

## 6 Masouleh

Boundaries: NW= the Masal  
W= the Khalkhal  
S= Pusht-i-Kuh of Khamse

The small town of Masouleh, situated approximately 23 km. WSW of Fouman, at an altitude of 1050 metres, is surrounded by mountains on three sides. Its unique architectural style and settlement pattern display great sensitivity to the town's socioeconomic requirements and have been well adapted to suit the natural environment.

### History:

It has been claimed that Masouleh's existence depended upon the nearby iron mines and that the early residents extracted iron ore<sup>1</sup>. Thus the place became the centre for trade of steel products such as knives, scythes and nails. In 1891 the iron mines and the nearby smelting furnaces produced 400 kilograms per day,<sup>2</sup> but when Rabino visited the area (1906-12) although most of the iron utensils used in the villages of Gilan were the work of Masouleh blacksmiths, the mines were not being exploited and their entrance had been blocked by a rockslide.

Masouleh formerly linked Azarbaijan to Gilan and was an important distribution centre for merchandise. For this reason merchants, businessmen and artisans comprised most of the population, enjoying a high income and also a higher level of culture to the extent that present-day Masouleh is one of the few places in Iran where nearly all the inhabitants are literate (90%).<sup>3</sup>

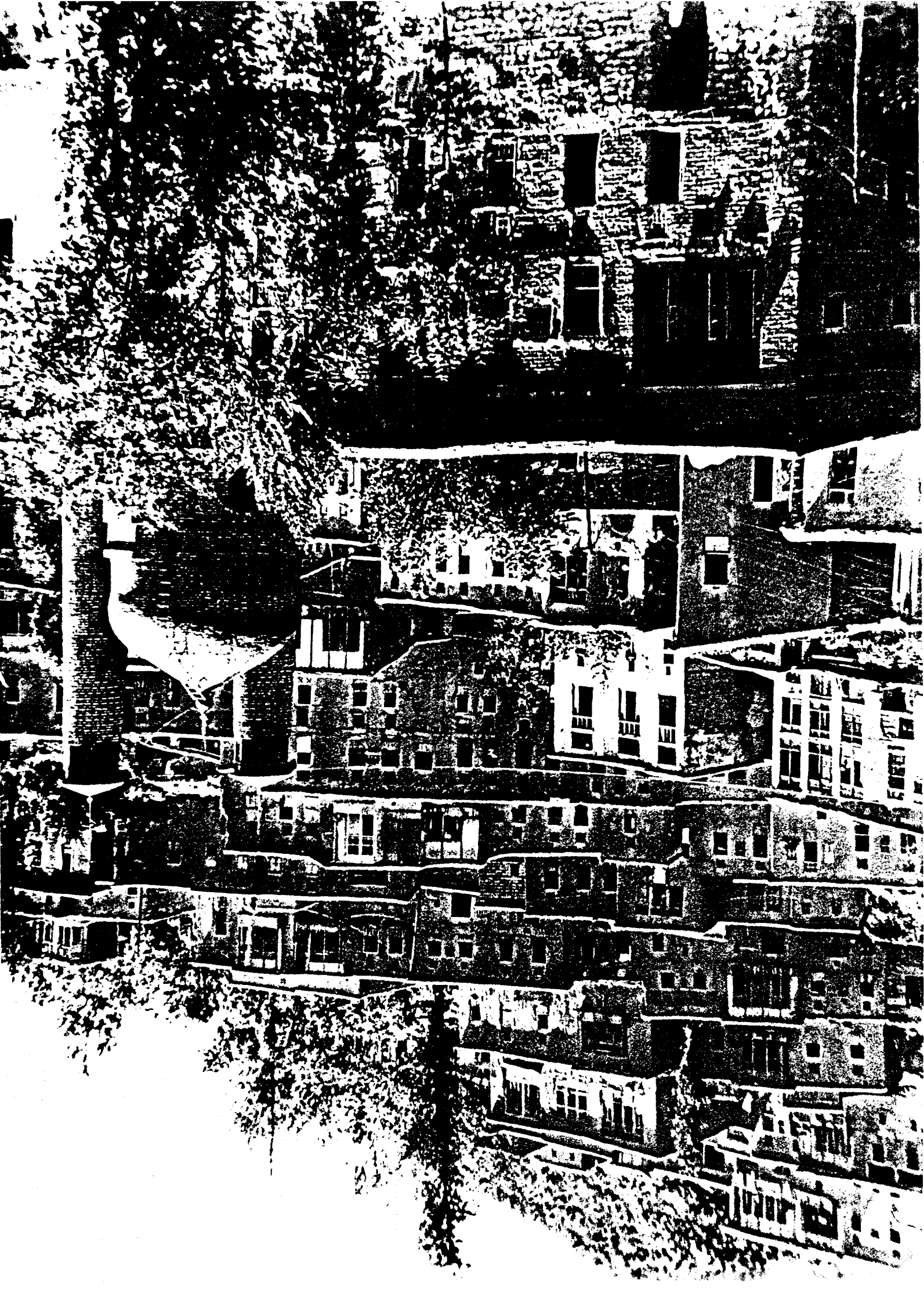
In the late eighteenth century the town of Masouleh was sacked by Karim Khan Zand's army and the population was taken to Qasvin<sup>4</sup>. When the people were allowed to return the clan of Hadji Yousef Tabrizi, who came from Tabriz, were

<sup>1</sup>\*Architectural Group #7, Masouleh, trans.article

<sup>2</sup>\*G.H.Liddell, cited by Rabino, Les Prov.Casp., p.187.

<sup>3</sup>\*Arch. Group #7, *ibid.*

<sup>4</sup>\*Rabino, Les Prov.Casp., p.183.



sent to Masouleh to help the Zand tribe in building the town's fortifications<sup>\*1</sup>. This clan remained in Masouleh and along with the half nomadic tribe of Ilbegi formed the town's major ethnic groups.

The population of Masouleh, who were traditionally blacksmiths, leather sandal makers (chamoush), and tradesmen, have to some extent remained in these occupations. Although due to new road connections the trade with Azarbaijan no longer takes place through Masouleh, people continue trading in dairy and woolen products with the villages and towns of Gilan. There is also a thriving tourist industry during the summer months. The Talesh herdsmen who inhabit the mountains take the flocks of Masouleh to grazing ground. They build themselves forest shelters, called "koumeh", constructed of branches and stay the winter there with the flocks; they spend summers under the black tents in the yaylaqs. The population of Masouleh due to their migratory lifestyle vary in numbers during the year. The population of Masouleh are also migratory and hence the number of people in the town vary during the year. At the beginning of autumn they descend into the villages and markets of Shaft and Fouman where they pass seven months of the year. At the turn of the century only five hundred people lived in the village all year; among these were a few Hadjis who did a little commerce with Rasht and Zendjan. The women stayed alone, passing their time by knitting socks and woolen clothes called "chal" and covers for the nomadic tents. Today the permanent residents of Masouleh are estimated at 1500 people, but the population increases to over 3000 in the summer. as the people return from the towns of Fouman, Rasht and Tehran to Masouleh<sup>\*2</sup>. The residents claim that the population of Masouleh has declined since the new roads diverted trade from the town. It is said to have had 20,000 inhabitants before it lost its trading importance.

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\*1 M.Sotudeh, op.cit., p.131.

\*2 various pop.figures have been given for Masouleh:

Gazetteer 1976: village pop.= 1,626  
dehestan pop.= 8,888

Arch.Group#7: winter pop.= 2,000  
summer pop.= 12,000

Case study interviews by authors: winter pop.= 1,300-1,500  
summer pop.= 3,000-5,000

K.Keshavarz: pop.= 500-600 households.

#### Built Environment:

Masouleh exhibits a unique settlement pattern. It consists of compactly clustered buildings that are stepped up the hillside in terraces built on the west and south facing slopes of the mountains that surround Masouleh on three sides. The houses, which are two or three storeys, have flat roofs that form the town's horizontal circulation network. Pedestrian movement through most of the town takes place over the strong roofs that, according to an elderly resident, used to support caravans of twenty mules loaded with merchandise in the days when trade was booming. The vertical circulation through the town takes place via steps or steep ramp-like paths that lead from the side of a terrace of houses on the lower level to the terraces above.

The relatively large bazaar that is centrally located within Masouleh occupies three levels. The beginning of the bazaar at the lowest level is semi-enclosed, with the shops on both sides of a central mall; large roof overhangs almost cover the roof of the mall but leave a narrow central strip unroofed. The upper two levels of the bazaar follow the pattern of the housing, with shops leaning against the mountain on one side only, leaving the area in front, which is the roof of the shops below, as circulation space. At the beginning of the twentieth century there were four hundred shops, seven mosques, two public baths, and two or three caravanserais\* . Although today the number of shops have declined appreciably, the mosques have almost doubled in number.

#### Building Materials and Technology:

The buildings in Masouleh are amongst the highest quality flat timber and mud roof constructions commonly found in the foothill perimeters of the central Iranian plateau (south-central Alborz and the Zagros). Basically these

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\* Rabino, Les Prov.Casp., p.186.



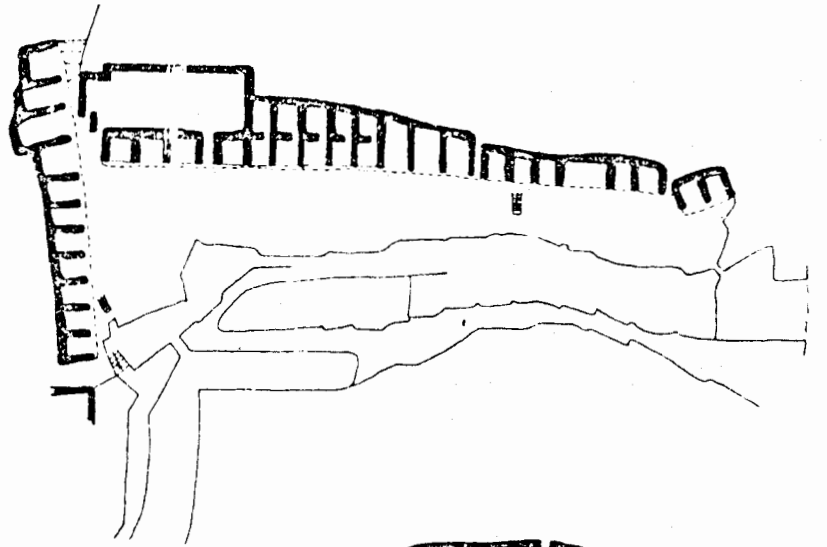
The upper level of the bazaar in Masouleh contains shops in a single row against the side of the mountain as in the same pattern as the housing.



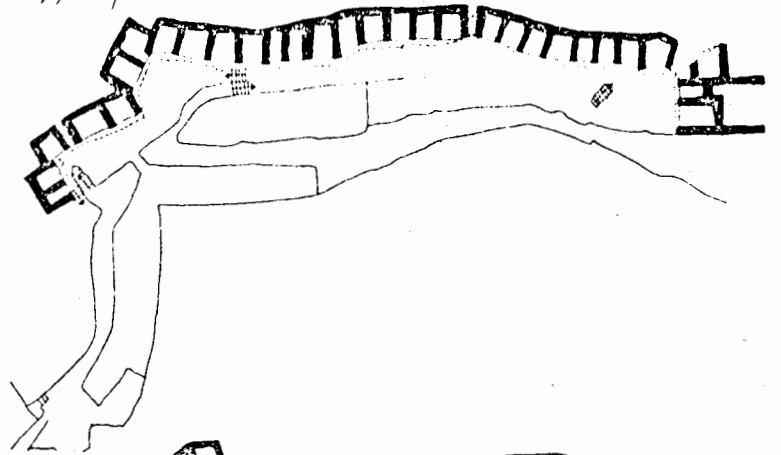
The lower level of the bazaar has shops on both sides of a semi enclosed central mall.

Bazar  
Masouleh

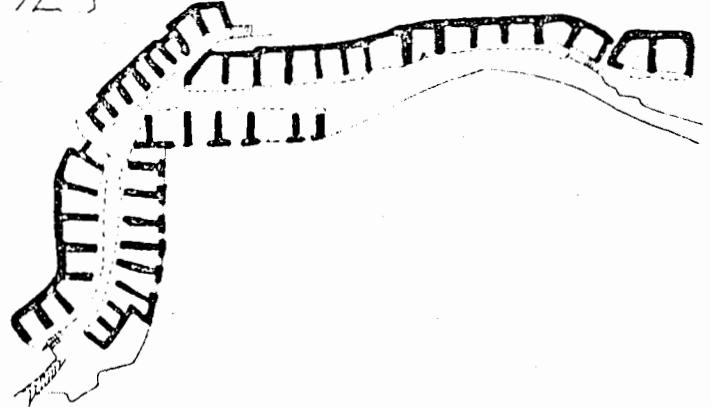
Plan  
Upper Level



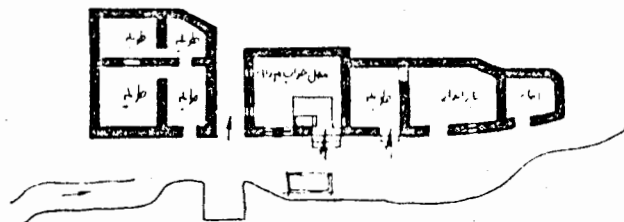
Plan  
Middle Level



Plan  
Lower Level

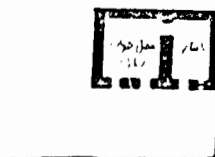


Caravansari  
Traders Temporary  
Accommodation



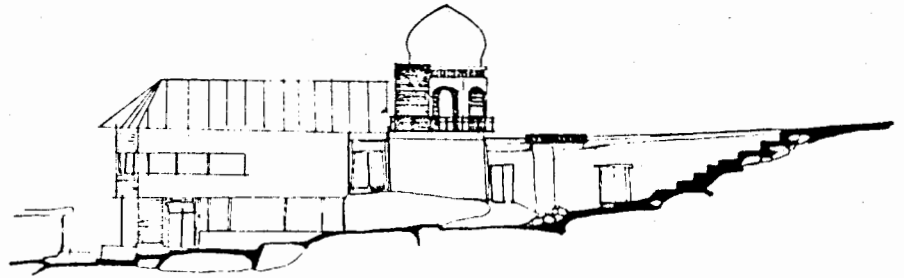
Lower Floor Plan

Note :  
Drawing by  
Architecture  
Group 7

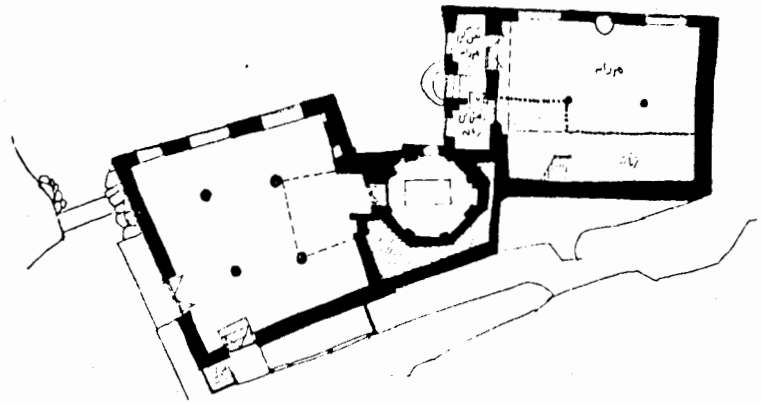


Upper Floor Plan

Religious Centre  
Emamzadeh  
Masouleh

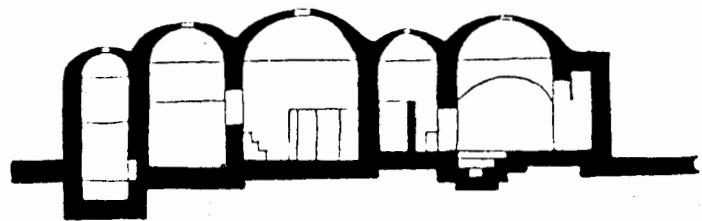


North  
Elevation

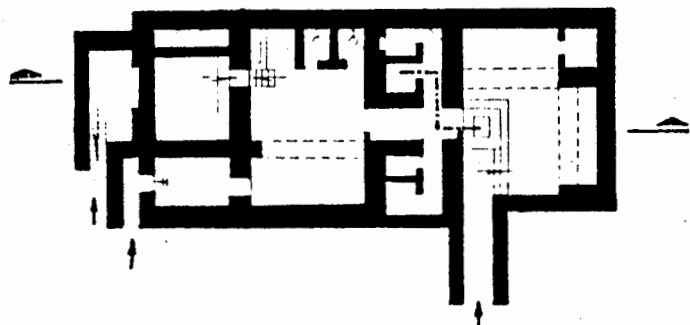


Plan

Masouleh Hammam  
( public bath )



Section



Plan

Note :

Drawing by Architecture Group 7

buildings consist of solid, loadbearing walls spanned with round section timber logs forming a flat roof covered with a layer of clay. This building technology is more suited to the drier interior of the country than to Masouleh, which has an average annual rainfall of 800 mm. and cold winters with a great deal of snow. One would expect to find pitched roofs in Masouleh as in the rest of the Caspian. However, the socioeconomic requirements of Masouleh to act as a cohesive unit, a town with closely interrelated parts linked together by an intricate circulation network, would have been hard to fulfill in the steep and difficult topography of Masouleh. The flat roof which is used in some villages in Iran as a partial pedestrian route, has been ingeniously utilized in Masouleh to form complete circulation systems not only for pedestrians but as clearly defined streets capable of allowing the passage of caravans.

The problem of the suitability of the buildings to the climate has been resolved in the specific methods and details of construction. The ground floor walls are built with semi-dressed stone strong enough to support the upper floors and resist moisture penetration from the ground or accumulated snow. The upper floor walls are of mud bricks. Horizontal timber ring beams are incorporated into the walls at one metre intervals to stabilize the building against ground movements caused by landslides or earthquakes. As protection against rain damage, all external walls are plastered with a particularly attractive bright ochre coloured clay. The strong log beams used in the roofs are covered with timber planks over which bracken (sarakhs) is spread. The final covering of the roof is composed of a dark grey soil thought to be particularly resistant to moisture penetration\* . The roofs have a comparatively steep gradient of approximately  $10^{\circ}$  towards the back of the house which is against the hillside. This slope

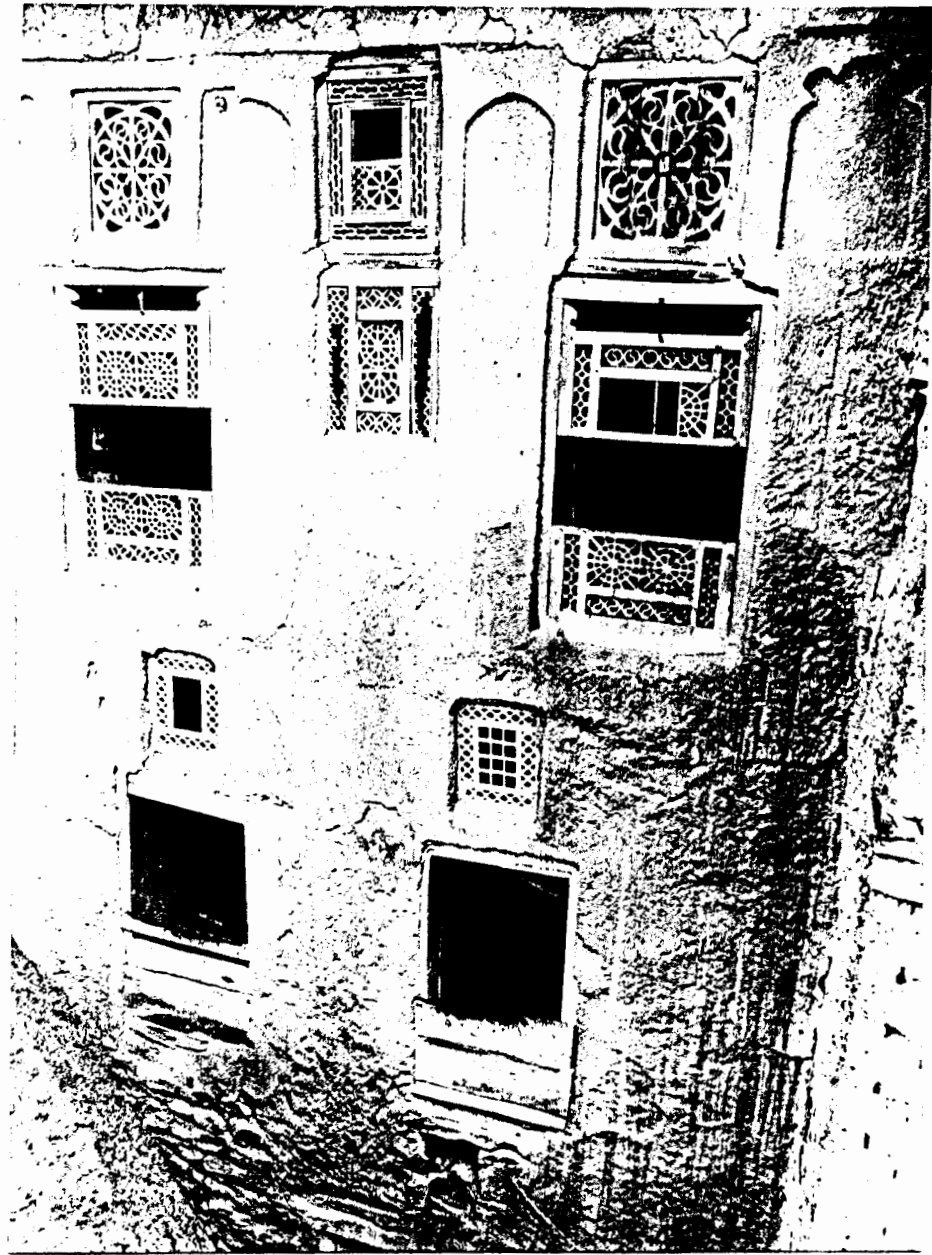
\* see Flat Roofs in Timber & Mud (Masouleh), technology section.

which is steeper than most other indigenous flat roofs in the country is a direct response to the high rain and snow-fall in Masouleh.

#### House Case Studies:

The houses surveyed in Masouleh clearly show the changes that have taken place in house construction techniques and details.

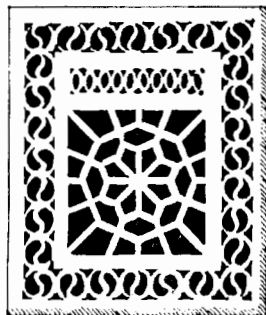
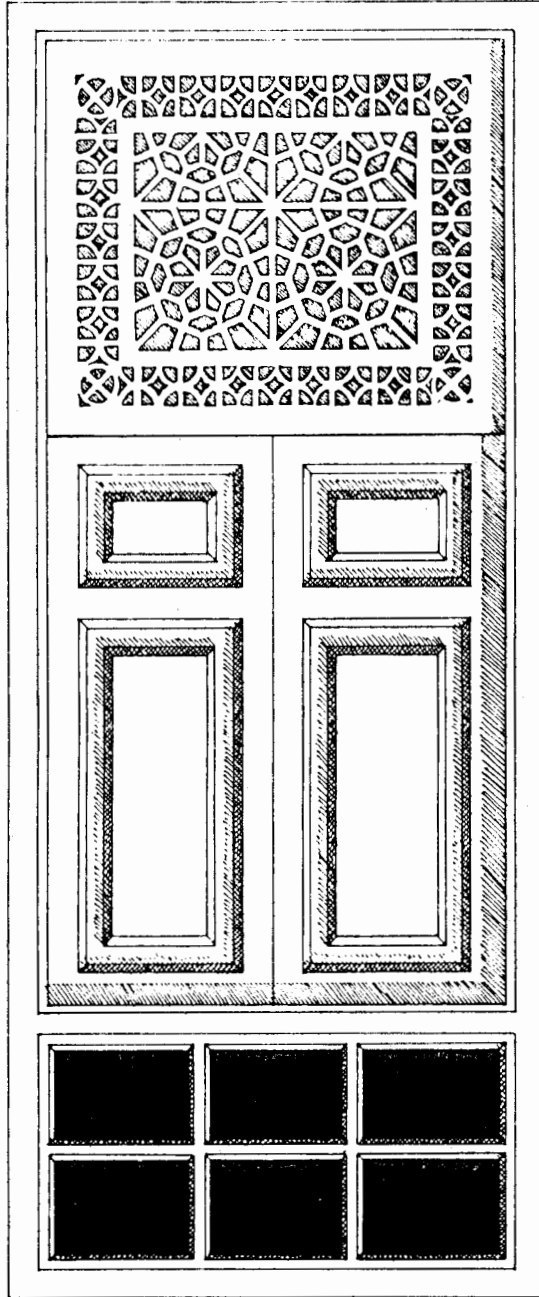
Drawing 6.1 illustrates two houses within a terrace. The house on the eastern side (household 2) according to the occupants was built 360 years ago along with the ground floor of the house - now occupied by household 1 (see drawing 6.1). The upper floor of the latter house is 80 years old. Drawing 6.2 is of a house which was being constructed at the time of the survey. It is apparent from these drawings that the basic construction methods and materials have remained unchanged, while the details of doors, windows, and general facade treatments have become increasingly austere, reflecting the current architectural style of their time. The oldest buildings have intricately carved lattice screen windows, that divide into three distinct sections. An upper section for ventilation expels the warm interior air, which is an important function in the warm summer months. An openable middle panel and a lower latticed section which has solid opening panels behind act as air inlets and control the natural interior lighting by eliminating glare. The lower section of these windows also allow unobstructed views of the outside while prohibiting a view of the interior of the rooms from the outside, thus retaining the visual privacy of the occupants. The upper storey windows of the eighty year old house are clearly different in both form and function. These windows have fixed timber frame glass panels on the upper part for illumination, and a solid timber panel that is openable for ventilation and view on their lower sections. Their timber frames clearly resemble the later Qajar styles. The ground floor windows are small in



In the older houses in Masouleh very fine timber lattice work is used in window panels.



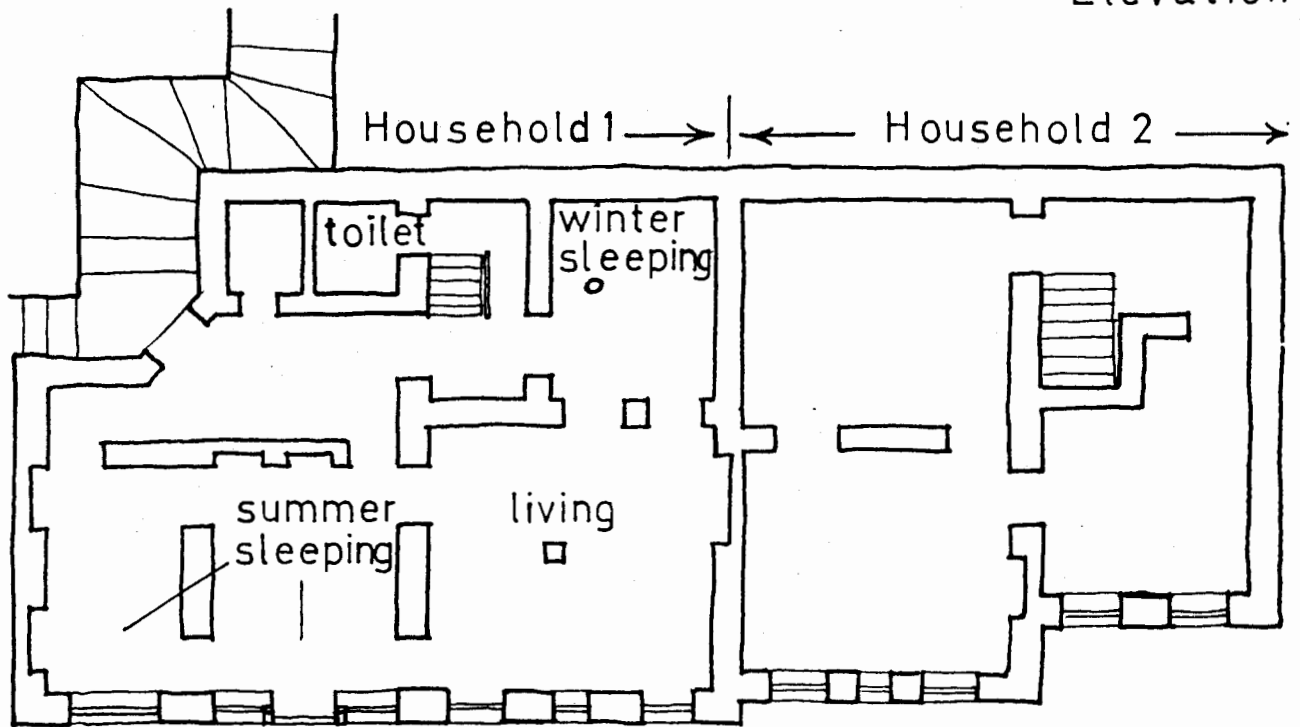
Masouleh  
multi-level  
window openings



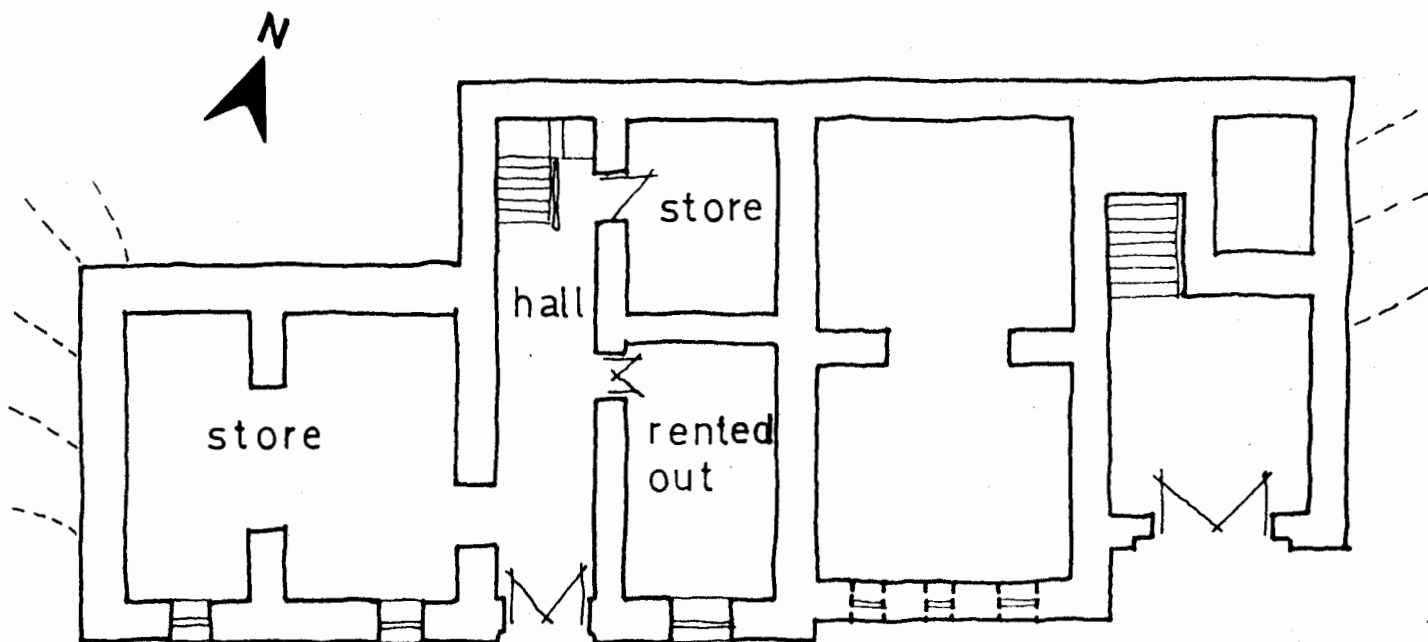
House 6.1 Masouleh



Elevation



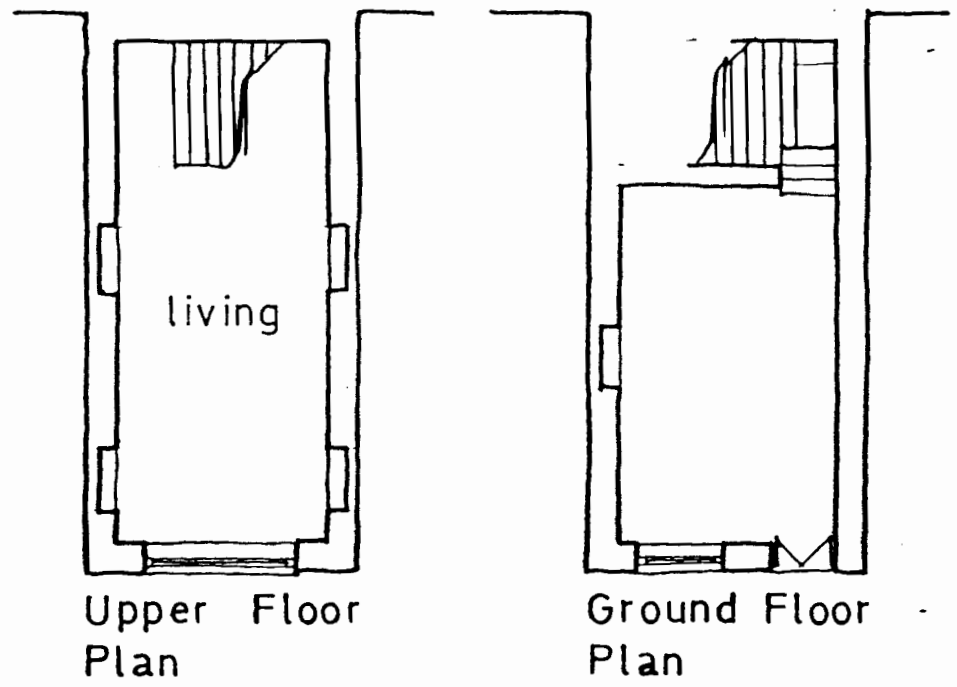
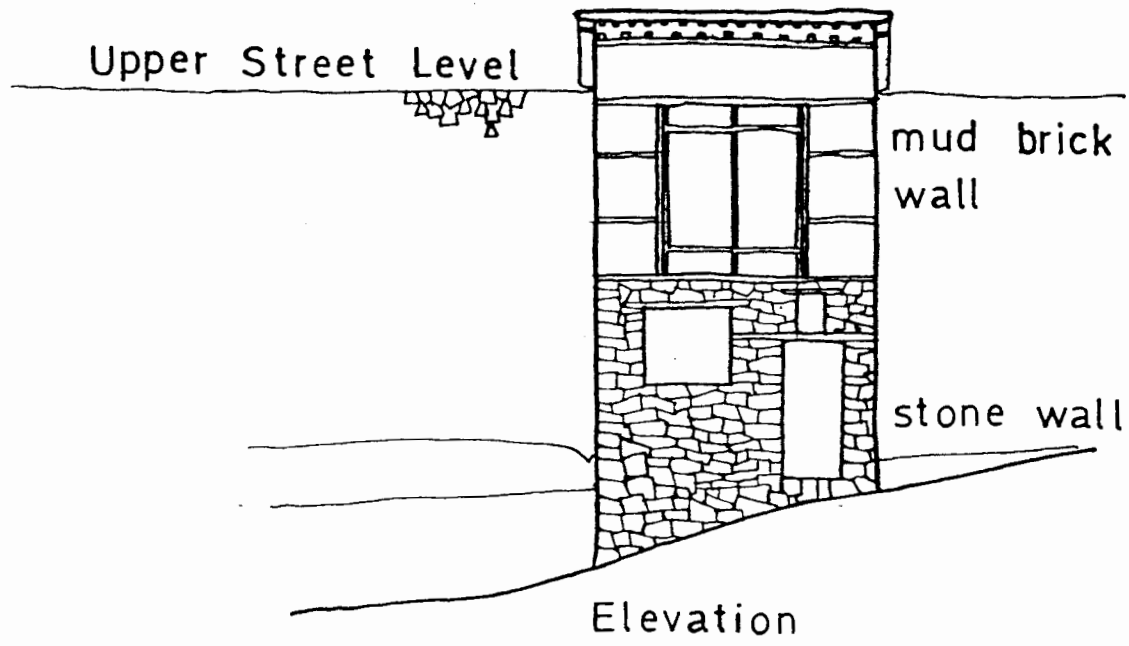
Upper Floor Plan



Ground Floor Plan

Scale

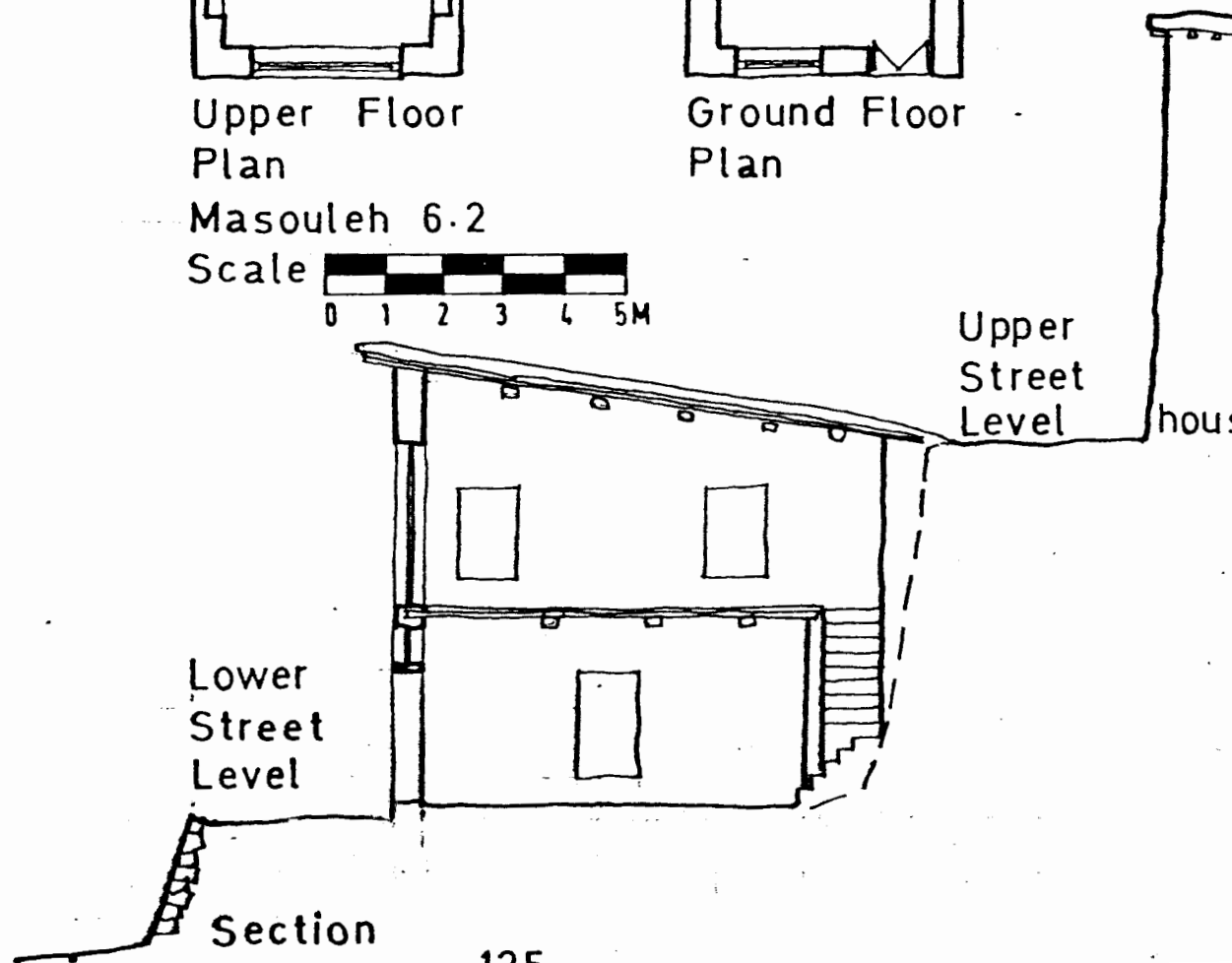




Masouleh 6.2

Scale 0 1 2 3 4 5M

A scale bar is provided below the floor plans, marked from 0 to 5 meters in 1-meter increments.



both buildings as this floor is used mainly for storage purposes. The new house under construction (drawing 6.2) belongs to a civil servant working in Rasht and his family of seven persons. This house illustrates the simplifications in both the plan and treatment of details characteristic of the present day architectural styles.

In all three buildings the construction materials and methods are basically as described in the building materials and technology section of Masouleh. The reason for this adherence to the indigenous methods are manifold. The topography and circulation system of Masouleh demands certain characteristics such as the strong flat roofs. The relative isolation and difficult access to Masouleh makes the importation of externally manufactured materials difficult and expensive and this encourages the use of local materials. The few builders who are well versed with the Masouleh style of construction are local residents and the inhabitants of the town do express a certain pride in the architectural beauty of their settlement. We did, on the other hand, observe the use of concrete blocks, which cost twice their normal price due to high transportation costs, and the use of fired bricks imported all the way from Tehran, in some of the newly constructed buildings. Due to a preservation order having been placed on Masouleh even buildings using the imported materials have to retain the traditional style and be rendered externally with the special ochre coloured Masouleh clay.

## 7 Sefid Rud Delta

### History:

- \*<sup>1</sup> The old district of Kuchesfahan, including Lachtenishah and Khochkbedjar was, at the time of the conquest of Gilan by Ouldjaitou, ravaged by the mongol troops until its king Salouk surrendered. The last king of the Ismail'vand clan was chased out in late 1300's by Seyyed Ali Kia. Kuchesfahan then passed into the Seyyeds of Lahijan's hands. Later it was fought over by the kings of Fouman and those of Lahijan. In 1538 Khan Ahmed Khan of Lahijan annexed it, but refused to give it up and so the Shah, Tahmasp, imprisoned him. Kuchesfahan was part of Biepas from 1538. It is said that it was called Kuchesfahan because it was so congenial and Kuchik (small) was Kuche in the Biepas dialect.

According to Rabino in 1900's, the district's produce was sold in Rasht, the soil was good, there was irrigation and transportation, and so the price of land was higher here than anywhere else in Gilan. The fertile plains give the biggest rice harvest in Gilan. There are mulberry plantations for silkworms and they cultivate tobacco and vegetables. The population of this area are Gilak and their religion is Shiah.

Kuchesfahan is a village with a population of 2,797. It is also a dehestan with 44,618 inhabitants. It's located in a bakhsh of the same name, in Rasht Shahrestan in Gilan province. In 1914 Homes described it as having houses scattered through the forest and a bazaar with two small rows of shops on each side of the road, open on Sundays and Wednesdays.<sup>\*7</sup>

The flat marshlands and the rice fields within the Sefid Rud delta, especially in the districts of Kuchesfahan and

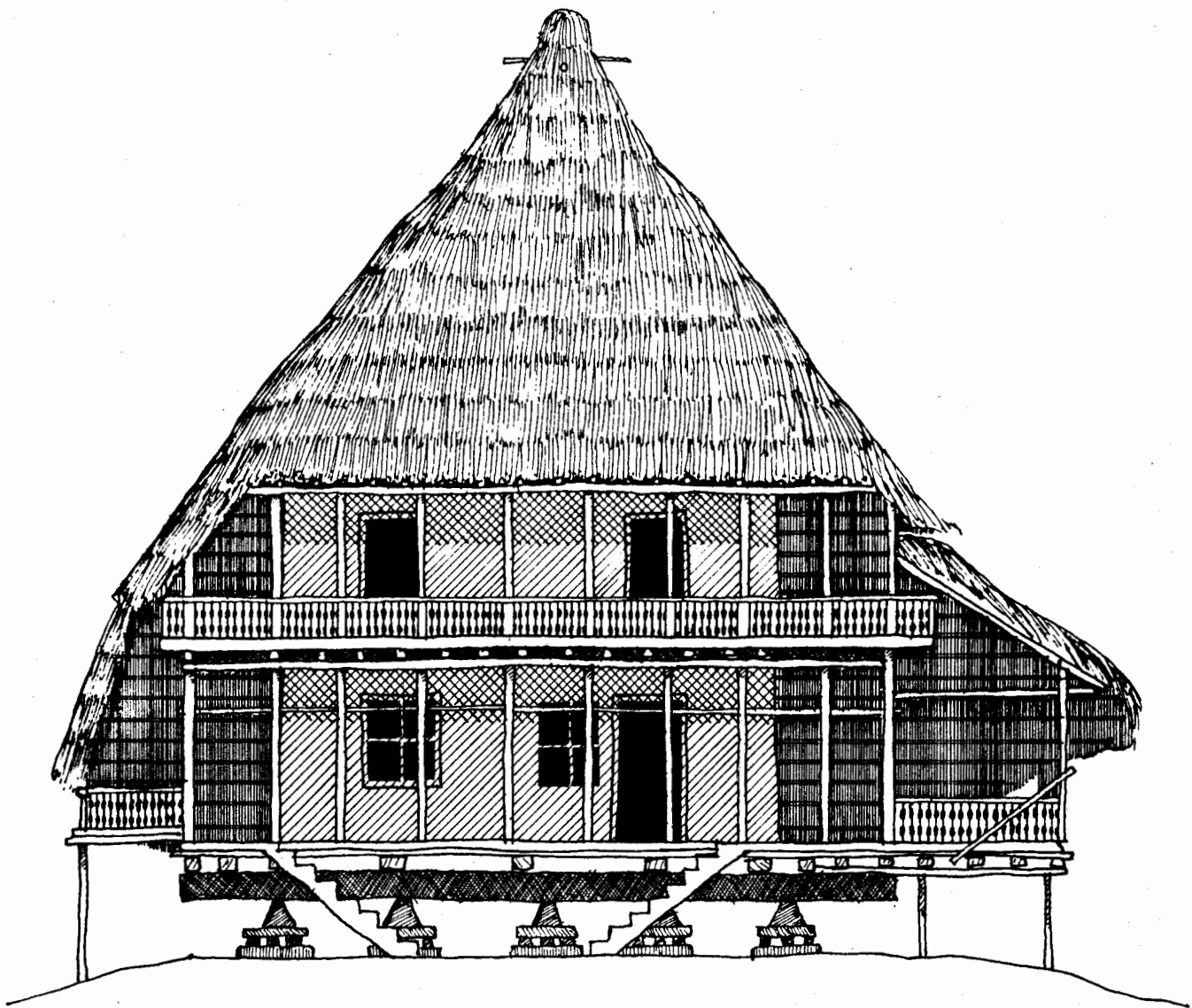
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\*<sup>1</sup> Rabino, Les Prov.Casp., p.216.

\*<sup>2</sup> Adamec, Historical Gazetteer, p.580.

Lachtenishah, have caused the dwellings of the inhabitants to become elevated from the flooded fields. The houses are scattered amongst the fields either individually or in groups of three or four houses, shielded by a belt of trees. The extremely high rainfall (approximately 1500 mm. per annum) requires the steeply pitched roofs (55° or more) that are hipped in form. The eaves of the roofs project down lower on the west and in older houses on the north side as well. The main roof covering material is thatch, but sheet metal is becoming increasingly popular and widely used in newer buildings. A set of timber columns around the perimeter of the building support the timber roof truss and the rooms are situated within the ring of columns so that there is a minimum of a one metre high platform all around the building. The platform or aivan on the front of the house (south or east side) is at least two metres wide. The walls are also framed timber lathing with mud infill. However, the most notable feature of the houses in this area is their raised hollow platform which is supported on wooden blocks. In recent house construction, concrete block columns are used instead of the wooden blocks to raise the house some one to one and a half metres above ground.

House 7.3 D2d2  
between Langarud and Ramsar



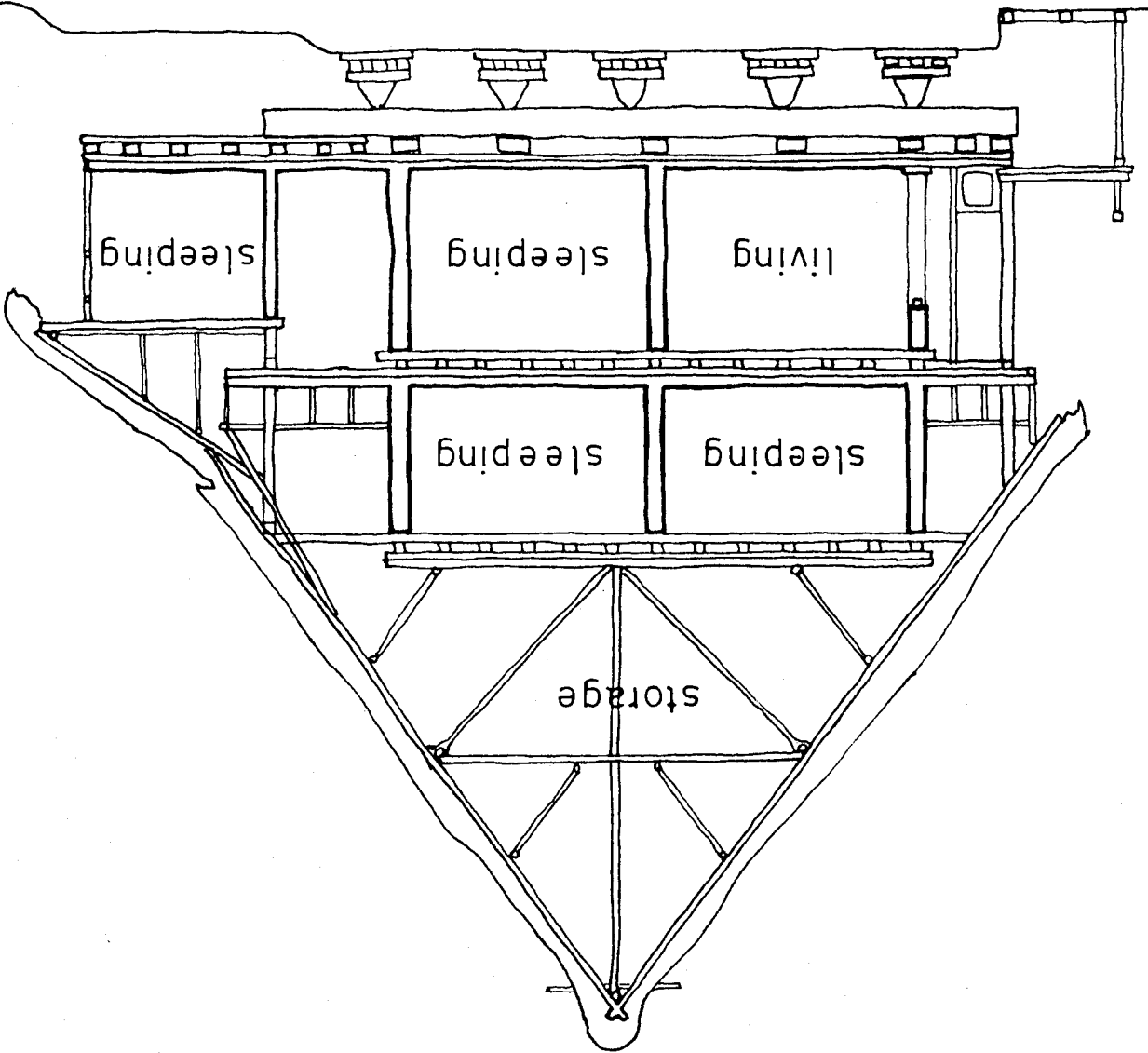
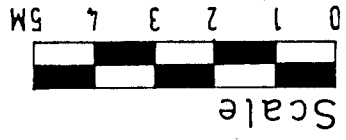
Front Elevation

Scale



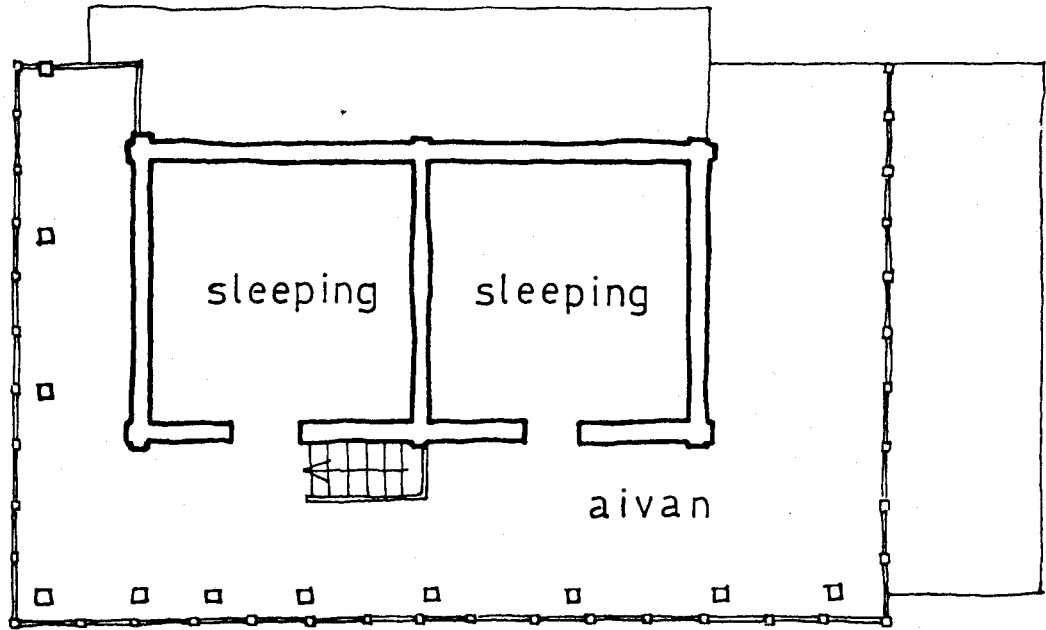
0 1 2 3 4 5M

Section

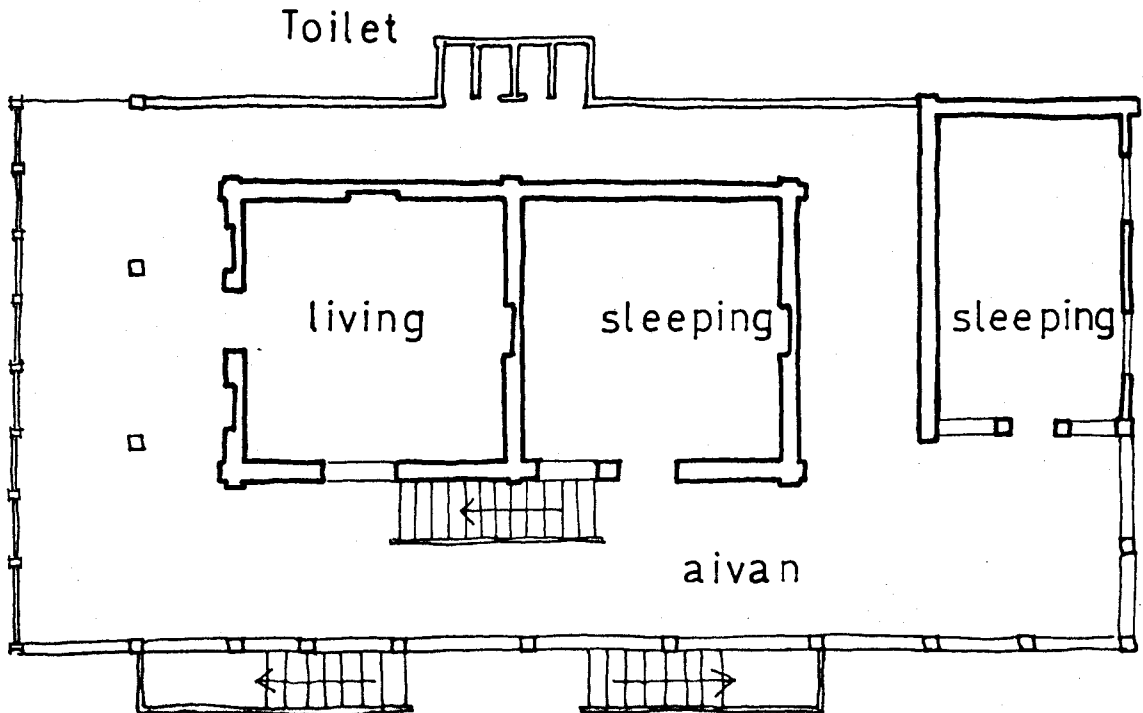


House 7.3

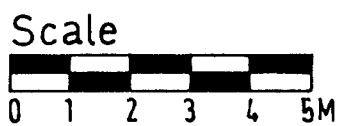
House 7.3



Upper Floor Plan



Lower Floor Plan



Drawn after survey  
by Rainer in Traditional  
Building in Iran.



Concrete block columns have replaced wooden blocks used traditionally to raise the timber platform of the houses in order to avoid flood damage.

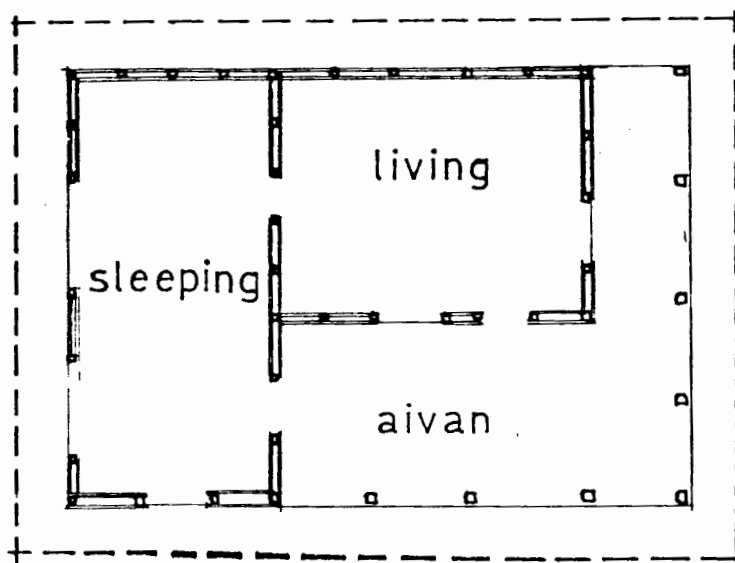




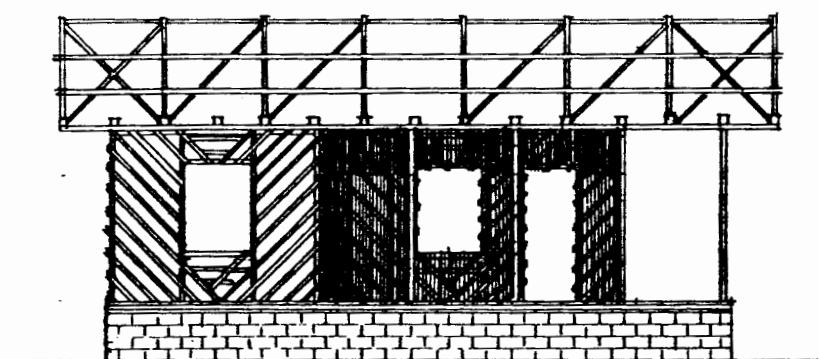
In the marshlands of the Sefidrud delta where flooding is likely, the houses are built on timber platforms that are raised from the ground on stilts.



House 7.2 Fakhraabad **B2s**  
under Construction

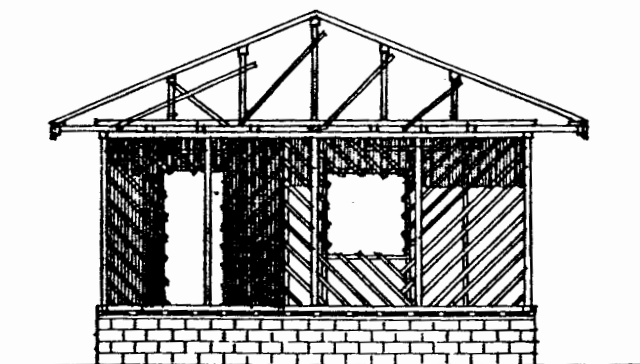


Floor Plan



timber  
truss for  
sheet metal  
roof

Front Elevation

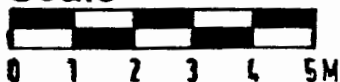


timber lath  
& mud walls

concrete block  
platform

Side Elevation

Scale



## 8 The Central Coastal Strip

The region extends from just east of Rudsar where the wooded hills converge toward the coast and the main asphalt road continues close to the shore, right through the narrow coastal strip as far as Babolsar. Hotels, motels and summer villas in mock Spanish, pseudo Baroque and Rococo of Louis the fourteenth and fifteenth of France, or simply in the International style, form an almost uninterrupted barrier along the shoreline. This central coastal strip, constituting the major part of the Caspian seashore, is where the tourist industry has concentrated - to an extent that it is difficult to find access to the beach other than through a hotel or a private villa. Land speculation has increased land prices to astronomical figures and developers have packed as many ostentatious holiday houses as they could onto the coastal plots.

On the southern side of the road, however, the remnants of the indigenous lifestyle and shelters, although greatly influenced by the exogenous developments, can still be seen. The narrow strip of flat land before the mountains is mostly covered by rice fields within which the raised thatch roof shelters on wooden stilts are scattered. The rice stores, also raised on stilts, are mostly covered by sheet metal roofs as are the majority of the newer housing. The case study of the village of Toulehsara off the main Ramsar-Shahsavari road illustrates the old and new local building methods in this region.

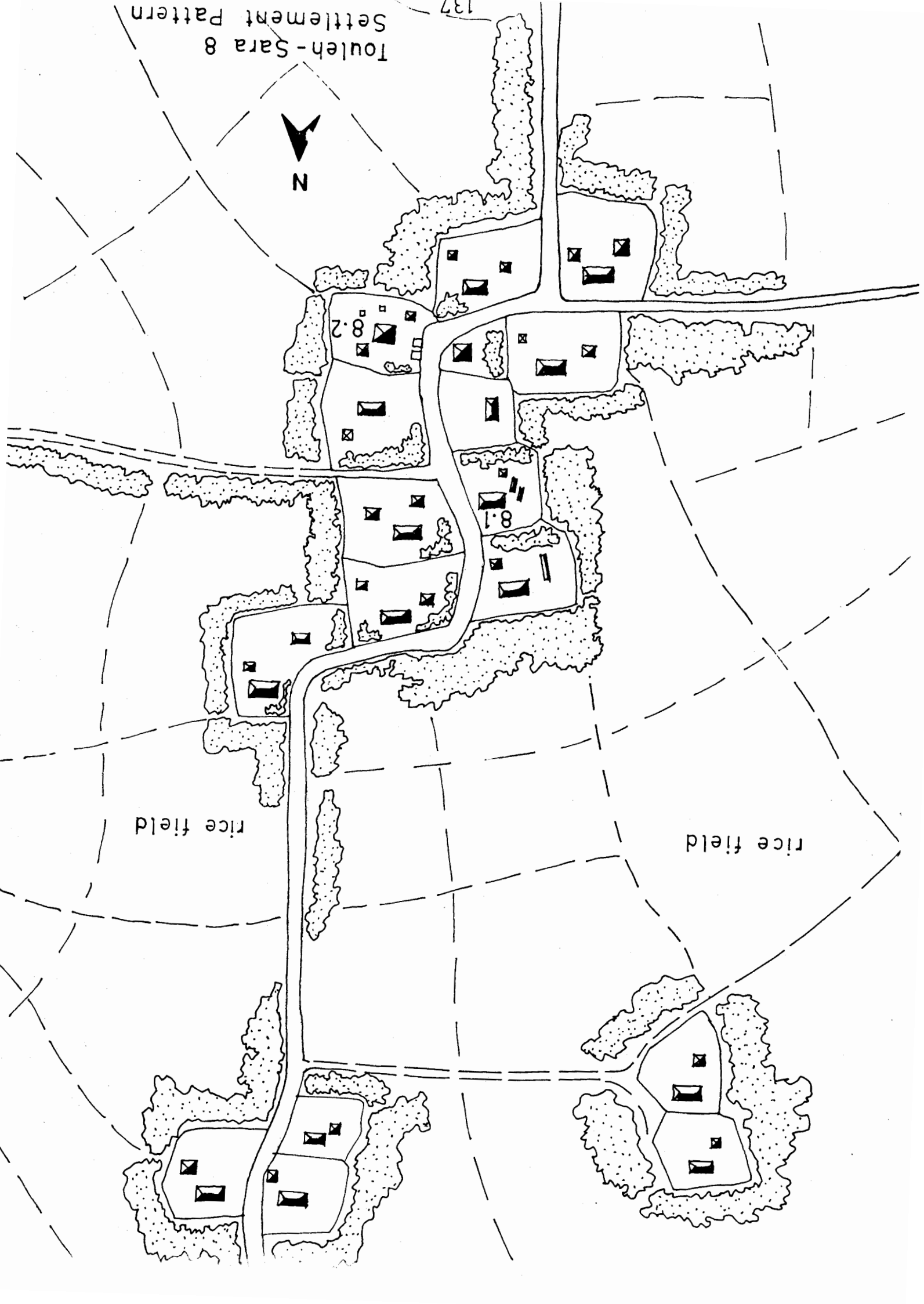
Toulehsara is a small village of about fifty households who are mainly Gilak. The occupation of the majority of the people is rice cultivation, while some citrus fruits (oranges) are also grown. According to those interviewed the ten to twenty people who migrate to Shahsavari for work are mostly school students who obtain temporary jobs dur-

ing their summer vacation. This low level of migration and the low percentage of landless agricultural workers (15%) points to the relative prosperity of the village. A number of villagers who own land are employed in government offices in Ramsar and hire others to work on their land. The village is believed to be over 120 years old.

In the two house surveyed in Toulehsara one can see clearly the process of change evident in the coastal strip area. Although the older house (70 years) has a tin roof which probably replaced an original thatched one, it still reflects the traditional form. Newer houses such as the one built ten years ago clearly reflect the villa type image of modernity.

Touleh-Sara 8  
Settlement Pattern

137



rice field

rice field



In Toulehsara, the traditional two storey front aivan house has given way to single storey "L" shape plan houses and other forms influenced by the strong tourist industry in the area.



### Toolesara House 8.1

Typical of older houses in the Shahsevar plain area, this house is of the front verandah type, with an upper storey also having a balcony. Rooms on both ground floor and upper floor are set to the north side of the house. The building is framed, with a hipped roof at 30°. The roof covering is sheet metal on a timber truss framework.

Walls are of log construction with mud infill and also plastered with mud. The balcony and roof overhang are supported by timber posts.

The house has had a one room, two storey extension added to the western end, using the same type of construction, but of inferior quality.

The main house is used for living and eating. The ground floor extension room is used as a timber store.

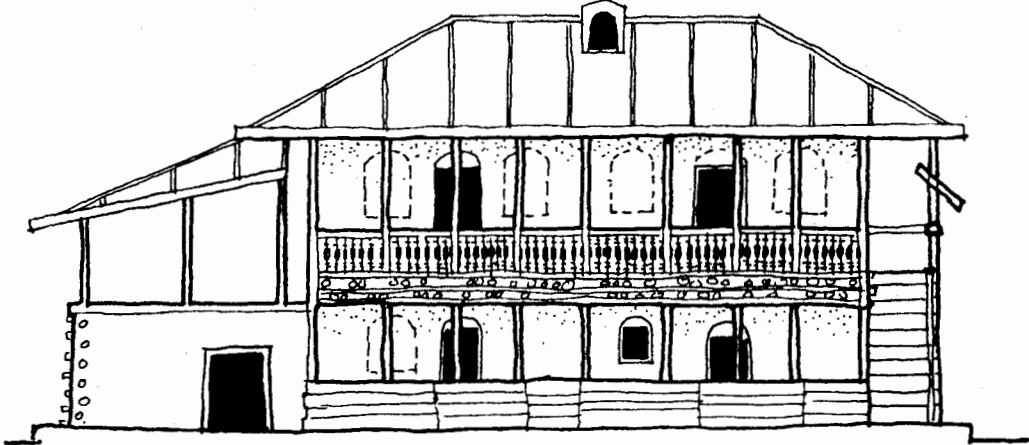
Openings are usually on the north and south sides, with the building oriented to the south.

The house stands in a fenced plot of land, with trees and four outbuildings - three thatch roofs (the lavatory, poultry and cattle shelters), whilst the fourth is a rice store with a sheet metal roof, log walls and standing 2m. off the ground, supported by four wooden columns. This rice store is typical of the region, and occurs in the Rasht plain as well.

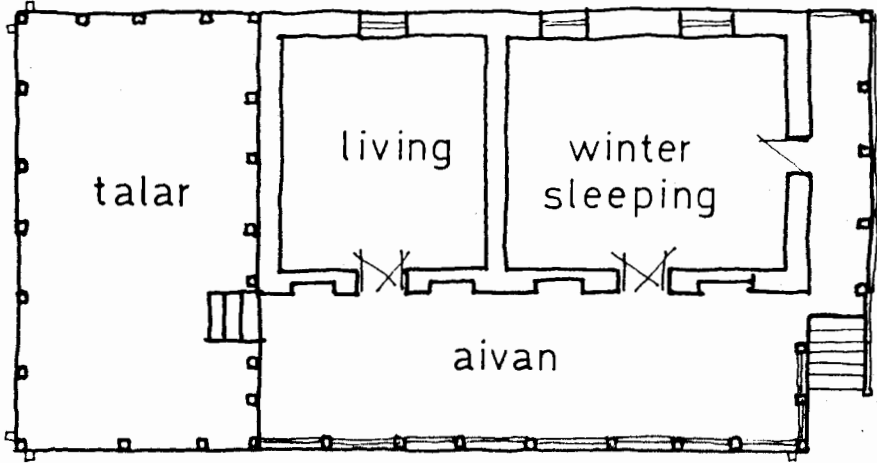
The house is lived in by one household consisting of two old ladies whose six sons work in local towns. The local occupation is rice growing.

The climate is temperate, warm humid in summer, with high rainfall of approximately 1300mm. per annum.

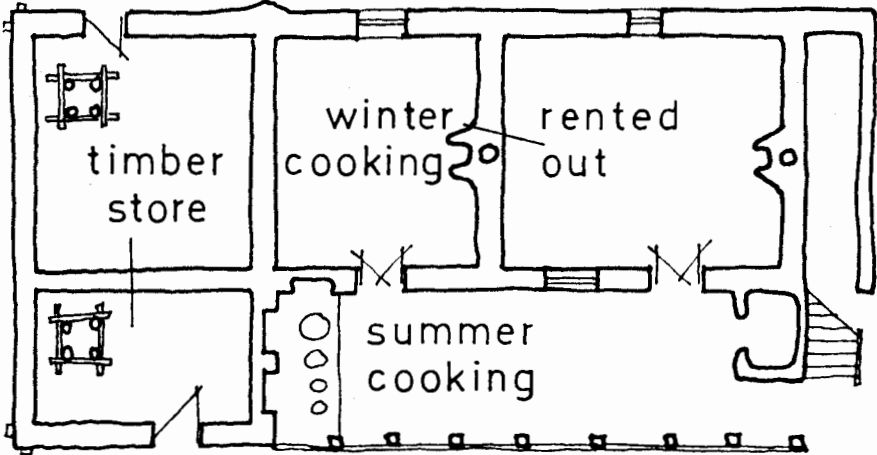
House 8.1 Toulehsara C2d2



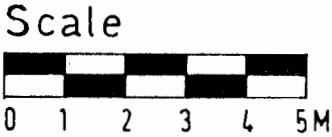
Elevation



Upper Floor Plan

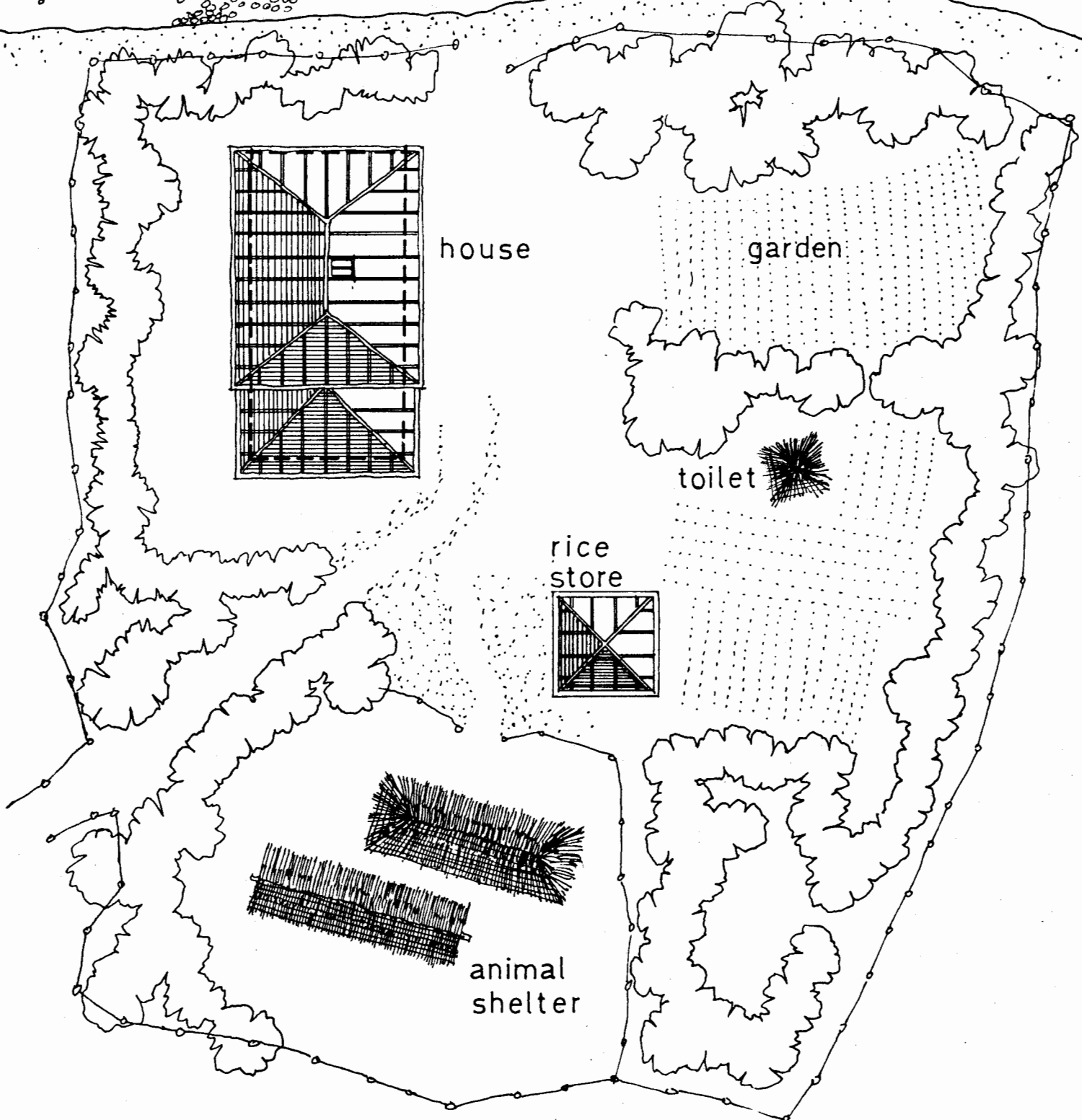


Ground Floor Plan



House 8.1 Toulehsara

← to main road



house

garden

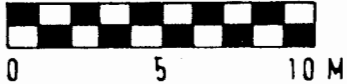
toilet

rice store

animal shelter

Site Plan

Scale



### Toolesara House 8.2

New houses in the Shahsevar plain tend to take a different form from the older houses of the region. The house shown here is of a basic pattern that can be found in most parts of the Caspian region.

The plan is an 'L' shape with a corner aivan, facing south, and stands on a 1m. high plinth. The roof is hipped in form, and is covered by sheet metal supported on a timber truss framework. The pitch is approximately 40°.

The walls are of concrete block rendered with cement.

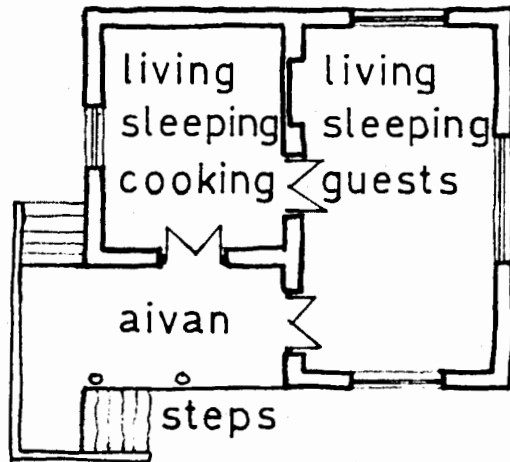
Openings face in all directions. The aivan is supported by concrete columns made from concrete drain pipes.

The house stands in a fenced and in part hedged enclosure.

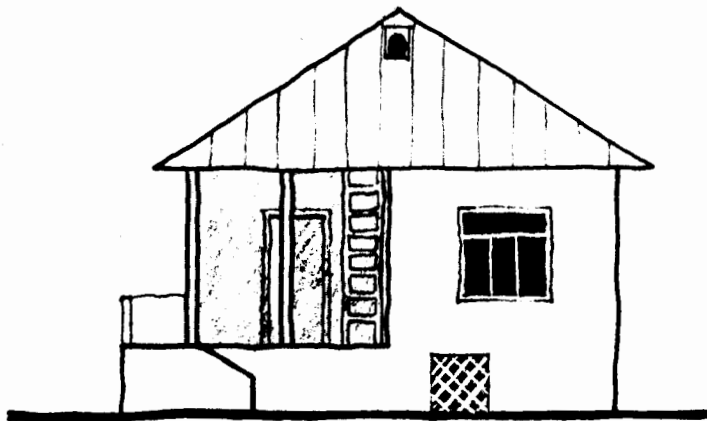
There are six outbuildings, all with sheet metal roofs.

One at the entrance to the plot is a shop. There is also a rice store and a lavatory, a small chicken hut and a building for rice drying. The rice store is of the usual regional form, standing on wooden stilts.

The house is occupied by one household of nine people, who grow rice for a living.

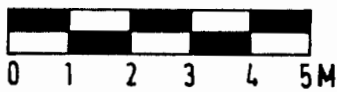


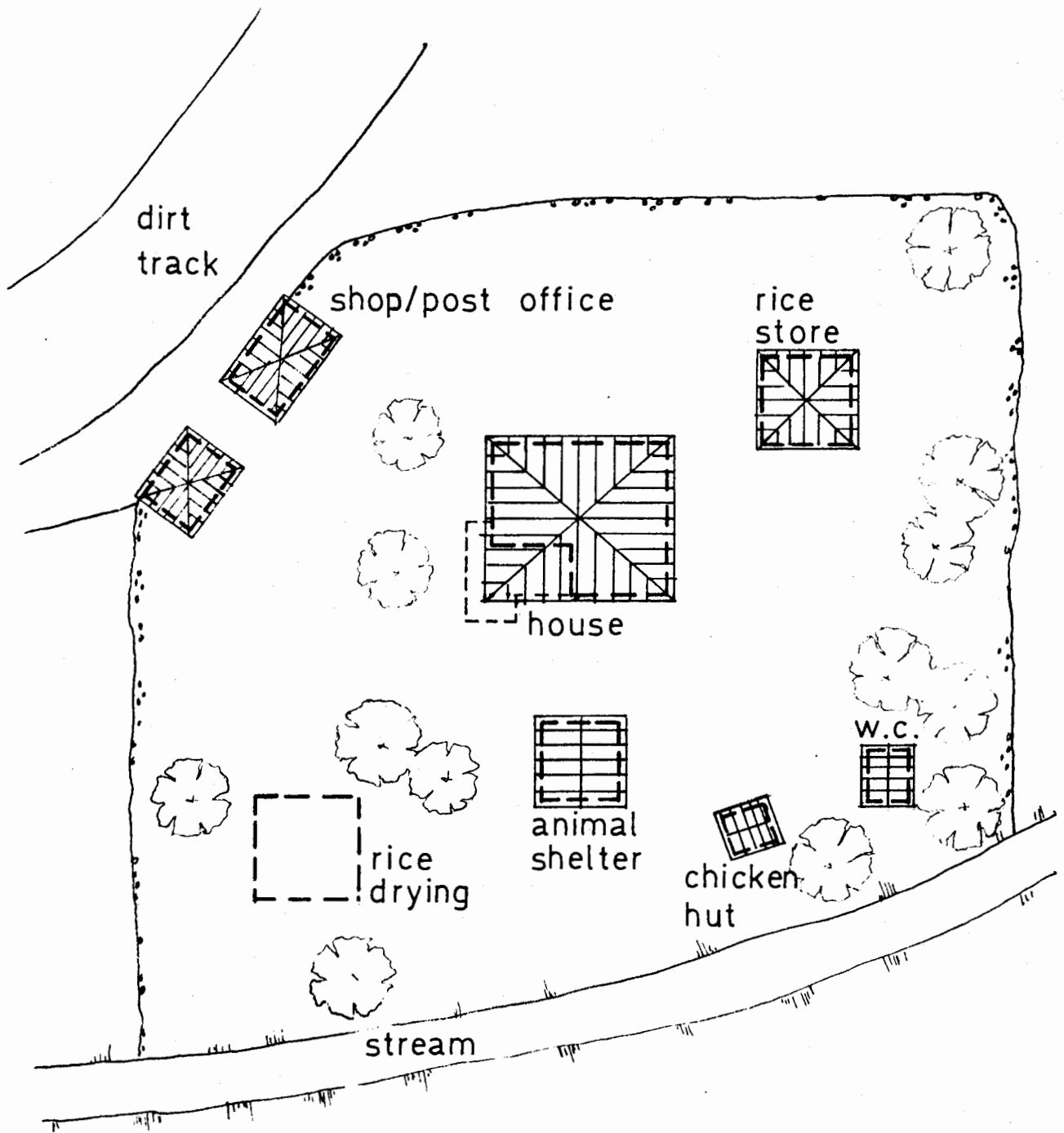
Plan



Elevation

Touleh-Sara **B2s**  
Scale





Site Plan



Touleh Sara 8.2

Scale

