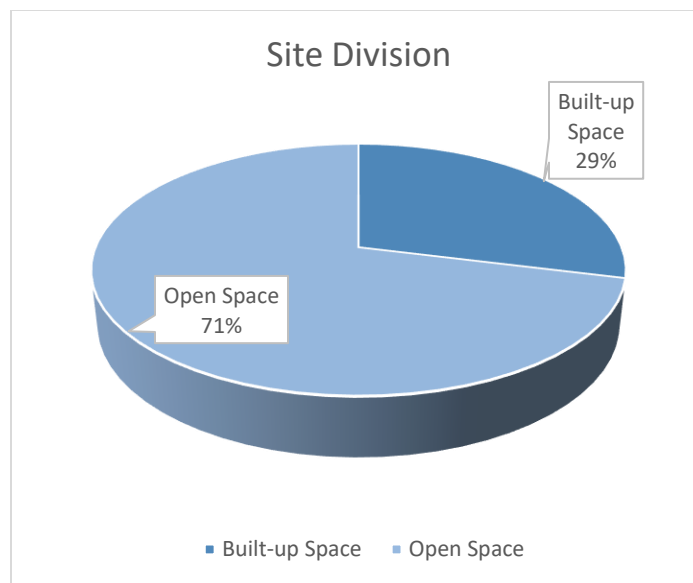
CHAPTER VI. CONCEPT AND DESIGN DEVELOPMENT

Concept Statement:

Contextual Placemaking through the built environment of Tharu Village.

The overall design of Tharu Cultural Center aims to give the essence of Tharu village through the design of built spaces, open spaces and landscaping elements.
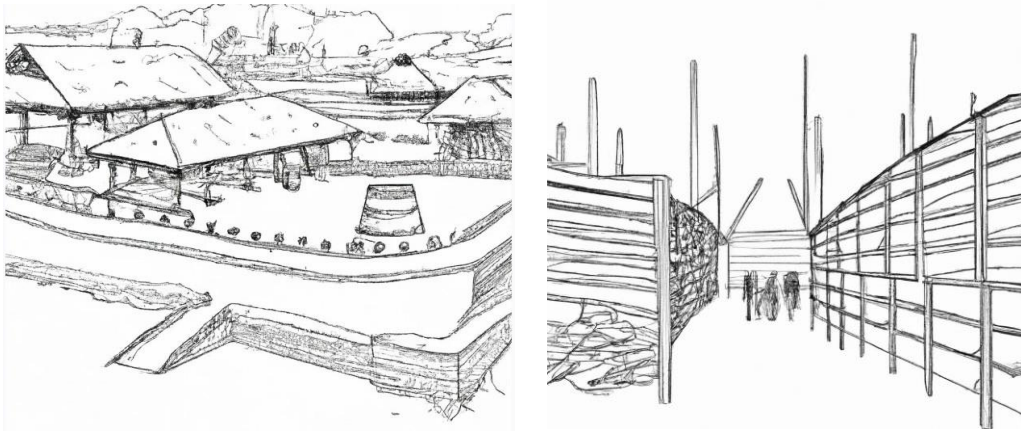
Approaches:

Approach 1: Buildings and Courtyard(Aagan)

The buildings in Tharu village are seen around the courtyard and bari with separate buildings for respective functions. The courtyard acts as connecting and extended space for activities of space under the lean-to roof in the front façade.

Figure 93 Residential Complex in Kawasoti
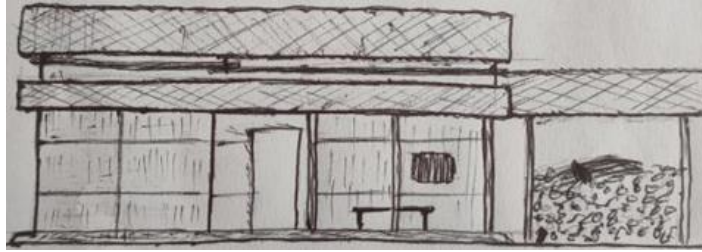
Figure 94 Front Facade of a house in Rataul

Approach 2: Building with semi-open spaces

The semi-open spaces connect the outer environment and give a sense of welcome than enclosed vertical walls. Thus, the semiopen spaces are created to a greater extent that connects the exterior aagan and activities can be extended in the courtyard. It helps in creating more vibrant communal spaces.

Figure 95 Semi-open buildings

Approach 3: Enhancing site with cultural landscape elements

The elements of Tharu landscapes like pigeon houses, Straw storage(Tauwa), and shaded wood storage.

(a)   (b)

Figure 96(a) Tauwa (b) Machan (tower)

74

Approach 4: Enhancing active participation in water

Kulo runs throughout the northern periphery of the site. A pond is created in the site along the kulo so the freshwater runs through the pond without disturbing the water flow. Swimming areas are arranged and the pond is for fish farming. Kulo is also used for fishing.

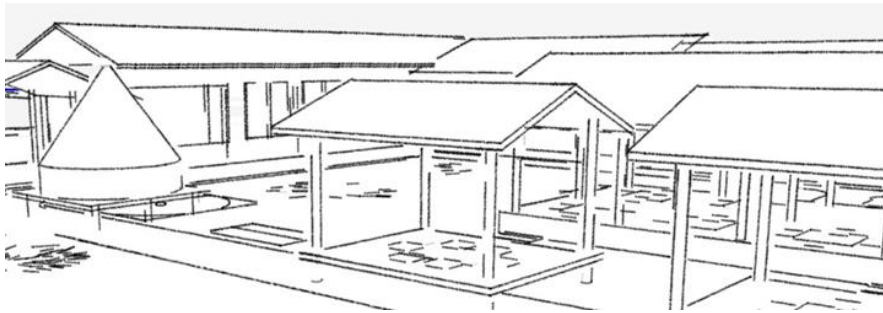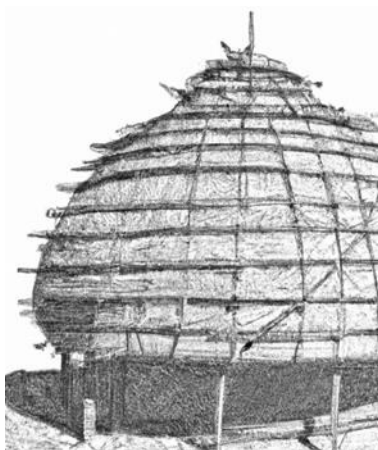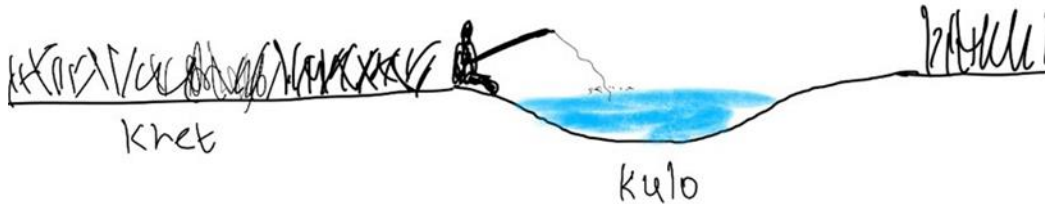*Figure 97 Field and Kulo in Site*

Approach 5: Material Consideration

Bamboo, wattle and daub and rammed earth materials, khapda tiles and thatch roofs are used. It makes the built space more contextual with Tharu anthropometry considerations. Also, more importantly, these vernacular materials can work effectively in hot climates.

<table>
<tr><td>(a)</td><td>(b)</td></tr>
</table>

Figure 98 (a) Wattle and daub   (b)Thatch roofing

Zoning

The buildings are designed thoughtfully around the courtyards considering the pedestrian and vehicular(service) flow.

Since the pedestrian flow is more on the southern side of the site, the main pedestrian entry and vehicular parking is on the South. The large open space and community hall are placed so that it makes visual connections with all the blocks and it is visible once one moves ahead from entries. The separate buildings for each program are created like the houses in Tharu villages where they have separate blocks even in a single residential complex. The segregation of blocks is also necessary to connect the people with the soil and nature as Tharu are eco-friendly and close to nature.

The pockets of green space are connected to all the buildings. Considering the service requirement for workshop and restaurant, service entry is provided in East and West respectively. Also, these paths work as side entries for locals.
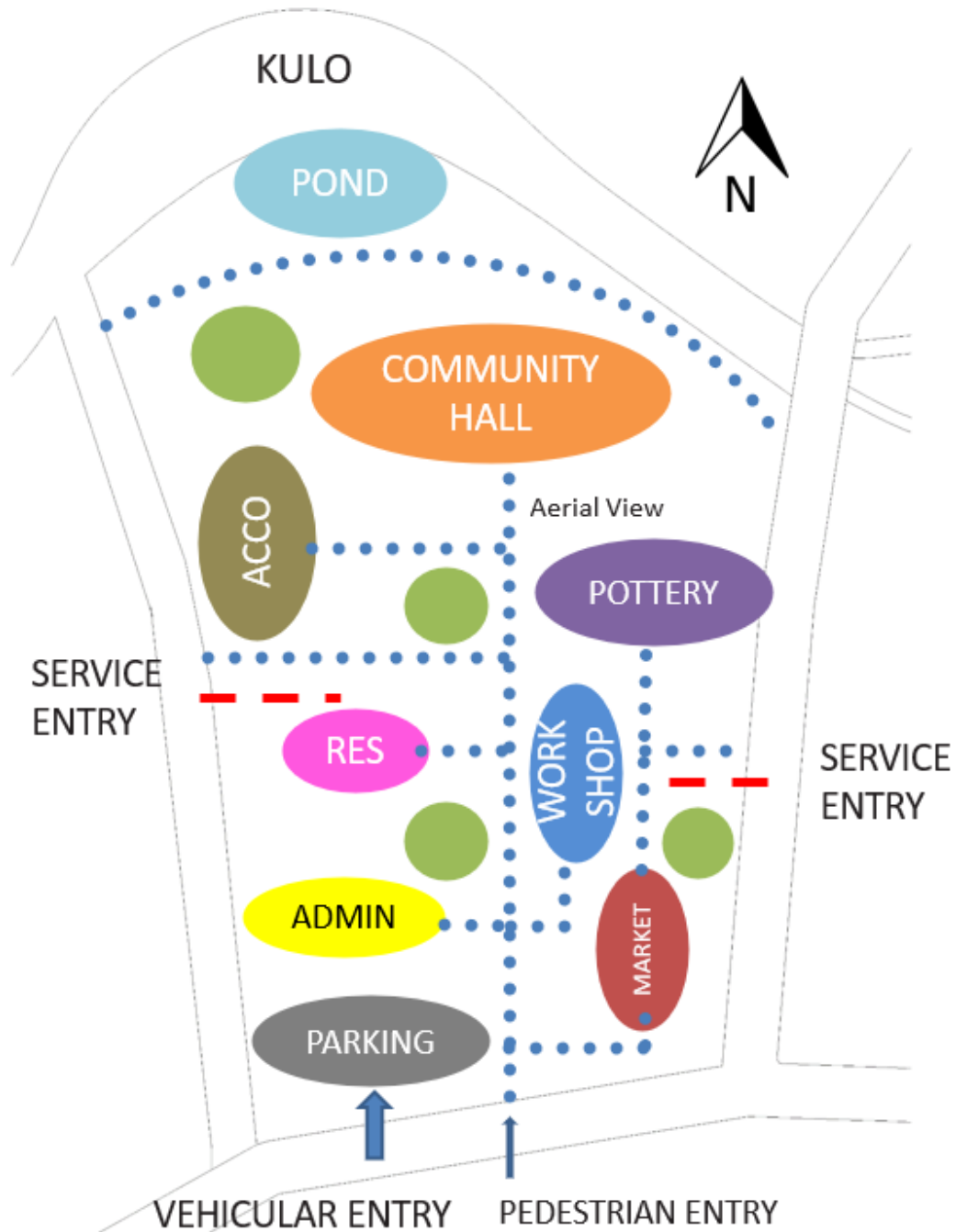
Figure 99 Zoning of Spaces
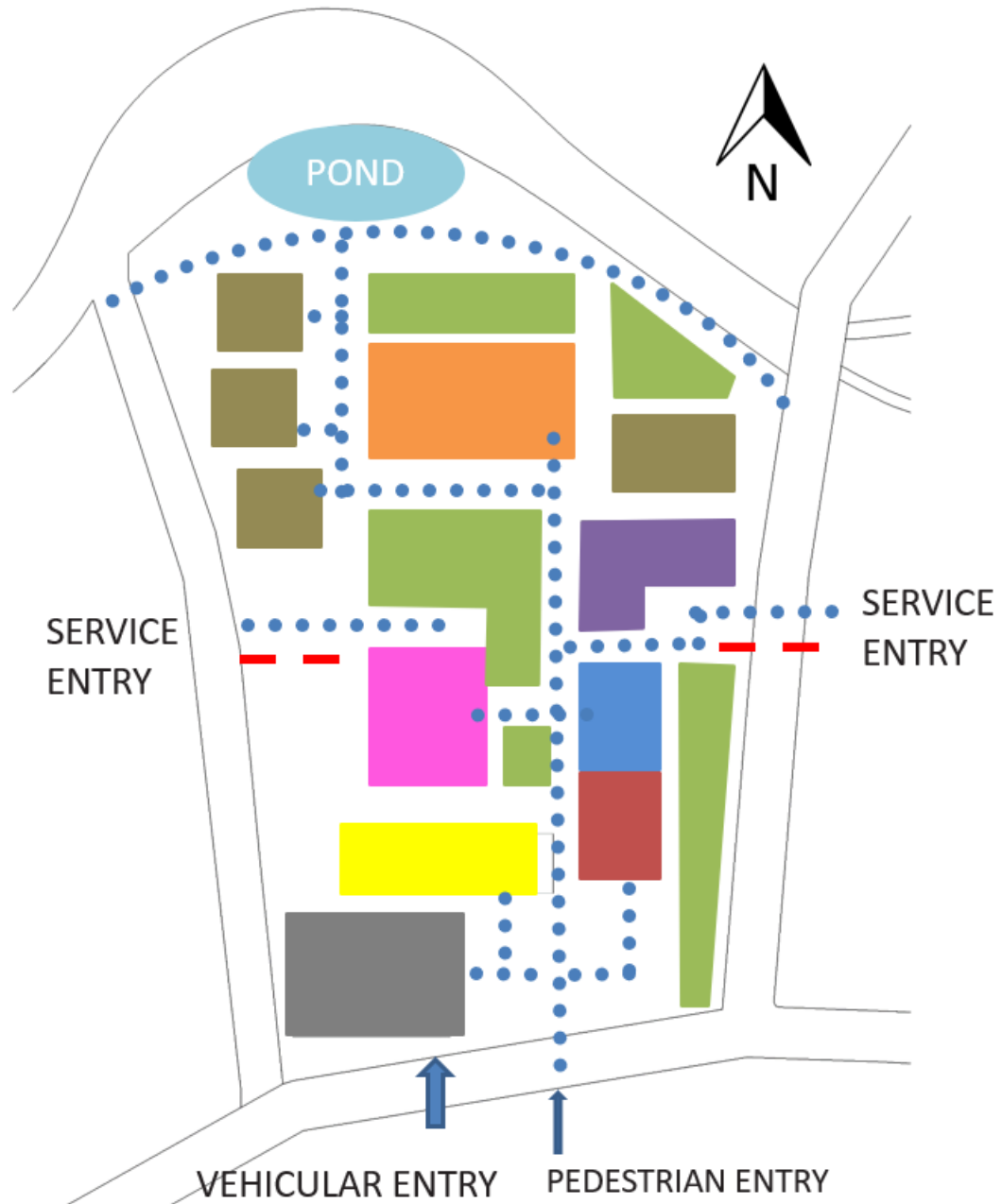
Figure 100 Zoning of Spaces

The pedestrian path is created on the northern side so that the locals can walk and enjoy the water bodies and greeneries. It helps to engage people more in the landscapes so that it creates a vibrant space for children's play and informal gatherings.

The pond along with the Kulo is created to use the flowing water through the site. Water from Kulo gets into the pond except when the water level is low than the pond boundary height.

Figure 101 Ground Floor Plan with Site Plan

Figure 102 3D

Individual functions

Entry Lobby

The main entry lobby is located on the southern side of the site. Through the parking and pedestrian entry, people arrive at the spacious lobby. It acts as a seating and gathering space for the community. Also, the lobby provides visuals for every other function. The admin and this lobby are under a single roof. From the lobby, the admin is on the left, and the workshop is on the right.
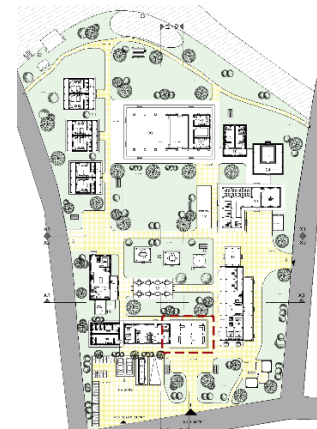
Figure 103 Entry lobby

Admin

Admin is located on the southern side of the site. People arrive at admin from the entry lobby. It is in the north of parking. It is an enclosed building made of wattle and daub. From the admin, Restroom is on the left and the lobby connecting the workshop area in the right.

The admin block house the facilities such as Reception, Staff room and Director's room.

Figure 104 Main entrance showing lobby and admin block

Basketry and Weaving Workshop

People arrive at this workshop area through the entry lobby. It is a semi-open-facing courtyard and pottery section to make a visual connection with the surrounding. Bamboo is used as a structural element. It hosts space for Gundry, Chakati and basketry making. This building has attic space for the storage of finished products while the raw materials are kept on the northern side of the block.

Its placement is made considering the service entry from the east side. Also, this block is connected to the market.
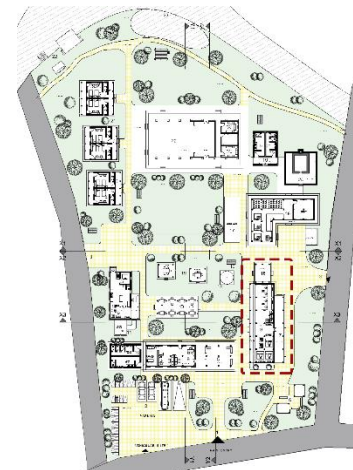
Figure 105 Weaving and Basketry Workshop

Market

The market is in the east of the site. The vegetable market is connected to the roadway outside to make it more accessible to the public. The market runs in the morning and evening, while at other times, this is used as an extended workshop area and resting,

gathering space for the community. The planning makes people enter the market easily from the road and seating and food stall is nearby. The service entry is the same for the market and workshop.

Pottery

The pottery Section is on the southeast side of the site. The kiln for pottery is in the south considering the wind flow that goes away from the site. Also, to counter, greeneries are dense nearby kiln. The required semi and open space for drying are thoughtfully given.

Figure 106 Pottey Workshop and Kiln

Community Hall

Community Hall is the main built space for gatherings of the community. The locals gather, practice dance and music and perform in this hall. Besides, for outdoor performances, it is connected to the southern courtyard. The hall is almost semi-open to connect to nature as the performance and gatherings of tharu are generally done in aagan.

Figure 107 Community Hall

Accommodations

The site performs various cultural activities of Tharu. Thus, it can flourish as a tourist area. To enhance tourism, accommodation space is provided in the north-west of the site. It is made quite segregated while connecting to the landscape of the site. Accommodation is suitable for the visitors coming for engaging in the workshop and cultural activities at the site and Tharu Village.

Figure 108 Accommodations

Restaurant

The traditional Tharu restaurant is placed in a way that the visitor will enjoy the activities and landscape. Semi-open space is provided for dining. The dining space is placed in open spaces so the visitors can feel the landscape of the site. This is the same reason for using suspended wooden flooring in the dining spaces. The service entry is provided for the kitchen that directly leads to storage of the Kitchen.
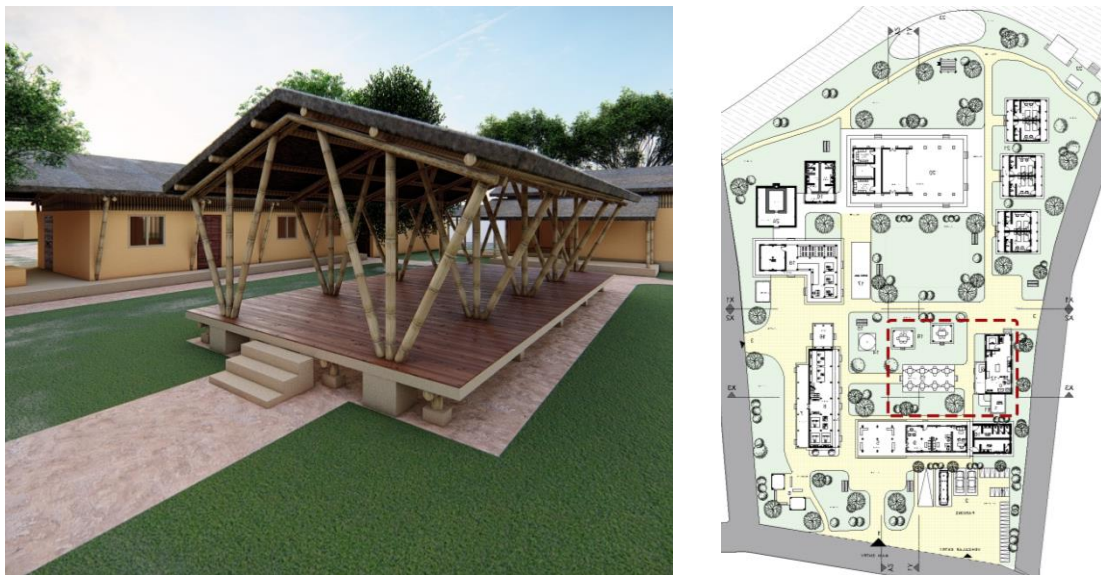

Figure 109 Restaurant Dining

CHAPTER VII.STRUCTURAL CONCEPT AND SYSTEM

The Tharu Cultural Centre has different blocks for different functions. These blocks have varying designs to fulfil their own functional needs. For structural systems, bamboo is used as the main structure for posts and beams. Except for the restrooms, which have load-bearing walls, all the blocks use bamboo construction.

The bamboo is often used by Tharu people in their daily life like in agriculture, fishing, household work, etc. Since well-seasoned Bamboo has more life expectancy, it can be used as a permanent structural component. With the bamboo structure, roofing is done over which thatch roofs are placed. Taking references from various textbooks and firms using bamboo structures, ideas are placed in the design for stable bamboo structures.

Bamboo can be harvested after at least 3 years. Well-treated bamboo has 50 years of life expectancy. For Bamboo beams/Columns, 70-100mm Dia of bamboo is used.

Bamboo Treatment

- For Column and Roof members:

  Boric acid(4)+Copper Sulphate(3)+ Sodium Disulphate (1.5) =

  i.e. for 14 litres of tank

- For Partitions and walls(non-structural members):

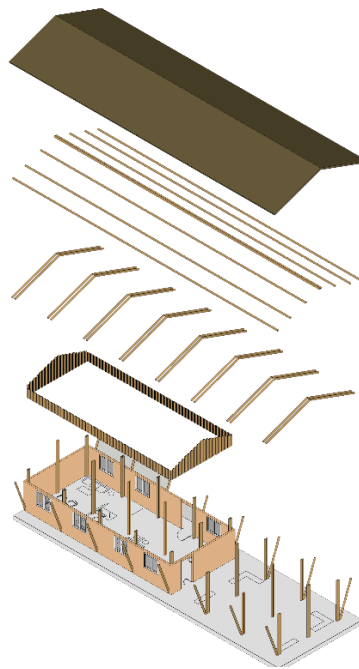 Borex(1) + Boric acid(1.5)

  i.e. for 14 litres of tank

Figure 110 Axonometric View of Admin block showing Bamboo use in structure

CHAPTER VIII. SERVICES

8.1. Water Supply System

Municipal line and boring water are supplied to the site. The water from boring is aerated at first and then supplied to the underground water tank and then to overhead water tank through the pump. The overhead water tank will be used to distribute the water in the respective blocks. Also, the separate firefighting water tank is provided which is attached to the underground water tank.

Calculation of Water Tank Capacity Excluding Fire Fighting Need

S.N.	Building	Min Req. Per head per day	No. of person	Total Demand
1.	Administration	45	4	180
2.	Basketry/Weaving Workshop	45	9	405
3.	Pottery Workshop	45	3	135
4.	Restaurant	50	49	2450
5.	Community Hall	15	100	1500
6.	Accomodations	100	12	1200
	Total	(litres)		5870

Total Water demand= 5.870 cu.m/ day

Size of Water Tank = 5.87 x 3 = 17.61cu.m (safety Factor=3)

Fire Fighting Demand= 50 cubic metres (NBC 208:2003)

Total underground Water Tank size = 50cu.m. + 17.61cu.m = 67.61 cu.m.

Height of tank = 3m

Area = Volume/height = 67.61 / 3 = 22.54cu.m. = 22 cu.m. = 5m x 4.5m

Adding 0.5m free board,

Underground storage= 5.5m x 5m x 3m

Overhead tank size = 40% of water demand

$$= .4 \times 5.87$$

$$= 2.348 \text{ cu.m.} = 2.5 \text{ cu.m.}$$

8.2. Sanitary System

The site has access to the municipal drainage line, the soil water and the waste water are collected at the septic tank and soak pit respectively and the overflow will have outlet to the municipal line.

Septic Tank:

Total Users:

For accommodation block, 10

For admin block,5

For workshop block, 9

For pottery workshop, 3

For Restaurant Kitchen, 3

Thus, 30 users used in daily basis

Based on I.S. 2470 (part I and II), for up to 50 users, minimum size of septic tank is 4m × 1.4m × 1.30m (13ft × 4.59ft × 4.25ft) in respect to their Length, breadth and depth. It has tank capacity of 7500 litres of liquid wastages.

Soak pit:

Again, based on I.S. 2470 (part I and II), for up to 50 users, the size of the soak pit is as follows: Diameter(D)= 1.5 m Depth(H)=2.75m

CHAPTER IX. FINDINGS, CONCLUSION AND RECOMMENDATION

Findings:

Cultural Significance: The Tharu community's cultural heritage holds immense importance and reflects their unique identity, history, and way of life. The findings reveal that the Tharu culture encompasses a diverse range of traditions, art forms, rituals, and practices that are at risk of being diluted or lost.

Cultural Challenges: Urbanization, globalization, and cultural assimilation pose significant challenges to the preservation and promotion of Tharu ethnic heritage. These factors have led to a decline in traditional practices, language erosion, and a diminishing sense of cultural pride among the Tharu youth.

Need for a Cultural Centre: The research highlights the urgent need for a dedicated Tharu Cultural Centre. Such a center would provide a platform for the Tharu community to safeguard and showcase their cultural heritage, revive traditional practices, and pass on their knowledge to future generations.

Architectural Design Considerations: The proposed architectural design for the Tharu Cultural Centre takes into account the integration of traditional Tharu elements while incorporating modern amenities and sustainable practices. The findings emphasize the importance of creating a welcoming and inclusive space that respects and preserves the authenticity of Tharu traditions.

Conclusion:

The findings of this thesis underscore the significance of establishing a Tharu Cultural Centre as a means of preserving and promoting the Tharu ethnic heritage. By providing a dedicated space for the Tharu community to express and celebrate their culture, the Cultural Centre can play a vital role in revitalizing and invigorating the Tharu community.

The Tharu Cultural Centre serves as a hub for preserving, showcasing, and educating locals and visitors about Tharu traditions, art forms, and way of life. It not only contributes to the preservation of Tharu ethnic heritage but also fosters intercultural dialogue and appreciation.

Moreover, the Cultural Centre has the potential to generate social and economic benefits. It can enhance cultural tourism, and contribute to sustainable development in the region.

In conclusion, the establishment of a Tharu Cultural Centre is crucial for the Tharu community's cultural survival and development. The findings and recommendations of this thesis provide valuable insights for policymakers, cultural organizations, and architects interested in cultural preservation and community development. By investing in the Tharu Cultural Centre, we can ensure the preservation of a vibrant and unique cultural legacy for future generations.

Recommendations

Based on the findings of the thesis, the following recommendations are proposed:

Establish the Tharu Cultural Centre: It is recommended to prioritize the establishment of a dedicated Tharu Cultural Centre. This facility should be designed to accommodate exhibition spaces, performance areas, research and documentation facilities, and educational programs. The center should reflect the cultural aesthetics and values of the Tharu community while incorporating sustainable architectural practices.

Collaboration with the Tharu Community: Involve the Tharu community at every stage of the Cultural Centre's development. Engage community members, cultural experts, and elders to ensure that their perspectives, knowledge, and traditions are respected and accurately represented. This collaboration will foster a sense of ownership and pride among the Tharu community.

Preservation and Documentation: Emphasize the importance of preserving and documenting Tharu cultural heritage. Develop mechanisms to record traditional practices, oral histories, art forms, and rituals. This documentation will serve as a valuable resource for future generations and contribute to the overall preservation of Tharu traditions.

Education and Outreach Programs: Develop educational programs within the Tharu Cultural Centre to raise awareness and promote understanding of Tharu culture among visitors, tourists, and the younger generation. These programs can include workshops, cultural performances, language classes, and interactive exhibits to engage and educate the public about Tharu traditions and values.

By implementing these recommendations, the Tharu Cultural Centre can effectively preserve and promote the Tharu ethnic heritage, contribute to the empowerment of the Tharu community, and foster intercultural understanding and appreciation.

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ANNEX

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Date: 2080/02/04