

documents

Environment and design

NOTES ON THE VERNACULAR ARCHITECTURE OF THE ASIR

GEOGRAPHY

The vernacular architecture of the Asir is to a great extent dependent on the geography and the climate of the area and of the availability of local materials such as stone and mud. The province of Asir forms part of the Arabian Highlands. The administrative capital of Abha is situated at an altitude of approximately 2,000 metres above sea level. Some kilometres west of the city lies the ridge of the escarpment and the terrain then falls dramatically towards the lowlands of Tihama. To the north a road runs up into the Sawdah Mountains to an altitude of about 3,000 metres. To the east and south lies a more level terrain, encompassing the cities of Khamis Mushayt and Ahad Rafidah. Everywhere the landscape is, however, hilly and to a large extent characterized by mountain ridges, cliffs and rocky ground. The main variations are constituted by the wadis. They are seasonal rivers, surrounded by fertile land, the most important being Wadi Bisha. The cities and villages of Khamis Mushayt, Rahban, Ahad Rafidah and Buta are all dependent on this wadi, while Abha is located in one of its tributaries. Another important wadi is that of Tindaha, which bisects the north-eastern part of the province.

CLIMATE

Due to its highland situation the average temperature of the Abha region is moderate, ranging from about 12°C in January to 21°C in July, while the daily fluctuation is somewhat more prominent; approximately 12°C in September. The relative humidity is moderate and no month is without rain. The main part of the annual rainfall is usually reported in August. The changeable monsoon and the micro-climatic effects of the mountainous terrain, however, cause great variations in rainfall and, as a consequence of its situation near the escarpment, Abha is often shrouded in clouds that rise over the ridge.

The heavy rains fill the wadis and make them swell to quite prominent features in the landscape while most of the year they lie dry. The eastern wind carries dust from the desert. The influence of the climate on the vernacular architecture of Asir is considerable.

FARMING

The first settlements of the region are likely to have been located in or near the wadis where water is abundant. In the larger wadis of Bisha, Abha and Tindaha some water prevails even during long periods of drought and is used for irrigation. Orchards and fields of vegetables and various crops intermix with the natural greenery of tamarisks and large grasses like

Arundo donax. The houses are mostly of mud.

The prerequisites of mountain farming are rather different. The water needed for cultivation is here provided by the rains, and the slopes of the hills are terraced by means of substantial walls. The upper terraces surround and sometimes support the village which is often situated on the highest level, overlooking the valley. The houses and walls are mostly of stone.

TRADING

Traditionally the villages have been more or less self-sufficient, but some surplus products have been disposed of and there has been a certain amount of trading with crafts of various kinds. Nomads and people from other parts of Arabia, like the Tihama, have come to sell their goods in the Asir markets.

Such trading activity, however, has hardly affected the layout of the ordinary village. The space needed for trade has often been located outside the cluster of houses. This is the case of Al Yanbu in Tamnia where an old market place, surrounded by rows of booths, is located on an even strip of land between the fields and the terraced slope of the village. The space needed for trade has often been located outside the cluster of houses. Khamis Mushayt, where a market is held every Thursday, represents a later stage of development, since recent commercial activities here have led to a remodelling of the original wadi settlement.

DEFENCE

In all probability the market place was located outside the village due to security reasons. Safety and defence have been decisive factors in the shaping of the Asir village as well as the singular houses.

The village, whether situated on a hill top or in a wadi, is built to look defensive and fortress-like. The silhouette of the high-raised structure is commanding, and closely observed the exterior reveals many features that are traceable to genuine works of fortification.

The ordinary farmhouse is a towerlike building of three or four storeys. The walls are thick with small window openings and there are traces of battlements at the top. The large houses are called *Qasr* or *Hisn*, arabic for fort.

The wadi village is loosely composed while the houses in the hills are tightly grouped and in some places still preserve a safe inner system of communication: a labyrinth of covered alleys and passages that was once locked during the night by means of heavy plank doors.

In some respects the Asir villages are reminiscent of vernacular architecture in other parts of the world

where basic conditions are about the same and where frequent wars and the need for defence have set the pattern. One example is the borderland between Pakistan and Afghanistan where the Pathan tribes have built houses and forts that resemble the Arab ones in outlook as well as in modes of construction. Another is the area south of the Atlas Mountains in Morocco. It has been said of the Morocco fortified *ksars*, that their form persisted even when the need for defence was no longer paramount. This also holds valid for the *qasaba* or free-standing watch-tower of the Asir province.¹

SOCIO-CULTURAL FACTORS

The factors dealt with so far might have been decisive but they do not fully explain the shape of the overall structure of the Asir village. Religion and tribal habits as well as other socio-cultural factors ought to be considered. On these subjects, however, there is a shortage of data and reliable information. Nevertheless, some suggestions can be made as to the likely influence of these factors. Islam asks for seclusion. The order of religion and the necessity of defence corresponds in general terms, and the hermetic character

of many villages can be explained by a combination of these factors.

The function of the mosque has not influenced the layout to the same extent as in other Muslim areas. Most village mosques are quite simple and of recent origin. They might have replaced either old mosques or sites where common prayers were conducted in the open air. There is an open-air mosque in the Sawdah mountains where *qiblah* is indicated by means of a simple stone *mihrab*.

In this connection it seems appropriate to refer to a *hadith* or saying that according to the Prophet Mohammed, on whom be peace, the earth was *masjid wa-tahur*, i.e. «mosque and pure».

The mosques of the Asir village are generally located on the fringe of the built-up area. An exception is the village of Tamnia where an old mosque is woven into the fabric of winding alleys and houses. It is substantial and beautifully formed out of local materials and it has a minaret that towers like a light-house over the roof tops of the surrounding houses. The tribal pattern of Asir has been described by Cornwallis who gathered his information from Arab travellers to Cairo in the years just before world War I. It might since have changed and even deteriorated due to migration and general social development. The influence of tribal

WADI TINDAHA, FARM HOUSES AND CULTIVATED LAND



habit on traditional architecture may be the reason for the variation that can be seen on travelling from north to south through the region; many houses north of Abha have one storey only.

THE DESIGN OF THE ASIR HOUSE

The traditional architecture of Asir, like the mass of vernacular buildings in other parts of the world, is an «architecture without architects». Generations of villagers have repeated the same pattern; the styles are not traceable to individuals although variations do occur and the inventive mason or master builder might well have been a renowned member of the community.

Basic conditions, such as climate and topography, social habits and local materials have, to a very great extent, decided the shape of the common house. Other influences and aesthetics might nevertheless have left their marks on the buildings but they were continuously balanced by practical requirements and traditional likings.

The prevalent material of the wadi houses is mud, extracted from a place nearby. In the hilly areas of the region local stone is dominant. There is, however, no clear distinction between the use of the materials and combinations are frequent. Whether of stone or mud the building may often be built on natural rock, and big boulders might be included in the walls.

Timber is local tamarisk or juniper. A frequent roofing material is provided by a tall grass, *Arundo donax*, that grows in some of the wadis. Colours, if added, are traditionally mixed with lime wash.

THE STONE HOUSE

The stone walls of the terraced fields and the walls of the houses are built in the same technique which is here termed diaper masonry. Large boulders, with the exposed side flattened, alternate with small pieces of schist. The layers are horizontal but irregular and sometimes rather difficult to distinguish. The quality of masonry varies a great deal. It is often the case that masonry of some age is more cleverly composed than more recent examples.

Diaper masonry is well known from the ancient kingdom of Gandhara in present day Pakistan. Good samples are found in Taxila. Small apertures in the stone walls have been produced by combining a series of boulders. The diminutive size of these openings can be explained by the need for defence. The ordinary window is small sized and above the upper slab can be found rows of white quartz stones inserted in the common masonry. This piece of decoration stands out against the dull colours of the stone wall and the dark window openings.

The windows have iron bars and solid wooden shut-

ters, sometimes painted in blue or green. The outer doors are made of heavy planks joined by cross-bars and turn on wooden pivots. Over the doors lie lintels of juniper or tamarisk. Such elements also constitute the roofs, they are covered by layers of reed and mud. Sometimes the roots of the trees are kept and lie embedded in the masonry.

The stone walls lean inwards and are somewhat thinner at the top. This is especially the case in the high rise buildings but the same technique has been applied in one-storeyed houses. The top of the wall is mounted by a mud course covered by lime plaster for further protection. The roof corners are pointed and the middle of the roof-line is sometimes in the same way. When rectangular building stones are used to achieve this feature the result resembles the stepped gable pieces of the ancient Nabatean tombs on the eastern coast of the Gulf of Aqaba.

The ordinary house is square set but rounded walls occur and contribute to the defensive look of the building — as if a tower was fitted into the structure. In the mountain villages especially, the stone walls of the houses touch and support each other but they are not actually joined together.

THE MUD HOUSES

The wall rests on a stone layer. The courses of mud, about 50 centimetres thick, are applied one after the other so that the previous layer can dry before the next one is added. The mud wall, like that of stone, leans inwards. The courses are easily distinguished since they recede slightly. The skilfully composed mud wall, when finished, serves to diminish the effects of the rains.

The mud courses also rise at the corners, and the top-most ones smoothly continue in the pointed features that have already been observed on stone buildings. The wooden beams of the upper floor are often carried through the walls, and the protruding points are surmounted by vertical moulds of mud that cast long shadows and stand out as distinctive elements.

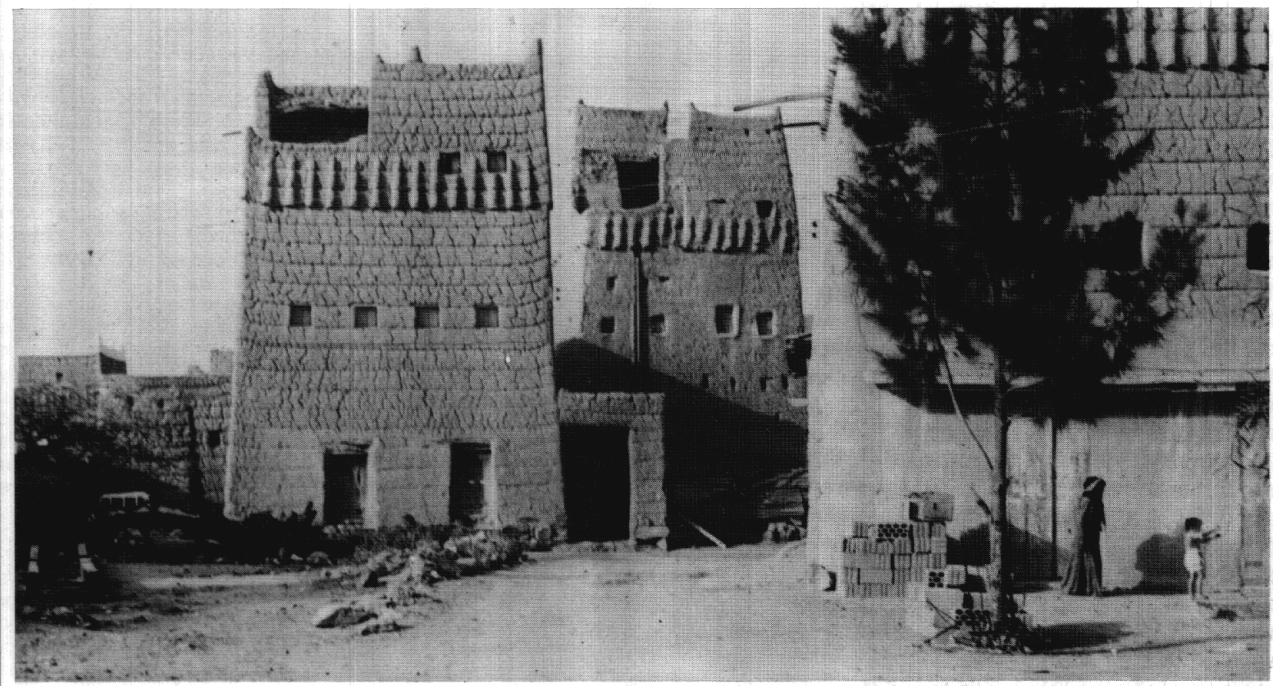
The most striking features of the mud houses are, however, the rows of slates that have been inserted into the walls. The effect is that of a plumage, and the rain never touches the wall itself.

From the roofs the water is either diverted by means of long hollow wooden jets or directed to stream down the walls in vertical drains of lime plaster. (Mud houses in the old city of Isfahan, Iran, also have such devices). Parts of the wall are often covered by horizontal bands of white or bluish lime wash and in some cases every window is surrounded by a moulded frame of wash. These features, although to a great extent explained by the necessity of protection, also appear as decorative elements in an otherwise homogeneous exterior.



ABHA CITY

AHAD RAFIDAH, SUQ, EAST SIDE, MUD HOUSES



The mud house of course needs continuous maintenance to protect it from the adverse effects of weathering.

THE STONE AND MUD HOUSES

Some Asir houses have ground floor walls of diaper masonry while the upper parts of the building are of mud, with or without slates. This combination of traditional techniques also applies to watchtowers or *Qasabas*.

As far as the *Qasabas* are concerned the combination seems original and could be explained by the scarcity of substantial building material. In ordinary houses the mud extension of the stone wall might, in many places, be the result of later additions to a one storeyed building. The stone and mud house does not differ in other respects from the genuine buildings of stone or mud.

INTERIOR ARRANGEMENTS AND SOCIAL ORGANIZATION

The Asir house is a self-contained building and the singular tower-like structure often provides shelter for man and beast. The livestock - goats, sheep and poultry — occupies the ground floor, that also contains stores for forage and crops. The main sitting-room, the *majlis*, is generally on the first floor, while the rooms for sleeping and cooking are upstairs. The kitchen generally occupied the topmost storey and an adjacent roof terrace serves for washing. When the house is swept and cleaned, the carpets are taken out and hung on the parapet.

Since the walls are thick, and the staircase — built of wood and mud — occupies quite a large space in the building, many rooms are small sized. The main sitting-room is, however, fairly large and airy, furnished with carpets and cushions and sometimes brightly coloured.

A bed for occasional guests can be placed here. Referring to the habits before World War I Cornwallis reports that straw mats are used for beds and that they are covered with a thick sheepskin *furwah* or rug.

According to Islam and general practice in this country there is always a need for privacy and the women have a separate room for sitting and sleeping.

The internal arrangement of space as well as many features in the exterior of the buildings can be explained by the need for security and seclusion.

When auxiliary buildings are at hand, such as cowsheds and stores, the space in front of the buildings is enclosed by a mud wall surmounted by twigs of thorny acacia. The door is heavy, made of wood with metal fittings and knobs the shape of which approximate to the lion heads found at al-Fau in the

Wadi al-Dawasir area of central Arabia.

The doors frequently have carvings of geometrical patterns and inscriptions from the Holy Koran. In some instances the date of the building has been added.

PRACTICAL CONSIDERATIONS AND AESTHETICS

Vernacular architecture in general depends on basic conditions and needs. The Asir house, as we have seen, is no exception to the rule. Local materials are combined to balance the effects of monsoon rains, summer heat and winter cold, and to provide security in times of warfare. The exterior of the building in particular, is shaped according to such factors. Even so, several features have a distinctive aesthetical appearance. The carvings on the door, the lime-wash bands and mouldings, the pattern of the quartz stones of the stone buildings and the total form of the structure reveal a deliberate aesthetical intention. The result is at the same time convincing and pleasing. The singular house as well as the village is finely marked in its natural surrounding; the buildings and the landscape seem inseparable. In the wadi the structures rise distinctively out of the greenery. In the rugged mountains they reinforce the bold profiles of the hilltops.

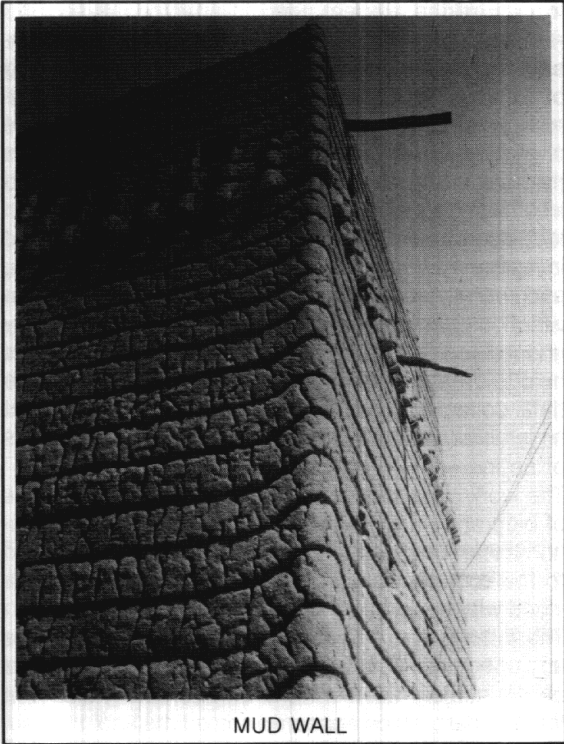
Although reminiscent of vernacular buildings in other countries the Asir house should be recognised as a distinctive contribution to world architecture.

Sten Nilsson

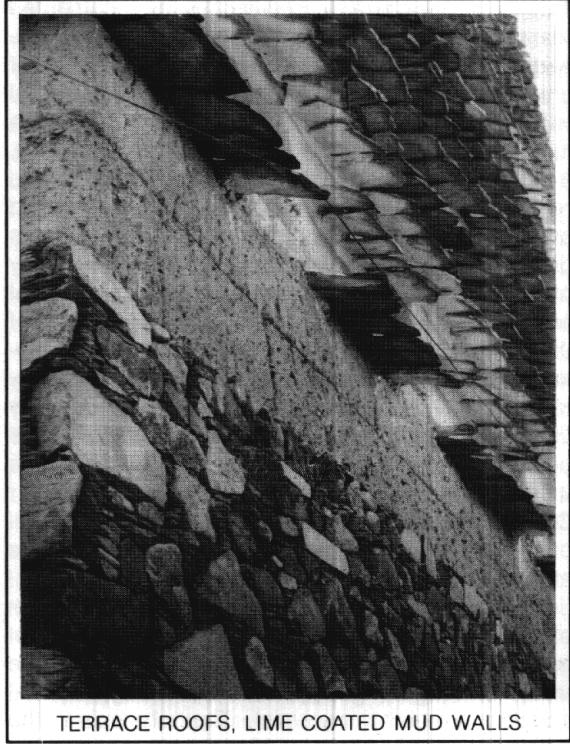
¹ The *Qasaba* is a free-standing tower built quite far from the village in the fields, or on a hilltop nearby. Like the ordinary house, the *Qasaba* is built of stone or mud, or of a combination of these materials. Most of the towers have a circular plan but square ones can also be found, and they often rest on a substructure of rock and stone. They might originally have had as many as four or five storeys with a platform on top for shooting and observation. The entrance to the tower is sometimes through an opening about half way up, accessible only by rope, and access from one storey to another is by means of a ladder built into the wall.

If made of stone the masonry is constructed with utmost care and the exterior wall of the tower bulges at the base like the shaft of an early Doric column. If made of mud, rows of slates are inserted in order to keep the rain water off the walls. Early travellers to Asir paid some attention to this type of buildings. Philby, in his book about the Arabian highlands, compared the *Qasaba* and the Chinese pagoda. The resemblance is superficial. Thesiger said that the *Qasaba* should have four horizontal bands marked with lime wash: these bands have hardly ever been preserved.

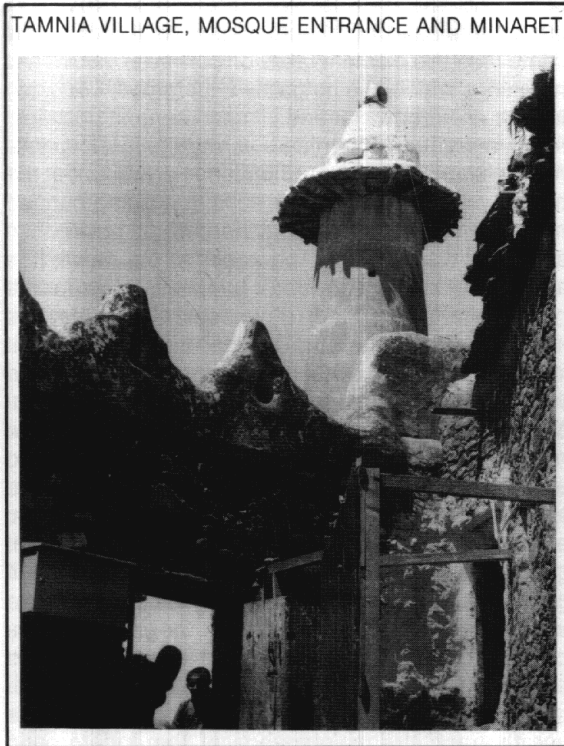
European observers in the region also speculated on the function of the *Qasaba*. Geoffrey King, in an article on the architecture of South West Arabia, suggested that the towers originally formed part of a communications system. Most of the towers are, however, placed very close to each other and there are very few on the hill tops where is a good view of the terrain and where it is possible to signal from one village to another.



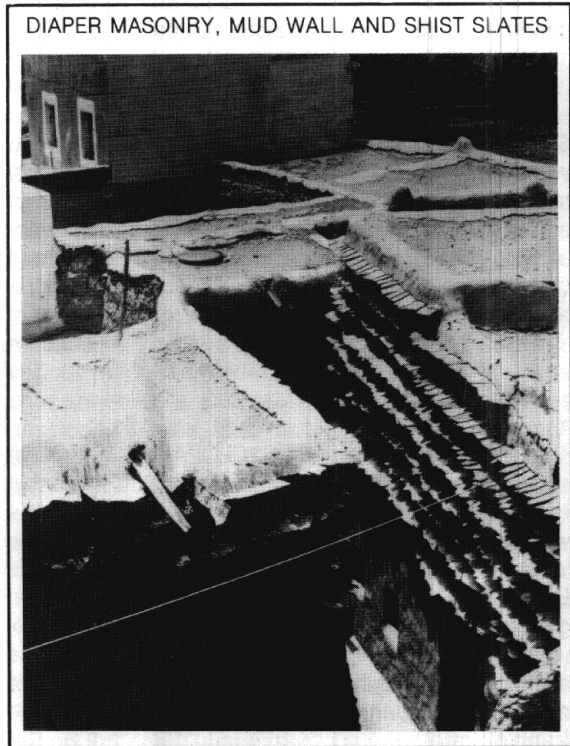
MUD WALL



TERRACE ROOFS, LIME COATED MUD WALLS



TAMNIA VILLAGE, MOSQUE ENTRANCE AND MINARET



DIAPER MASONRY, MUD WALL AND SHIST SLATES