



SITE PLAN 1:8000

LEPERS HOSPITAL

The hospital is built in a society without the institutionalized social security systems of western society. The surrounding landscape is hostile in several ways:

- The climate; from very hot in summer to partially flooded in the rainy season.
- Wild animals; tigers, leopards and hyenas.
- Robbers and highwaymen.

In such a place taking architectural precautions is a necessity. All buildings in this area are concentrated in villages, for obvious reasons; the villages are easy to defend, they are always placed near water, and they are full of trees, making them appear like small forests in the otherwise open landscape of fields. The houses seek shadow, water, and the protection of the community.

These observations have been decisive for the design.

The site is at the border of the hilly forested Satpura preserve. To the south is a flat cultivated plain. The rainy season lasts four months, the rest of the year is dry and the landscape takes on a desertlike appearance.

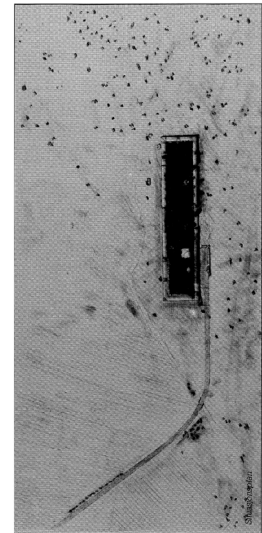
The programme required a complete in-patient leprosy hospital for about 40 patients as well as staff housing, workshop, farm facilities etc.

The clients' wish was to make a home for the lepers, the outcast among outcasts in the Indian society.

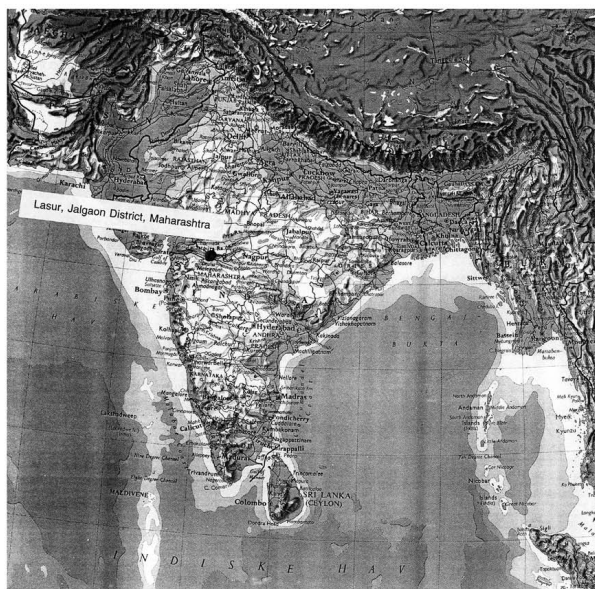
The Persian word for paradise means a waterful garden in a desert. The architectural idea is to make such an enclosed garden with shadow and protection. The architecture of the surrounding four meter wide building does not discriminate between patient and doctor, office and workshop, all have access to the garden.

The hospital is built with local materials, local technology, and local masons. Maintenance is thus simple, and needs no external guidance.

The roof is clad with waste glazed tiles purchased from a nearby factory. The tiles, mostly white, arrived assorted. We put the white tiles over closed rooms for maximum reflection of heat, and the colored tiles over verandas, open to the outside air, thus optimizing the heat reflective effect.



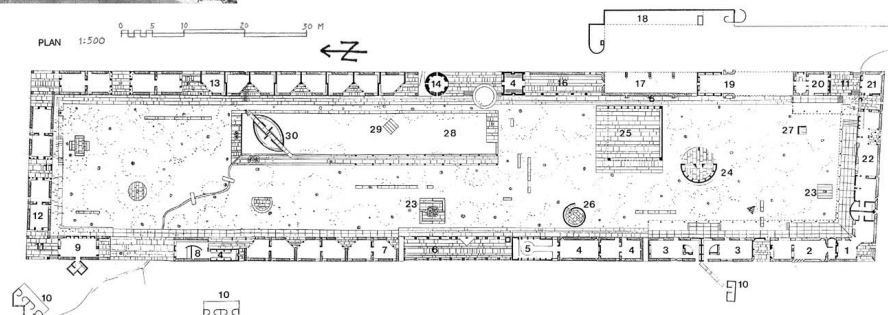
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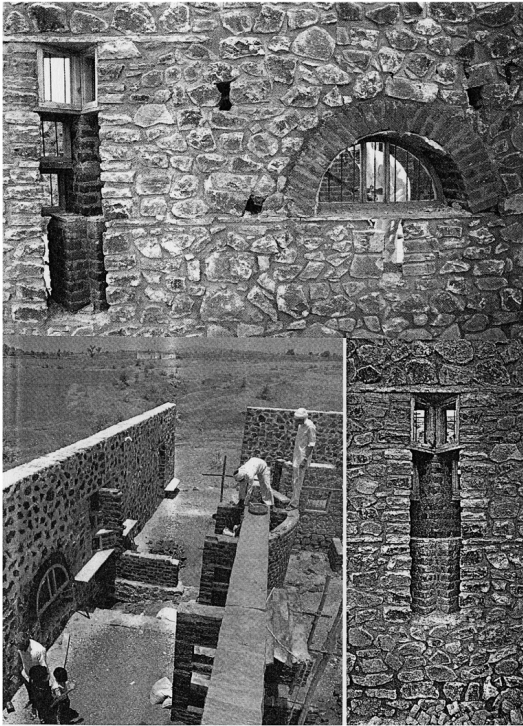
MAP OF INDIAN SUBCONTINENT



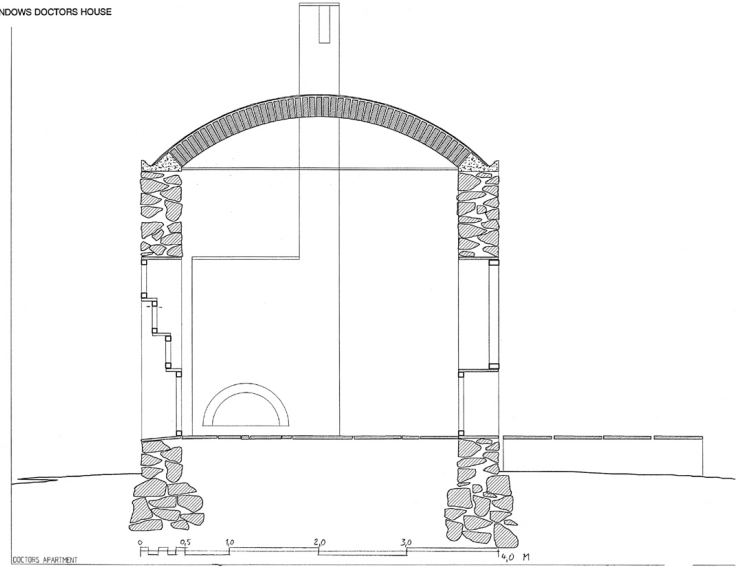
SITE PLAN



13 General layout. Key: 1, guest room; 2, nurse quarters; 3, future staff quarters; 4, storeroom; 5, kitchen; 6, dining porch; 7, female ward; 8, clinic; 9, epidemic ward; 10, toilets; 11, porch; 12, male ward; 13, future ward; 14, water tower; 15, well; 16, workshop; 17, butchery shed; 18, poultry shed; 19, garage; 20, watchman; 21, office; 22, doctors' quarters; 23, bench; 24, laboratory; 25, chapel; 26, pigsty room; 27, dove shed; 28, carp pond; 29, duck shed; 30, bathroom.



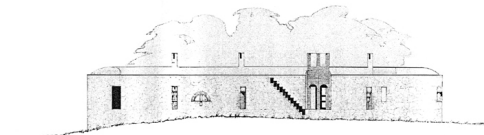
WINDOWS DOCTORS HOUSE



SECTION DOCTORS LIVING ROOM, 1:35

BATHROOM WINDOW, DOCTORS HOUSE AND GUEST HOUSE

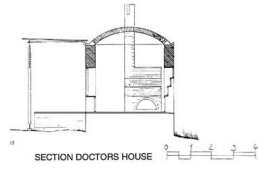
BATHROOMS DOCTORS HOUSE AND GUEST HOUSE DURING CONSTRUCTION USING SLATE STONE SLABS AS LOAD BEARING BEAMS



Facade syd

ELEVATION DOCTORS HOUSE, OFFICE AND GUEST HOUSE

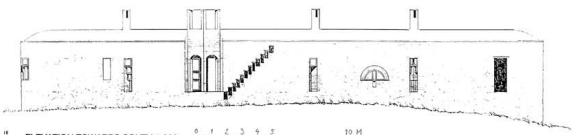
VIEW GUEST ROOM CORNER FROM WEST



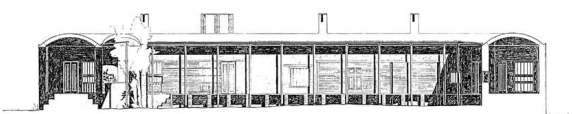
SECTION DOCTORS HOUSE



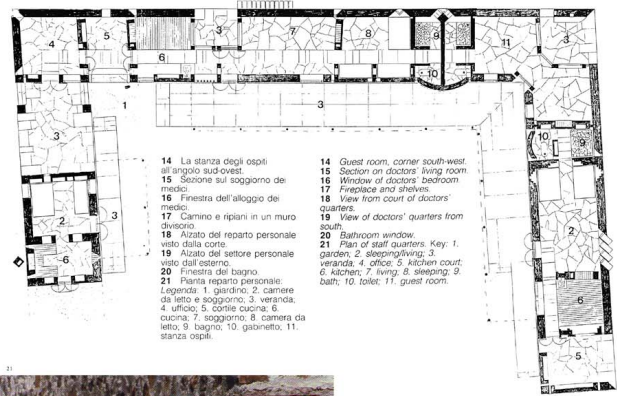
WINDOW, DOCTORS BEDROOM



ELEVATION TOWARDS SOUTH 1:200



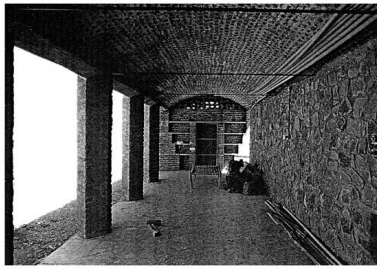
SECTION STAFF QUARTERS TOWARDS SOUTH 1:200



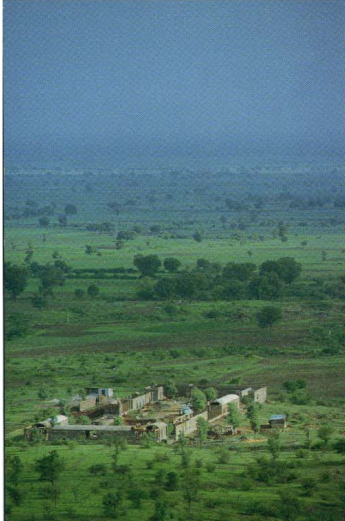
STAFF QUARTERS, PLAN



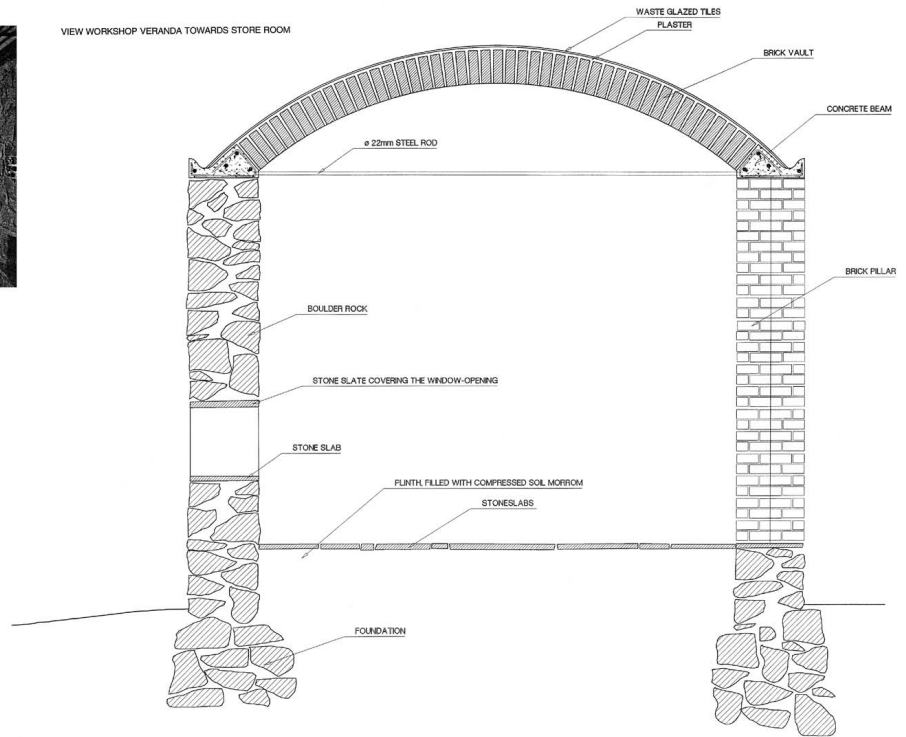
CORNER WINDOW, OFFICE



VIEW FROM HILLS DURING CONSTRUCTION

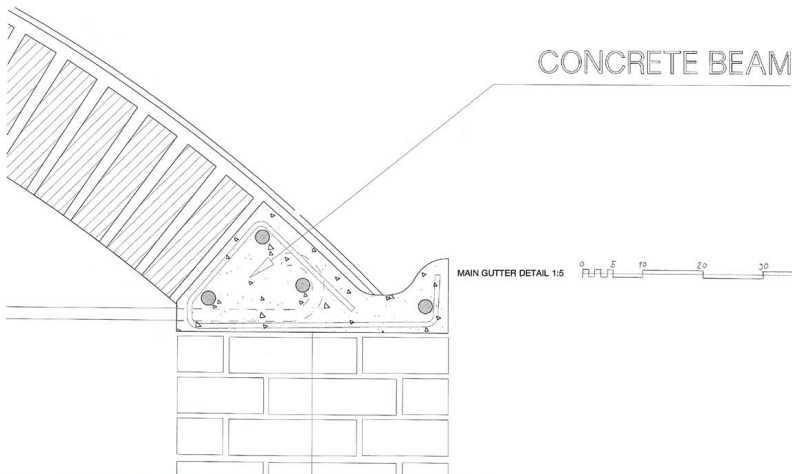
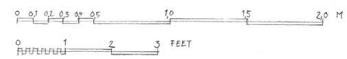


VIEW WORKSHOP VERANDA TOWARDS STORE ROOM

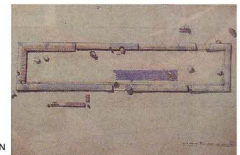


WORKSHOP VERANDA

SECTION WORKSHOP VERANDA WITH CONSTRUCTION DETAILS 1:20



MAIN GUTTER DETAIL 1:5



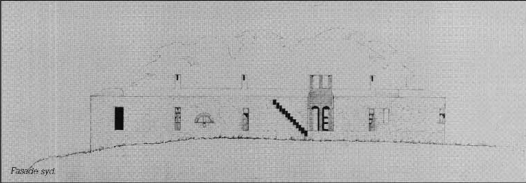
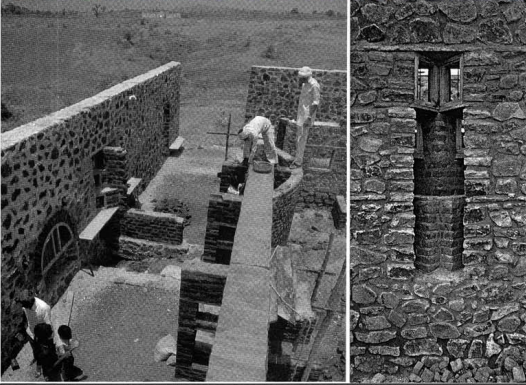
SITE PLAN



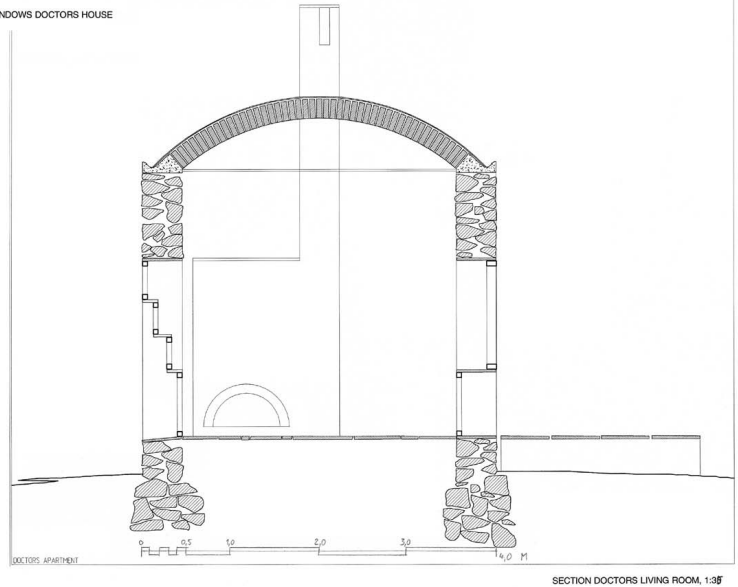
VIEW TOWARDS TAPTI RIVER PLAIN

MUSLIM AND TRIBAL WORKERS





WINDOWS DOCTORS HOUSE

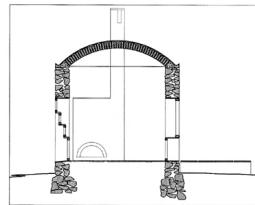
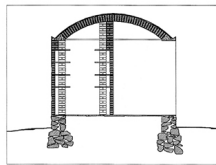
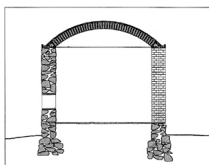
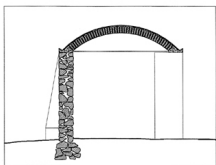
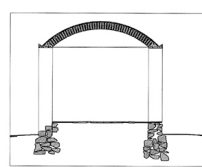
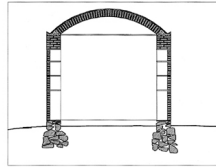
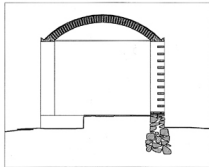
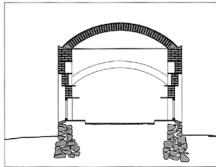


SECTION DOCTORS LIVING ROOM, 1:30

BATHROOM WINDOW, DOCTORS HOUSE AND GUEST HOUSE

BATHROOMS DOCTORS HOUSE AND GUEST HOUSE DURING CONSTRUCTION USING SLATE STONE SLABS AS LOAD BEARING BEAMS

ELEVATION DOCTORS HOUSE, OFFICE AND GUEST HOUSE

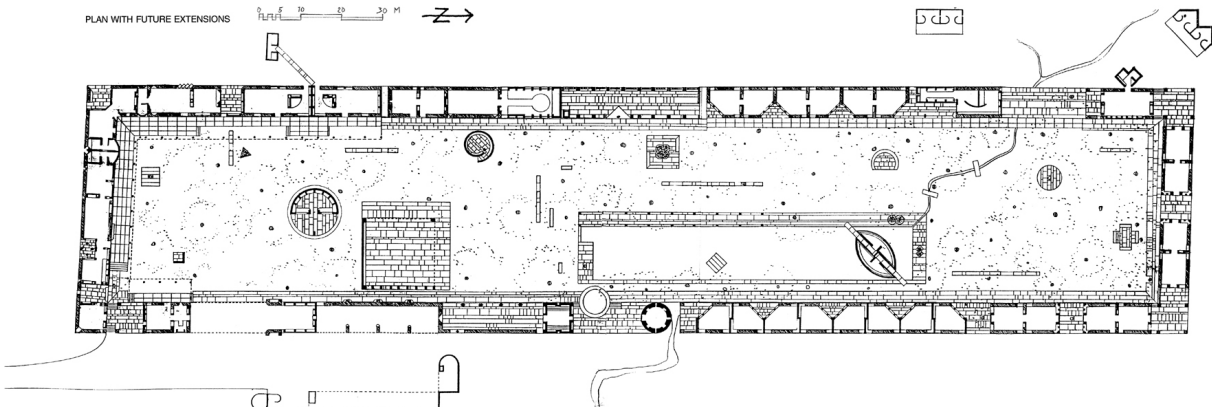


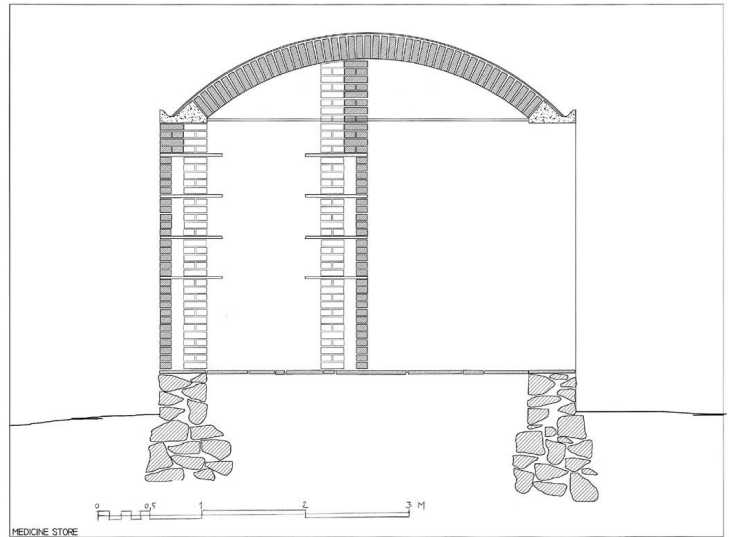
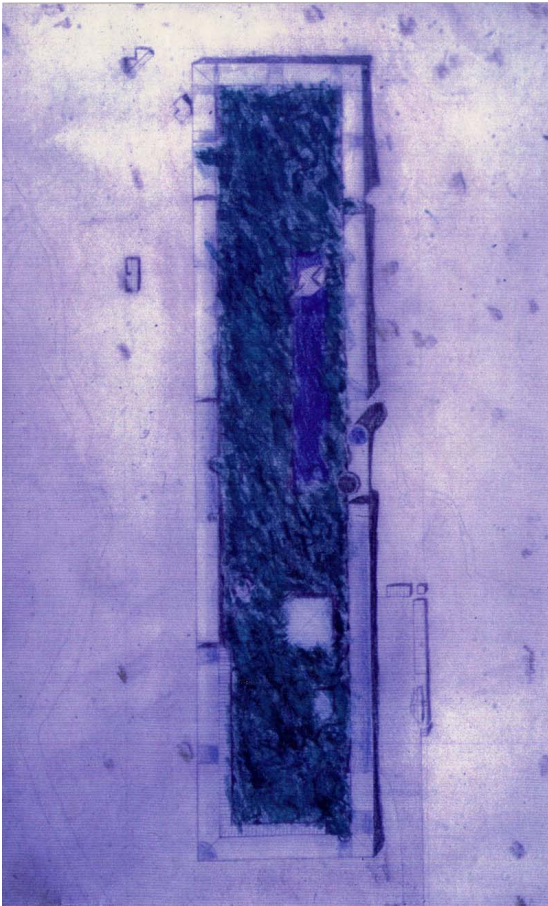
0 1 2 3 4 M

SECTIONS 1:100

PLAN WITH FUTURE EXTENSIONS

0 10 20 30 M

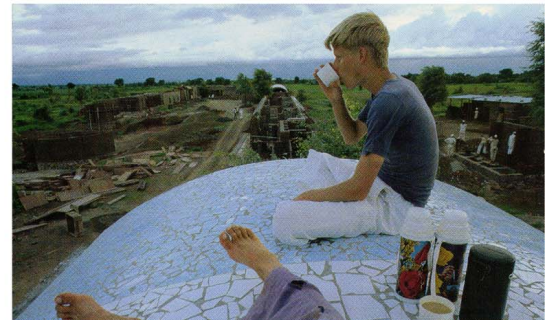




MEDICINE STORE

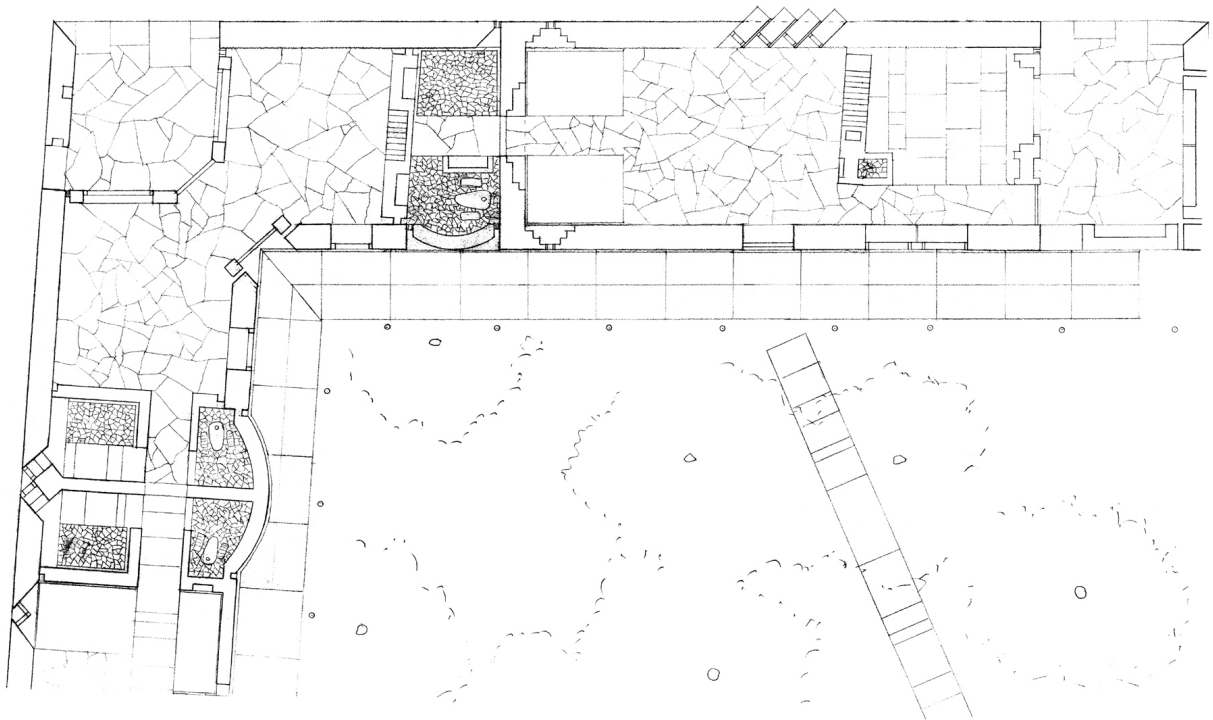
SECTION MEDICINE STORE 1:30

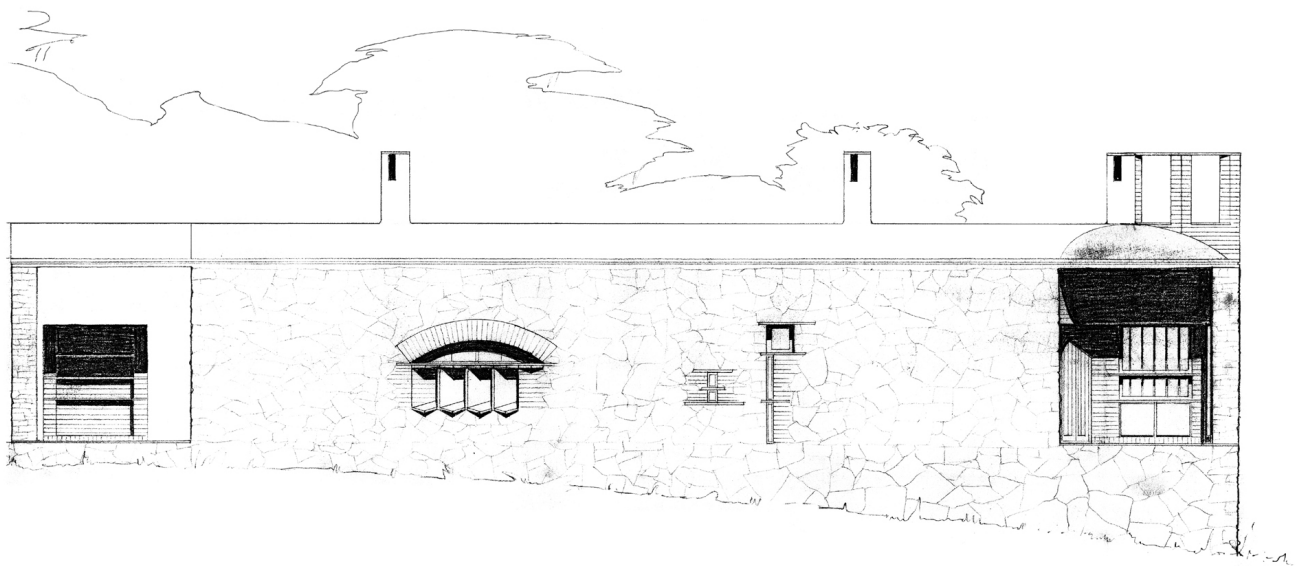
EXPERIENCING THE TEMPERATURE OF TILE ROOF



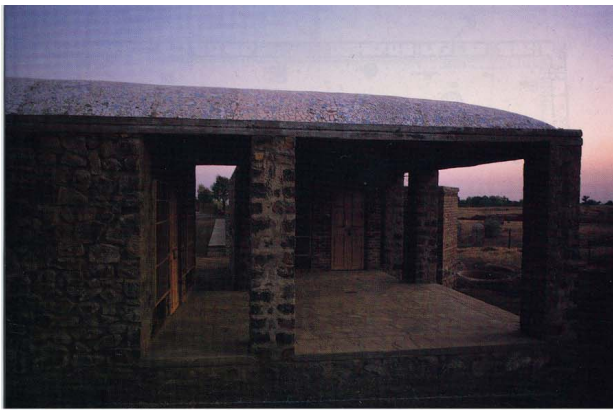
ROOF PLAN

PLAN NURSE QUARTER AND GUEST HOUSE 1:50

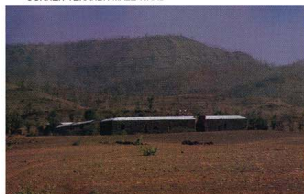




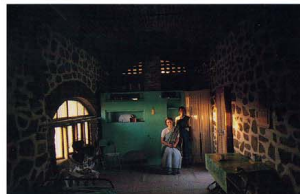
ELEVATION NURSE QUARTER AND GUEST HOUSE TOWARDS WEST 1:50



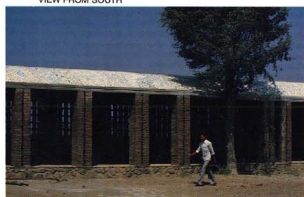
CORNER VERANDA MALE WARD



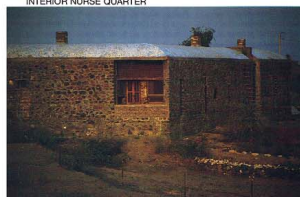
VIEW FROM SOUTH



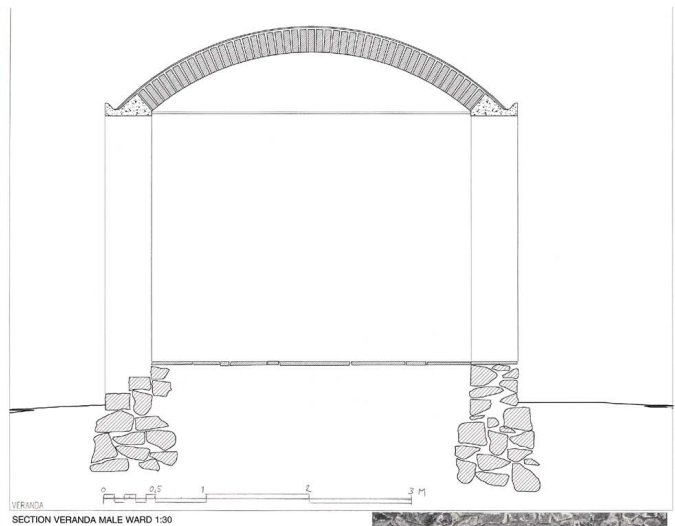
INTERIOR NURSE QUARTER



DINING HALL WITH PRESERVED TREE

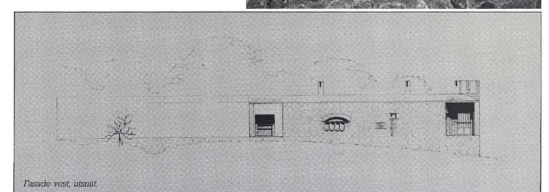


GUEST HOUSE CORNER VERANDA

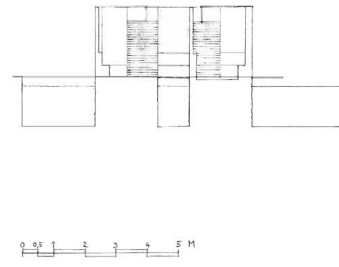
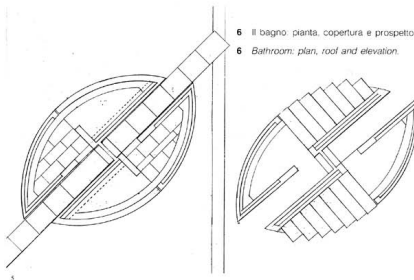


SECTION VERANDA MALE WARD 1:30

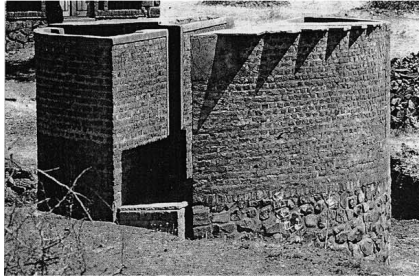
LIVING ROOM WINDOW, NURSE QUARTER



NURSE QUARTER, ELEVATION TOWARDS WEST



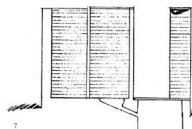
ELEVATION AND SECTION, BATHROOM 1:100



BATHROOM WITH SLATE ROOFING

7-9 Gabinetti: pianta, prospetto e sezione.

7-9 Toilet: plan, elevation, and section.



The floors and the platforms have red sandstone flooring.

Generally the walls are 18 inches thick, made from stones from the district. The stone walls are clean, beautiful, and protect against heat as well as cold. These walls are combined with brickwork giving more precise and thinner walls, and red sandstone openings for a multitude of possibilities. Combined with brick it is found in shelves, benches, sills, windows, etc.

Doors and windows are made from teakwood which is naturally impregnated against rain, drought and ants. The different rooms demand different windows; wooden shutters, screens, or glass with steel bars against thieves. The windows are bigger where protected by the roof against the very strong sunlight.

The roof is a one brick thick (22 cm) vault covered with broken glazed tiles in assorted colours mostly white. The white tiles reflecting the heat are reserved for the living areas — the darker tiles absorbing more heat are used over verandas and porches.

The inhabitants have painted pavilion walls containing fire places, shelves and benches of ornamental and hygienic reasons.

The court has long traditions in Indian architecture. The roof is a green roof giving shadow and the car pond with its water work together for a better climate. The pavilions are in brick, steel and sandstone slabs.

The experience

"The house has been growing more than being a finished design before the building work started", Jan Olav Jensen answers to the question about their architectural experience concerning their stay in Chopda. "We were in close contact with the building of the house and had the possibility to change, even tear down lesser constructions and draw details that would be built the next day."

Jan Olav continues: "Experience isn't always a must. Our naive approach was a strength in this case — we sort of unknowingly avoided many conventional solutions and did the *error* instead, things which we liked, but which were wrong. The problems of the technical side had to be solved of course. Per Christian goes on:

"We had to investigate, not invent, for instance how the women make the food sitting on the floor — the kitchen expresses this. We thought out the needs and made shelves, niches, etc. to meet them."

"There must be differences between the process of building in India and Norway — what kind of cultural experience did you get?" "The Indian concept of time was both a negative and positive factor. You could never plan to have something ready for a specific date, but this gave us freedom to talk to people about their needs and time to concentrate on architectural details," Jan Olav Jensen adds. "In contrast to the sometimes 'academic' way of having to plan everything months ahead like we mostly do in the West, we could continually use the skills of the workers. If the mason had a method new to us, we could immediately benefit from this in the design."

"Lastly, what are your personal experiences after this venture?" "The close social contact with the Indians was very inspiring, but getting the house built was rather painful. I didn't know it was so difficult", Jan Olav says. "It was fantastic to arrive directly into the dynamic process of building after being a student. We had a lot of working together with the missionaries and the Indians for something important". Per Christian Brynildsen concludes.

Present situation

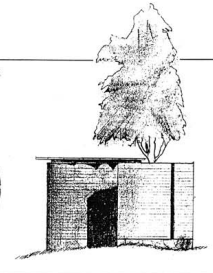
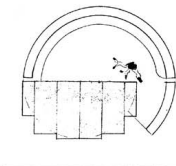
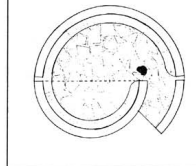
Today the hospital has about 30 in-patients as well as a large number of day-patients. The work is gradually being extended.



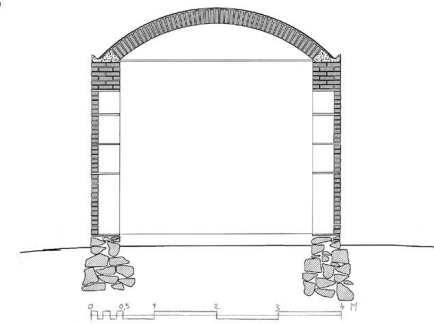
HOSPITAL DURING CONSTRUCTION

10 La stanza di preghiera: pianta, copertura e prospetto.

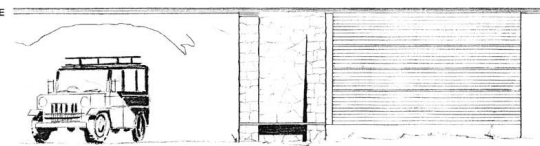
10 Prayer room: plan, roof and elevation.



SECTION GARAGE 1:50



ELEVATION GARAGE



VIEW INTERIOR GARAGE WITH SPARE PARTS SHELVES



Leper hospital in Lasur, India

Chopda, India — "Monsieur Mouchet" Missionary Clara Lerberg is pulled out of his thoughts about getting ugly and useless, watching her tired hands. Outside her house she finds two lepers begging her for help. One without hands and the other with wounds in her side; both just in filthy rags.

This is just one of the experiences in Clara Lerberg's life showing her that she had still more to give besides the educational and evangelical work she and her husband Leif Lerberg, had started in Chopda. There are dozens of thousands of lepers in the area and no organized medical work to help them. This was a great challenge to the experienced missionaries. They had been working among the poor and the tribes for many years — Clara for 50 years and Leif 38 years — and now they joined their forces to build a hospital for the lepers. Financially they were supported by donations from the pentecostal churches in Norway, the charity campaign Hope42 and Noraid — the Norwegian foreign-aid department.

Oslo, Norway — A young man is sitting by his desk at Oslo School of Architecture. He doesn't know what to do — he has finished two and a half years of study and now he wants a break of some sort. Suddenly another student stops by his desk to chat. "What are you doing this spring?" Per Christian Brynildsen asks. "I'm planning a trip to India and Nepal", Jan Olav Jensen answers.

Jan Olav Jensen was actually born and raised in India by missionary parents, settling in Norway at the age of 15. After four and a half years of study he wanted to go back to India and visit India. Accepting the invitation from Leif Lerberg to come and help with a few sketches — the two students, 23 and 24 years old, arrived in Chopda, India, in March '83.

Soon it appeared to them that this could be a long stay. After three weeks of searching in Kaimunda — the drawings were sent back to India — and in June they were back in Chopda to start digging the foundations.

Chopda, India — Through the 13 months in Chopda the daily leader of the work was Vijay Sapkal. He was a mediator between the Norwegian and the Indians in the process of building — a diplomat, adviser, responsible for buying the materials — and a good friend.

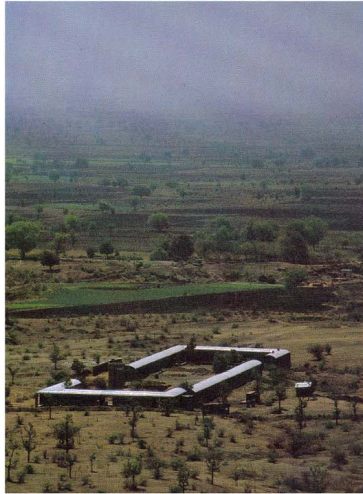
The hospital

The setting — The hospital is situated 400 km north-east of Bombay, in the Jalgaon district in Maharashtra. The village of Lasur lies just south of the Sarpura hills facing the vast agricultural plain of the Tapi river. The north border aligns with the official jungle border. The jungle being the home of tribal people as well as wild animals — leopards, wild boars, antelopes, makes this a dramatic place to live. The climate is harsh with a hot dry season from February to May, a rainy season from June to September, and a cool dry season from October to January.

The building — The missionaries wanted the hospital to be a hiding place for the lonely, poor, and humiliated lepers. The building represents a shelter in the alien surroundings. It can be seen from everywhere around — like an oasis in a desert or a flower pot on dry ground. The walls hide a garden with refreshing water and shadows under the lush trees.

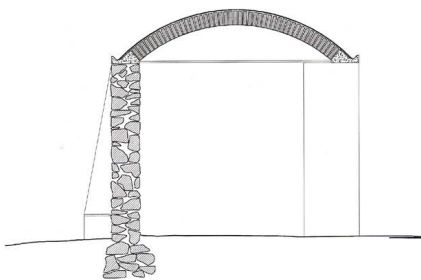
The building is a wall 6 meters wide containing most functions. The south wall (25 m) has an office and living areas for the employed. The patients use the north-east section. The west wall contains the kitchen as well as the dining hall. Workshop, garage, and buffalo shed are in the east wall.

Some functions for community activities are placed in the yard; a bath, a chapel, a prayer room, a carp pond as well as benches and bird sheds.

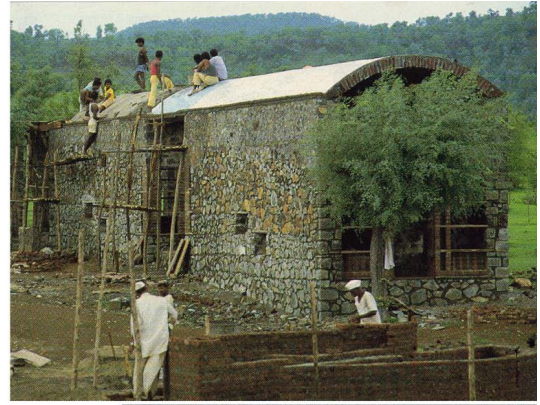


VIEW FROM HILLS SOON AFTER CONSTRUCTION (BEFORE GARDEN HAS GROWN)

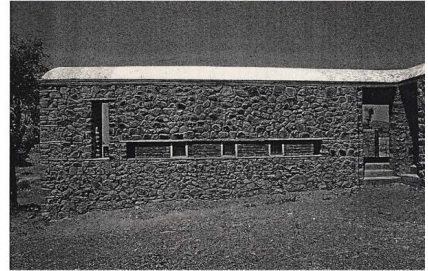
SECTION BUFFALO SHED 1:50



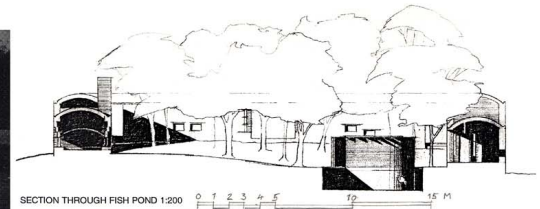
MALE WARD DURING CONSTRUCTION



VIEW EPIDEMIC WARD FROM EAST



VIEW EPIDEMIC WARD FROM WEST

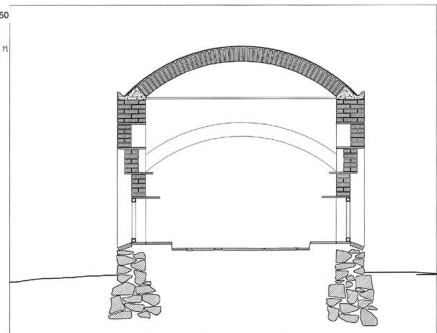


SECTION THROUGH FISH POND 1:200

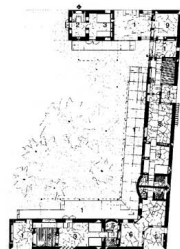


INTERIOR KITCHEN BEFORE OCCUPANCY

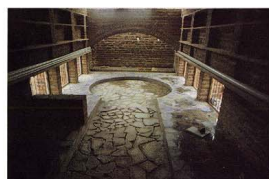
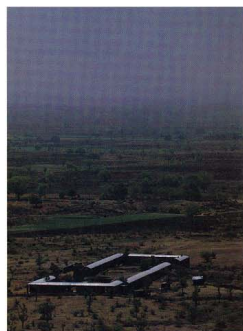
SECTION KITCHEN 1:50



PRESENTATION LEPEHS HOSPITAL, LASUR IN NORWEGIAN ARCHITECTS MAGAZINE

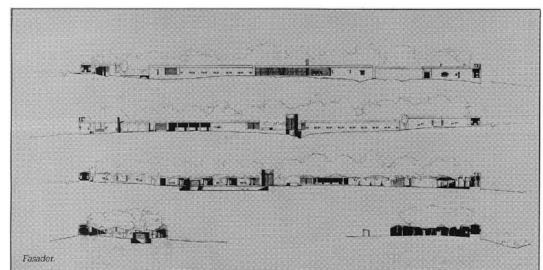


- Planutkast 1:800
1. Overdekket veranda
 2. Kjøkken
 3. Sov-opphehold
 4. Bad
 5. Toilett
 6. Gjesterom
 7. Soverom
 8. Oppholdsrom
 9. Korridor

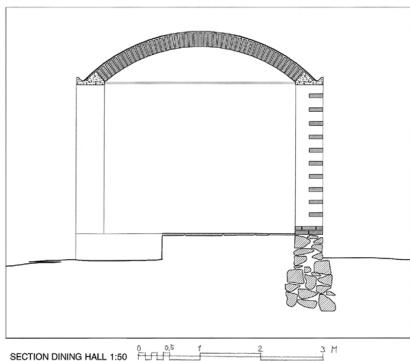


Fra kjøkkenet

LEPRAHOSPITAL / LASUR, INDIA
Per Christian Brynildsen og Jan Olav Jensen, 1985



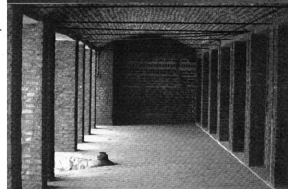
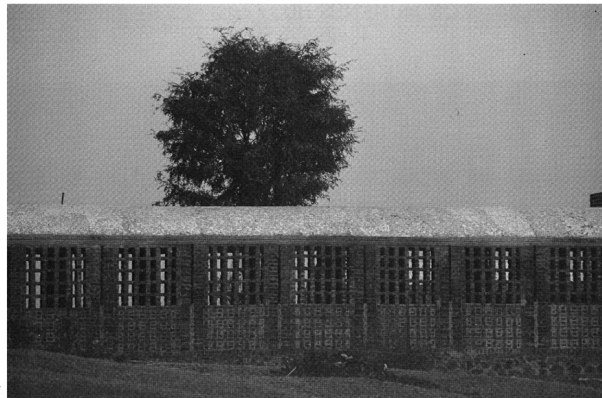
ELEVATIONS APX 1:1000



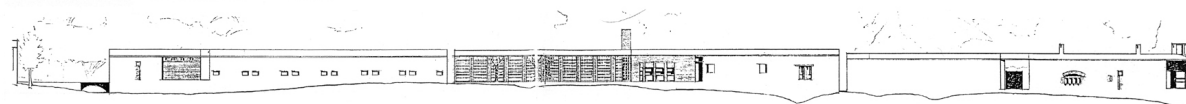
SECTION DINING HALL 1:50

VIEW DINING HALL FROM WEST

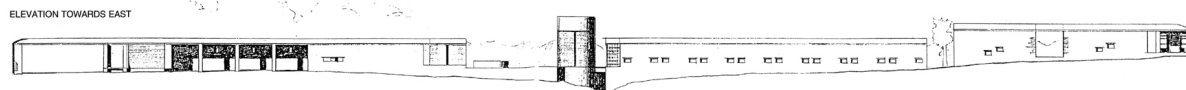
INTERIOR DINING HALL



ELEVATION TOWARDS WEST



ELEVATION TOWARDS EAST

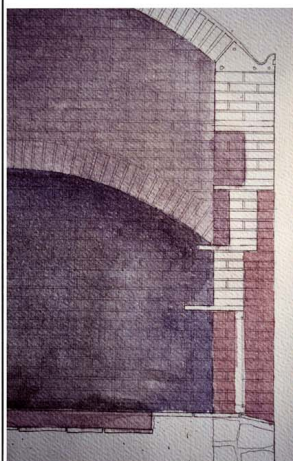


21

Lepers Hospital

Lasur, Jalgaon District, Maharashtra
Chopda Taluka, India

Architects	Per Christian Brynildsen Fjellhamar, Norway Jan Olav Jensen Fjellhamar, Norway
Client	N F E Mission Chopda Taluka, India
Commission	March 1983
Design	April 1983
Construction	June 1983
Occupancy	July 1985
Site	8000 m ²
Ground Floor	1000 m ²
Total Floor	1000 m ²
Costs	
- Global	140000 USD 1400000 INR
- Rate	USD = 10.00 INR (Dec. 85)
- per m ²	140 USD 1400 INR
- Rate	USD = 10.00 INR (Dec. 85)
Currency	Indian Rupees
Programme	Specialised Hospital



LEPERS HOSPITAL

The hospital is built in a society without many of the institutionalized social security systems typical of western societies. The surrounding landscape is hostile in several ways:

- The climate: from very hot in summer to partially flooded in the rainy season.
- Wild animals: tigers, leopards and hyenas.
- Robbers and highwaymen.

Taking architectural precautions was crucial. Buildings in this region are concentrated in villages, for obvious reasons: the villages are easy to defend, they are always placed near water, and with numerous trees they give the impression of small forests in an otherwise open landscape of fields. The houses seek shade, water, and the protection of the community.

These factors significantly influenced the design.



The site is at the border of the forested Satpura Hills. To the south is a flat cultivated plain. The rainy season lasts four months, while the rest of the year is arid, and desertlike in appearance.

The programme requirements included a complete in-patient leprosy hospital for about 40 patients as well as staff housing, workshop, farm facilities etc.

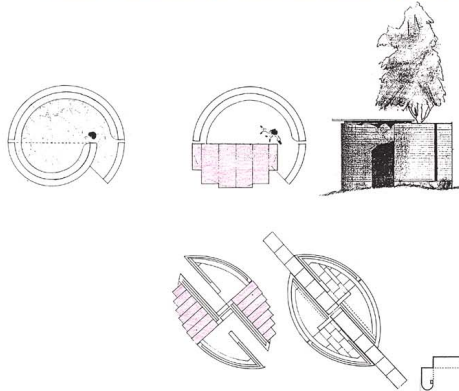
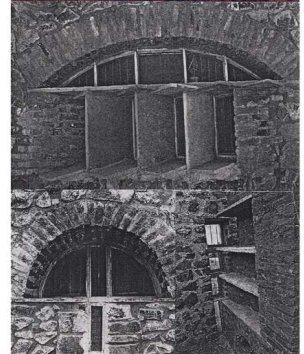
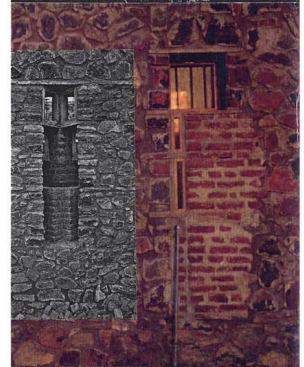
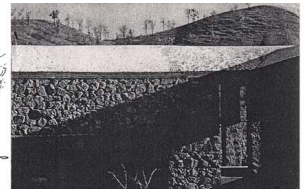
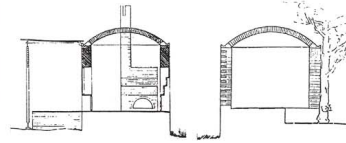
The clients wish was to make a home for the lepers, the outcast of outcasts in the Indian society.

The Persian interpretation of paradise means a water-filled garden in a desert. The architectural idea was to create such an enclosed garden with shade and protection. The architecture of the enclosing four meter wide building does not differentiate between patient and doctor, office and workshop. All have equal access to the garden.

The hospital is built with local materials, local technology, and by local masons. Thus maintenance is simple, and needs no external guidance.

The roof is clad with waste glazed tiles purchased from a nearby factory. The tiles, mostly white, arrived assorted. The white tiles were placed over closed rooms for maximum reflection of heat, and the colored tiles over verandahs, open to the outside air. This optimizes the heat reflective effect.

Building Type 414
1995 Award Cycle 1700/IND



13 General layout. Key: 1. guest room; 2. nurse quarters; 3. store and laundry; 4. range; 5. kitchen; 6. dining porch; 7. female ward; 8. clinic; 9. syphilis ward; 10. bath; 11. porch; 12. male ward; 13. nurse ward; 14. water tower; 15. well; 16. workshop; 17. buffalo shed; 18. poultry shed; 19. garage; 20. warehouse; 21. stable; 22. kitchen; 23. canteen; 24. laboratory; 25. chapel; 26. patient room; 27. office; 28. carpenter; 29. sick shed; 30. bathroom.

21 Plan of staff quarters. Key: 1. garden; 2. sleeping porch; 3. kitchen; 4. office; 5. bathroom; 6. kitchen; 7. living; 8. sleeping; 9. bath; 10. stable; 11. guest room.

