

OBJECT



Pic. 1: object photo

space where the inhabitants can meet.

SITE / LOCATION

The described cluster is located in the highest part of the village. The ground consists of clay and rock.

mines

The environment is heavily polluted by mines. Located mines are signed with red cloth or red painted stones, like in picture no.4. When the stones are painted red and white the white site means that the ground is cleared and the red site is absolutely no-go area. The inhabitants do agriculture around the cluster in the family garden.



Pic. 4: Garden Photo

FACTS

Altitude:	462m above sea level
Building Age:	approx. 25 years
Dimensions:	ca. 4x4x2,5m
Built surface:	ca. 16m ²
No. of stories:	1
Typology:	adobe shelter
Climate:	dry savannah
Topography:	flat, small rocky hills
Used Materials:	clay, stone, straw

INFRASTRUCTURE

The sleeping and living room is located deeper inside the cluster and surrounded by storage and working rooms. This ensures privacy and is useful for insulation in summer and winter times. This arrangement of rooms keeps the temperature inside the living room steady. There is no running water inside the Cluster, water has to be carried from the local spring. The kitchen stove is fired with wood and has to heat the building in winter times, because they do not have other kinds of heat



Pic. 2: Site

Pic. 3: Location

INTRODUCTION

This flat is inhabited by 2 families, which have about 6 to 7 family members. The inhabitants of one cluster are usually members of the same clan or family. The Building is constructed with three different kinds of walls, one construction-technic for each level - even constructed with different materials. The basement is usually used as working and storage area. There are no living rooms. The second and third floor contain the living rooms and kitchen but also storage and working rooms. The cluster is occupied by families of the same clan, courtyards and roofs are the semi-public

sources in the living room. Electricity has become popular, but there is no power supply so some families use a generator.

SOCIAL STRUCTURE

Traditionally there has been no gender-segregation inside the family and no separation of the living and sleeping room. The



Pic. 5: Cluster plan groundfloor and courtyards, the official entrances

whole daily life takes place in the central room. The kitchen is used as working space but is not adapted as living room.

It is not usual to host guests inside the cluster, guests usually live in the local guesthouse.

USE

The cluster is used for similar purposes, like living, working and storage in the same time. The pottery is located on the ground floor with potter's wheel and stone floor for the preparation of the potter's clay aside the cattle stables and storage rooms. The roofs of the lower floors are used as partly united and private space. Here is space for social life and other things like storage room for pottery or to dry vegetables.

CONSTRUCTION

The whole building is constructed of local materials, like clay, natural stones, straw, and local timber. The construction type is a walled construction. The building is divided into three construction parts. The basement, the first and the second floor. The builders use a special kind of construction for every level. The basement is constructed by natural stone, the first floor is walled by adobe-bricks or rammed earth and the second floor is made by adobe bricks with a timber frame construction.

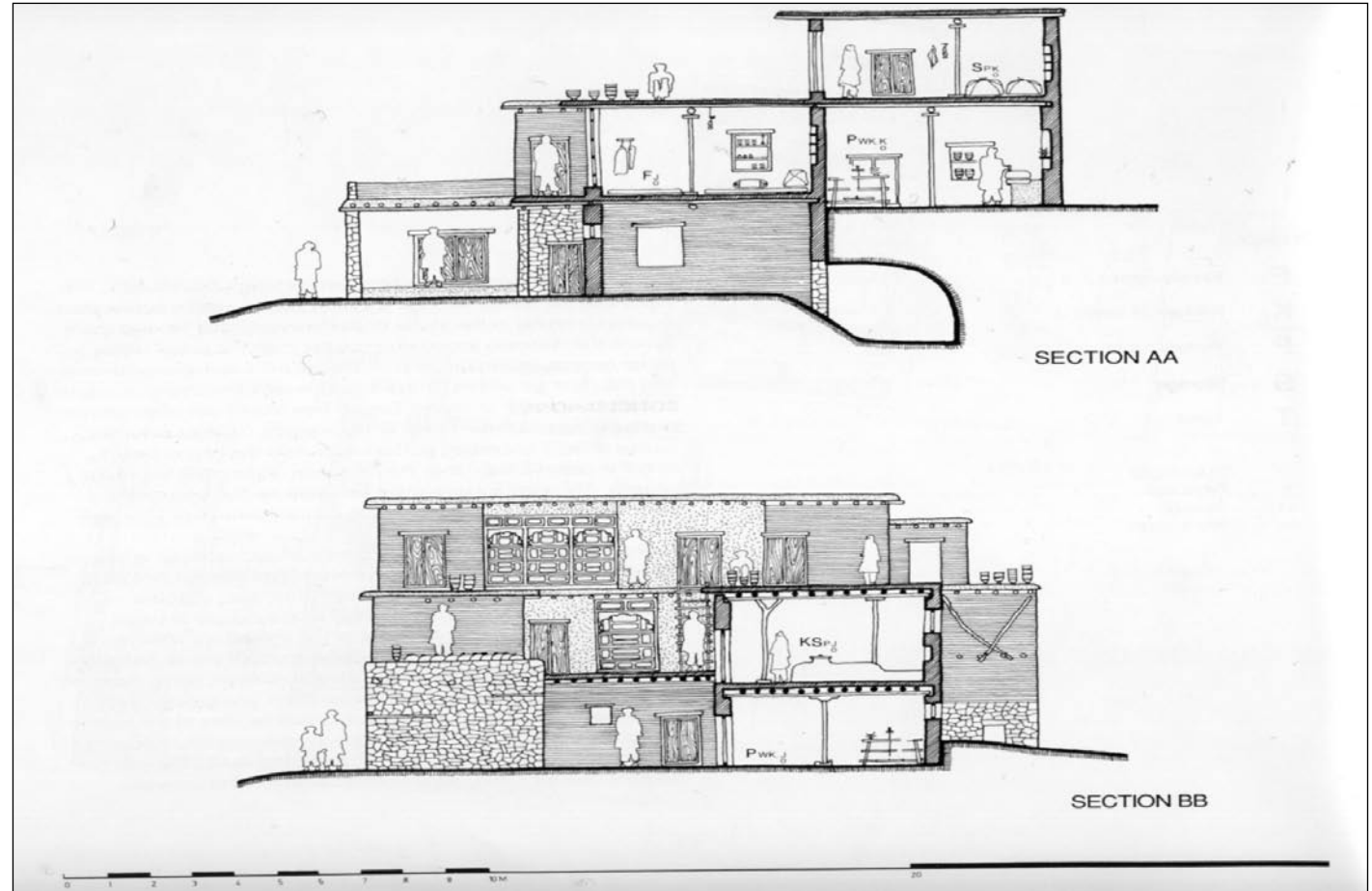
CONSTRUCTION PROCESS

Since new roads and cheaper transport facilities appeared, the usage of timber as building material became more popular. In the former times there were only the local resources of timber and it was often the crucial factor of the buildings measurement.

Nowadays some buildings have balconies to give access to the upper floors, the supporting beams overhanging the wall for about 1 or 1,2m covered with a similar, or even simpler, floor construction as described further.

To prepare the clay for the adobes, earth is mixed with water this mixture rests overnight until the clay is in the right earth-moist condition. The clay is rammed in a wooden box to shape the brick.

This form is powdered with sand or earth, to prevent the clay



Pic. 6: section

from sticking to the form until it is pitched on the ground. The bricks have to dry for at least 24 hours before they can be moved without deformation. After about a week the bricks are ready for use.

FOUNDATION

The basement is partially dug into the hill, the foundation is normally 60 to 80cm deep and brought up with big stones and clay mortar.

WALLS

Basement

The Basement wall is brought up with stonework consisting of natural stone and clay mortar. It is characteristic that the edges of the basement are reinforced with infilled timber frames, this increases the wall's stability in horizontal direction and in case of earthquakes it will also have positive reinforcement effects,

but that could not be proved by evidence.

Second Floor

Traditionally the walls of the second floor are made of a special type of rammed earth. The earth is mixed with water, stone and sand on the ground. This clay mixture is brought up the wall in layers of 50 to 60 cm by hand and rammed, then the wall side is flattened with a blade.

The layers are often covered with some stones to connect the layers. When the layer is dried for a while and is able to bare load, the next layer can be brought up, and so on.

Since better roads made the transport of bricks available, most of the new houses or reconstructions are made of adobe brick walls. The thickness is also similar to the walls of rammed earth, about 60 to 70 cm. The adobe also allows bigger openings in the walls with a small reinforcement. The traditional rammed earth walls have not been plastered.

The adobe walls have to be plastered, otherwise the draining water of melting snow and rain erodes the wall.

Third Floor

The walls of the third floor are made of adobe bricks. Often in a timber construction, with bracing of adobe clay bricks and clay-straw-mortar. The whole construction is plastered with clay plaster, mixed with straw for reinforcement. Diagonal struts, made of halved beams reinforce the construction.

Thus a light construction exists on the roof. This is called "Senje Construction"

OPENINGS

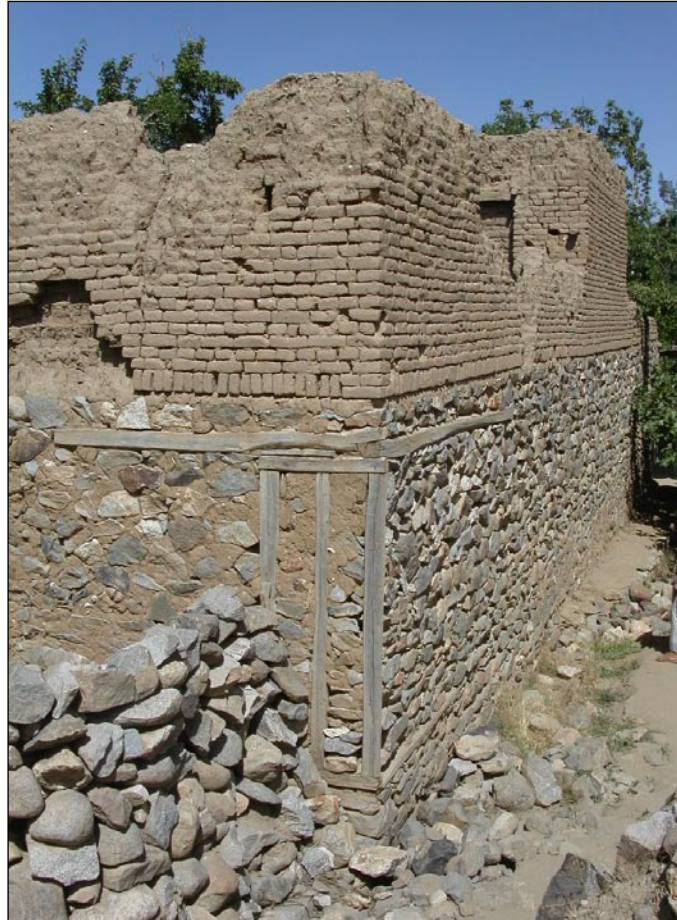
Usually the Frames of windows and doors are directly built into the walls. Small openings are just blocked out the wall and plastered with clay-mortar.

Large openings also require lintel beams. Doors are made with doorpost and doorframe.

The doors are decorated with wrought iron, which gives them a well-fortified look. Usually the windows are orientated towards east and south.

ROOF / FLOOR

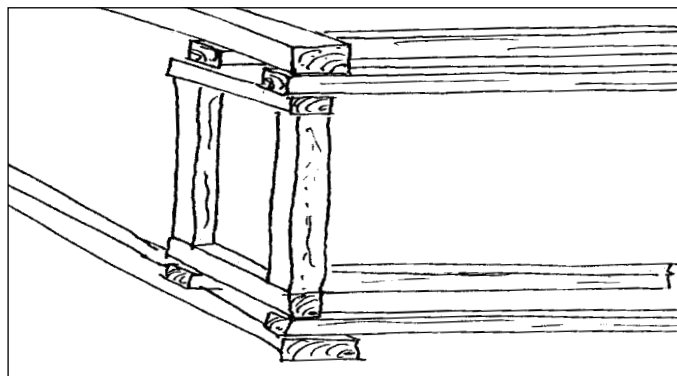
The floor of the basement consists of rammed earth. Then a



Pic. 7: Timber framework to stabilize the wall horizontally



Pic. 8: construction



Pic. 9: Construction schema

layer of earth to level the floor is put upon it. This layer is plastered with a layer of clay-mortar mixed with straw. The floor of the working area is covered with natural flagstones. In this area the clay for the pottery is prepared.

The floors and roofs are constructed of timber and clay. Poplar beams, mostly bedded right on top of the wall or a bigger beam, about 12 to 20 cm in diameter are laid out with a distance of 30 to 50 cm .

A layer of rush mats covers the beams. A second layer of reed or sticks covers these mats. The reed or wooden sticks are covered with clay mortar.

Now it is leveled with earth as basis for the following layer of about 15cm of rammed earth.

Another layer of earth levels the construction to become a gradient. This layer is plastered with clay-straw for several times to get a waterproof screening layer.

This kind of roof has to be maintained with new clay-plaster every year due to destructions caused by draining water. That's why the snow has to be removed during winter times every once in a while to prevent the melting snow from destroying the roof.

The floor is constructed in the same way, but even thinner. The poplar beams give the maximum span, about 4 to 5 meters. If greater spans are desired, the construction has to be underlaid with wooden standards. The beams usually do not overhang, they are sealed in the wall. But today some people use the overhanging poplar beams to construct balconys.

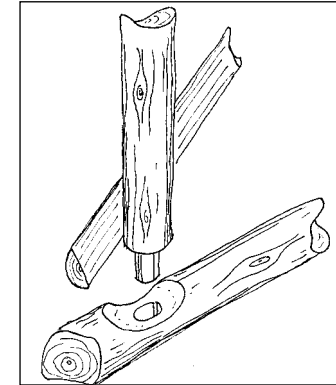
The floor plaster is finally covered with a thin clay plaster to



Pic. 10: Plaster



Pic. 12: Balcony construction



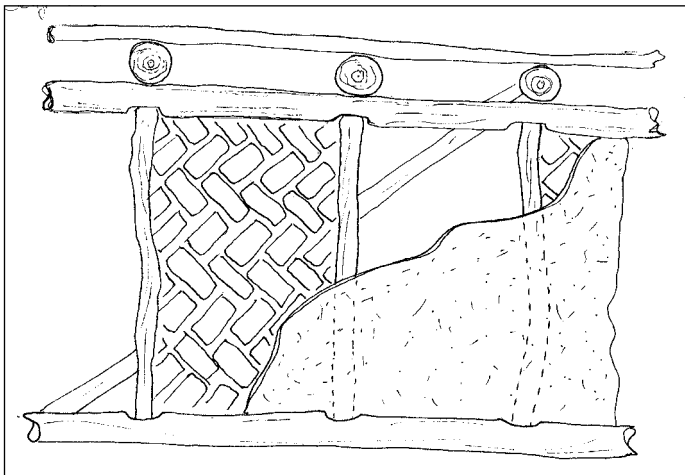
Pic. 14: roof detail Edge of Senje construction



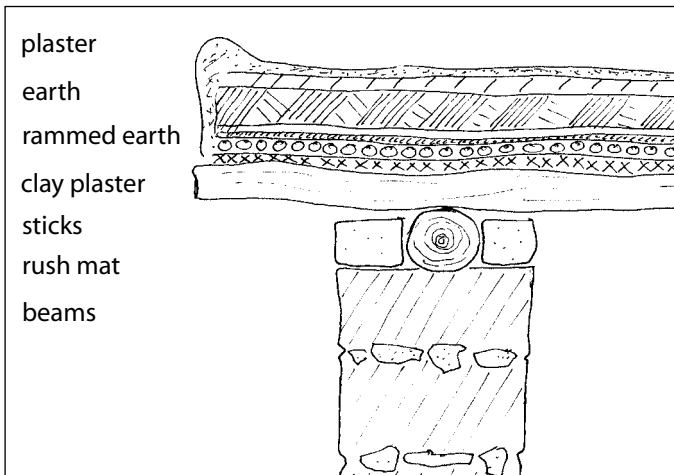
Pic. 15: Different walling types in one construction



Pic. 16: Roof construction



Pic. 11: roof detail 1 senje construction



Pic. 13: roof detail 2 Roof construction Layers

form a smooth surface.

The floor in the living room are covered with carpet.

All walls are plastered with a plaster made of clay, straw and sand. Inside the Building two layers of different plasters are used. On the ordinary plaster a layer of thinner clay-plaster with fine sand and with thinnest straw is plastered.

INNER BUILT ELEMENTS / FURNITURE

Traditionally there is not much furniture inside a tajdik house.. Inside the living rooms there are alcoves inserted in the walls which are used as closet for daily use. More stuff is stored in a chest in the storage rooms. The Floors are covered with carpets and pillows, which are used as seats.

CONTINENT: Asia > LAND: Afghanistan > REGION: Kabul > SUBREGION: Istalif > OBJECT: **Traditional tajik House**

ENCLOSURE

The flats, storage rooms and working rooms form a conglomerate of rooms with one outer wall. This cluster generates privacy inside and the cluster can just be entered by a central door which normally connects the outer space with the courtyard.

Because the cluster is closed in a way no foreigner could even take a glimpse inside, the inhabitants do not use any other kind of enclosure.

DETAILS

Detail information can be found in the respective chapters.

ORNAMENTS & SYMBOLS

Traditionally door and window frames and the door leafs have been carved with ornaments. Today's frames are just sometimes carved, The doors are decorated with wrought iron, which gives them a well-fortified look.

PROBLEMS / CHANCES

Many of the organizations concerned with the reconstruction do not understand the traditional ways of family-life in Afghanistan. Thus flats often do not fit the needs of a traditional tajik family. The reconstruction of the infrastructure is important for Istalif, as well as the clearing of remaining mines, which will still take years. A modern clay-architecture could help to convince the inhabitants to take advantage of the available resources and reduce costs and problems of the desired concrete-constructions.



Pic. 17: Ancient door with wrought iron and carvings



Pic. 18: alcoves used as boards

Images:

Pic.-Nr.: 1,4,8,10, 12, 15,18 Anne Seidel/ Studenten Bauen in Kabul;
Pic.-Nr.:2,3,7,16,17 Morten Loes / Studenten Bauen in Kabul Pic.-Nr. 5, 6:
Albert Szabo,Thomas J. Barfield/Afghanistan an atlas of indigenous domestic architecture; Pic.-Nr.:9 Christoph Knüppel /own Pic.-Nr.: 11, 13, 14 Christoph Knüppel /based on Nadjibullah Habib
Stadtplanung, Architektur und Baupolitik in Afghanistan

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Nadjibullah Habib; Stadtplanung, Architektur und Baupolitik in Afghanistan;
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Websites: