

BADAMI

PEOPLE. PLACE. SPACE

BGS SCHOOL OF ARCHITECTURE AND PLANNING

THE SQUAD

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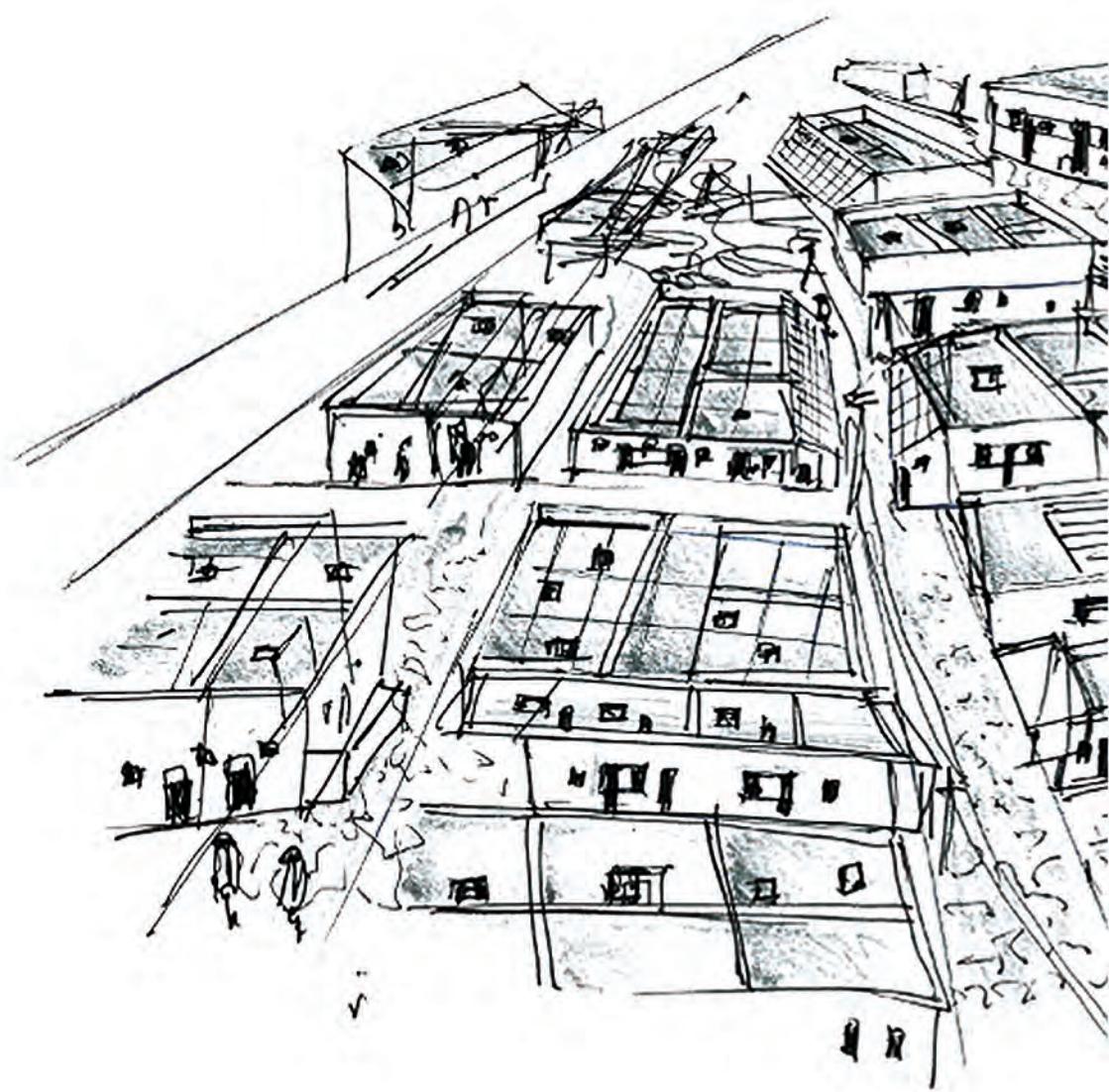
BADAMI

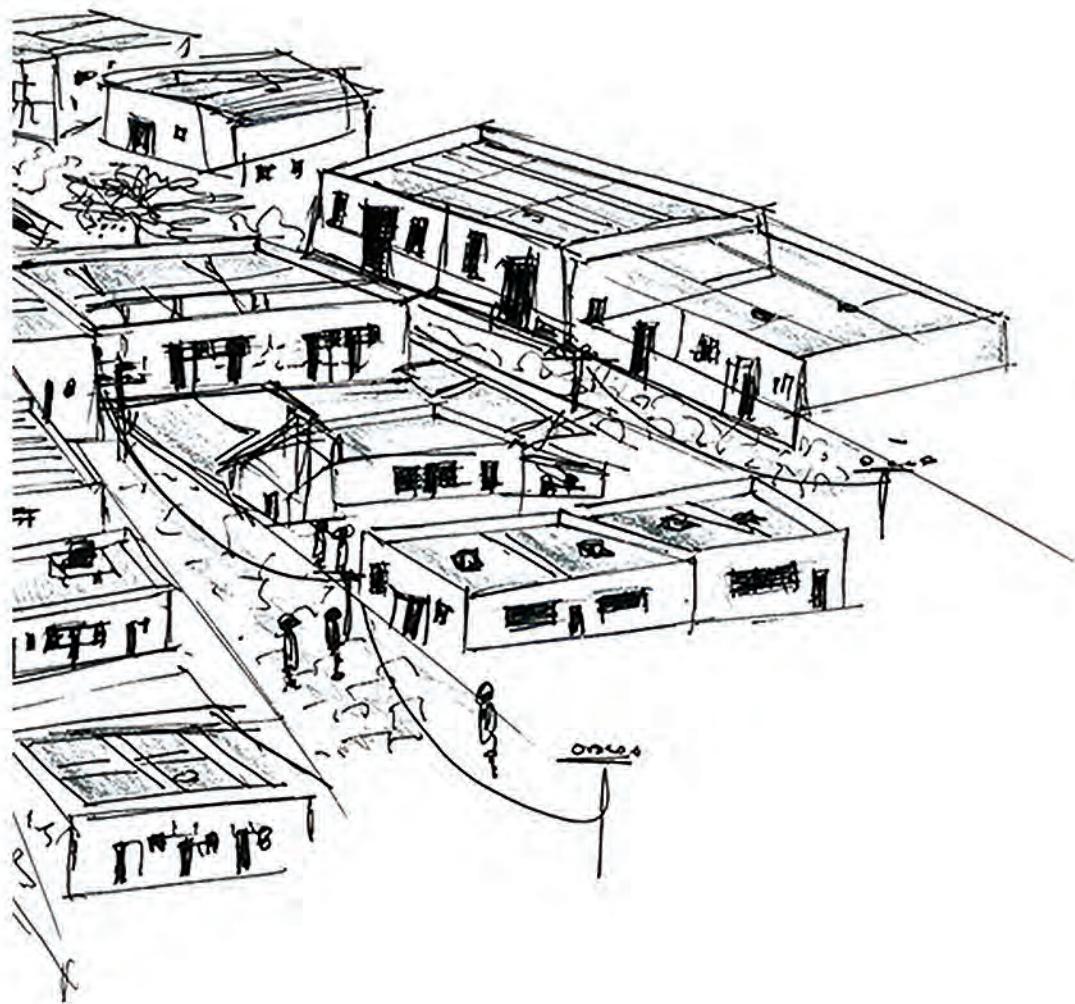
PEOPLE.PLACE.SPACE

A Study By 2nd Year Students(2017-2022)



BGS School Of Architecture and Planning





Dr. Ajai Chandran C.K.

Dean, BGSSAP

Every place is unique and every journey of discovery helps one mould a better future. Engaging with the past is what helps us evolve. To understand the traditional way of living in a place is imperative to protect its future.

At BGS School of Architecture and Planning (BGSSAP), we believe that every student must travel, learn and evolve. Travelling enlivens our souls.

Many thanks to the faculty team for mentoring our students, showing them this world so worthy of exploration. Also, we would like to express our gratitude to the residents of Badami, who welcomed our students and faculty into their homes and lives for the two-day documentation.

We are grateful for the generous support of our respected Managing Director, Sri. Sri. Dr. Prakashnatha Swamiji, and the Management of BGS Group of Institutions for letting us expand our horizons.



Ar. Indu Sathyendran

Faculty, BGSSAP

Vernacular traditions in architecture, directly or unconsciously, demonstrate the physical form of culture, needs, values, dreams and wishes of the people. Buildings built with local materials by native people, using built-by-hand construction methods create a lasting architecture that is specific to a place and its culture.

Immersion in an environment is recognized as a valuable method for learning in relation to the built-form; direct experiences enrich the learning process. As such, the intention of this elective-studio was to instill in students an appreciation for vernacular settlements and spaces. Conversations centering on the students' understanding of vernacular architecture of their native regions, the strength of the local traditions and their communities, the reality of changing lifestyles and climatic factors, lead us to Badami, a town close to the ancestral homes of a few of the students. With its culturally rich community and integrity of the settlement, Badami was an ideal site for the study.

As part of the journey, we wanted to push the students into a direct, hands-on approach to studying of the built environment by observing, recording and measure drawing. For the two-day documentation, emphasis was laid on understanding the existing, vernacular built form or space by documenting its organisation and occupation, activities and uses, materials and techniques of construction.



ACKNOWLEDGEMENTS

THE MANAGEMENT



His divine soul
Padmabhushan
Sri Sri Sri Dr.
Balagangadharanatha
Maha Swamiji
Founder President,
Sri Adichunchanagiri Trust



His Holiness Jagadguru
Sri Sri Sri Dr.
Nirmalanandanatha Maha
Swamiji
President,
Sri Adichunchanagiri Trust



Reverend Sri Sri Dr.
Prakashnath Swamiji
Managing Director,
BGS group of Institutions &
BGS group of hospitals



Dr. Ajai Chandran C.K.
Dean, BGSSAP

OUR MENTORS



Ar. Indu Sathyendran



Ar. Ashfaq K Aliar



Ar. Aswinkumar PN



Ar. Amod Shah

And lastly, the people of BADAMI who were extremely welcoming, giving us permission to carry out our study, and additionally sharing invaluable information and stories about their home.

INTRODUCTION

Badami town is of significant heritage value with its unique rock cut caves, structural pink sandstone, an artificial water tank and vernacular architecture of the historic settlement.

The historic settlement of Badami has some remnants of traditional buildings that are between 150 to 300 years old. These buildings, mainly residential units are built using traditional techniques of construction. This area is significant because it offers an insight into different layers of history of Badami, the cultural and social life of its people and associated intangible heritage traditions.

Through this documentation and study, we have tried to understand the vernacular architecture traditions of the settlement and how it is affected by different parameters from climate to social conditions.



OVERVIEW

Badami, formerly known as Vatapi, is situated in Bagalkot district of Karnataka. The capital of the Badami Chalukyas, Badami is famous for its rock-cut cave temples, carved into a red sandstone outcrop that towers over the Agastya lake. Nestled at the foot of the rocky outcrop is the historic town of Badami which is said to be built on the plinth of the original town of Vatapi. The old town has houses/buildings built using indigenous techniques and materials and it still retains a local vernacular character.

Its street network retains a compact organic grid pattern with widths varying from around 6m to 2m which enables different scales of activities. Streets are named after the nature of activities or communities that inhabit along the street and have a distinct character. The built spaces along the streets retain their traditional elements and forms a living urban centre. Market streets are used as linear public spaces. The narrow interactive street edges and small scale of the historic precinct area promotes walkability. Many houses and streets are 100-250 years old and hence of heritage value.

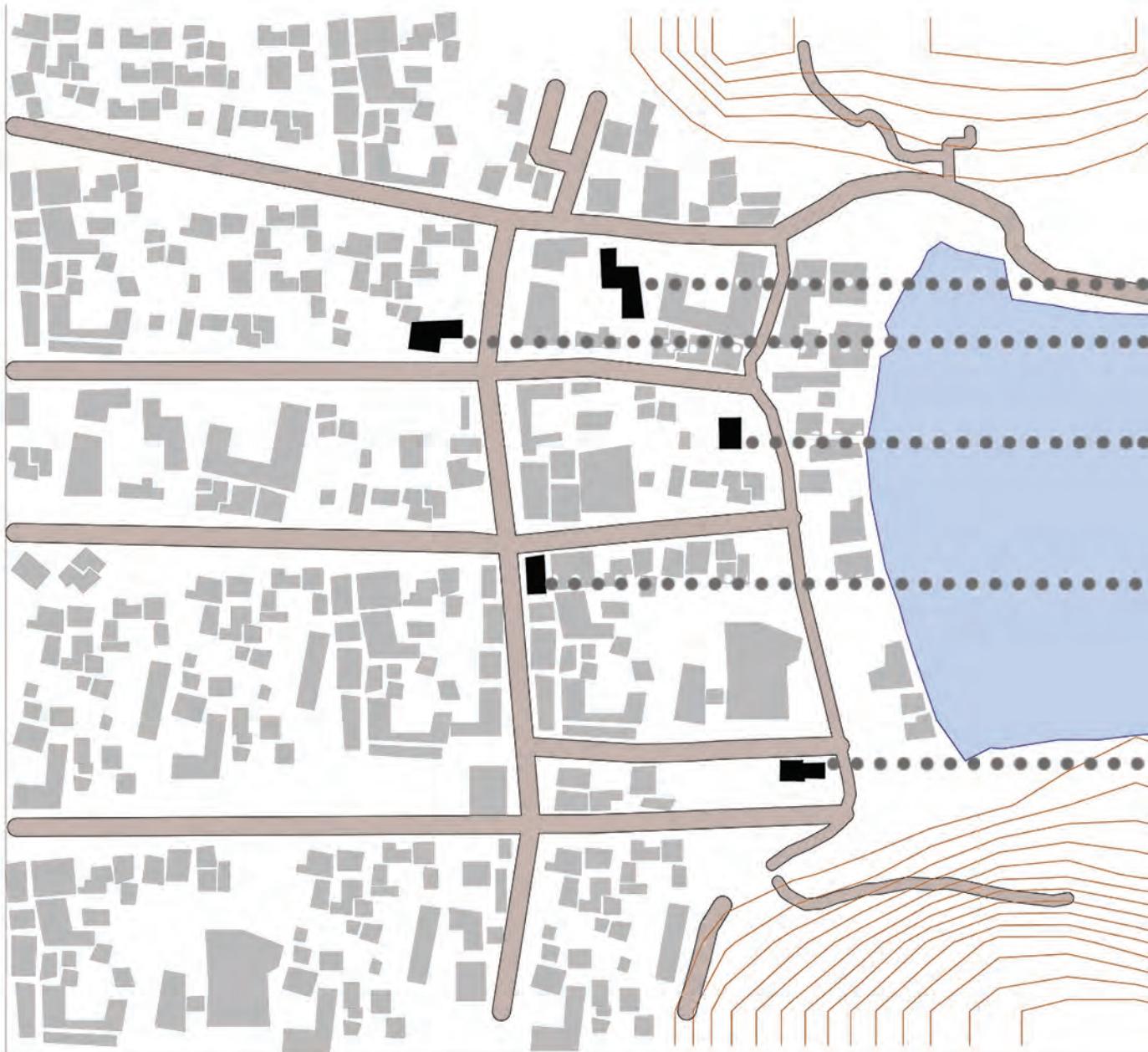
The vernacular architecture in the region is shaped by the climate, locally available building materials, building techniques and the culture of the people. The main structure of houses is built out of stone and the finer elements of the houses such as doors, windows, cornices etc are made out of wood which forms an interesting combination with the stone used in the masonry. The courtyard is important space within the house. The hot and dry climate results in the houses having very few openings in the walls, sometimes only one single skylight. In some houses, inner courtyards light up the indoors and provide ventilation which helps regulate temperature of the spaces. Houses in the historic precinct are clustered around open spaces. These open spaces play a significant role in both in daily lives of the residents as well as an important space for religious and social activities. Some of the open spaces within the neighbourhoods are used for cattle and day today activities like washing and drying clothes. These spaces are also used by different age groups of the community for their past time such as playing, conversations, grooming etc.

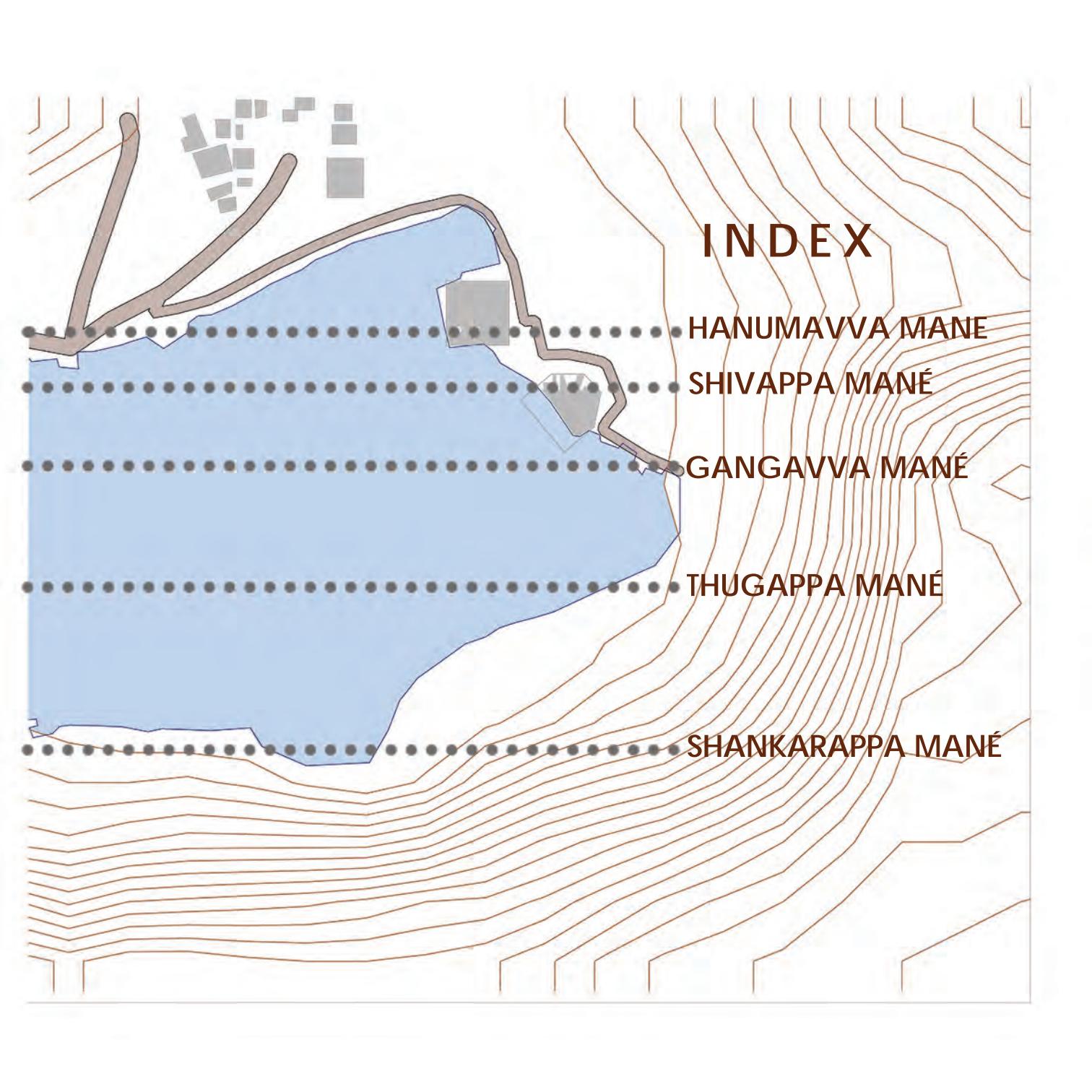


“May we know refreshment, and a
community having lively waters.’

- verse 165.15: Rigveda, Agastya.







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SHIVAPPA MANÉ

GANGAVVA MANÉ

THUGAPPA MANÉ

SHANKARAPPA MANÉ

HANUMAVVA MANÉ

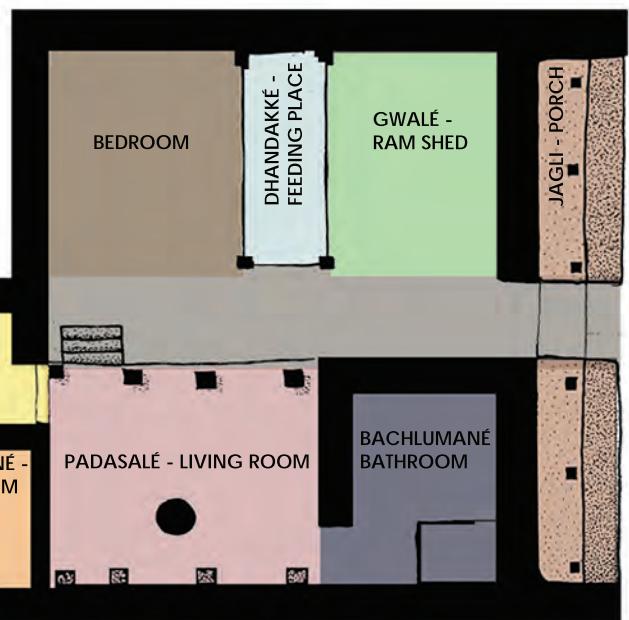
SHEPHERD'S HOUSE



As we were walking along the narrow lanes of Badami, we found a unique house, one that belonged to a very endearing woman, Hanumavva and most interestingly, a 'Tagaru' (Ram)! A ram is rarely domesticated and we learnt it was the family's prized possession. The ram, was tied to a 'Lakshmi khamba' or revered pillar in the 'Gwale' (shed).

The entrance to the house has a stone 'Jagli' (porch) for seating, on either side of the door. The Jagli katte is a high platform / seated porch, which is used to wash and dry clothes and vessels. In the evenings, it is where the family gather to socialise with the neighbours.

The small entrance door has two windows on either side which are the only other openings in the house apart from a skylight. The door and windows are made of wood. The interior passage leads to a living space on the left called 'padhsale' and the 'gwale' or shed on the right. The gwale was initially built to house cows but now it is home to the ram. A 'Dhandakke' is positioned next to the shed, which is a feeding space for the ram. Next to this space is a bedroom. The bedroom was partitioned off from the living space using timber, a later addition, constructed during the houses' renovation.

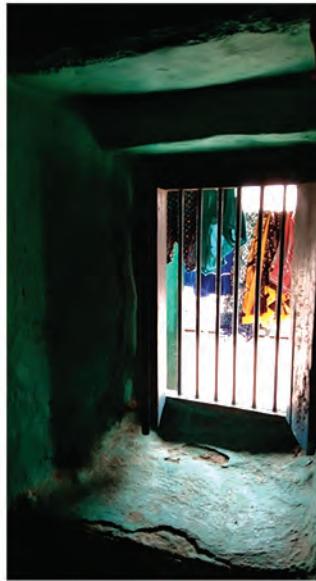




THE FAMILY INFRONT OF THE HOUSE



THE SKYLIGHT



SIZE OF THE WINDOWS



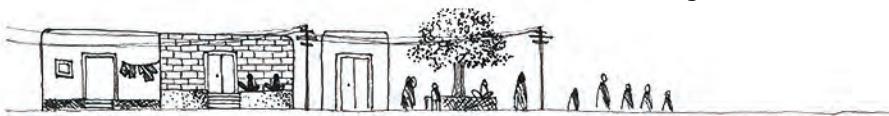
THE 'GWALE' / SHED FOR THE RAM



On one side of the 'padhsale' is the 'Bachlumane' or washroom. This is only a small sunken area with curtains around and functioned as a washroom for bathing. Small niches were provided in the wall during the houses' renovation. Leading to the large 'Adigemane' (kitchen) is the 'Devaramane' or the pooja room.

The skylight above the passage directs sunlight into the entire living area of the house. The 'Adigemane' or kitchen also has a skylight for light and ventilation. The kitchen now has a brick slab to hold the vessels and gas stove as well as an old wood fired stove on the floor, which is a niche in the wall. The skylight is positioned so as to act as ventilation for this stove.

The structure has wooden columns and beams and the roof is made of firewood rafters on top of which mud plaster was laid along with earthen pots surrounding the skylights. The walls and flooring is of local stone which keeps the house warm during winter and cool during summer.





JAGLI - PORCH

ENTRANCE

BATHROOM

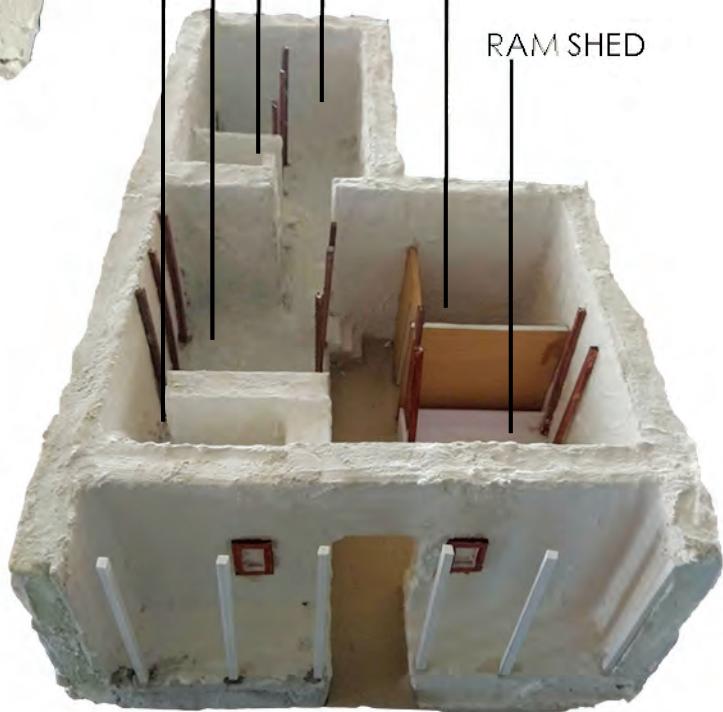
LIVING ROOM

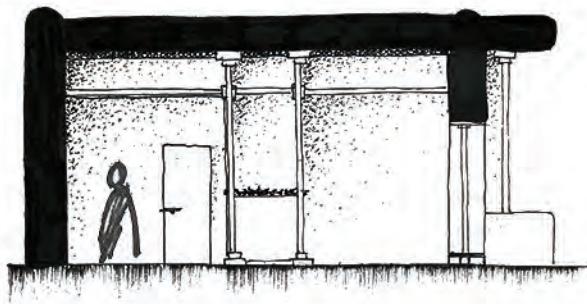
PRAYER ROOM

KITCHEN

BEDROOM

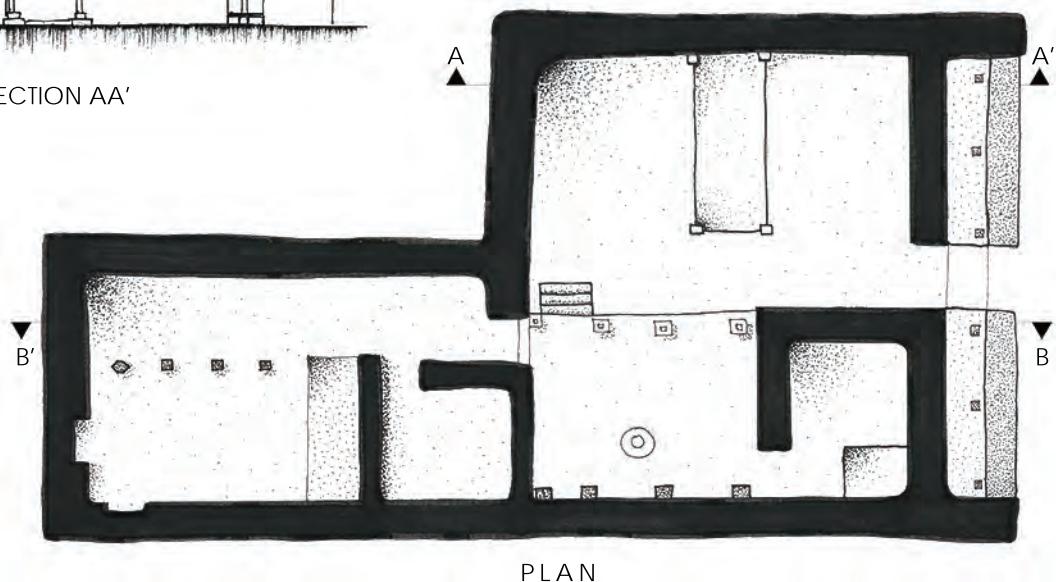
RAM SHED



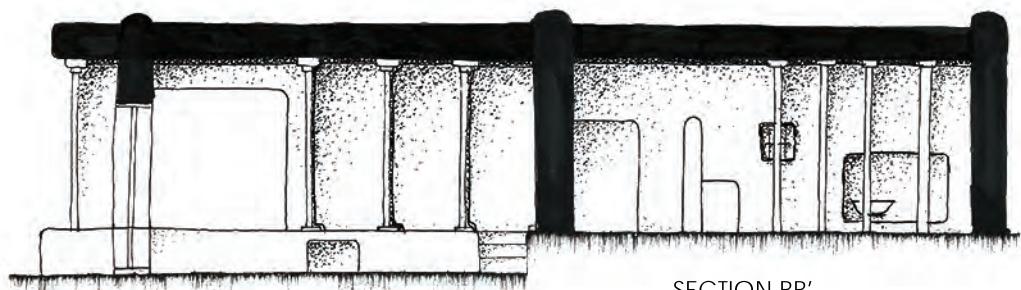


SECTION AA'

The 100 SQM house is home to 10 people, a large family of herders and farmers. The materials used are stone, mud, wood and straw. These materials, and the thick walls and roof keeps the house cool during hot days and warm during cold nights.



PLAN



SECTION BB'



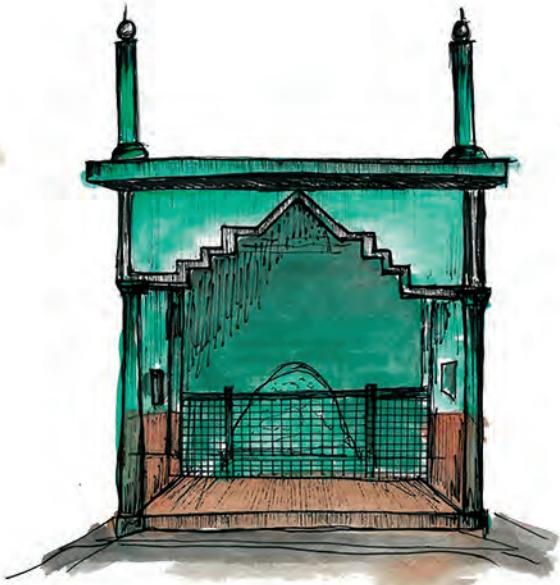


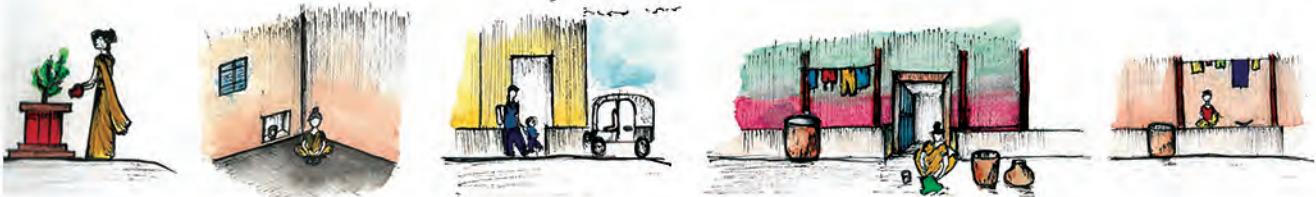
Much like every other street in Badami, the house sits on a street which is culturally diverse, having a mosque on one end and a temple on another. Regardless of their religion, all the people appear to live in harmony.

All the 'jagli's' or front porches of the houses face the street. Small gutters run along the entire length of the road, on either side, and this carries the grey water from washing as well as storm-water. Most houses have newly built toilet blocks facing the road.



A lot can be learnt about the lifestyle of the people by observing the street layout. As all the houses face each other, the main community activity happens in this area. Women come out of their houses at the same time to wash vessels and later clothes. In the evenings the street is a buzz of activity as families sit on their jagli's to discuss the days events while watching their children play on the street.





PEOPLE AND ACTIVITY

'Hanumavva', the 50 year old matriarch of the family, manages the household with the help of her 30 year old daughter-in-law, 'Laxmi' and 'Sakkava', her 19 year old granddaughter.

By 5 A.M., water is filled into the tanks and vessels for the day's consumption. By 2 P.M., the street in front of their house becomes abuzz with activity and chatter when Laxmi and her neighbours wash clothes and utensils. Some days they walk to the lake together to wash clothes. Laxmi also looks after her 1-year old daughter Deepa. Her husband, 'Muthappa' aged 32, goes for herding and to farm at 7 in the morning. 'Yamunavva', aged 35, helps Laxmi with cooking in the morning by 6 A.M., and then leaves for the farm by 10 A.M. along with her husband, 'Mallapa', aged 38. They have a 16-year-old son 'Saikumar', who drives a JCB.

Apart from farming, the family earns extra income from renting a house, located just behind their family home, for a sum of Rs. 2000 a month. After most of the household chores are complete by around 6:30 in the evening, the entire family and their neighbours gather on the street, sat on the 'katte' of their homes and chatter about the day's events while the children play on the street.



SHIVAPPA MANÉ

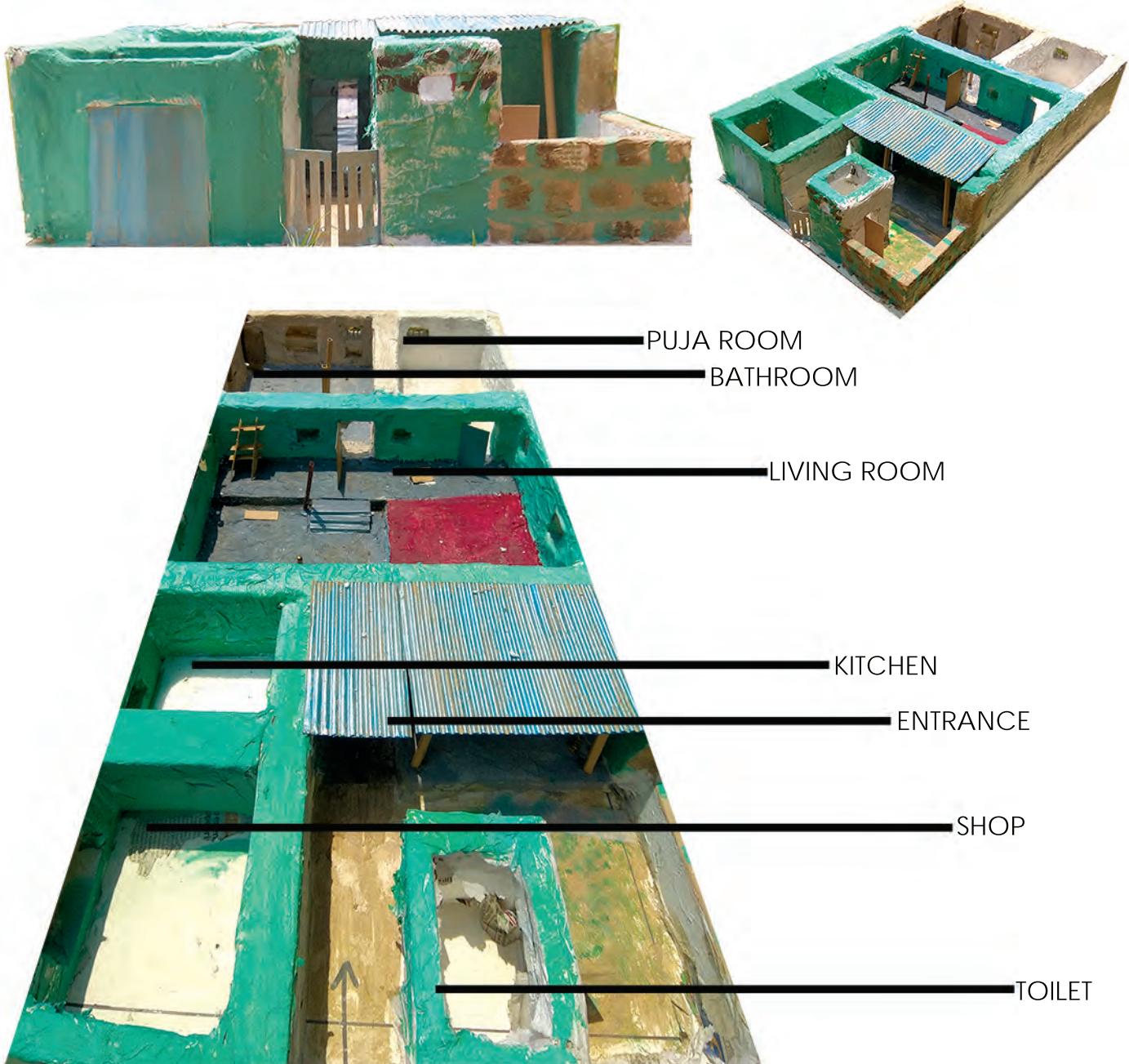
FARMER'S HOUSE

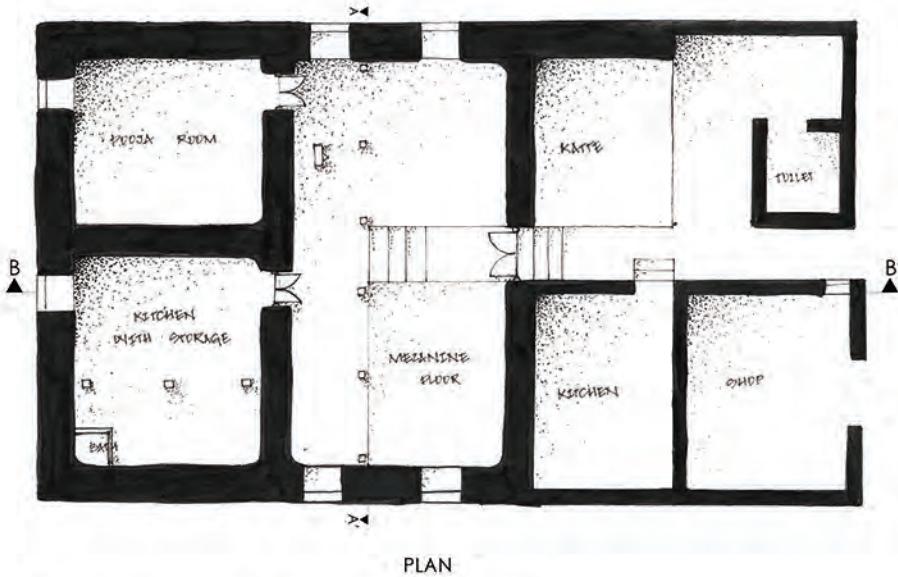




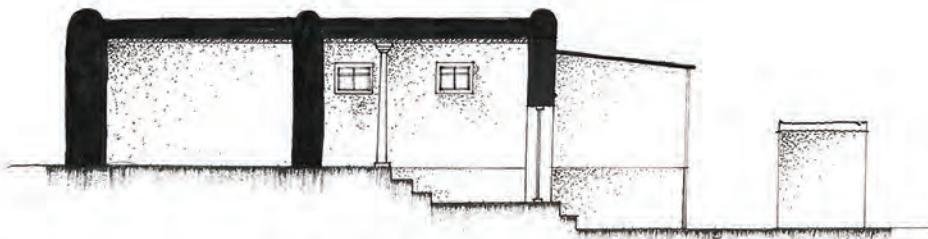
Shivappa mane is a 150 year old house that has gone through many changes over the years but still keeps its original character and architectural features. The new additions include a shop, kitchen and bathroom at the front of the house. At the entrance to the house is a very large 'katte' on one side of the main door. The entrance door was detailed with wood panelling and was higher than other doors in similar houses. On entering the house, the cow shed on the left now has a mezzanine floor above it which is accessed by a timber staircase. This mezzanine floor was used for sleeping but now is used as a storage space. Similarly, the family now uses the cowshed as a storage space.



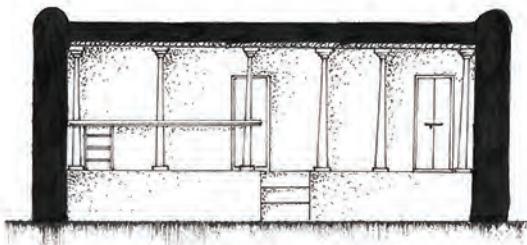




PLAN



SECTION BB'



SECTION AA'



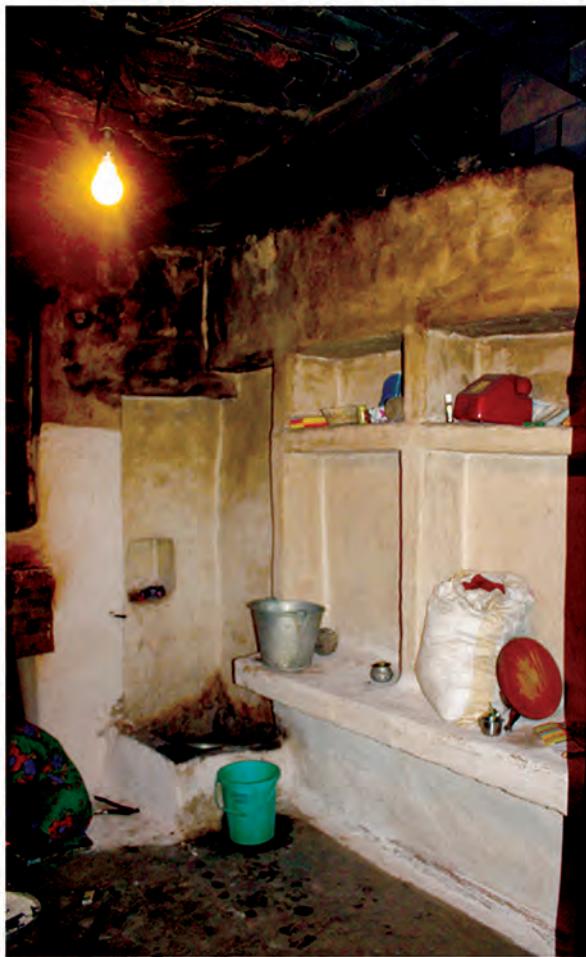
The windows on either side of the front part of the house allows for good cross-ventilation and ample amount of light into the interiors. In addition to the windows, there is a skylight to provide direct sunlight. The stone flooring has been coated with red oxide.



VIEW OF KITCHEN



DETAIL OF PILLAR AND BEAM



VIEW OF BARTHA(WALL NICHES)



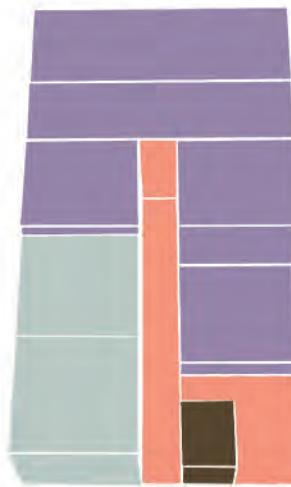
VIEW OF THE BATHROOM AND OLD KITCHEN



MAIN ENTRANCE DOOR



VIEW OF FRONT KATTE



TIMELINE OF THE HOUSE



GANGAVVA MANÉ

FARMER'S HOUSE



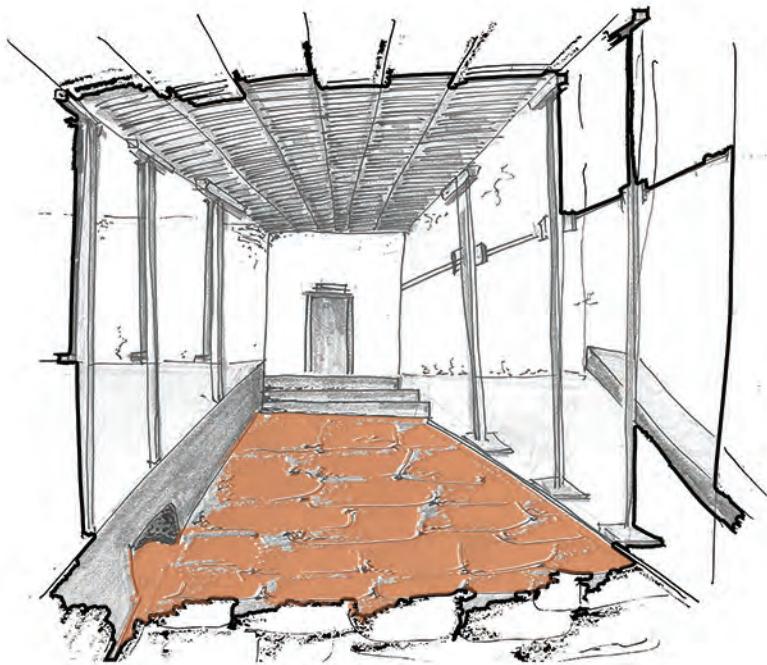


This 80 year old single-storeyed house, is home to a family of 16. The main occupation of the family members is farming. The materials used are stone, mud, straw and wood. The house is very linear and built on two levels.

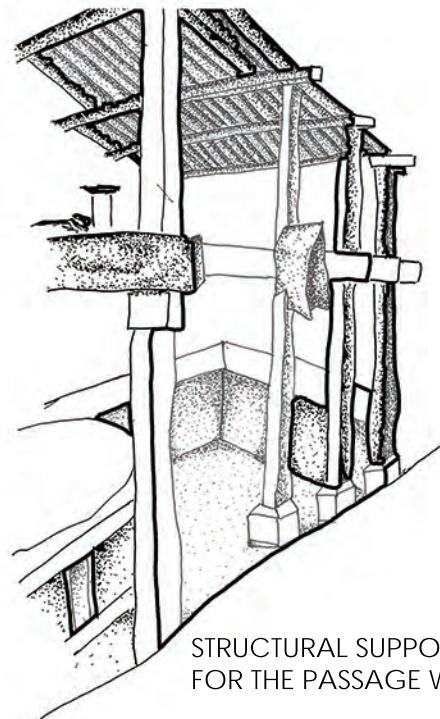




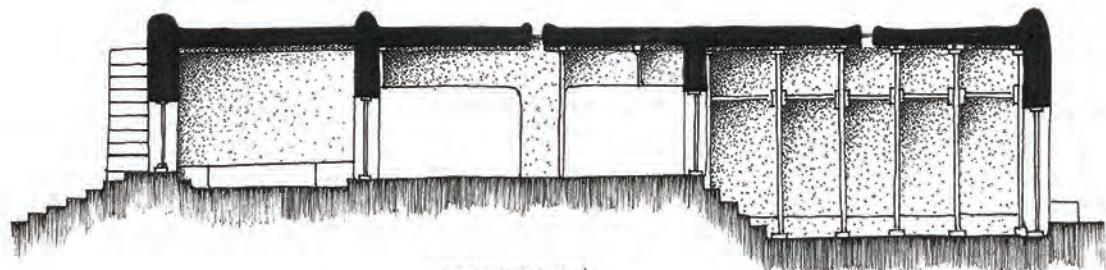
VIEW OF THE CEILING



FRONT PORCH

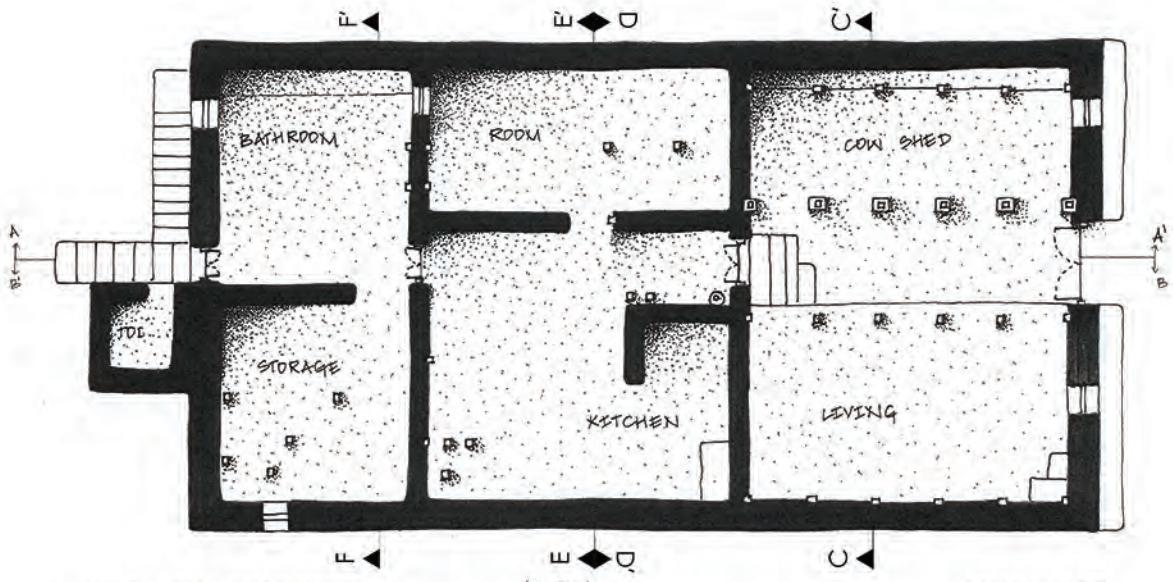


STRUCTURAL SUPPORT
FOR THE PASSAGE WAY



SECTION AA'

SCALE : 1:100

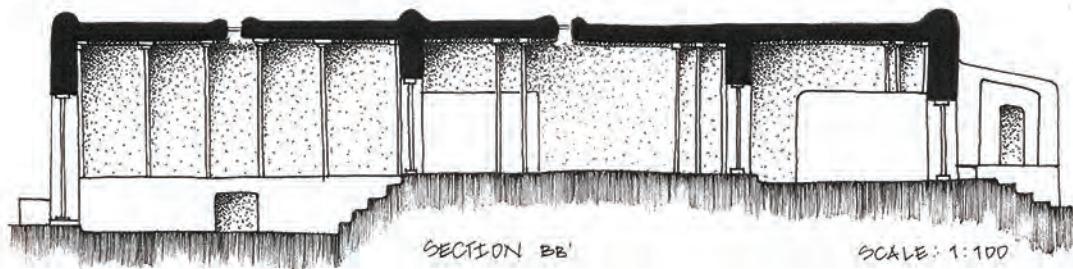


PLAN

SCALE : 1:100

OUTER WALL THICKNESS - 0.6M

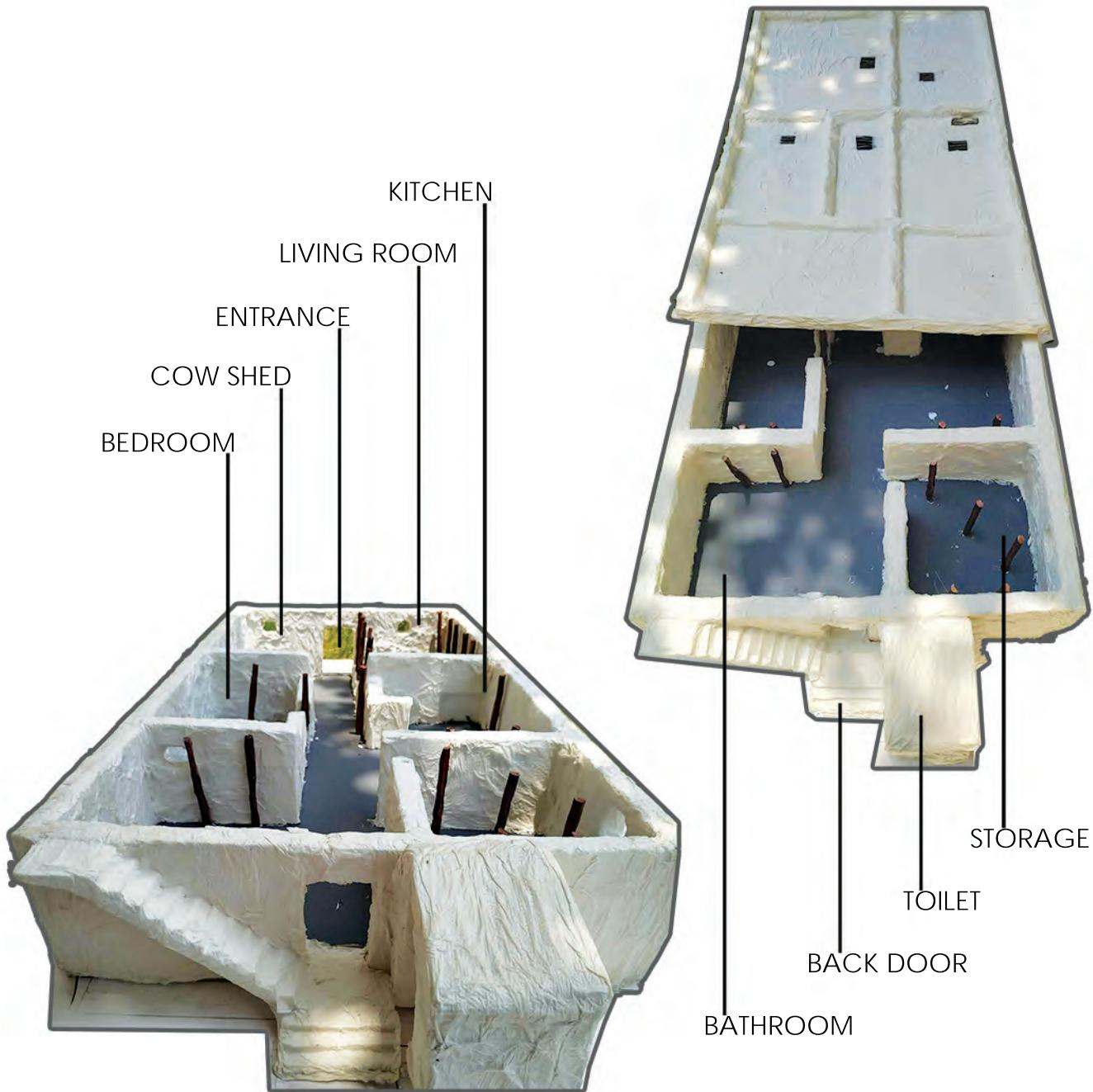
PARTITION WALLS - 0.35M



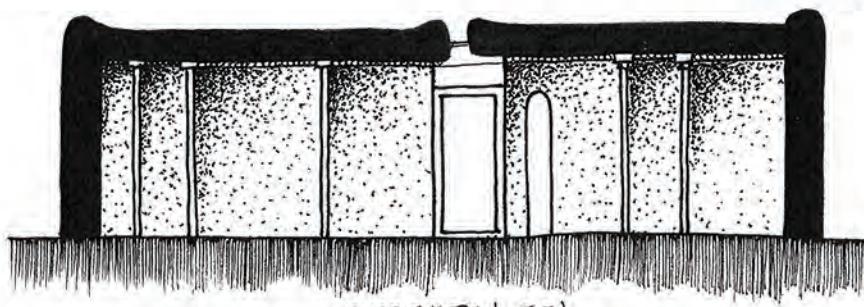
SECTION BB'

SCALE : 1:100

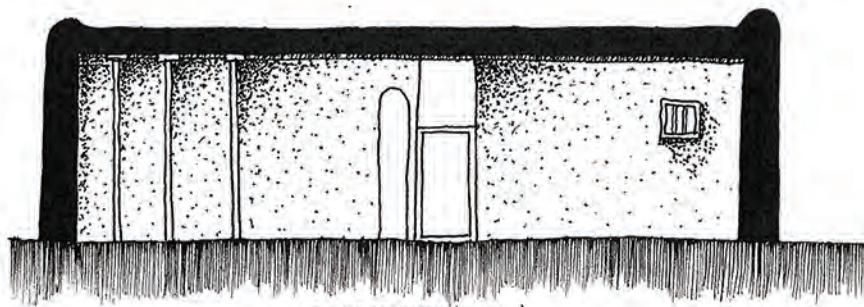




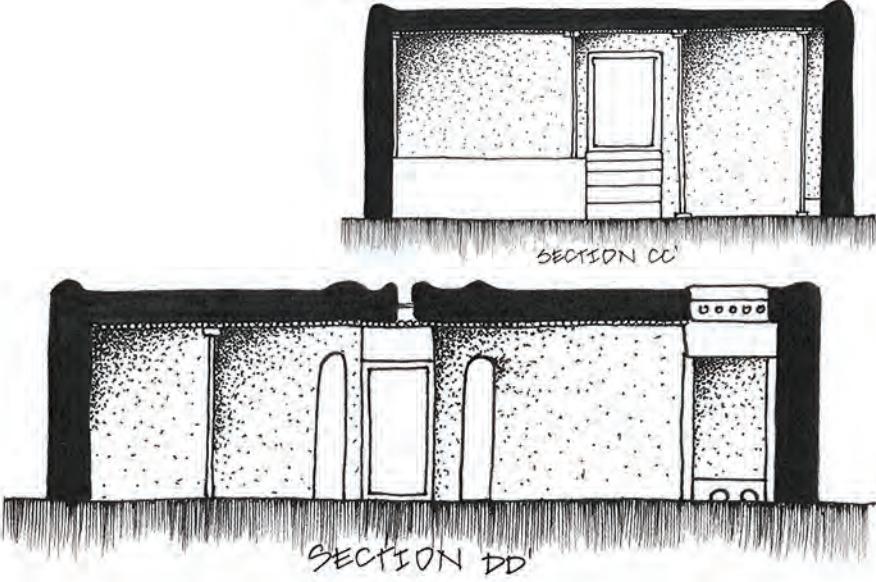
The entrance porch has an elevated sit-out space which is used by the residents to spend their leisure time. The interior of the house is in two levels. The living and sleeping areas in the front of the house are at a lower level than the kitchen at the back. A long passageway leads one to the stairs and the kitchen beyond. The passage way, with columns on either side, is lit by a small skylight.



SECTION EE'



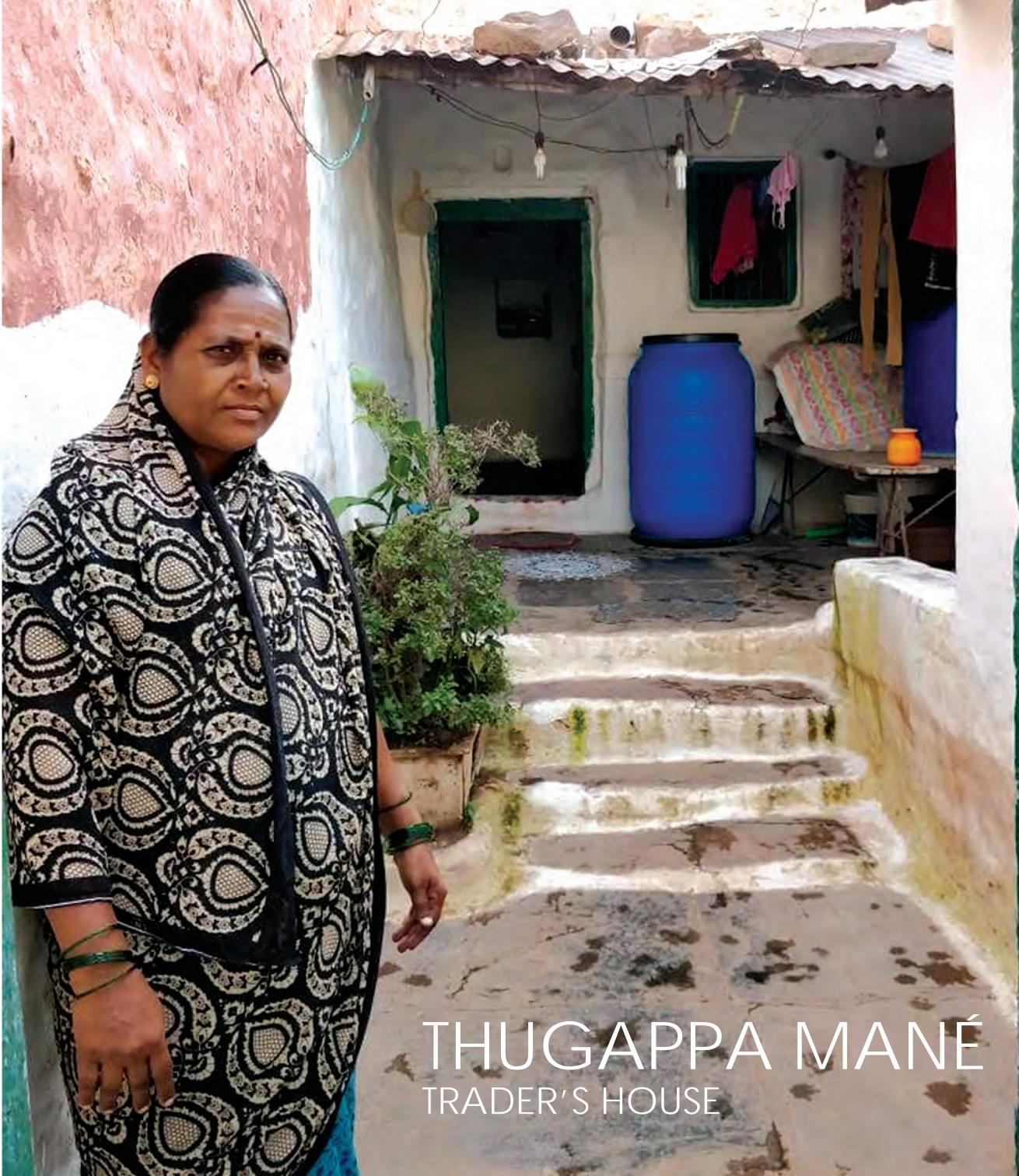
SECTION FF'



SECTION DD'

There are two small windows at the front which help illuminate the house. The interior passage leads to a living space on the left called 'padhsale' and the 'gwale' or cow shed on the right. The kitchen is lit by a skylight. At the back of the house is a storage room and bathroom constructed at a later date. The stairs leading to the terrace is at the back of the house.



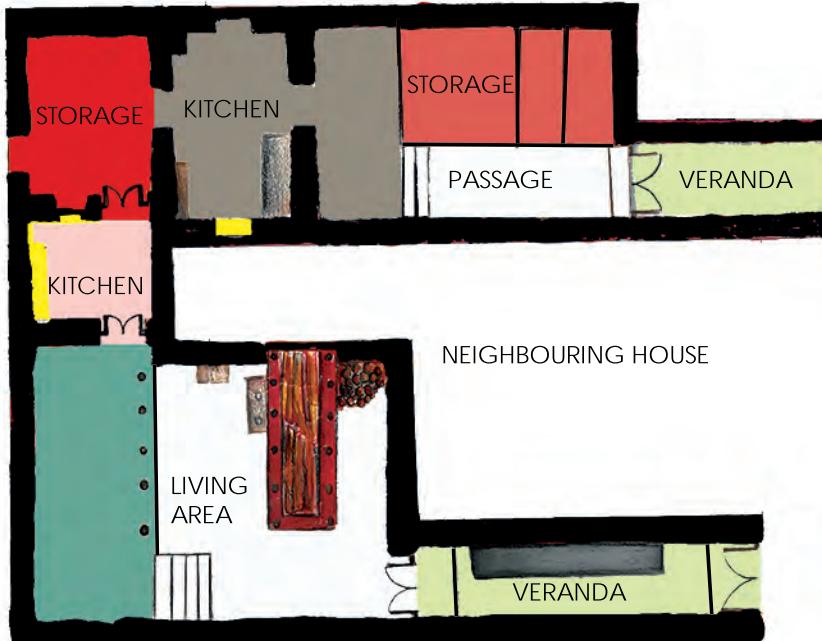


THUGAPPA MANÉ

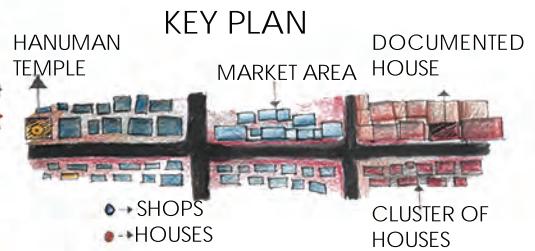
TRADER'S HOUSE



FRONT VIEW OF THE HOUSE



PLAN



Thugappa mane, is a U-shaped house, wrapped around another residence with two narrow entrances on either side of it. A large family of 22 members live in this house whose main occupation is trade.

The entrance door to the house is only 5 foot high. This was to show the same reverence as one enters the house as to when one enters a temple. A narrow entrance foyer with seating opens up to a large living area. The living space had an area for cows but is now used a for firewood storage and the 'thagaru' or ram. The katte of the 'padhsale' leads to a small kitchen at the back. There is another kitchen and a storage space in the other wing of the house

The flooring is of kadapa stones, walls of mud and roof of timber covered with mud plaster. The terrace could be accessed by steps at the back of the house.





THE OPEN SPACES ARE USED FOR CATTLE AND DAY TODAY ACTIVITIES LIKE WASHING CLOTHES. THESE SPACES ARE ALSO USED BY DIFFERENT AGE GROUP OF THE COMMUNITY FOR THEIR PAST TIME SUCH AS PLAYING CHOWKABARA, CONVERSATIONS, GROOMING ETC.



VIEW OF THE ENTRANCE FOYER LEADING TO THE LIVING ROOM



VIEW OF THE TWO ENTRANCES INTO THE HOUSE



THE LOW HEIGHT DOORS TO SHOW THE SAME REVERENCE AS ONE ENTERS THE HOUSE AS TO WHEN ONE ENTERS A TEMPLE



THE SECOND DOORWAY OF THE HOUSE WAS USED AS A STORAGE SPACE AND BELONGED TO THE EXTENDED



KITCHEN STORAGE AREA



LIVING AREA OF THE HOUSE



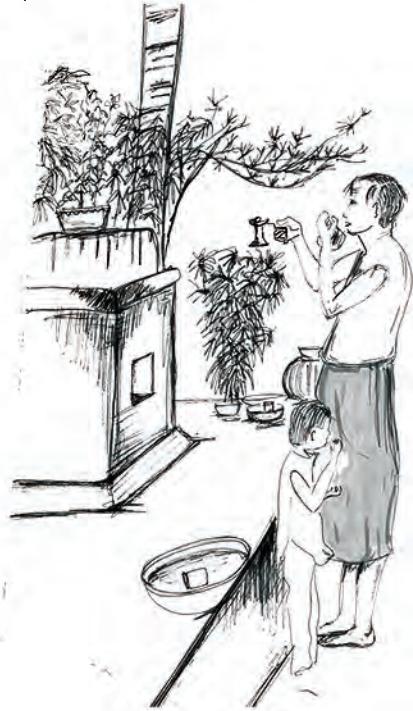
KITCHEN THAT SERVES 22 FAMILY MEMBERS



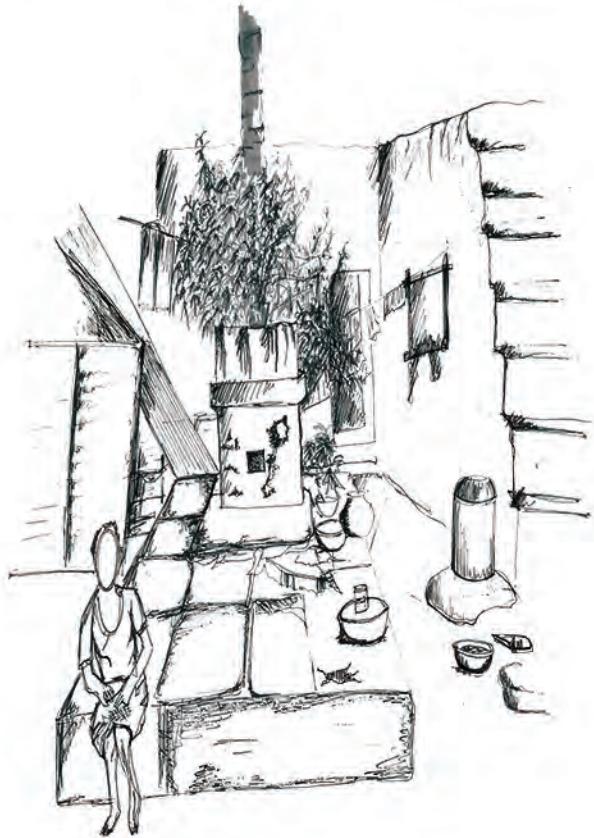
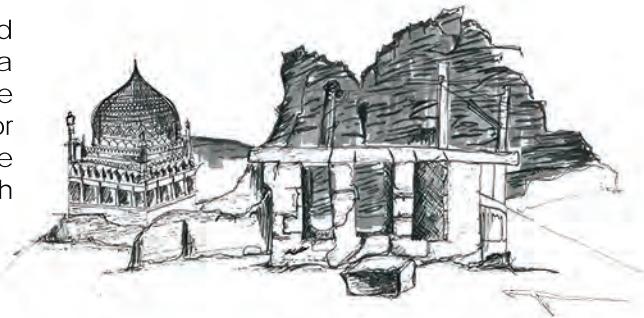


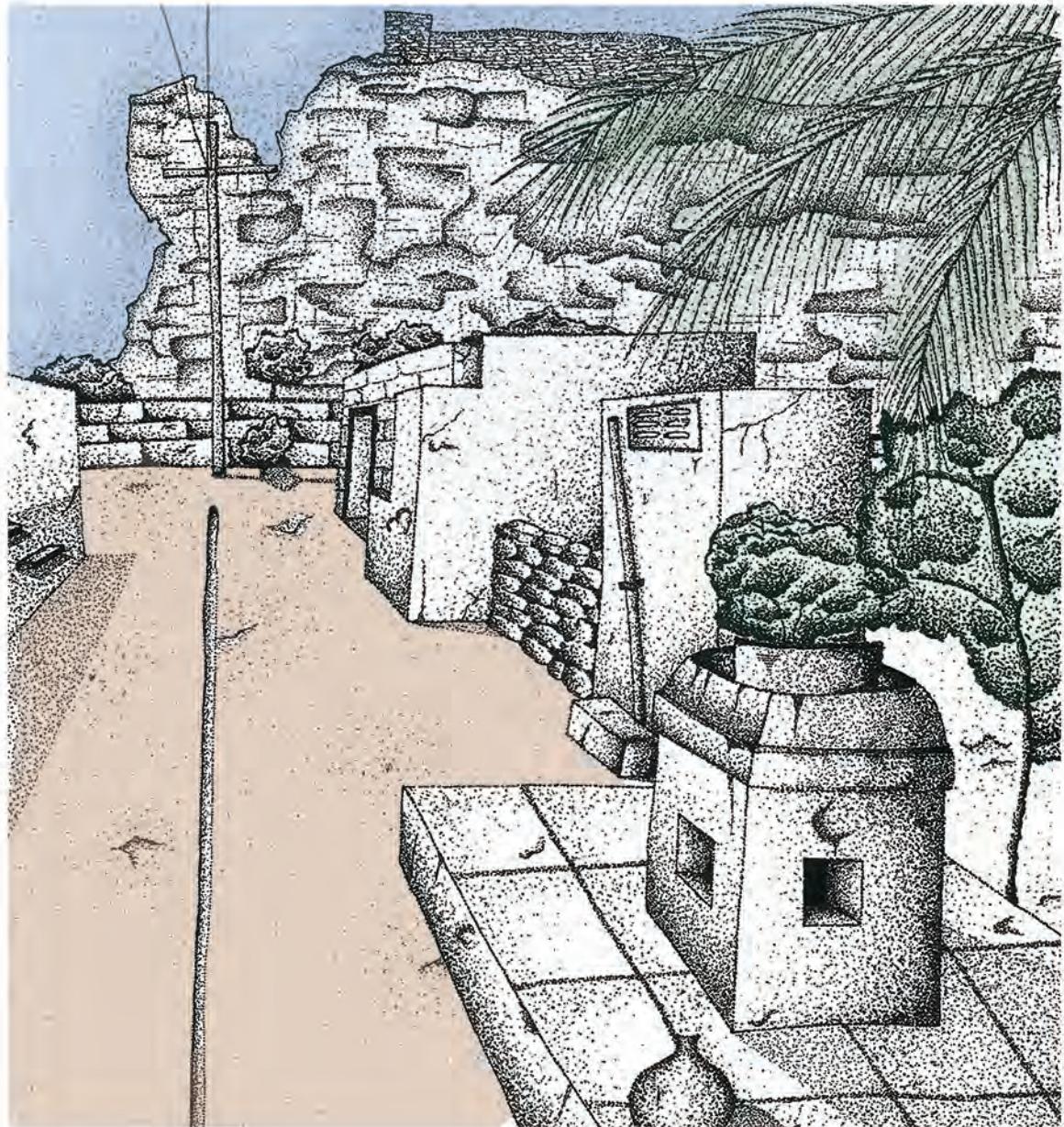
SHANKARAPPA MANÉ
HEADMASTER'S HOUSE

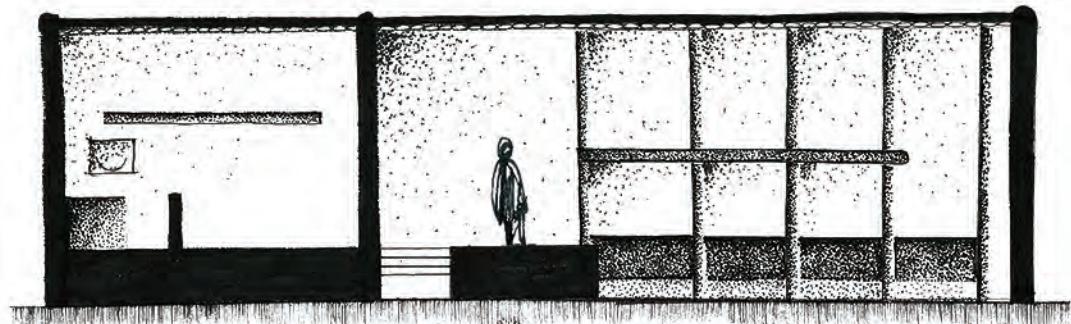
Houses in the settlement are clustered around open spaces. These open spaces play a significant role in both in daily lives of the residents as well as an important space for religious and social activities. Sankarappa Mane is part of a cluster of houses around one such open space in a cul-de-sac.



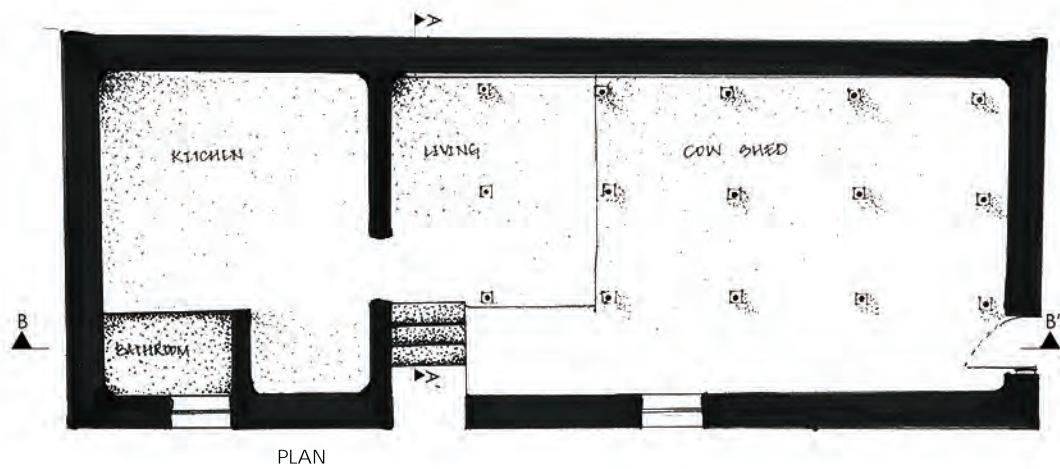
The cluster surrounds a Tulsi katte (a high platform with a tulsi plant in the centre) which is right next to a temple. Apart from being used for day to day activities like washing and drying clothes, these spaces are also used by different age groups of the community for various leisure activities such as playing chowkabara, conversations, grooming etc.



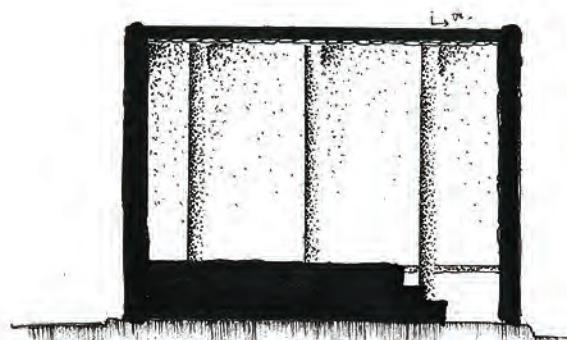




SECTION BB'



PLAN



SECTION AA'

This house does not have a passage way in between the living space and cow shed as seen in other houses, rather, the living space or 'padhsale' is on a higher platform and the cow shed or 'kottige' is accessed from another side door. The kitchen is separated from the living area by a wall. The 'Bachlumane' or washroom is a 1mX1m space on one side of the kitchen. The pooja room was also in the kitchen.





*Bhagyada balegara hogiba nan
tavarige,
Ninna tavarroora, naneu ballenu,
Gothilla yenage, guri illa yelebale,
Thorisu bare tavarroora*

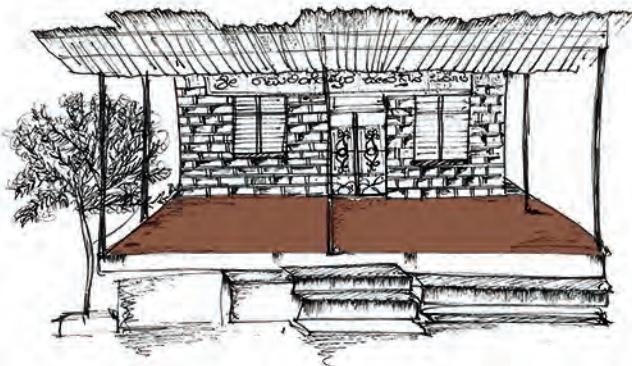
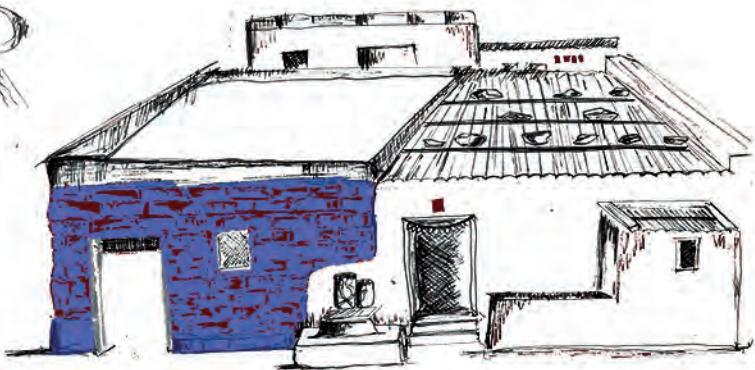
*“Dear bangle seller,
Please go to my hometown”*

*“How am I suppose to know which is
your hometown?
I don’t know the directions.
Show me how to get there.”*

*-excerpt from a popular Kannada
folk song*

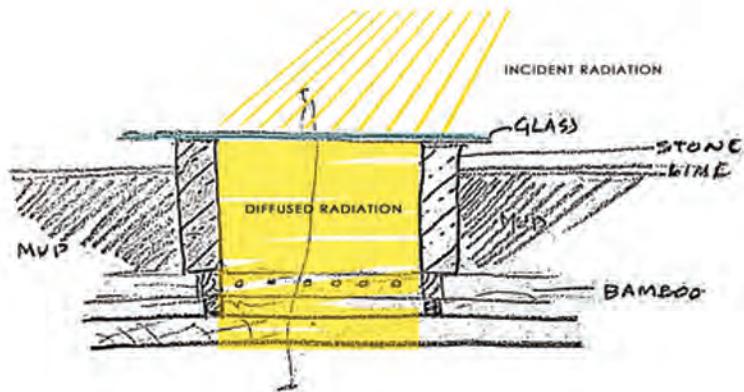


The house has stone walls with wooden columns and beam. There were rafters supporting the roof. The skylights are built into mud pots. The cluster surrounds a Tulsi katte (a high platform with a tulsi plant in the centre) which is right next to a temple.



The street and cul-de-sac opens up to the mighty Badami caves in the background. Due to the nature of the houses clustered around it, the central space becomes very active in the early mornings when the women come out to draw the 'kolams' and later in the evening, when all the residents come out to interact with each other.





INCIDENT RADIATION

ABSORBED RADIATION

REFLECTED RADIATION

OUT

IN

TRANSMITTED
RADIATION

150X400mm
Stone

2.cm Thick
Plaster

2cm Thick
Internal Plaster

CLIMATIC ANALYSIS - DAY

