# THE OLD CITY OF LHASA REPORT FROM A CONSERVATION PROJECT



BY ANDRE ALEXANDER AND PIMPIM DE AZEVEDO:
A TIBET HERITAGE FUND PRODUCTION,

Werkleute sind wir: Knappen, Juenger, Meister,
und bauen dich, du hohes Mittelschiff.
Und manchmal kommt ein ernster Hergereister,
geht wie ein Glanz durch unsere hundert Geister
und zeigt uns zitternd einen neuen Griff.

We are all workmen: prentice, journeyman, or master, building you - you towering nave.

And sometimes there will come to us a grave wayfarer, who like a radiance thrills the souls of all our hundred artisans, trembling as he shows us a new skill.

Rainer-Maria Rilke

# 7The Old City of Lhasa

# Vol.I Report from a Conservation Project

by
André Alexander and Pimpim de Azevedo



TIBET HERITAGE FUND

Berlin / Kathmandu MIM

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In the summer of 1993, while walking around in the old city of Lhasa, I became witness to the demolition of the Surkhang mansion, a large traditional building probably 300 years of age and located at a prominent corner of Lhasa's ancient Barkor Street. The demolition made me notice the immense transformation that the old city was just beginning to go through. I had visited Lhasa on several occasions before, and thought the old houses were virtually untouchable. Though they seemed to be in a fairytale-like sleep, I thought nothing would dare disturb them. I was proven wrong by the events of that summer.

Together with my very old friends, Pimpim from Portugal, Moritz, Sylvester and Alex from Berlin, and Andrew from Keswick, that same year we founded the Lhasa Archive Project (LAP) with the aim to study and document all aspects of the Lhasa old city: the architecture, the history, and the social structures. In this respect, the Lhasa Archive Project has collaborated on related research projects with Berlin's F.U. University (Dept. of Geography), Trondheim University (Inst. f. Byggekunst), the Tibetan Academy of Social Sciences, the Paris-based Shalu Association, and recently with the Chinese University of Hong Kong (Dept. of Architecture). The LAP system of data collection has been used in class by the Hochschule der Kuenste Berlin (Faculty of Architecture).

The first years of our work had been a case of chronicling a sad demise. Since 1993, every year on average 35 historic buildings in the old city were torn down, Lhasa having lost more than 150 irreplaceable historic buildings in the process. But the case was not entirely hopeless: we found the issue of preserving the old city was also being widely discussed in Lhasa. By teaming up with those factions who pleaded for preservation, the Tibet Heritage Fund (THF) was founded in 1996.

Since then, as a non-profit organisation, we have spent almost two years on studying the conditions in the old city, identifying the main problems and trying to devise solutions. We have begun the rehabilitation of historic neighbourhoods and carried out several pilot projects already. Finally in mid-1998, a list with most of the last remaining old buildings was accepted for official listing by the municipality.

More people have joined our team since the early days. I would like especially to mention John Harrison, whose wonderful drawings can be found throughout this report, and Margaret Miller, who had a close look at Lhasa's gutters for us.

The present publication presents some of the findings of our initial studies of the old city and Lhasa traditional architecture (chapters 1-5). Chapter 6 describes the current conservation area rehabilitation programme. Chapters 7 - 9 deal with further activities by THF, and the last chapter names all the people and organisations who contributed to the project and to this report.

Special thanks to Trace Foundation (New York) for having made this project possible.





Satellite image of Lhasa in 1965

# 1.1 Geographical Setting

The city of Lhasa is located in the southern part of the Tibetan high plateau at an altitude of 3650m above sea level and on roughly the same longitude as Cairo. The valley in which Lhasa is situated is formed by the river Kyichu, a tributary of the Tsangpo (which is known as the Brahmaputra in India). The dominant peaks surrounding Lhasa range between 4400m and 5300m above sea level. The city itself is built on a plain of marshy grounds, dominated by the three hills, Marpori ("red mountain"), Chakpori ("iron mountain") and Barmari ("rabbit

mountain"). The Lhasa valley is sheltered from the harsh winds that roam much of the Tibetan plateau, and the city benefits from a micro-climate that can be termed moderate. Recent maximum summer daytime temperature was 28 degrees celsius, wintertime temperatures average -15 degrees celsius at night. The air is extremely dry throughout most of the year except during the summer rainy season (July-August). Lhasa has more than 300 days of sunshine a year.

# 1.2 Historical Setting

In the Lhasa valley, to the north of the city area near present-day Sera monastery, the neolithic settlement of Chugong was excavated in the 1980s. Chugong dates back to about 1500 - 2000BC. Bronze and stone tools were found, leading to the assumption that the Chugong people practised agriculture, animal husbandry and hunting.

Tibetan recorded history began in 127 BC when the first emperor Nyatri Tsenpo was crowned. During the first half of the 7th century AD, the

33rd Tibetan king, Srongtsan Gampo created an empire that largely corresponds to the present-day extension of the Tibetan cultural realm (incorporating Tibetan-speaking areas in India, Nepal, and China's Sichuan, Qinghai and Yunnan provinces as well as the Tibetan Autonomous Region itself). At that time, Tibetan society was presumably the culture of nomadic warriors, somewhat comparable perhaps to the 11th century conquering Mongols. These warriors were in constant territorial warfare with their neighbours, China's Tang dynasty and the Uighur

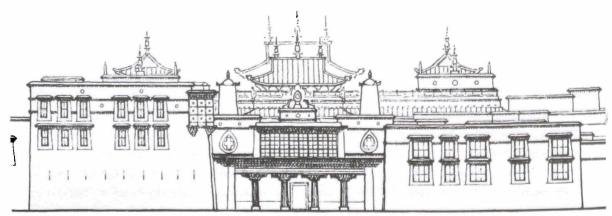


Central Lhasa ca. 1940s, Potala Palace in background

northern tribes, and at times even with Persia. The Tibetan royal court moved regularly throughout the country, from summer camp to winter camp.

Far from the Yarlung valley where many Tibetan kings were customarily buried, emperor Srongtsan founded Lhasa as Royal camp site in ca. 633. Originally the city had been named Rasa, meaning simply "fortified city". Various factors contributed to the establishment of Lhasa as semi-permanent royal capital. Two of the five queens of Srongtsan fullfilled an ancient prophecy by bringing Buddhist images and ritual knowledge to Tibet. Apart from Srongtsan's own palace (at the site where today

the Potala Palace stands), the capital of Rasa consisted of several Buddhist temples and shrines. the queens' palaces, and presumably quarters for servants, labourers, warriors and merchants. Several imperial strongholds are known to have existed in different parts of Tibet during the flourishing of the empire period (7th-9th century). Lhasa remained important despite subsequent kings having established their courts elsewhere because of the Rasa Trulnang Temple (miraculous self-manifest temple of Rasa), later also called the Lhaden Tsuglakhang (Lhasa Cathedral) or simply Jokhang (house of Jowo, precious image of Buddha). This temple was founded in ca. 641 at the behest of princess Brikutri, the Nepali bride of king Srongtsan. The Rasa Trulnang was closely modelled on Indian Buddhist temples that were famous at that time, and was several times restored under Srongtsan's successors on the throne. Tibetan scholars name the 7th-8th century Vikramasila temple, which itself was destroyed in the 12th century, as a model for the Trulnang. Many similarities in lay-out and details also exist between the Trulnang and the Indian Nalanda monastery, and with the Ajanta caves. The Jowo image that eventually came to be housed in the Trulnang temple, said to have been cast during Buddha's life-time, was the bridal gift of princess Wen-Cheng, Srongtsan's Chinese wife. Even as Lhasa's political influence wained after Srongtsen's death, the Trulnang temple's importance was recognized again and again during the following centuries, giving Rasa the status of a Holy City and its new name Lhasa, the place of the gods.

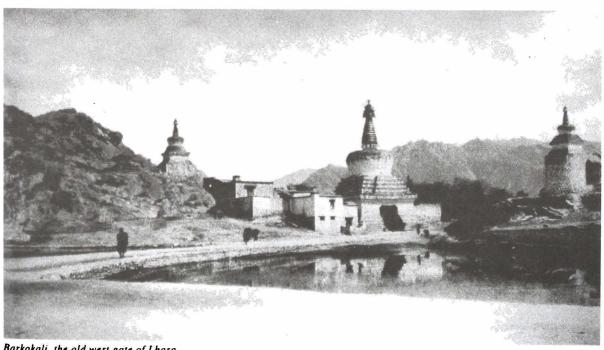


Tsuglakhang, west elevation / main gate

#### Social Development 1.3

In the mid-9th century, the Tibetan empire fell, and the kingdom disintegrated into independent fiefdoms and regional power centres. Lhasa no longer had much political importance, but because of the Trulnang/Tsuglakhang temple, the city remained an important destination for pilgrims and renowned Buddhist teachers. In the early 15th century, one of Tibet's most important religious teachers and scholars, Je Tsongkhapa from Amdo, founded the great monastic universities of Sera and Drepung on the outskirts of Lhasa. Lhasa soon became an important seat of learning, attracting students from as far away as Mongolia who studied Buddhist dialectics, astrology, medicine and calligraphy, and practiced debate and meditation. Besides being a major cultural centre, Lhasa was still a major trading centre, being the cross-point for trading caravans from Nepal, India, Ladakh and Muslim central Asia. In the 17th century, the Tibetan regions become once more unified under the Fifth Dalai Lama and his Mongol patrons. The Dalai Lamas were the reincarnated de-facto heads of Tsongkapa's reformed Gelugpa ("virtuous") sect. The Fifth Dalai Lama, Ngawang Lobsang Gyatso (1617-1682), established a central Tibetan government named Ganden Podrang ('Tushita palace') and re-modelled Lhasa as his capital. He was responsible for the building of the Potala Palace, and he extended the Tsuglakhang temple to its present-day dimensions. In 1913, the Thirteenth Dalai Lama, Thupten Gyatso (1876-1933), declared an end to China's status as suzerain (or patron) of Tibet, and began the modernization of his mediaeval realm. Lhasa soon had a post office, a hospital, a permanent British representative, and a small hydro-electric powerstation. Despite setbacks, the modernization continued, and in 1947-48, the government employed the Austrian engineer Peter Aufschnaiter to survey the city because of plans to improve power supply and irrigation.

In 1950, Mao Zedong's People's Liberation Army crossed the boundaries established by the 13th Dalai Lama between Kuomintang China and the Tibetan areas under administration of the Ganden Podrang government. Lhasa decided to take up Beijing's offer to become an Autonomous Region of the newly-established People's Republic of China,



Barkokali, the old west gate of Lhasa

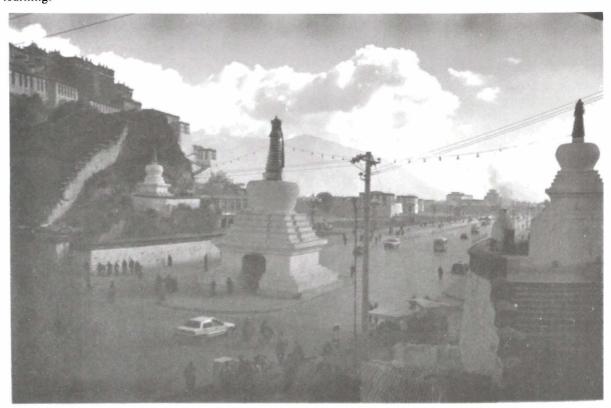
H. Richardson

under the 1951 17-point agreement in which a high degree of autonomy for Tibet is stipulated. In 1959, popular revolt against communist reforms led to several days of warfare in Lhasa, causing much destruction and suffering. The 14th Dalai Lama fled to India and almost 40 years later is still a guest of the Indian government. With most of the ancien regime having also departed, communist reforms were fully implemented in Tibet. Property was nationalized, and agricultural production radically

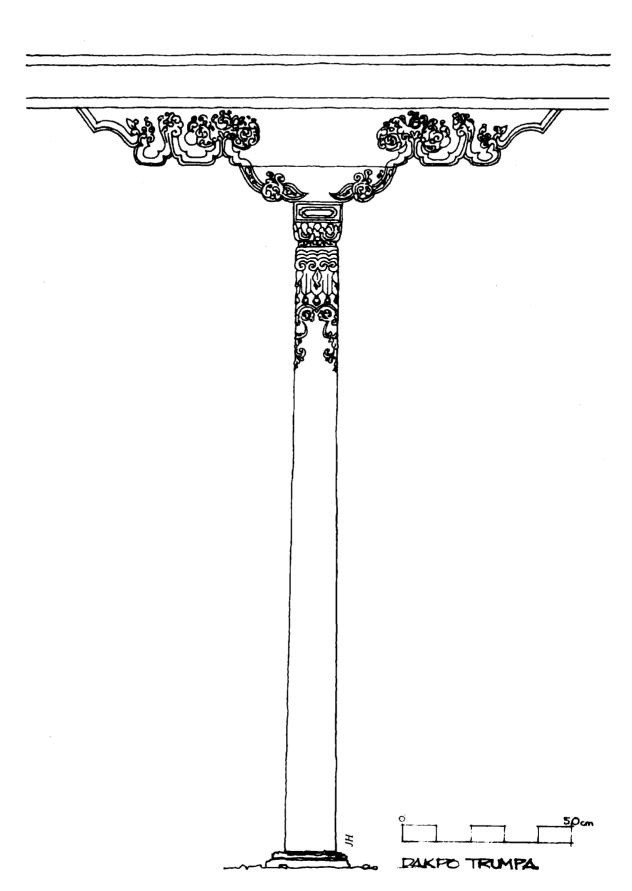
re-organized under a commune system. During the Cultural Revolution (1966-1976), monasteries were destroyed and Tibetan customs and traditions branded as feudal and forbidden. Since the political reforms that began in 1978, Tibetan religion and customs have slowly become rehabilitated. By the 1990s, the economic reforms that already transformed most of China had also reached Lhasa, resulting in rapid modernisation of the city and a growing prosperity for many city dwellers.

# 1.4 Lhasa's Uniqueness

Lhasa, Lhasa was perhaps old Tibet's only truecity. Today, Lhasa is still the biggest urban settlement in the Tibet Autonomous Region, and has retained its importance as a holy city for the entire realm of Lamaist Buddhism. Lhasa also has been, and to some extent still is, an extraordinary cultural centre, where traditional medicine, astrology, philosophy and Buddhism could be studied in great institutions of learning. The physical remains of the old city represent a living witness to history. Lhasa's buildings are a rare example of urban Tibetan architecture, and the old city allows the visitor to view developments that originally took place over centuries by simply taking a few steps.



TheDrakgo Kam today (rebuilt in 1995)



## 2.1 Lhasa's Historic Urban Fabric

The ancient urban and social patterns to be found in the old city reveal much about Lhasa's cyclic historical development and the traditional life-style of its inhabitants.

The Tsuglakhang temple, as described in the previous chapter, is the spiritual and physical heart of Lhasa. In harmony with the Buddhist traditions established by Lhasa's founder, circumambulation routes lead clockwise around the Tsuglakhang, enabling pilgrims to venerate Tibet's most holy shrine and to gain merit for the next life by doing so.

The innermost pilgrimage circle, the Nangkor, which leads around the Tsuglakhang's central temple building, was presumably established at the time of its founding in the 7th century.

the Barkor is also Lhasa's main bazaar street. However, in the early hours of the morning, and at sunset, a visitor can ascertain that the Barkor is still a religious circumambulation route of major importance for Lhasa citizens and pilgrims.

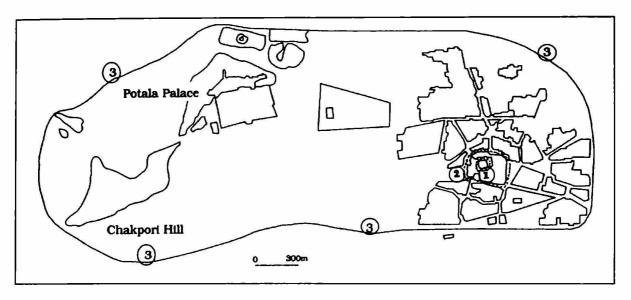
The outer circle, called Lingkor, leads clockwise around the city at its pre-1950 limits, encompassing the 40-odd temples, monasteries and shrines once existant in Lhasa. These three koras determine the way Tibetans perceive and access the city, as customarily a visitor would first do a Lingkor before entering the city, then do a Barkor before entering the Jokhang. The three circumambulation routes have also in the past defined the pattern of Lhasa's urban growth axis. Over the centuries, the city grew in concentric circles around the Tsuglakhang. These layers of city quarters are



Barkor Street in Winter

The intermediate circle, the Barkor, has existed at least since the late 14th century, with its outlook and size changed and amended over the centuries. The shape of today's Barkor is largely identical to that of the late 17th century, except for alterations made in the 1960s (removal of Buddhist stupas, huge prayerwheels and other religious attributes) and in 1984 (creation of the large open square in front of the Tsuglakhang's main gate). Today, as it has been for centuries,

entered by crooked little alleyways, lined by low, white-washed stone-and-mud houses. One-, two-and three-storey buildings would alternate with one another, so that no-one would block the neighbour's sunlight. The dense maze formed by the old city's ancient residential buildings was previously interspersed by temples, market squares, covered and open sewers, ponds, gardens, and Buddhist Stupas.



Lhasa's three main circumambulation routes.

1 Nangkor 2 Barkor 3 Lingkor

#### 2.2 The Traditional Lhasa House



A typical Lhasa mansion (Trijang Labrang)

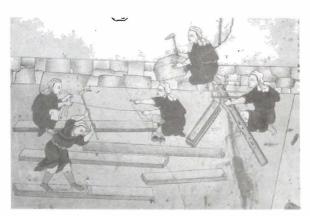
The traditional Lhasa house has a flat roof and the outer walls slope inwards, resulting in a characteristic silhouette. The white-washed facade is further accentuated by thick black frames around and little slate roofs above the doors and windows. The corners of the roof are elevated, and twigs decorated with prayer-flags in five colours signal that the inhabitants are Buddhists. Monastic buildings have additional attributes and a different

lay-out, but the basic architecture is the same. The vernacular buildings of old Lhasa can be classified into three main types: the noble house, the large residential building, and the smaller house inhabited by merchants and commoners.

All three types of buildings generally have at least one courtyard. Smaller and medium-sized buildings are often rectangular in shape.

The noble houses are generally much more elaborate than the other two house types, with better craftsmanship and better materials used. The basic noble house consists of a main building, up to three floors high, and an attached outbuilding. The main building is often conceived symmetrically, and always hierarchically, with the top floor accentuated by ornate windows and balconies. The outbuilding is usually one floor lower that the main building. It is built around a large principal courtyard, with a gallery giving access to the romms on the upper floor. The ground floors of both buildings are designed to function as store-rooms and stables.

The large residence yards of old Lhasa were originally owned either privately, by rich monasteries or by the government. They probably originated as caravanserais providing temporary lodging and shelter for travelling merchants, and later became



Tibetan workers building the Jokhang Temple, mural, 20th century, Jokhang

tenement yards in response to urban growth. Monastically-owned residence yards served the additional purpose of providing central accommodation for large numbers of monks during important festivals. The traditional residence yards are less symmetrical in design, and the third floor is always built from mudbricks. The craftsmanship displayed is generally very solid, but ornate decorations are to be found only in a handful of rooms reserved for the owners, their relatives or representatives.

Traders owned or rented smaller houses that served simultaneously as residence, shop and goods storage. Usually two stories high, many of them were very well-built. Smaller residences owned or inhabited by common people were often built from mud-brick on a stone foundation and were less decorated than houses owned by nobles or merchants.



Construction of a traditional building in the 1940s

#### 2.3 Materials and Construction

The traditional way of building is a response to Tibet's cold and dry climate, and the earthquake-prone ground. Since from at least the 7th century onwards until recently, the materials used for construction of housing in Lhasa have not changed much. Local stone, wood and earth are the basic materials, different qualities of which were used for different purposes. Slate, for example, forms the little roofs over doors and windows, while granite is preferably used for walls. Softer woods (such as poplar) are used for carvings, while harder woods (firs, nut trees) are used for structural support.

One of the most characteristic features of traditional Tibetan architecture is the battered wall. Besides giving Tibetan buildings a distinctive silhouette, the inward-sloping walls also provide extra stability in case of tremors. The sloping is created by the reduction in thickness from the ground floor wall to the top floor wall, with the inside wall remaining vertical

The walls on the ground floor, usually built from stone on shallow stone foundations, are extremely thick, often more than a metre. The walls get thinner and lighter towards the top of the building. The top floor of a house is commonly built from mud bricks; but wealthier houses would have used stone bricks for all floors. Between the meticulouslymade outer and somewhat simpler inner faces, the wall core is filled with stone rubble and then rammed with mud, straw and other insulating materials.

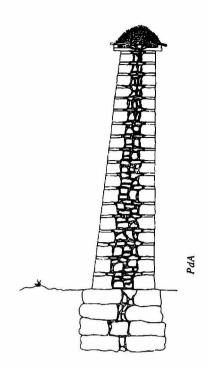
The masonry deserves special mention. Courses of large rectangular stones, roughly of equal size, are laid between layers of small flat stones. This technique, known as galetted rubble, gives the walls a greater flexibility in case of tremors and therefore adds to the stability of a house. The top of a wall is sealed against rain by a cornice made from slate and wood, crowned by a mound of clay.

Ceilings, supported by a pillar-post construction, are built by placing wooden rafters between the cental beams and the walls. The rafters support layers of pebbles and mud. The roofs are sealed either by stamped and oiled clay (known as Arga) or water-absorbing sand known as Tikse.

The thick walls and the filled ceilings ensure maximum insulation against the harsh temperature changes in the Tibetan climate.

Tradionally responsible for the entire construction of a house there would be a master carpenter or master stone mason, who had the title of "chimo". The client would explain the size of the house and any special needs, and the only drawing of the building needed would be a rough sketch drawn on sand or with charcoal on a piece of wood, for the client's approval. For the placement of doors, windows and designation of rooms, as well as for ceremonially initiating the construction project, a monk well-versed in Tibetan geomancy would be hired.

For the refinement of the Lhasa style of architecture, the period from the 17th century onwards is most relevant. The 17th century saw the consolidation of the lamaist state. Building projects during that period re-defined the Lhasa urban landscape. In the 18th and 19th centuries, influential aristocrats and monastic officials built opulent mansions as their residences. The concentration of wealth, political power and religious

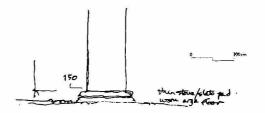


Section of traditionally-built wall



Wall detail, Bonshoe mansion, early 20th century

importance provided the necessary background for the formation of a tradition of master builders. In the early 20th century, contacts between Tibet and the outside world gradually increased. The advent of new construction materials obtained from outside of Tibet, first of glass, later of metal beams, and finally of cement, heralded a modernisation of the traditional way of building houses in Lhasa.





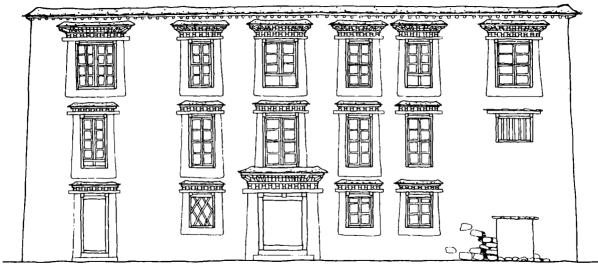
Railing, Bumthang House

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#### 2.4 Life in an Old Manor House

The most elaborate houses of old Lhasa were the homes of the aristocracy. Each was built as the residence of a single noble family, who would live there with their relatives, servants, animals and stored goods. We find a good description of a noble house in the writings of Sir Charles Bell, British special envoy to Tibet and a personal friend of the

13th Dalai Lama. In 1915, Bell stayed with the wealthy Palha family at their country estate near Gyantse. The following description of the estate gives a good impression of the life-style of the Tibetan aristocracy prior to 1959, though it must be noted that a noble house in Lhasa is only a downsized version of the country manor.



Kagye Nup, South Elevation

The house at Drong-tse is built around a audrangular courtyard. The side opposite the entrance rises to four storeys above the ground Inote: in Lhasa city, three storeys was the rule]. On the topmost floor the members of the family live during the summer months, moving one floor down in the winter for the sake of warmth. Their sitting-rooms, bedrooms, and kitchen are here. There is a schoolroom also, to which come both the sons of the house and those of the retainers and the tenantry, but the Pa-lha boys have their own special seats. A small praying-room, where the family priests read prayers, though poorly furnished, is heated with braziers of vak-dung, the common fuel of high Tibet, where wood is scarce and coal basically unknown. Thus warmed, the family gather in it often during the cold mornings and evenings of the long Tibetan winter. All the sitting-rooms have altars and images in them, for, from prince to peasant, their religion is part and parcel of the life of the Tibetan people.

On the floor below are found the room for the two stewards, in which they do their work and pass the day. On the walls hang bows and arrows kept ready for the archery which delights the heart of Tibetan man and maid, held as it is under the blue Tibetan sky and accompanied by wine and song. On the floor are three or four of the low Tibetan tables with teacups on them drawing

attention to the national beverage. Beyond are two Gönkhangs. Here, too, is the largest chapel in the house. It is known as the Kan-gyur chapel, for it enshrines a complete copy of the Buddhist canonical books, one hundred and eight volumes in all. In the floor is a large trap-door through which grain is poured into the store-room below. A kitchen for the servants, a store-room, and a large reception room, used for important entertainments, complete the tale of rooms on this storey. It was on this floor that my wife and I were lodged when on a three-day visit to Drong-tse in 1915. For our room we were given a large chapel. part of it being partitioned for our use. Behind the partition a monk could be heard off and on from five o'clock in the morning intoning the services for the Pa-lha household.

At the New Year, the more influential retainers and tenants come to offer ceremonial scarves to the head of the house. If a member of the house is present, he receives the scarves; if not, these are laid on the table in front of his empty seat.

On the floor below we are among the rooms for servants and for storage. An apartment used for housing wool runs along one side. From end to end of the other side runs a long room for housing grain. Part of the latter, however, is taken up by two open verandahs, separated by a partition wall and

facing the courtyard. These spaces are used by persons of rank somewhat lower than that of the master of the house for watching the entertainments that from time to time take place in the courtyard. Convention requires that those of highest rank shall sit in the highest seats, though thereby they lose the better view of the spectacle. The nobility are accommodated with seats in the gallery, the common folk are relegated to the stalls.

Rugs, tables, &c., filled a lumber-room; in another bread was kept; in yet another was stored barley to be used for making beer (chang). I had often heard that Tibetans laid in a large part of their meat supply once yearly, in October, and here I witnessed the proof of this. For in a large room joints of yak-beef and mutton were hanging from the ceiling. The meat had been killed for nine months - October to July - but was free from offensive smell. A bedroom for the priests and various servants' apartments found place on this floor.

On the first storey are two rooms for brewing beer, a large room in which meat, barley-flour, oil, and such-like are stored together. Along the other sides we find rooms used for peas, barley, and other grain.

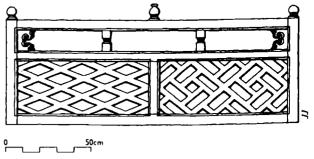
After the Tibetan custom a strong wooden ladder with steep, narrow steps leads to the courtyard below. At the top of the ladder, in a recess on each side of it, stands a praying-wheel, as high as a man and of ample girth. Thousands upon thousands of incantations and prayers are printed and pressed together within these great cylinders. At the foor of each sits an old dame, who makes it to revolve, and in so doing sends upwards this mass of prayer and offering for the benefit of the world at large and the Pa-lha household in particular.[...]

Round the courtyard, under the projecting verandahs of the floor above, are stables. At the back of these are rooms for storing hay. [...]

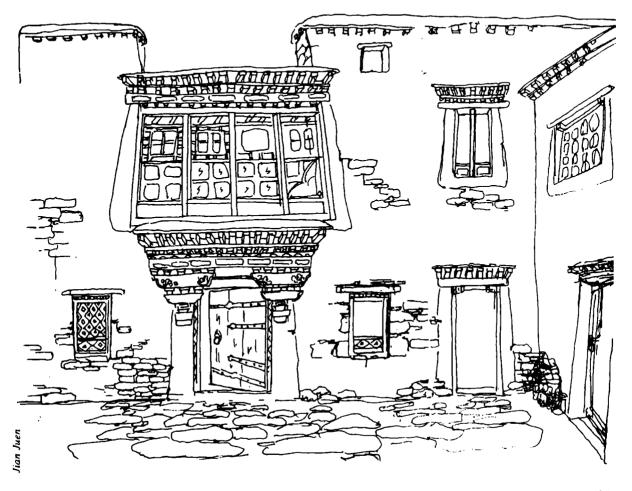
The room in which we were offered the usual tea, cakes, and fruit was, as so often happens, a chapel and a sitting room combined. But it was unusual in that it faced towards the north. Tibetans usually arrange that their best rooms shall catch as much sunlight as possible.

#### 2.5 The Traditional Lhasa House - as a Relic of the Past

The elaborate life-style of the aristocracy has now all but disappeared. Changes in society have led to the decline of private ownership, and population development has created increasing demand for inexpensive public housing. The advent of steel and cement has made it possible to build faster and comparatively cheaper than before. These factors have led to the decline and near-disappearance of the traditional skills, and have also contributed to a drastic change in appearance of the city of Lhasa.



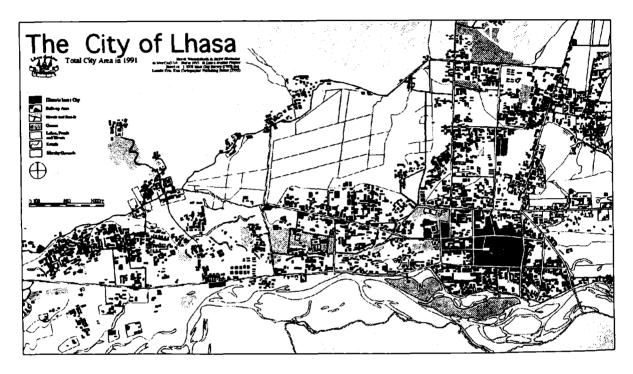
RAILING , BUNTHANG



#### 3.1 City Development

In 1948, according to the Peter Aufschnaiter survey, the city of Lhasa consisted of about 600 buildings. The population, as given in official statistics, was around 30.000 people. Since then, Tibet has made the leap into the industrial age and Lhasa has experienced spectacular growth. Today, the city is home to at least 330.000 people, and has modern roads, several high-rise buildings (more than 10 stories), many modern facilities,

and even a local internet server. Because of Lhasa's above-average employment and income opportunities, and available educational and medical facilities, the city still attracts people from most parts of Tibet as well as employment-seekers from many Han-Chinese provinces. There is very visible evidence that the city is still rapidly expanding.



# 3.2 The Separate Character of the Old City

Today's old city is an area of 1.3 km<sup>2</sup>, defined by the Lingkor North, Lingkor East and Lingkor South Roads, and the Do Senge Road to the west.

Despite the recent rapid redevelopment of Lhasa, the old city has kept its separate physical character. The structure here is very different, much denser than in the rest of the city.

The old city has a special official status as historic area, a separate administration (the Chenguan Chu Office), and is designated as Lhasa's principal public housing area. Several designated food markets and bazaars (Tromsikhang market, Ramoche market, Barkor market, Shasarzur market) are regularly visited by people from purely residential areas. Work units and government offices occupy

much of the northern parts. The old city is home to a dozen Buddhist temples, two hospitals, several primary schools, a newspaper office, two cinemas, and a growing number of restaurants and tourist hotels. There are no recreational facilities such as public parks, playgrounds or sports facilities located in the old city.

The city planners maintain that the old town is Lhasa's prime public housing area. One reason that they cite is the popularity of living in close proximity to the Tsuglakhang temple. Another reason is that much of the land in the Lhasa valley is being developed in a partnership between privatised work units, government departments, and private property developers, while most buildings in the old city are

still government-owned and managed by the Housing Authorities. This means that the old city has to absorb a continous influx of new residents. To cope with the growing population development, the Planning and Construction Departments devised the policy of replacing existing old buildings with 4-storey, densely packed concrete blocks, some of which are built in neo-Tibetan style. As a result of this policy, the population within the old city has approximately doubled over the last ten years. Today, it is estimated that 50.000 people (mostly ethnic Tibetans) live in the old city.

# 3.3 Official Management of Old Houses



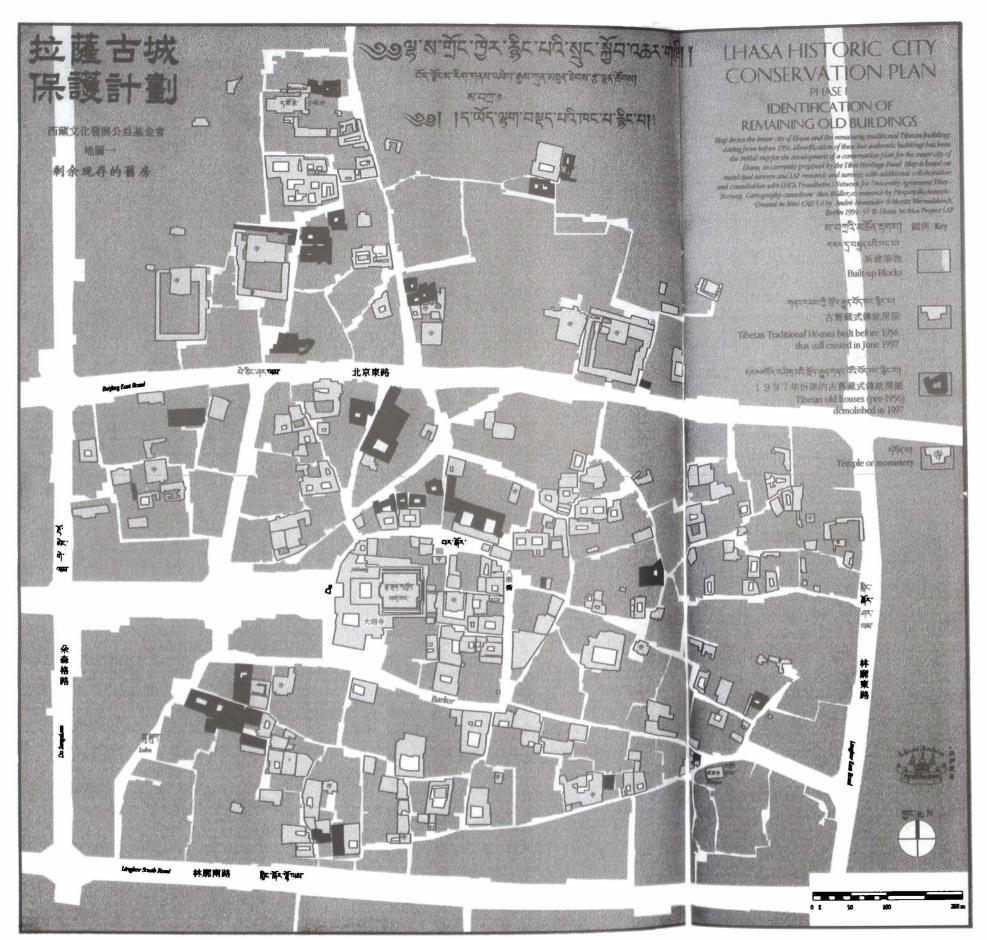
Collective responsibility

Between the 1950s and late 1960s, probably more than 85% of all traditional residential buildings had been nationalised. Some house owners who cooperated with the authorities, mostly during the initial period of collectivisation in the 1950s, received compensation for their properties. After 1959, aristocracy was abolished and former aristocrats had their properties and sometimes their personal belongings confiscated as well. The property of those who fled to India with the Dalai Lama was also confiscated.

The nationalized houses were transformed either into subsidized public housing, or to provide free housing for the employees of government work units. Since then, the municipal Housing Authority manages the houses, allocates flats and collects the subsidized rents. Rent levels have not risen much since 1959, and in the area studied by THF averaged no more than two US\$ per year for a flat.

The disappearance of private ownership of houses led to a problem not foreseen by the advocates of socialist ownership: a near-total lack of maintenance, apparently caused by lack of responsibility and security. Experience from other countries with similar housing systems suggests that people feel discouraged from taking care of their residences if they have little security over their continued staying there (personal observations by the authors made in Moscow, St. Petersburg and East Berlin seem to confirm this). A lack of official funding for maintenance by the Housing Authorities has aggravated the problem. As a result, few repairs have been carried out over the past three decades. Leaking roofs have not been fixed, broken windows have not been changed. Many publicly-owned houses are now in a state of dilapidation but still inhabited. A recent government study suggests that now more than 60% of public (old) housing is in 'dangerous condition' and needs urgent repair.

Since recent economic reforms and privatizations, the Housing Authorities have stopped allocating subsidized flats to new residents, even if they have the Lhasa residence permit. Newcomers have to rent at market rates, which in the old city generally are about a hundred times higher for a comparable flat than subsidized rent would be. Market rate rents are about 50% of the average income in areas studied by the THF. It is thought that the policy of subsidized rents will be eventually phased out, even in the old buildings. But a solution for management improvement of the old houses has not yet been found. Since the 1980s, some smaller properties have been given back to their former owners. Of the large aristocratic mansions, usually only parts of one building (perhaps only one flat) were given back. The majority of old buildings are still government-owned.



### 3.4 Demolition of Old Houses

Since 1993, an average of 35 historic buildings have been demolished every year. If that pace of redevelopment were to continue, the remaining historic buildings would all disappear within three more years. It was a prime objective of the THF project to halt the current development programme, to instigate an official re-evaluation of the current situation, and to jointly develop a viable alternative programme that would include official protected status for the remaining historic buildings.

The map given below shows the remaining old buildings in the old city area.

Also highlighted on the map are all old buildings that have been demolished during 1997, in total 38 buildings.

The nature of the redevelopment projects behind each 1997 demolition is as follows:

- eight sites are private residential or commercial projects (including a tourist hotel)
- one site was former housing for a work unit, which had relocated its employees. The site was sold to another government office, the Lhasa City Planning Office. This is operating under semi-privatised status, and has demolished the building and erected a new four-storey residence to sell and rent flats and shops at market rates.
- two sites are small-scale residential developments by private owners
- three small sites were previously owned by Ramoché monastery, nationalised in the 1960s and recently given back. All three were in dilapidated condition, built mostly from mud-bricks. Ramoché had all three demolished and built new residence quarters for its monks.
- the remaining 24 sites are state properties that were redeveloped under the government housing programme. All projects are four-storeys, have gravity-model cess-pit toilets (with drainage of liquid contents only to an existing sewer), very little insulation and water-supply provided by a single tap in the courtyard. The tenants of the original buildings are scheduled to move into the new buildings after completion, but face a rent increase of sometimes several hundred percent, even though the basic facilities are not improved.



Demolition of 18th century Palling Liushar House, 1998

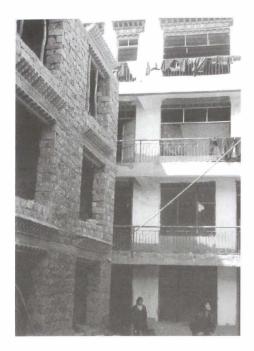
## 3.5 New Public Housing in the Old City

Since the early 1990s, much of the old city, including especially the Lubu, Banak Shoel and Tromsikhang neighbourhoods, has been redeveloped and replaced by four storey housing blocks.

The new blocks are built from concrete and stone in mostly uniform design, and have mock Tibetan facades. The battered wall feature is entirely absent. Each block has one or two smallish courtyards, and houses on the average 40 families. These 40 families have to share a single water tap in the courtyard. Sanitation is provided on each floor by sets of slot-type toilets without proper plumbing. The ground floor toilets of many new tenement blocks in the old city are permanently blocked by human waste, with unpleasant smells permeating the courtyard. From design, workmanship and materials these buildings are totally unsuited for the Tibetan climate, as they have no insulation and are hot in summer and freezing cold in the winter. An earthquake would spell disaster for the inhabitants,

as the new houses have none of the protective features of the old architecture. The size of the new blocks is too big for the scope of the old neighbourhoods, and sunshine is being blocked out from many small alleyways. All new blocks have rows of shops on the ground floor.

The demand for new flats and for more commercial retail space in the old city, coupled with the strong financial interests connected with property development, have led to a construction boom with the result that most available space in the old city is already built up. Now houses built in the early 1980s are being demolished and replaced by higher buildings. The section of Beijing Road Lhasa's main street) that runs through the old city is an example. Houses two and three stories in height, with alterations on the facades, and built with many features and materials of the traditional architecture, are now being replaced by new housing blocks.



Public housing blocks, 1998

According to a THF study of existing water and sanitation infrastructure in the old city, the traditional systems of supply and disposal are no longer working in the present context. New systems have been introduced, but have in some aspects failed to fully cope with the situation. The increasing density of the old city

as a result of the housing redevelopment programme is therefore putting further strain on the already weak infrastructure. Combined with either the absence or low standards of plumbing and sufficient water supply, there is a genuine strong risk of the old city becoming a slum area.



Modern Lhasa

Josef

The local Neighbourhood Offices, acting on behalf of the municipality, have worked on improvement of the situation by paving many alleyways, improving drainage, having the streets swept and garbage collected more regularly (in some areas, there is no collection at all). Houses now under the protection of the Cultural Office have been checked for urgent repair needs. Still, a lot remains to be done.



Old building surrounded by new blocks, Shasarzur East Street

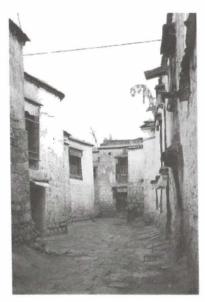


Tin Alley

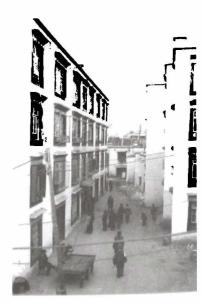
# 3.6 Consequences

Lhasa, like so many rapidly-growing towns in newly-developing countries, already faces challenges to cope with growing pollution, and population development pressure on infrastructure. Waste management, traffic control, energy supply and infrastructure development feature in the Lhasa 2015 development plan, but a lot needs to be done to achieve genuine improvement.

As a result of the previous housing development programme, the historic character of the old city has been seriously eroded.

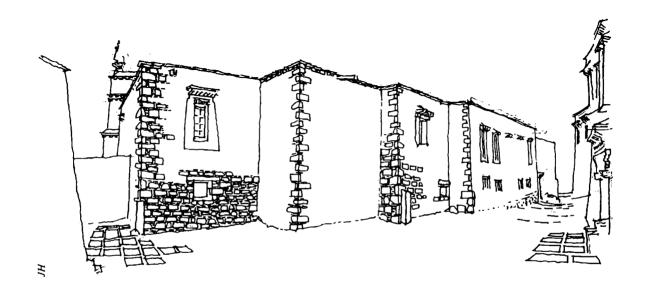


Lhasa, Banak Shol area in 1992



same view in 1994

# 4. OFFICIAL PRESERVATION POLICY



#### 4.1 Preservation Activities at National Level

The state council of the People's Republic of China listed two sites in Lhasa, the Jokhang temple and the Potala palace, as nationally protected monuments in 1961.

The city of Lhasa has had the official status of being one of China's Historic Cities since the 1980s. Historic City regulations stipulate that construction in the old city area, and especially close to the two national monuments, has to have unspecified "national characteristics", and that new construction may not block the view of the national monuments. The Lhasa City 2000 Development Plan, approved in 1983, mentions that these "national characteristics" should be respected during construction in the old city. In practice, this has often meant little more than giving new facades a Tibetan-style paint-job.



The ruins of Ganden monastery, founded in the 15th century. Between the 1950s and 1970s, thousands of Tibetan monasteries, temples, stupas, fortresses and estate buildings were destroyed.

## 4.2 Regional Level Activities

The Cultural Relics Authority of the Tibet Autonomous Region (TAR), in the late 1980s, declared several sites in the Lhasa valley "regionally protected buildings". Three of these sites are located in the old city: the Tsangkung Nunnery, Muru Sarba Monastery, and the Great Mosque. A further six sites have been listed as protected since 1991 at the Lhasa municipal level. All of these six are religious sites: the Karmashar Temple, the Northern Rigsum Temple, the Southern Rigsum Temple, the Western Rigsum Temple (which is in a new location since 1990- a road runs over the original 7th-century site), the Eastern Rigsum Temple and Murunyingba Monastery. The same office had already proposed in 1985 to list all temples in Lhasa (including the inactive ones) as protected buildings. Active monastic sites in Lhasa have enjoyed some local-level protection. Some inactive sites (such as Phurbuchog Labrang in 1989 or the eastern wing of Darpoling monastery in 1996) have been demolished in recent years.

Earlier efforts (notably by the now-retired head of the TAR Cultural Relics Bureau,

Mr. Sonam Wangdu, and the late Mr. Horkhang, member of the Lhasa People's Political Consultative Committee) to protect old residential buildings remained unsuccessful at the time. Instead, since 1993, the redevelopment of the old city has sharply accelerated.

A report on Lhasa compiled in 1991 by China's Central Construction and Planning Authority in Beijing recommended that the old city should be regarded as a special historic area, and that its character be preserved. Nevertheless, the report classifies the vast majority of the old buildings as "dangerous" or "unsafe" housing that need to be replaced. The report only specifically recommends that a further nine sites in Lhasa "have some preservational value". Three of these sites are not monastic in origin: the 18th-century Tromsikhang

House (see chapter 9), the old Nepali embassy in Lhasa (18th century), and the Nangtseshar Court (founding date presently unknown). The latter, the former Law Court of Lhasa, was restored by the City Cultural Office in 1995 but is not open to the public yet (the municipality plans to eventually use it as a museum). The other seven suggested sites are: the 'little' mosque, the old traditional hospital and medical and astrological college, Mentsikhang; Shidé Monastic College (partly in ruins); Tsemonling Monastic College; Tengyeling Temple and the Gyumé Lower Tantric College. In February 1995, the municipality officially approved the recommendation to list the sites described as protected buildings, and chose to add the Ganden Khangsar complex. Ganden Khangsar already existed as a palace in the 15th century, but was rebuilt in the early 20th century as residential complex. One of its toilets collapsed in the mid-1970s and has not yet been repaired.

The TAR Cultural Bureau has expanded the list of protected buildings at Autonomous Region level, to include most of the important active and inactive monastic sites throughout Lhasa prefecture.

One of the houses on Barkor street, called Labrang Nyingba has become a precedent for successful prevention of planned demolition. The site is connected with the 15th century Buddhist reformer, Je Tsongkapa. The Barkor Neighbourhood Committee, an official local administrative unit that used to have its office in the building, announced in 1994 that the old house

was going to be demolished and replaced by a new office building. However, the office was visited by many residents who suggested that the house be preserved because of its historical significance. The municipal authorities and the Cultural Office also voiced their concerns. In 1995, the Barkor Neighbourhood Committee announced that the house was definitely not going to be demolished. The Committee instead moved into new premises on the northern strip of the Barkor, built in 1996. Because of the height regulation that came into force, the new office is built in modern Tibetan style and has two storeys only, as did the old Changling House that previously stood on the site. There was no clear overall policy towards the preservation and listing of historic secular buildings in Lhasa.

In early 1998, the 2-storey Lagang house, located on Barkor north just east of the old Tromsikhang, was demolished despite objections by the cultural office and strong criticism by THF. Lagang was previously owned by Nepali merchants and housed a Nepali shrine. The Cultural Office decided to impose the height regulations existant on the inner Barkor to cover every redevelopment of a historic site, meaning that a new building that replaces an old one could not be higher that the original building. The developer, in this case the Tromsikhang Neighbourhood Committee, decided to ignore the regulation and had partially constructed the third floor already. The construction work then was frozen by direct order of the municipality, with the final outcome still undecided by the time of writing.

#### 4.3 The 76 Listed Houses

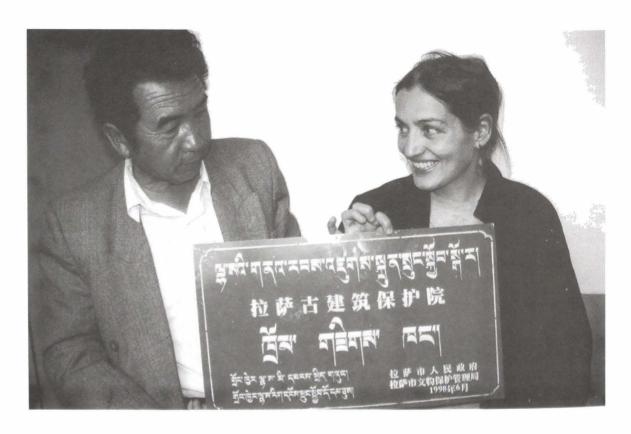
In 1997, THF proposed to create a conservation area out of the southern part of the inner Barkor area. The municipal government departments in charge of the old city agreed, and eventually placed all old buildings located within the inner side of the Barkor under protection. Unfortunately, buildings on the wrong side of the Barkor were still demolished in early 1998, such as the Lagang House and the Tashi

Lhunpo monastery-owned Thelun Khangsar.

THF submitted a long list of old houses in the old city suggesting that these be given protected status. This list contained almost all of the remaining old houses that are government-owned, and some privately-owned houses that are located in planned conservation areas. 76 houses were accepted for final inclusion in the list.

The list was approved by the Lhasa city government in early June 1998, and was read out in full on the Lhasa TV evening news on June 5, 1998. The 76 houses are now officially listed as protected historic buildings at Lhasa City level. Each house has been marked with a special plaque (see photo).

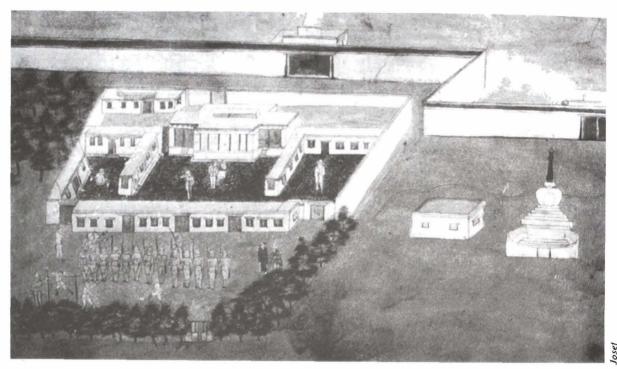
To sum up, while there has been some action from the government to protect certain religious monuments, and some effort to influence the style of construction in historic areas of Lhasa, previously there has been no official policy to preserve individual historic residential buildings. The June 1998 decision to list 76 buildings marks a genuine shift in official policy towards preservation.



"Protected Historic Building", sample of the new blue-and-white metal signs that mark the 76 protected houses by authority of the Cultural Relics Bureau. The sign is held by Mr. Dopön (secretary of Lhasa City Cultural Relics Bureau) and Ms. Pimpim de Azevedo, THF field director



Kongaa 10-5-98



Soldiers exercising at Kussung Magar complex, mural, early 20th century

# 5.1 Kussung Magar

The large complex known as Kussung Magar (meaning bodyguard regiment) was built by the Thirteenth Dalai Lama adjacent to the Norbulingka Summer Palace. Typically for government projects of this period, the complex is laid out symmetrically

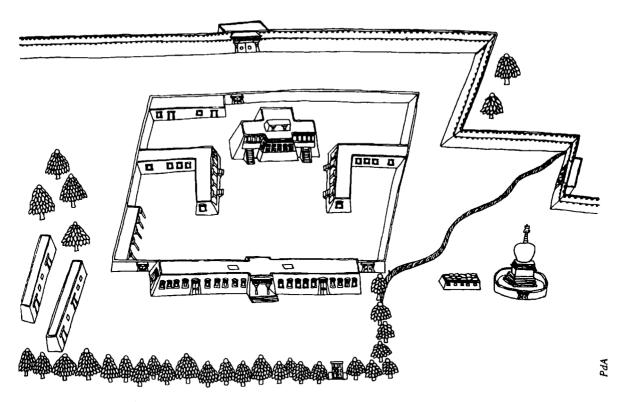


Window, Kussung Magar

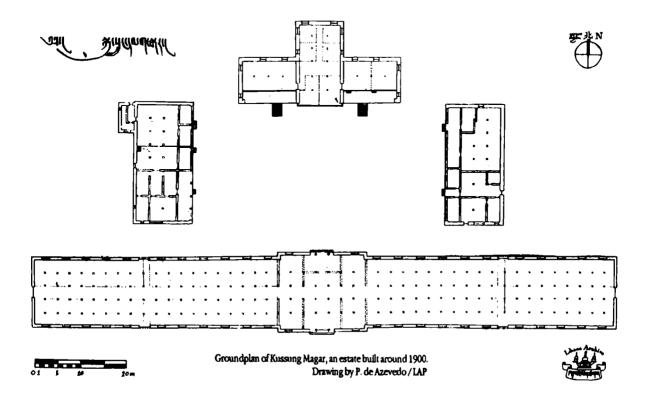
on a central axis. A long building to the south was a soldier's dormitory previously housing 100 soldiers whose job it was to ensure the Dalai Lama's safety. Two smaller buildings, used by the officers and as arms depot, flanked a central building close to one of the gateways into the Norbulingka. This central building was called the Magar Podrang ("Army Palace"), where the 13th Dalai Lama would receive foreign visitors to whom entrance to the Norbulingka was denied. The building was very elaborately decorated and well-built. Even the detailed plan of the Podrang itself and of the long building was quite symmetrical: each side had the same number of pillars and windows. The Podrang was entered via

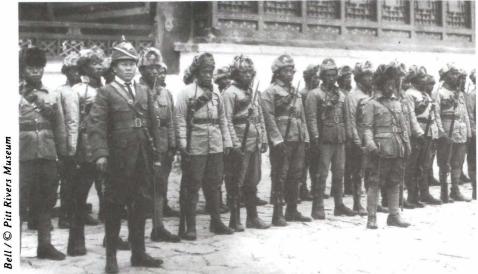


Fragment of mural, Kussung Magar



Kussung Magar in the 1920s





Tibetan Army at Kussung M.

a pair of stone stairs flanking a wooden portico. The interiors had surviving religious murals, partially white-washed during the Cultural Revolution. Among those not covered was a large mural illustrating the Shambala myth, depicting the forces of good leaving the paradise of Shambala to fight and defeat the forces of evil, ushering in a new age of enlightenment. A mural depicting Kusung Magar, probably completed during the life-time of the 13th Dalai Lama, suggests that the entire complex was originally surrounded by walls.

The 14th Dalai Lama reportedly used the Magar Podrang to watch movies using a gift projector. After 1959, the entire bodyguard complex was turned into a government clinic. In late 1997, the clinic, now privatized, moved to different premises and sold the complex to a Chinese property developer. The administration of the Norbulingka (now a museum) tried unsuccessfully to reclaim Kussung Magar as part of the original Norbulingka complex. In early 1998, the developer had the core of the Kussung Magar complex demolished. The carved windows and pillars were, with few exceptions, burnt, and the murals destroyed.



Fragment of Shamballah mural, Kussung Magar



Mural fragments, Kussung Magar demolition site

#### 5.2 Dakpo Trumpa



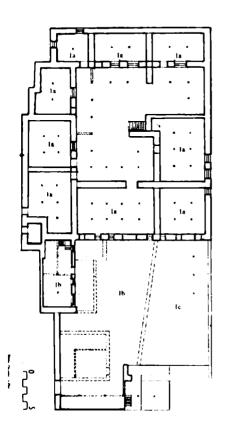
Dakpo Trumpa was a mansion built before 1900 by a noble family related to the Thirteenth Dalai Lama. The family worked for the Tibetan government as tax collectors in the Lhoka area. They collected "green tax" (agricultural taxes) from farmers. These taxes were paid in foodstuffs such as grains and peas, and in wool and butter collected from nomads. Part of the Dakpo Trumpa Lhasa residence was used to store the goods.

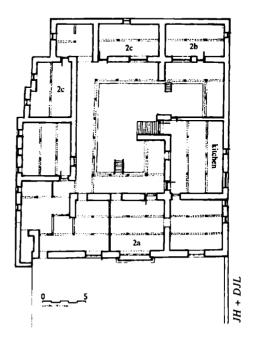
At that time, the main building had three storeys, and a central courtyard. On the top floor lived the Dakpo Trumpa family (3a). Just below the family's main sitting room lived the secretary of the family (2a) whose job it was to keep accounts of the collected tax goods. At the north wing of the middle floor was the family chapel (2b). This probably once had religious murals on the walls which were lost during the cultural revolution. Some religious writings could still be seen on the wooden beams supporting the ceiling. The servants of the family also lived on the middle floor (2c). All the rooms were previously connected, one could walk around the building going directly from one room to the next. On the ground floor were the store rooms for the tax goods (1a). In front of the main building was a courtyard (1b). Around the courtyard were stables (1c), and near the main gate facing west was a small

room for the housekeeper (1d). This room was given to the Dakpo Trumpa family after the house was nationalized in the 1960s. Sometime afterwards, most of the third floor of the main building was destroyed. The wooden construction on the second floors showed traces of burning. The facade of the main building was well-preserved, and illustrates perfectly the hierarchical structure of a noble house (see illustration on back cover). The long western elevation of the mansion was important for the historic character of the Palling alleyway.

On the 15th of April, 1998, the tenants of Dakpo Trumpa house were told by the housing authorities that they had two days time to move out of the house because it was going to be demolished. After construction of a new housing block, they would be able to return to flats equivalent in size to their old ones. The original Dakpo Trumpa family, the only one who owned their flat, was told that they had to sell their flat so that the entire complex could be rebuilt. They would receive RMB40.000,-(US\$5.000,-) compensation, but would have to pay RMB80.000,- (US\$10.000,-) for the upgrading of their housing if they wanted to move into a flat of equal size in the new four-storey building.

In 1998, the building was demolished and replaced by 4-storey public housing block.





Dakpo Trumpa, floors 1+2

### 5.3 Chongye Bumthang



Bumthang, main building east elevation

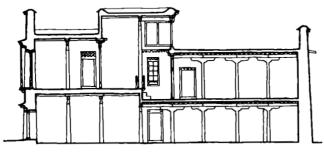
Bumthang was the name of a noble family from Chongye in Southern Tibet. Their mansion is built two storeys high in masonry, with the eastern wing being a bit lower than the western wing because one was the area for servants and stables and the other was the family's residence. Both wings have a courtyard and a separate entrance, and a gate with elaborate carved decorations leads from the servants' courtyard into the master's wing. The master's wing has beautifully-carved wooden railings, and is composed symmetrically. The residential rooms are on the northern side of the courtyard, and have big windows facing south. On the opposite side are kitchens and additional rooms. According to official information, the family died out when several members became insane, which some Lhasa people blame on their mansion having had two gates on opposite sides of the house. The craftsmanship displayed in the details of Bumthang mansion is among the finest in Lhasa.

After 1959, the house was converted into public housing, with some families having to live in former stables and store rooms. The leaking roof which had not been fixed for many years led to a dangerous dilapidation of parts of the second floor, and the southern side of the master's wing had begun to sink because of weakness in the wooden pillars on the ground floor. In early 1998, plans were made to demolish the site in order to build a four-storey building. Intense lobbying by the THF stalled the demolition. Unfortunately, until the demolition was halted, the workers had inflicted some damage to the buildings. The fine railings, and other elaborate wooden details, had been chopped up for use as firewood, as Tibetan workers are accustomed to having regular tea breaks.

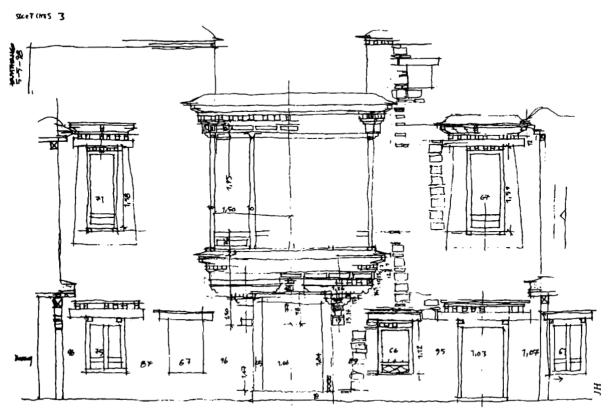
In October 1998, THF and the Cultural Relics Bureau began a joint rehabilitation project at Bumthang.



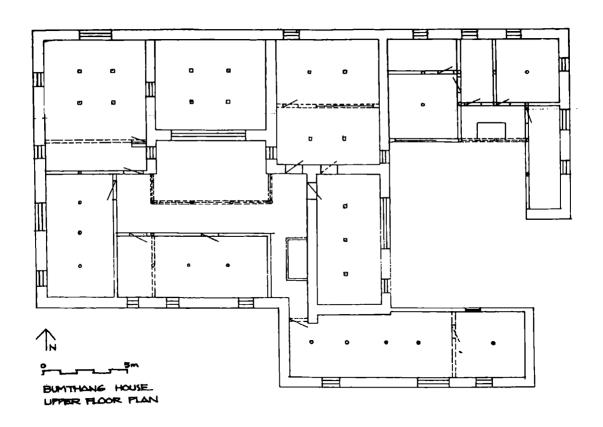
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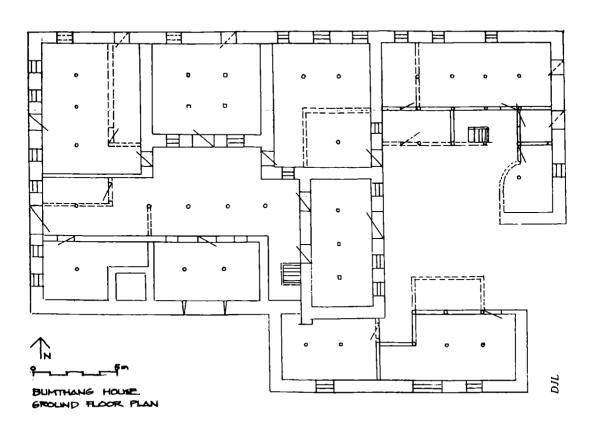


BUMTHANG



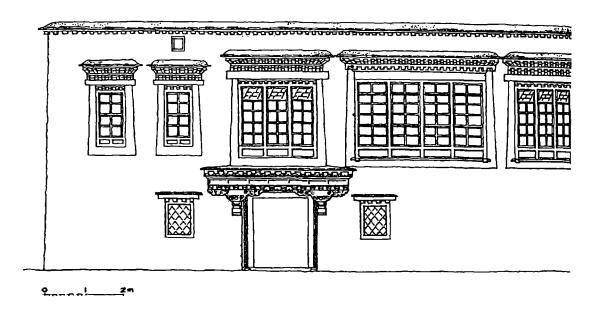
Sketch of Bumthang, main building east elevation





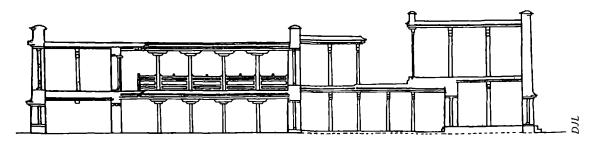
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KHIMEY HOUSE. SOUTH ELEVATION

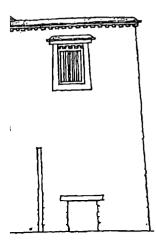


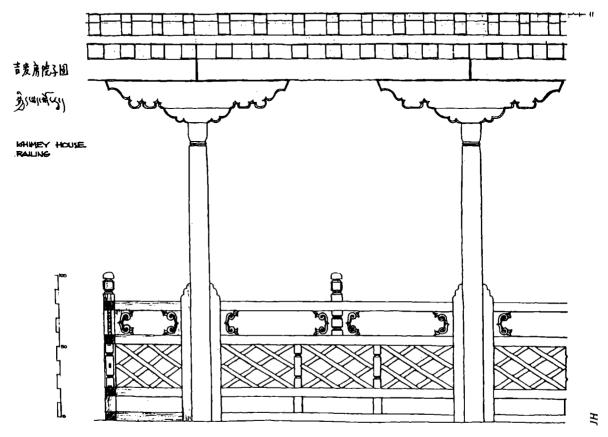
Khimey is the 18th-century ancestral residence of the Khimey noble family. It is two storeys high, built from stone and mudbricks, and has preserved a few details decorated with exceptional carvings. After 1959, the house was converted into public housing. Later, the northern half of the building was given back to the five heirs of the Khimey family. In early 1998, both halves were in similar state of dilapidation, and parts of the roof had already caved in. Despite its prominent location on Lingkor South Road, near the Ani Tsamkung, the house had been scheduled for demolition. Mr. Khimey and his sisters would have received five flats of equal size to the rooms they owned in the old house, and the new construction would have been four stories high. Then it was pointed out by Mr. Khimey that a wooden beam in one of the rooms had specially been painted by the personal doctor of the 7th Dalai Lama in the 18th century. Even though these paintings had been painted over during the Cultural Revolution, an attempt to bring them back to light revealed a painted medicine Buddha. This was reason enough for the Cultural Authorities to place the house under protection, even before the list of 76 was accepted.

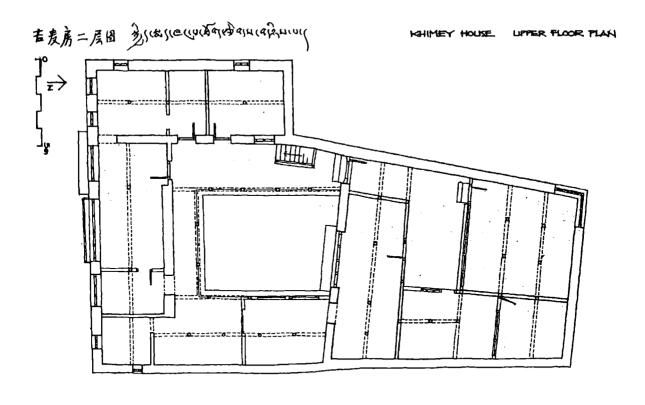
THF and the government's special Ancient Arts Construction Company then collaborated, under auspices of the Cultural Relics Bureau, on the rehabilitation of Khimey House. The Ancient Arts Company has worked on the government-sponsored restorations of Potala Palace, Ganden monastery and Tromsikhang House (see 8.). The work on the government-owned half of Khimey House was completed October 1998.

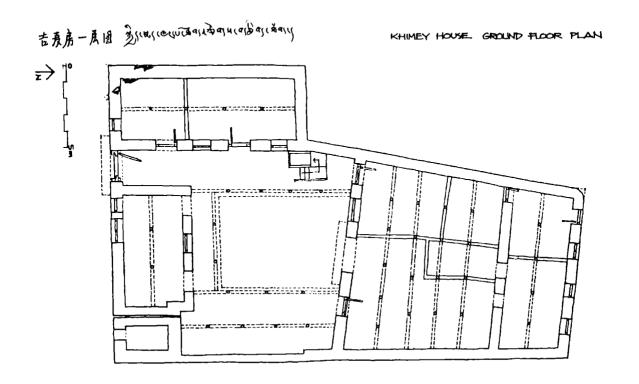


Khimey House, south-north axis section











### 6.1 General THF Strategy

In 1996, the THF signed an agreement with the municipal authorities to jointly undertake a restoration and infrastructure programme with the aim of rehabilitating the old city. THF financed and supervised the restoration of two historic residential buildings located immediately to the north of the Jokhang temple's entrance, the Trapchishar and Choetrikhang houses (for more detail refer to the 1996-97 THF first annual report). Since during 1996 and 1997 old houses were still being demolished, THF placed high priority on urgently preserving intact neighbourhoods and clusters of historic buildings. For practical reasons, it was decided to

establish a model conservation area, which should be centrally located. In this area, restoration and infrastructure improvement projects should be planned and implemented together with the local residents and the authorities. The work should then have positive influence on the rest of the old city. However, even while concentrating on the work in the first conservation area, THF continously lobbied for official protection of all the remaining historic buildings or at least of the more important ones. To this end, documentation and study work was being carried out in several parts of the city, and urgent relief work planned.

#### 6.2 The THF Conservation Area Concept

The THF principles for the Lhasa old city programme are perhaps best represented by the German model of "Behutsame Stadterneuerung" ("careful urban renewal"), adapted for the Tibetan context and with strong emphasis on architectural conservation. Different concepts of restoration and conservation are suitable for different situations and needs. Conservation of monuments and historic buildings transformed into showcases open for visitors qualifies for the museum-type approach in conservation. Inner city areas populated by ordinary tenants qualifies for an approach that fully integrates the concerned part of the population. The German model places equal emphasis on the preservation of historic areas in their contemporary urban context and on infrastructure improvement based on actual needs, with a grass-roots approach where residents and planners meet. Driving principles of sustainability and ecological concerns are achieved by involving the local community in the planning and implementation of the programme, and by developing individual solutions and necessary new technologies. For implementation at micro-level, a larger district is divided into different conservation areas (Sanierungsgebiete). This approach was deployed in the 1980s in the old Kreuzberg district of Berlin (West), after local residents successfully protested

against a large-scale government redevelopment programme of a severly dilapidated historic district.

In the Tibetan tradition, only the most valued building elements (such as revered religious murals or structural elements with historic connotations) would be preserved in their original state. In most cases, when necessity warranted repair works, old buildings (monasteries and manor houses alike) were often partially rebuilt and in the process modified according to contemporary taste.

The immense loss of historic structures in Tibet during the 1960s should warrant the preservation of as many of the scarce remaining historic structures as possible. The events of 1959 have produced a brutal break in the gradual cultural development of Tibet. Monasteries, forts, palaces and manor houses were destroyed during the Cultural Revolution. Master craftsmen were persecuted. Most crafts have been radically re-organised (in the form of state-run construction companies), and new materials that are comparatively cheap and easily available have been introduced (eg cement). This has caused many traditional techniques to fall into disuse. The modern development of Lhasa will certainly go on and will find ample space in the Lhasa valley.

The comparatively small size of the old city (less than 5% of the present city area), and the cultural and historic value of its ancient structures, now justify the introduction of internationally-accepted approaches to conservation.

The THF subscribes to the charter of ICOMOS (listed in the appendix). Recent rehabilitation projects carried out successfully in the kingdom of Nepal (a Himalayan neighbour of the TAR) are also being taken into consideration by the THF. Most important however is the research undertaken by LAP since 1993 into the traditional architecture and lifestyle of the Lhasa old city.

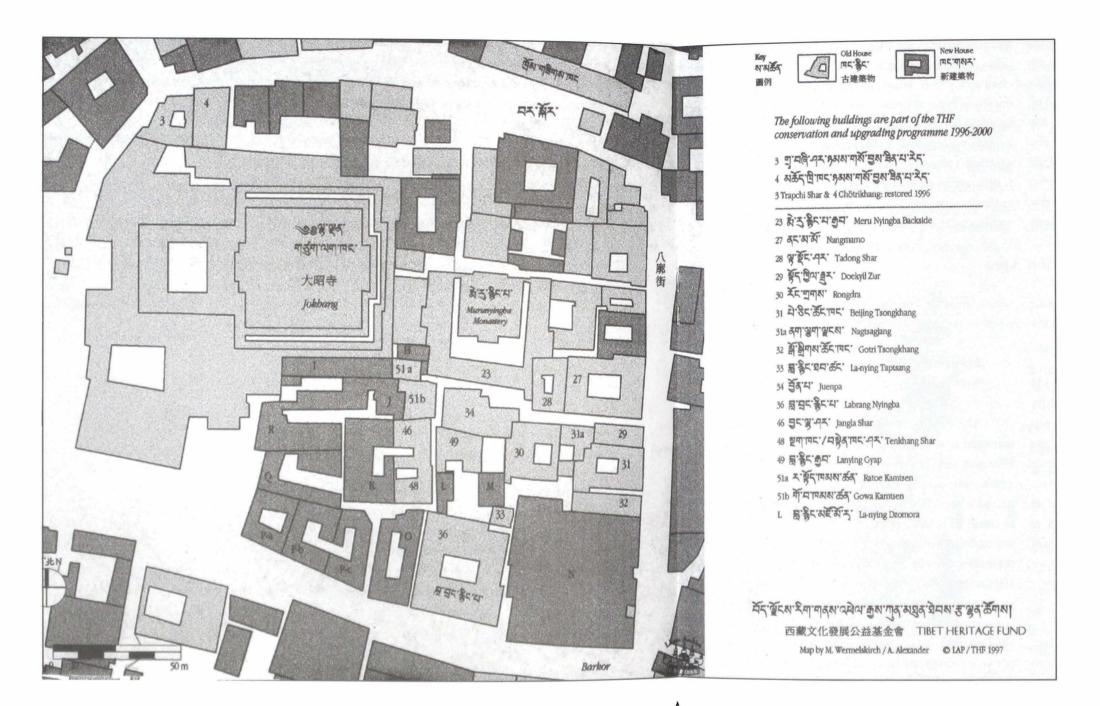
In project research carried out, the two points raised most often by Lhasa residents when talking about the old city were:

- a wish to preserve the historic cultural identity of the old city
- a desire to improve living conditions

Having examined the situation in Lhasa, the THF has decided to concentrate its efforts on the preservation of at least one intact neighbourhood in the old city. Thus several different styles and grades of traditional Tibetan architecture can be preserved in their original context. The THF views as essential to the success of the conservation programme a good cooperation with the authorities to ensure the proper protection of listed buildings and the smooth implementation of programme activities, combined with a grassroots approach for the drafting of the conservation plan. Altogether, the THF hopes to contribute to a lasting local conservation policy and achieve sustainable improvement of living conditions.



Trapchishar House, restored by THF in 1996



# 6.3 The Oedepug Conservation Area

The THF chose a neighbourhood comprising fourteen old residential buildings (12 of which are owned by the government) to be turned into a model area. This area, known by the ancient name of Ödepug, is located inside the south-eastern section of the Barkor. It is accessed by two very narrow alleyways, the Ödepug Sranglam and the Ngakhang Sranglam. The neighbourhood is adjacent to the Jokhang temple, whose golden spires can be seen from several viewpoints in the area. It was in this

area that the workers who built the Jokhang temple in the 7th century set up their quarters, and even the royal court had, according to popular legend, put up residence on the site of several of the buildings existing today. The exact meaning of the name "Ödepug" is unclear. The name probably either means "area being under command of a higher place", referring to the Marpori palace of king Srongtsan who personally oversaw the construction of the Jokhang; or is a corruption of

"Ulaypug", meaning the area of ulay workers, ulay being the Tibetan term for corvée labour.

THF agreed with the municipal government on a cooperation project with the aim to create a conservation model area by restoring the old buildings in the Barkor Ödepug area, and to make improvements in the fields of water and sanitation. The Lhasa City Cultural Relics Office backed the proposal. Because of the proximity of the area to the

Jokhang temple (a listed national monument), where restrictions on new construction had already been placed, official cooperation was easy to obtain. THF therefore began the necessary studies and social surveys. Each house was visited, and the residents were involved in the planning stage of the project. This was received very positively by the local community. Official support and collaboration during the first programme stages have so far been quite positive.

\*^

transformation of Lhasa in general, and even of most quarters of the old city, the small quarter chosen by THF as first conservation zone already appears like a relic from another time, so different are the dimensions and pace of life. Rather than see the alleyway turned into a business quarter with hotels, banks and souvenir shops overtaking the houses, THF hopes to regitalize the neighbourhood by involving the inhabitants in the process of improving the general living conditions. To this end, many modifications

and alterations are planned that aim to redeem some of the problems described in previous chapters. This plan goes beyond the purist museum-type approach to conservation, but is important for the renitalization of the neighbourhood. THF will certainly retain as much original substance and traditional architectural fabric as to guarantee the preservation of the authenticity of the area and the original architectural diversity.

#### 6.4 Social Survey in the Conservation Area

An overview of the housing situation in Ödepug, based on the 1997 social survey carried out by Pimpim de Azevedo.

The survey conducted by THF covered 14 old buildings in the Ödepug area. All 14 were originally built as residential houses. The majority were owned by well-to-do families, who lived in rooms on the upper floors of the houses and kept their livestock below in rooms off the courtyard. One house, Doekyilzur (29), had a shop on the ground floor for the family business. A few of the buildings, such as Nangmamo (27), were purpose-built tenement blocks. Nangmamo also has shops on the ground floor facing Barkor street. In Ödepug street itself, there are no shops.

When buildings in Lhasa were nationalised, after 1959, most of the old residences in Ödepug were made into Public Housing. Some buildings, however (29, 31, 49, 46), are privately owned. Buildings taken for Public Housing were divided up into flats so that each would house many families. Even rooms on the ground floor, intended as store rooms or animal sheds, were taken over for human habitation. Unfortunately, the converted old houses, without regular building maintenance, stressed by over-occupation and not designed for innovations such as running water, are now in a state of considerable dilapidation. Privately owned houses have fared much better. In the survey, THF tried to gauge current occupants' opinions on the state of their homes and how this might be improved. Many interesting aspects were discovered, which must be considered when planning future work in the area.

# Ownership, Maintenance, Renting and Sub-renting:

The Public Housing buildings in Ödepug are managed by the Lhasa Housing Office, which also allocates the flats within the buildings. Until the 1980s, allocation was strongly influenced by a person's social background. Better flats were given to those who had been of the "oppressed classes," whilst those with aristocratic connections might find themselves living on the ground floor in the old stables. Nowadays it is more or less a matter of luck as to whether one is allocated a good or bad flat. Government housing in Ödepug is heavily subsidised. Typical rents for a family are 3-23 RMB per year (compared to 150-350 RMB per month for similar primate sector accommodation). Poor or infirm people are exempted from paying any rent. In some cases, the classification as "poor" was made in the 1960s and has not been revoked, despite a family's rise to relative prosperity.

Some families have become rich enough to rent better accommodation elsewhere and are now subletting their Ödepug government housing. Subtenancies are often taken up by people who are not registered in Lhasa and therefore are not eligible for housing in government-owned buildings. Sub-rents of up to 250 RMB per month are charged, a substantial profit for the official tenant. Subtenants

are effectively powerless to complain about poor housing conditions since it is illegal for them to live in Lhasa in government housing.

One of the first observations to be made in Ödepug was that the public alley was a lot cleaner than many others in Lhasa, and that the courtyards of the individual buildings were also regularly kept clean. The people of Ödepug are mostly long-time Lhasa residents, who like their neighbourhood and sweep their courtyards. However, the residents



Conservation area Oedepug alleyway

lack a feeling of ownership for their houses and therefore do not undertake major maintenance jobs themselves. Although crisis repairs are carried out, maintenance tasks, such as oiling an Arga roof every year or stamping fresh soil into a soil roof, are not done. The Neighbourhood Committee, responsible for regulating all activities within the houses, does occasionally offer assistance in paying for some repairs, especially where toilet towers have collapsed. The Housing Office is not in a position to offer assistance. In the 1980s, a plan was made to have all the old buildings in Lhasa replaced by the year 2000. Execution of this plan is mainly in the hands of the

Planning Office, often following recommendations from the Housing Office. With the future of the buildings so uncertain, there is little incentive to invest in renovation work. When asked for help, the Housing Office can only beg the residents to be patient until their house is demolished and replaced by a new building. An additional effect is that residents feel unsure about the future of their house and are less motivated to carry out even minor repairs themselves.

# Living Space, Facilities and Condition of Buildings:

The living spaces in the old houses have not adapted very well to division into flats. Rooms purpose-built as, for example, kitchens, reception rooms, or shrine rooms were reallocated to house entire families. In the new setup, residents have had to improvise kitchen areas or shrine rooms for themselves. Toilets which were designed for the use of one household might now serve 20 families.

Residents often expressed concern about damp in the structure of the houses, especially around the toilet vault, and because of leaking roofs. The mud mortar joints are weakened by excessive damp and have been known to fail in several old houses. Since nationalisation, some modern developments have led to an increased likelihood of damp. Originally the buildings were designed for an arid climate where toilet vaults were kept dry by the addition of ash, and water was supplied from wells. The change from yak dung to gas and kerosene as the main cooking fuels has led to a shortage of ash for adding to toilet vaults. New inadequately drained water taps and frequently blocked drains exacerbate the problem.

Within a typical 3-storey house a great variation between the quality of flats on different floors was found. Third floor windows are large and rooms have a good amount of light. In rainy weather, however, the roof often leaks. One cause of considerable concern for some 3rd floor tenants is that their floor is the one furthest away from the courtyard tap. Usually older people said that they

would prefer not to live on the 3rd floor since they find it hard to carry water up from the tap.

The second floor of the house seems to be the most popular amongst residents. Some second floor residents were concerned about unsafe pillars or beams in their flats, but most were satisfied with their accommodation.

The least desirable rooms are on the first floor (ground floor). Here in rooms intended as store rooms or animal shelters, there are few or no windows. The rooms are therefore always dark and damp. One particularly unpleasant problem found was in rooms next to the toilet vault. Often the vault walls are damp with urine and some actually leak into the flats. A similar problem is encountered in flats with one wall to the street. Poor drainage means that in wet weather the street is often awash with unsanitary water which can seep in through the walls. In addition, passersby frequently urinate on the house walls.

Some of the residents were dissatisfied with their accommodation and concerned about the condition of the building they were living in. In cases where residents have asked to be rehoused, they have been told that they could only be moved into flats in a worse state than their present accommodation.

#### The Demolition and Replacement Option:

In the 1980s, the decision was taken by the planning authorities in Lhasa to demolish all old public housing buildings and replace them with new ones. Due to THF's efforts, this policy is now being reconsidered. Reasons given for the policy are that the buildings would be too expensive to repair, are structurally unsafe and lack good sanitary facilities. Other reasons might be the considerable sums to be made by replacing a 2-storey building around a large

courtvard with a 4-storey building around a small courtyard. Residents from the old flats are rehoused in similarly sized accommodation and the remaining flats can be sold or rented out. The rents which can be charged for a flat in a new building are much closer to those charged in the private sector. Residents rehoused in a new flat after demolition of their old building might now be charged in one month what they would previously have paid over 10 years. The quality of the new buildings means that they are not very expensive to build, making this an attractive option for the developers. Unfortunately for the tenants, the water supply and toilets in the new buildings are similar to those of the old houses, but must be used by many more families.

Opinions amongst residents varied on the demolition and rebuilding issue. Those living on the ground floor often welcomed the idea of moving into a new building since their conditions would undoubtedly be improved. People living on the upper floors were not so keen for change. Most of the older people did not want the building to be demolished since they had lived much or all of their lives in their present flat. Many people were aware of the shortcomings of the new buildings, including thinner walls, poor concreting, lack of light and increased population. The situation, however, is such that the only hope of improvement that has been offered to tenants by the authorities is the demolition and replacement of their buildings. This was often seen as an inevitable outcome which people would rather get over with than have hanging over their heads indefinitely. Most residents were very interested in the 1996 THF restoration of nearby Trapchishar house. Many said that they thought the people at Trapchishar should have been more involved in the project. This must be taken into account when restoring the Ödepug buildings.

#### 6.5 Consequences

Store-rooms and stables have been transformed by the Housing Authorities into living quarters with mixed success. Scarcity of housing in Lhasa, and the lack of need for stables due to social changes rule out any reconversion into stables again. Rather, one is faced with the difficult task of turning dark and humid rooms into decent and acceptable living space. One solution is to encourage the building of public housing elsewhere to offer alternative space for those not wishing to live on the ground floor, and then turn the free rooms into storage or shops. Otherwise there is a need to provide extra windows, and added insulation and improved air circulation to counteract the dampness.

THF generally prefers to preserve the facade of a historic building as much as possible, and restore it by opening up blocked windows and doorways. New windows and doorways where unavoidable should blend in well with the original design.

Attention must be paid to keep the courtyard open, for use as communal space and to allow maximum sunlight penetration of the building.

Removal of extensions in the courtyard or visible from the street is recommended, but this sometimes requires a good deal of persuasion. Some courtyards, like Jagdrak House and Thentong mansion (one of the 76 houses listed in chapter 4.4) have the entire courtyard built up and blocked by numerous extensions. Similar extensions can be found on many rooftops (the one on Rongda House is particularly annoying), but can be partially redeemed by "disguising" them with traditional features that blend with the original design of a house.

In the interior, much more liberty can be taken to improve and modify the house according to requirements. Some rooms that have surviving murals or rich carvings on building elements deserve more attention, and the inhabitants and the authorities are asked to make a special agreement under which the tenant takes the responsibility to look after these important details, with the Cultural Office in posession of a full list of descriptions of the details concerned.



Tree planting

### 6.6 The Individual Houses in the Conservation Area

(numbers refer to the map given under 6.3)

THE CONSERVATION ZONE BARKOR SOUTH / ODEPUG: HOUSE DATA BYPDA MM AA

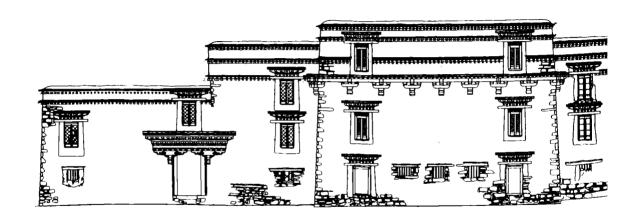
	House Name	Tibetan Name	Owner- ship *	No. of families	Height (stories)	Property Size	Floor Space	Remarks	House
KA 27	Nangmamo	४८.भ.ध्.	govt/pvt	22	3	794m <sup>2</sup>	2223m <sup>2</sup>		representative Tsering Panggyel
28	Tadongshar	å.€£.च≠.	govt.	8	3	300m <sup>2</sup>	828m <sup>2</sup>	high age	Lhakdon
29	Doekyil Zur	B. Bu.Sz.	pvt.	3	3	176m <sup>2</sup>	483m²		Tsering Panggyel
30	Rongda	र्ट.जेबल.	govt.	13	3	476m <sup>2</sup>	1269m <sup>2</sup>	noble house	Kheldrön
31a	Nagtsag)ang	ट.कैंच.कैटश.	govt/pvt	7	3	207m <sup>2</sup>	516m <sup>2</sup>		Lobsang Thubden
33	Taptsang	Br.Qc.	govt.	3	2	61m <sup>2</sup>	122m <sup>2</sup>		
34	Juenpa	<b>3</b> 4.ti.	govt.	12	2			noble house	Nyima
36	Labrang Nyingba	활.건. 김.건.	govt.	. 15	3	1337m <sup>2</sup>	3627m <sup>2</sup>	historic significance	Pong Chung
46	Changlashar	<b>∃</b> ८.8.4⊀.	govt.	3	2	160m²	302m <sup>2</sup>		<del></del>
46a	Nyarongshar Amtchi	क्षराष्ट्र. भरत्यः	pvt.	1	2			owner plans	_
48	Ngakhang shar	र्रेची.धर.चर.	govt.		2	291 m <sup>2</sup>	516m <sup>2</sup>		
49	Lanyinggyap	思,皇亡,皇亡,	govt.	2	2	256m <sup>2</sup>	452m <sup>2</sup>		
51a	Rato Kamtsen	र क्रिंट् ग्यक्षशास्त्र	govt/pvt	7	2	91m²	182m <sup>2</sup>		Tsamchö
51b	Gowa Kamtsen	म्.च.प्रथमः क्ष	govt.	6	3	200m²	380m <sup>2</sup>		Chimé Dolkar
L	Dzomora	AE'Ă'Ş	govt.	6	2	400m <sup>2</sup>	270m <sup>2</sup> without extensions	rebuilt in the 1970s	

<sup>\*</sup> govt.= government, pvt.= private

#### 23 Murunyingba monastery

The Murunyingba site dates back to the founding of the Jokhang temple. By the 9th century, a small temple with circumambulation path had been established, which still exists today. In the 17th century, the Fifth Dalai Lama enlarged the monastery by adding a four-storey temple building and a large courtyard, and made it into the Lhasa city residence

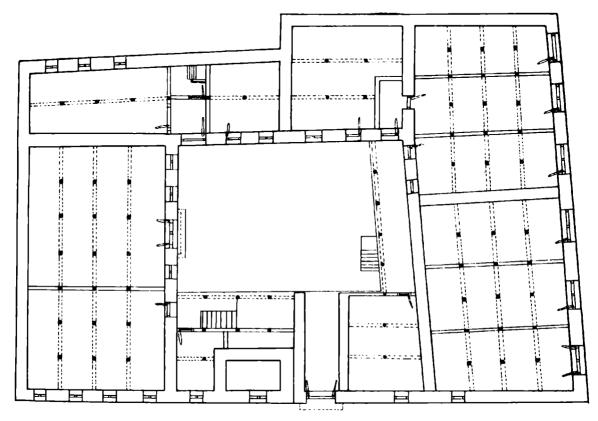
of the Tibetan state oracle Nechung. A Sakyapashrine is also part of the complex. During the Cultural Revolution, the monastery was closed, but not destroyed. Today, the three individual temple rooms are open to the public, while the former monk quarters built around the courtyard have been converted into public housing.



#### 27 Nangmamo

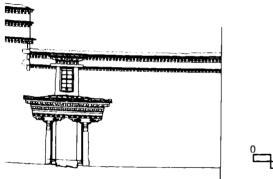
A large tenement yard previously owned by Ganden monastery. A large former monks' assembly hall and adjacent kitchen on the ground floor have been given back to Ganden, the rest is government-owned and inhabited by tenants. The shops on the ground floor facing Barkor street are connected via trap-doors with the flats above. Many flats are overcrowded (one family with children

that lives on the top floor only has one room). Main problems are cracks in walls, leaking roof and infiltration of liquids from the toilet into adjacent flats. The toilet is also in a precarious condition. The building has two important facades facing Barkor and Ödepug streets. Its history dates back to the founding of the Jokhang, but the present structures are probably 18th-19th century.



Nangmamo House, floor 1, JJ







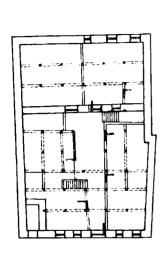
Murunyingba Elevation

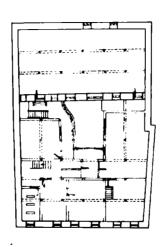


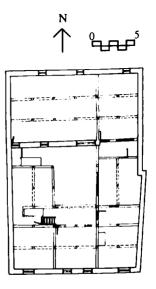
Tadongshar and Nagmamo, south elevations along Oedepug alley, JH

#### 28 Tadongshak

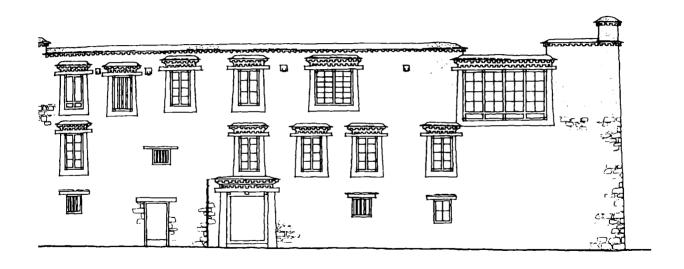
One of the oldest buildings in the area, currently government-owned. Main problems are cracks in the walls, leaking roof, and infiltration of toilet liquids into main walls and adjacent rooms. The residents try their best to maintain the house and to keep the courtyard and entrance area clean. The house in its present form is at least 200 years old, but its history dates back to the 7th century when it was a caravanserai and guest house for visitors to the Tibetan court.







Tadongshar, floors 1, 2, 3 JJ



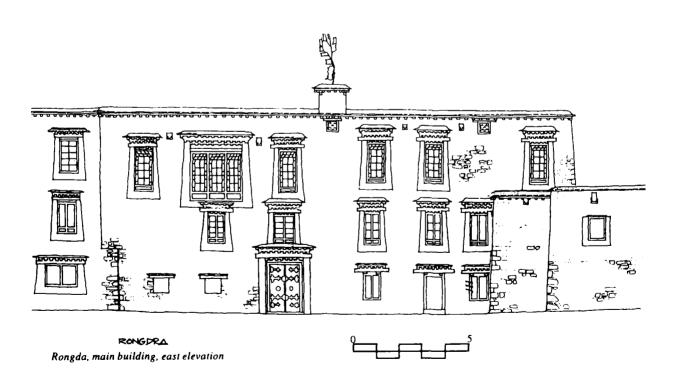


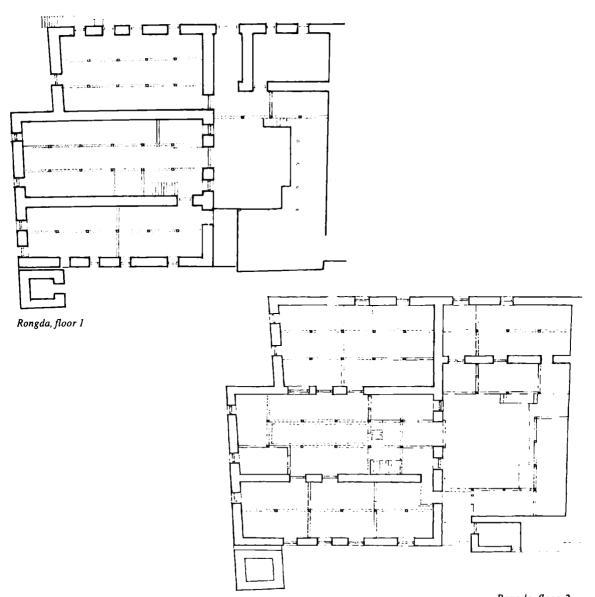
Tadongshak, courtyard elevation, south-facing

#### 29 Doekyilzur

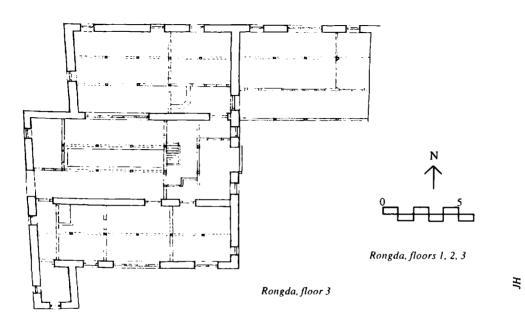
This building with groundfloor shops on Barkor street has recently changed owners. The new buyer has asked the THF for assistance in necessary repairwork. There are cracks in walls and floors. The house has some very beautiful architectural details. It dates back to the 1920s.

30 Rongda - this is a very significant houses, built with excellent craftsmanship and elaborate and artistic details. The main building is in reasonable condition, but parts of the courtyard gallery are sinking. A lower courtyard building has recently been repaired, and an ugly extension on the roof spoils the view of the building from afar. The toilet section is in some danger of collapsing. A small space behind the house, once a through-way to Barkor street, is now blocked by new construction and full of accumulated waste. The house had no water for most of the day when the investigation began (see chapter 7). Built in the 1930s, Rongda is one of the latest buildings in the conservation area.



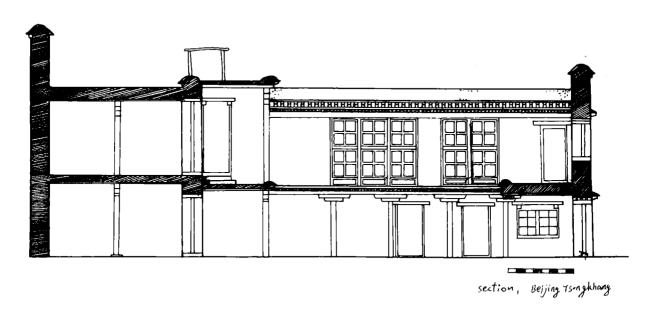


Rongda, floor 2

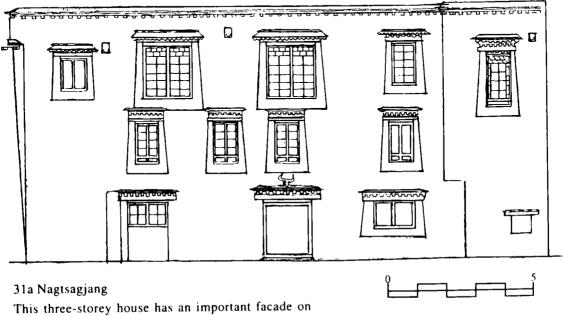


#### 31 Beijing Tsongkhang

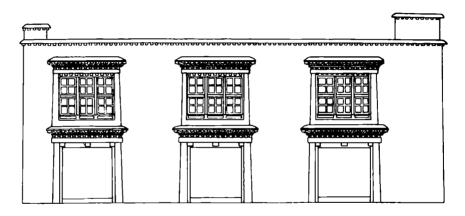
This building has an important Barkor facade, and some very nice interiors. Built around the 1920s, one part of the house today is privately owned.



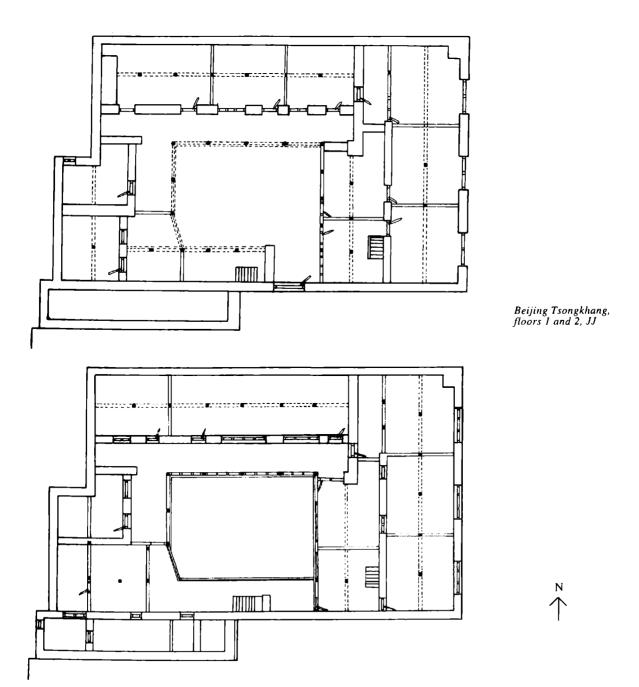
Beijing Tsongkhang, w-e axis section

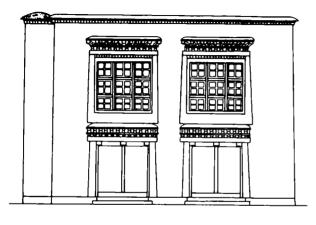


This three-storey house has an important facade on Ödepug street, but the insides are simple and dilapidated. The age is unknown.



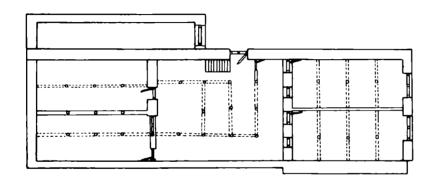
Beijing Tsongkhang, east elevation facing Barkor Street, JJ

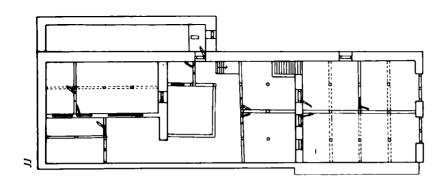




Gotri Tsong Khang Front elevation

Gotri Tsongkhang, east elevation facing Barkor Street, JJ





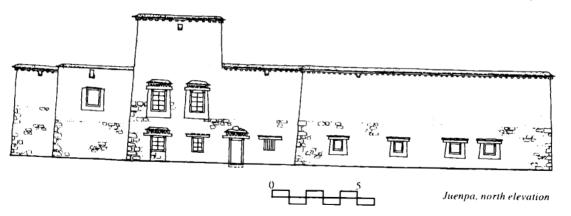


Gotri Tsongkhang, floors 1 and 2

34 Juenpa - with two courtyards and a very long wall along and several important corners on Ödepug street. The bigger courtyard has been filled up with extensions, some of them only sheds, others more permanent, each of them housing one family. Condition of the main building is sound. The history of the house dates back to the 7th century, and until the 1960s an important shrine was preserved in the building.

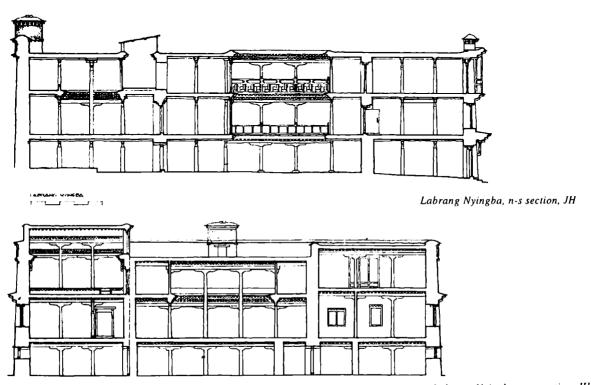


Juenpa, west wing elevation facing east towards courtyard

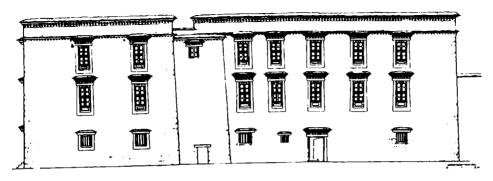


36 Labrang Nyingba - the most important building in the area. It was founded in the 15th century as residence for the founder of the Gelukpa order, Je Tsongkhapa. It has since been repaired, refurbished and partially rebuilt. The craftsmanship displayed in the present structures, a lay-out that is both pleasant and imposing, and the richness of the decorative details make this one of the best illustrations of the qualities of Tibetan architecture in all of Lhasa. The municipality had already

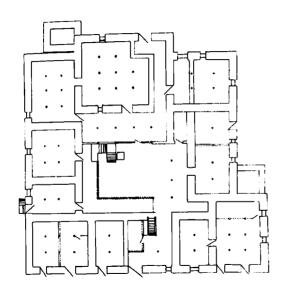
earlier placed the building under protection because of its historic significance. There are some cracks in the walls, the back toilet may collapse soon, some parts of the top floor have already collapsed partially, and still the building is somehow imposing and noble in appearance. The development of a suitable rehabilitation plan is now regarded as a priority for both the local community and the THF.

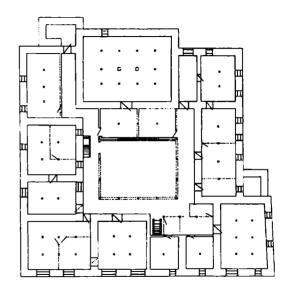


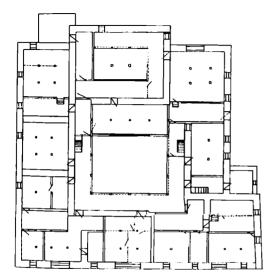
Labrang Nyingba, w-e section, JH



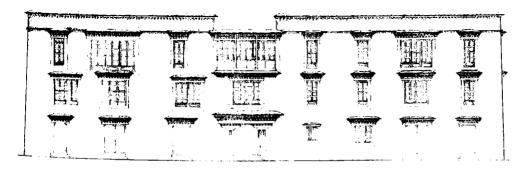
Labrang Nyingba, east elevation, DJL



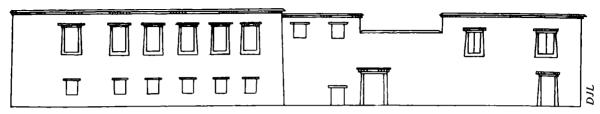




Labrang Nyingba, floors 1-3, DJL + JH



Labrang Nyingba, front elevation , JJ + HXL



Jangla Shar/Tenkhang Shar, east elevation, facing Oedepug alley

46 Jangla Shar - this was probably conceived as a pleasant little residence for one family. At present, it is overcrowded, dark and rather damp. Probably built in the 19th century.

46a Nyarongshak Amtchi is a small privately-owned house, and the owners have made it known that they are thinking of carrying out some necessary repair or even rebuilding works in the future.

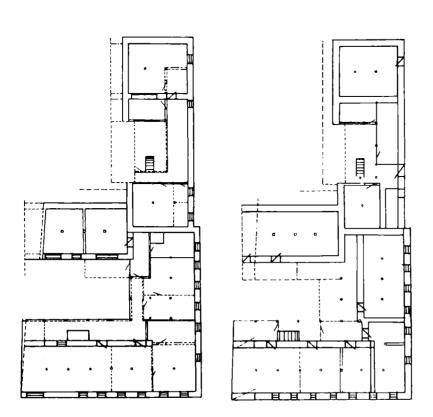
48 Tenkhang Shar - the last remaining part of the historic Ngakhang complex. Ngakhang was comprised of several buildings and courtyards, and was previously owned by Drepung monastery. Most parts of Ngakhang were replaced in 1980 and 1990. Tenkhang Shar's long outside wall and outer corner are important for the southern end of Ödepug street. Inside, it has few significant details, and can only be accessed through the adjacent building 'New Ngakhang' (which itself was built in around 1980 in acceptable traditional style).

Probably built in the 17-18th century.

49 Lanying Gyap - originally part of a complex of stables and servants' quarters connected with House no. 36, it was transformed into a separate residential building in the 1970s.

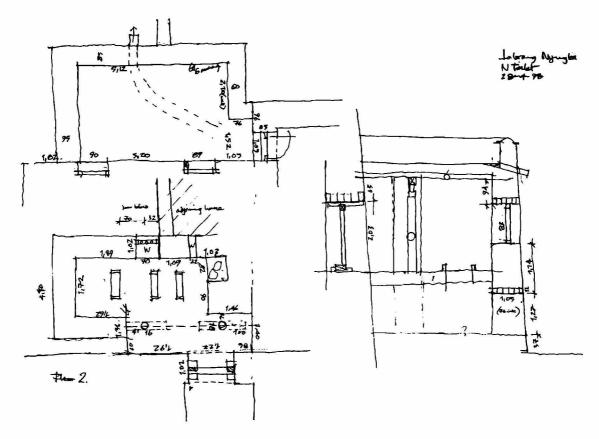
L This 1970s residential building has replaced former cow stables attached to House no. 36. Recent shed-type extensions spoil the long

courtyard. Just outside the entrance, where the toilets of this buildings and of house no. 36 meet, lies what can be described as a health hazard zone because of two toilets without drainage.



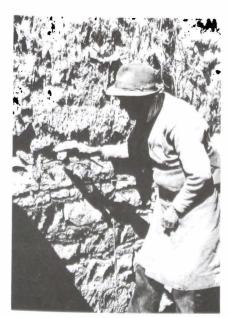
Tenkhang Shar, floors 1 and 2, DJL

# 6.7 Practical Work 1997-98

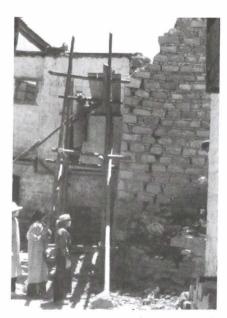


Sketches of Labrang Nyingba northern toilet, JH

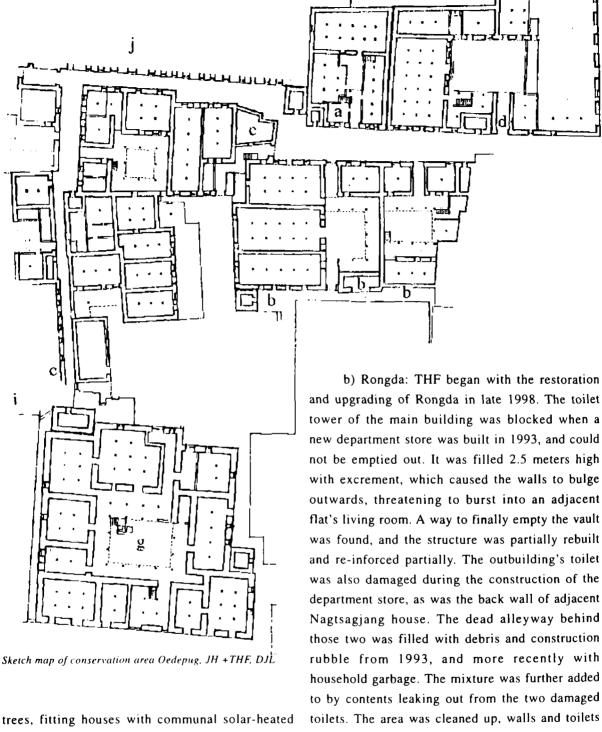
The work undertaken and begun by THF in the conservation area includes the restoration workshop project, water supply improvement, clean-up of rubbish accumulated in a blind alley, rebuilding and reinforcing of toilets, repair of structural damage, upgrading of toilets, repairing of foundations, repairing and restoration of facades, putting in new drain pipes, planting of



Building master Migmar, repairing southern wall of Nagtsagjang



THF repair of Labrang Nyingba northern toilet



h

showers and actual restoration work.

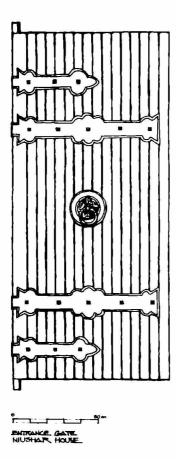
a) Tadongshak: in 1998, the building was restored and upgraded by THF. And this is also site of the main restoration training programme. Extensive work was done on the entire structure, the roof was renewed in traditional Arga-style, windows were enlarged, a solar-heated shower was installed, the toilet was tiled and fitted with a septic tank.

c) Ngakhang: the foundations, which were exposed and damaged when the alley level was lowered for paving in the late 1980s, have been repaired.

were repaired, a new drain was built and some trees

were planted.

d) Nangmamo: THF has so far completed water supply improvements, toilet emergency repairs, re-paving of the courtyard, and planting of a tree in the courtyard. Some damage to the outside wall has been repaired, and an antique wooden gate that was salvaged from the demolished Liushar house in the Lubu area replaced the modern tin-and-wood gate.



Traditional gate, now in Nangmamo House, JH

- e) Juenpa: lack of proper maintenace of the toilet had caused severe cracks and bulges in the outlying corner of the complex; part of the structure had to be taken down, rebuilt and re-inforced.
- g) Labrang Nyingba: work has begun to identify urgent problems that need to be taken care of in order to prevent further structural damage. During 1998 the north toilet tower was repaired and partly rebuilt. A solar-heated shower was installed in the large toilet room. Emergency repairs were made to a section of the roof which collapsed during heavy rains in July 1998.
- h) Another blind alley behind Tadongshar house (blocked by the recent construction of a privately-owned shopping mall) was filled about half a metre high with accumulated waste; this was emptied.
- i) A public toilet was built to ease pressure on the area (see chapter 7), tree-planting is planned.
- j) Murunyingba was one of several sites surveyed by volounteer architecture students of the Chinese University of Hong Kong working in collaboration with THF.

THF has completed water supply improvements, toilet upgrading and courtyard repaying; work on this site is on-going.



Juenpa house, THF toilet upgrading and restroration of main gate

### 6.8 Restoration Workshop

THF recruited old master builders with their personal students initially to study the traditional skills and methods. During 1998, the masters trained a group of younger construction workers, carpenters and masons. This was achieved by using the somewhat dilapidated Tadongshar House. Difficult problems were solved by the trainees under guidance of the masters. Notable feats included the replacing of rotten pillars on the ground floor without taking the top of the house down, the repair of small areas of damage in walls without taking the entire wall down, the building of stone walls in the traditional masonry technique, the



THF workers jacking up a section of Tadongshar to remove the rotten pillar

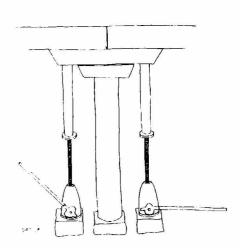


THF workers preparing to change a rotten pillar on the ground floor of Tadongshar House

making of the traditional long-lasting mud and Arga surfaces, the replication of the polished black frames around windows and doors using traditional materials, and the traditional carpentry work (windows, doors, pillar-post support). All together, a core group of 100 Tibetans are now being trained and employed by THF.

# 6.9 Extra Output and Future Plans

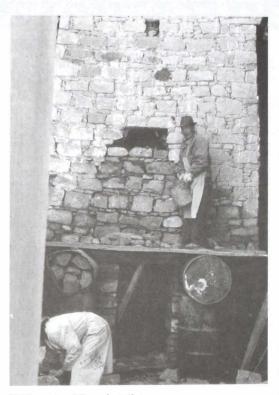
Since the initial programme activities carried out by the participants were accepted and widely regarded as successful by residents and authorities, it was locally proposed to extend the conservation area to include the entire inner Barkor area. The THF welcomed the plan and has already extended its activites, including the water and sanitation project, to cover the entire new Barkor conservation area.



sketch illustrating the method commonly used to replace rotten pillars, using car hydraulics, PdA



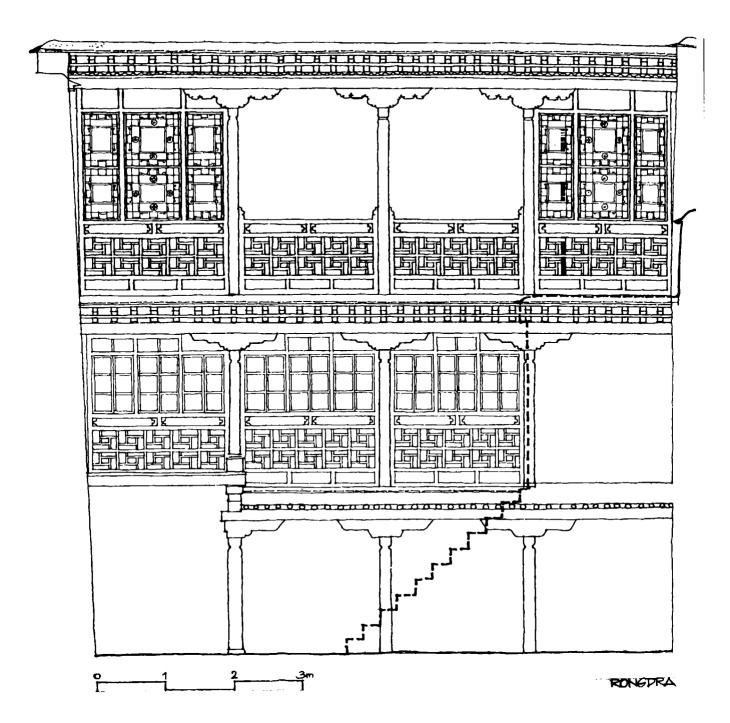
THF mason Loya cutting stones for repair of Nagtsagjang wall



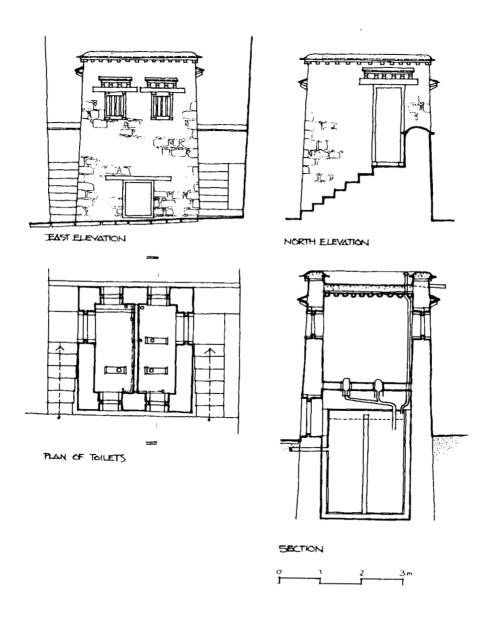
THF repair of Rongda toilet



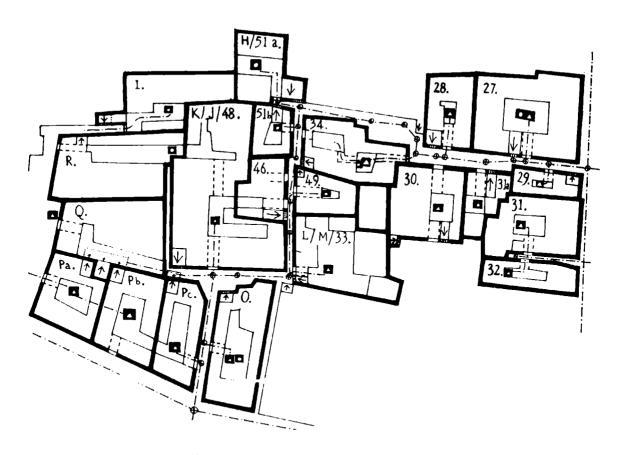
THF restoration works in Oedepug area



# 7. WATER AND SANITATION PROJECT



## 7.1 General Situation: THF 1997 Study



Sketch plan of new water installations and access holes in conservation area, M. Miller

As seen in the previous chapter on the Ödepug conservation zone, toilets are usually the most vulnerable area in a traditional building, and the hygiene issue is one of the most urgent problems in successfully rehabilitating an old house.

The THF water and sanitation consultant arrived in Lhasa at the end of May 1997.

On the basis of the 1996 THF agreement with the municipality, the water consultant and members of the THF held several meetings with the Lhasa Municipal Water Office and the Lhasa Municipal Sewage and Roads Office. The existing water and sewage systems were studied and evaluated.

In the next step, the local water supply and sanitation situation in the THF conservation zone of 'Ödepug' was studied. In order to achieve successful

rehabilitation of the neighbourhood as a whole, a block of new buildings located between Ödepug street and the Jokhang temple was included in the water and sanitation study and subsequent improvement project.

When the water and sanitation study was completed, the results showed that the water supply was not adequate. Some houses had piped water but only an intermittent supply. Some houses only had hand-pumps and a few houses had no water supply at all. The water, from both handpumps and standpipes, was found to be contaminated. The social survey carried out in parallel showed that water and sanitation was the field where most local residents wanted immediate improvement.

Before 1950, most houses were supplied by shallow wells in the courtyard, which have since run

dry. Today, the Lhasa City Water Office pumps the water up from 60 meters deep by electrical pumps. An earlier storage tank on Chakpori has been abandoned because of lack of capacity. The pressure is generally not very high in the old city area, which happens to be about one meter higher that most of the new city areas. According to official health regulations for China, once a month chlorine is added to prevent contamination of the system.

The THF decided to run a mini-project to improve water supply. The project consisted of:

- a) contracting the municipal water office to install a new water pipe in Ödepug street, bringing water from the Barkor water supply,
- b) connecting the houses in the zone (including new houses adjacent to the area)
- c) recommending to the residents that they should build good quality tap-stands for their connections.

The consultant designed the new network, and supervised the project, whilst local residents and Neighbourhood Office supported the work. Each house community was charged a nominal connection fee (which was paid in each case), since THF felt that this would make the residents feel more responsible towards the new installations. Some residents also dug new drains for their water supply.

The work was carried out during September and October. By the beginning of November, 7 courtyards housing 48 families were provided with a new tap and 1 courtyard housing 13 families had had its connection upgraded from smaller pipes to the new 50mm pipe. Water pressure in the area had been dramatically improved by the water office's independent action prompted by THF's initiative.

Another parallel project involved the sewage office. The residents of a block of new houses (built around 1990) had a problem with their toilets. These were of the Chinese cess-pit type: the liquids are drained through an unsophisticated system of sewers into the Kyichu River and the solids accumulate in the cess-pit, to be emptied either by hand (which is usually the case) or by pumptruck (which was perhaps the original idea, but for different reasons cannot be done). THF contracted the sewage office to lay new sewage pipes on Sungchoera square, connecting the problem toilets. An old stone drain from the Jokhang temple had to be unearthed, but was repaired and covered again.

For more details, please refer to the separate report:

"Tibet Heritage Fund Water and Sanitation Consultancy Report, December 1997".



Workers digging trenches for THF water installations in conservation area

## 7.2 Future of Water and Sanitation

With water supply improved in the conservation zone, the sanitation issue has become an urgent priority.

In the spring of 1998, THF started a pilot programme to improve the sanitary installations in the houses in the Ödepug conservation area. For these works, THF begun training workers from amongst its team of 100 workers and trainees.

Three THF water and sanitation consultants (a British engineer and two German experts), all found the situation quite alarming. Some toilets had not been emptied and cleaned for several years, with vaults filled 2 meters high with excrement. There was considerable seepage through the walls and onto the streets. The lack of adequate infrastructure (such as pipe-systems, sewage treatment plans, lack of water and water pressure to operate flush-toilets) presented a major challenge.



The present of water and sanitation in Lhasa: toilet with scenic view



The past of water and sanitation: Bathroom of Fourtheenth Dalai Lama, installed in the 1950's

losol

The inhabitants made clear that the old night soil collection system, where farmers would do the collection to gain compost, was no longer working for several reasons. One is the widespread use of chemical fertilizer, which had diminished the demand for good compost. Another reason lies in the social changes that have transformed customs and ownership structures. Local farmers contacted by THF expressed little interest in compost, because of the difficulties in collecting it from the centre of a sprawling, denselypopulated inner city area.

The toilets in old Tibetan houses are based on the vault system. The vault is on the ground floor. The bathrooms are located in the rooms above, with simple slots as openings. The walls are only protected from humidity by wooden splashboards. The need for more sophisticated reinforcement of the walls and the opening to the street was previously not seen as a priority, because in the old times the vaults where regularly emptied. Ashes were frequently added to soak up the excess liquid from the vault and to eliminate the stench. Today the toilets are emptied once a year or not at all, resulting in urine seepage damaging walls and contaminating the groundwater.

In some cases, new houses built very close to old houses have made it difficult to reach the toilet service openings.

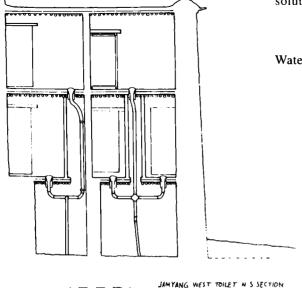
THF opted for a septic tank solution, such as the one used successfully for almost two decades in the neighbouring Himalayan kingdom of Nepal.

After emptying the vault, each toilet tract was checked for structural damage. In some cases the toilets had to be partially rebuilt because of serious damage. THF would then seal the toilet vaults from inside using reinforced concrete to prevent future infiltration. New drainage had to be provided. The bathrooms of repaired toilets have been tiled, and the walls plastered and painted for general hygiene improvement.

With the help of Mr. Manfred Wicki and the Swiss engineer, Danny Tscherrig, the first septic tanks were built according to Swiss-Nepali blueprints, with modifications to the conditions in Lhasa. Basically, the sewage will go into a sealed tank located in and below the original toilet vault. In several chambers, the sewage is treated by bacteria and reasonably clean water is being released into the nearest available drainage pipe. Flushing is either mechanically where pressure allows, or by poor flush (i.e flushing with a bucket of water).

THF has also built a public toilet, in traditional Tibetan architectural style but with the septic tank solution, at the western end of the conservation area.

For more details, please refer to the 1998 THF Water and Sanitation Report.





Who says no one gives a shit - emptying a toilet vault the old-fashioned way



Toilet in conservation area before repair



Tromsikhang as depicted in a 19th century traditional painting, mineral colours on cloth, private collection

The Tromsikhang complex dates back to the early 18th century. It is located on the northern stretch of the Barkor. The main building measured 60 by 40 meters and had two courtyards. Originally built as city residence for the Sixth Dalai Lama, the building has been associated with many historic events. At one time it served as residence for the official representatives (the ambans) of the Qing emperor. In 1751, the ambans assassinated the Tibetan king, Gyurmey Namgyal, in the Tromsikhang. Subsequently, the ambans were either killed or committed suicide in the building when it was besieged by an angry mob. In the late 18th century, the Qing court in Beijing ordered six stone tablets affixed to the entrance corridor of the Tromsikhang. Inscriptions on these tablets, in Chinese, Manchu, Mongolian and in Tibetan recalled the bloody events of 1751. In 1997, five of these tablets survived, even though the corridor has since been turned into a Muslim noodle restaurant. The preservation of this building was recommended by the TAR Cultural Relics Bureau in the 1980s, and by the Beijing City Planning Commission in the early 1990s, even though parts of the building were in a serious state of dilapidation. The Lhasa Municipal Planning Office had put forward the proposition that most of the Tromsikhang building should be demolished, but that the building's 60x10m front portion facing the Barkor

Street should be retained and restored. In the summer



Detail of carved capital inside the remaining part of Tromsikhang, before restoration

of 1997, one of the vice chairmen of the Tibet Autonomous Region authorized a start on this proposal.

Soon after the northern part of the Tromsikhang was demolished in the late summer of 1997, the THF received official permission to make a detailed survey of the remaining part which was to be restored. The THF drafted floor plans, and prepared documentation of the architectural details found inside the building. The plans suggested a partial rebuilding of the third floor portion, the replacement of many original details and some structural changes (e.g. conversion of two of the remaining three gates into shops). The THF



Tromsikhang, facade along Barkor Street, facing south, 1997

then submitted a list of suggestions regarding the Tromsikhang restoration to the Cultural Relics Bureau and to the Planning Office. The Planning Office claimed that the 1996 THF brochure, "Preservation of the Historic Inner City of Lhasa", had already been considered for the drafting of the original rehabilitation plan (during 1996 and 1997, THF distributed this brochure - translated into Chinese and Tibetan - widely amongst Lhasa government officials and offices).

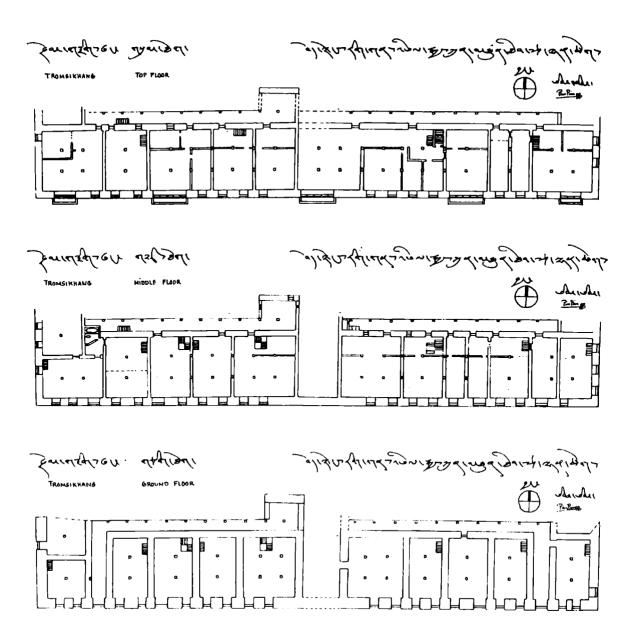
By mid-1998, a new four-storey housing block (of the quality described in chapter 3) had been built on the site where the old Tromsikhang had stood, however the remaining facade was restored. The 18th century stone inscriptions were removed and ostensibly will be stored by the TAR Cultural Relics Office, perhaps later to be displayed elsewhere. Some of the suggestions from THF had been put into practice. The three gates survived in amended form, but the interior stairs and some rooms had been rearranged even though the original tenants moved back into the building. Originally, the carved designs on the pillars and capitals had been different on each floor. The ground floor traditionally had the most simple pillars of the house. The middle floor had good carvings, while the third floor had the most intricate carvings. After restoration, some of the original pillars and capitals were kept, but the replaced pillars



Demolition of northern wing of Tromsikhang, 1997

had no carvings at all. The old Pembe cornice was kept. The roof cover consisted of layers of earth and a special absorbing red sand on top, but no Arga (stamped and oiled clay, the traditional roof technique). Inside floors had been concreted, even those rooms that had well-preserved Arga floors. The floor level of several rooms had risen because of the new concrete layer. Carved window frames on the facade were replaced by simpler ones. An old tiled bathroom with Nepali-style manual flush toilet and bathtub, presumably fitted in the 1950s, had





Tromsikhang, floors 1-3, PdA

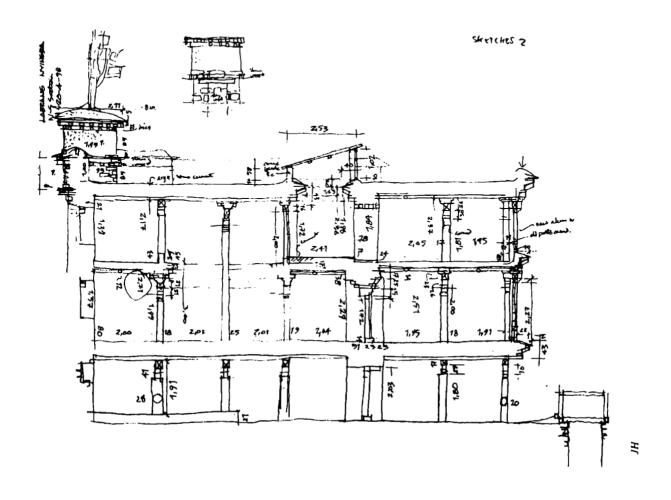
disappeared, and a hallway on another floor had been converted into a toilet to be used by all the tenants on the west side of the Tromsikhang. The people on the east side shared the toilet of the new adjacent four-storey block.

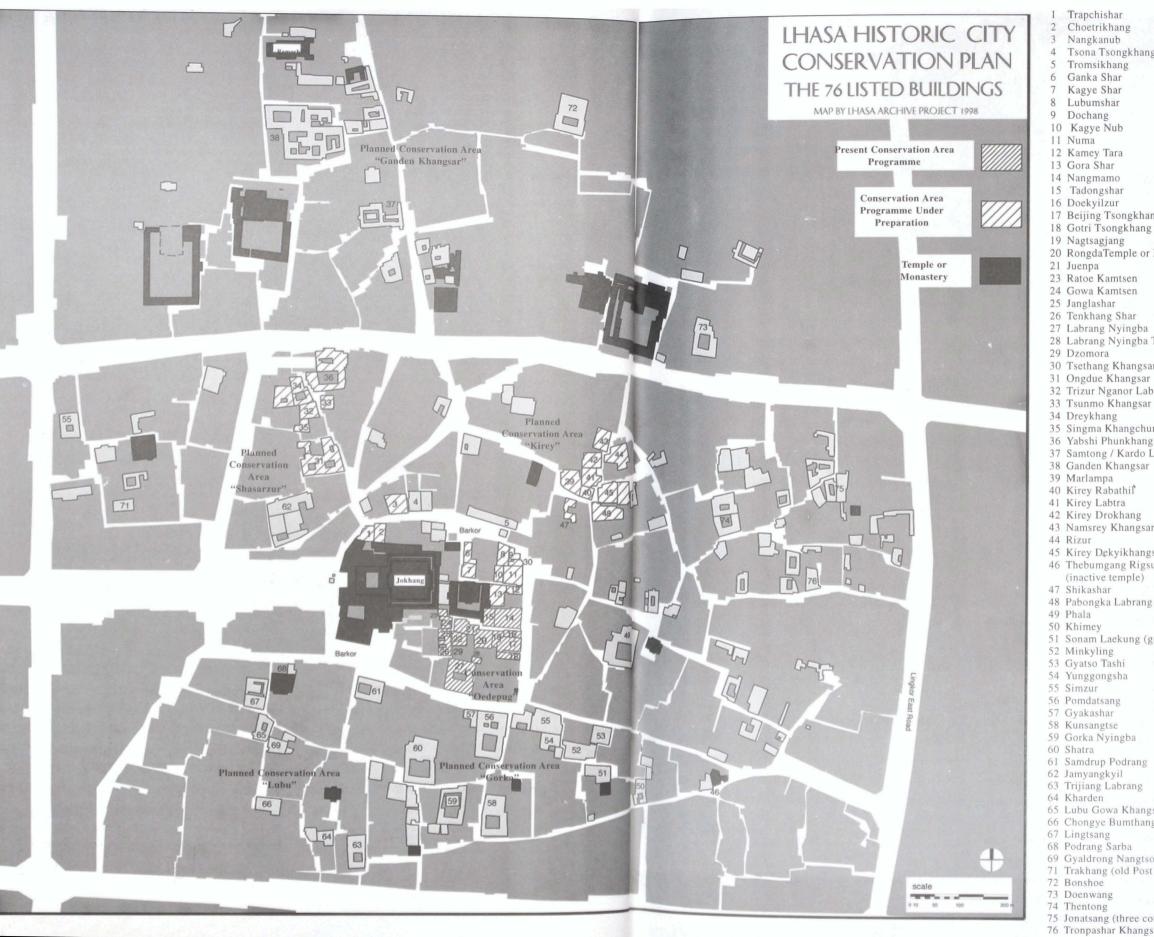
THF was invited to the official opening ceremony upon completion of the work.

The importance attached to the partial preservation of the Tromsikhang House marks another important shift in attitude. The Tromsikhang

is only the second non-monastic building in the old city to be restored by the government (the first one was the old courthouse, Nangtseshak, in 1995). The restored Tromsikhang facade has enhanced the appearance of the northern stretch of the Barkor. Unfortunately, the achievements of the Tromsikhang restoration have been somewhat marred by the demolitions of most of the original complex, as well as of the neighbouring Dechen Rabten and Lagang houses.

# 9. EXTENSION OF THE PROGRAMME





- 1 Trapchishar
- Choetrikhang
- Nangkanub
- Tsona Tsongkhang
- Tromsikhang
- 6 Ganka Shar
- Kagye Shar
- 8 Lubumshar
- 9 Dochang

- 12 Kamey Tara
- 14 Nangmamo
- 15 Tadongshar
- 16 Doekyilzur
- 17 Beijing Tsongkhang
- 18 Gotri Tsongkhang
- 19 Nagtsagjang
- 20 RongdaTemple or Monastery
- 23 Ratoe Kamtsen
- 24 Gowa Kamtsen
- 25 Janglashar
- 26 Tenkhang Shar
- 27 Labrang Nyingba
- 28 Labrang Nyingba Taptsang
- 29 Dzomora
- 30 Tsethang Khangsar
- 31 Ongdue Khangsar
- 32 Trizur Nganor Labrang
- 34 Dreykhang
- 35 Singma Khangchung 36 Yabshi Phunkhang
- 37 Samtong / Kardo Labrang
- 38 Ganden Khangsar
- 40 Kirey Rabathil
- 42 Kirey Drokhang
- 43 Namsrey Khangsar
- 45 Kirey Dekyikhangsar
- 46 Thebumgang Rigsum Lhakhang (inactive temple)
- 47 Shikashar
- 48 Pabongka Labrang
- 50 Khimey
- 51 Sonam Laekung (government part)
- 52 Minkyling
- 53 Gyatso Tashi
- 54 Yunggongsha

- 60 Shatra
- 61 Samdrup Podrang
- 62 Jamyangkyil
- 63 Trijiang Labrang
- 64 Kharden
- 65 Lubu Gowa Khangser
- 66 Chongye Bumthang
- 67 Lingtsang
- 68 Podrang Sarba
- 69 Gyaldrong Nangtso
- 71 Trakhang (old Post Office)
- 73 Doenwang
- 74 Thentong
- 75 Jonatsang (three courtyards)
- 76 Tronpashar Khangser



Trizur Ngawang Norbu Labrang, house no. 32 of the 76 listed buildings



Shasarzur West Alley

With the shift in official policy towards preservation, and the official listing of 76 buildings, the requirements for an overall urban renewal programme are now in place. The Cultural Relics Bureau and the Planning Office have agreed with THF on a 5-year activity programme, with the master plan currently being prepared.

The three main aspects have been identified as:

- carrying out urgent repairs to prevent further damage and loss of historic substance
- grouping the buildings into several mini conservation areas and beginning the necessary studies and social surveys
- formulating ways to improve the existing infrastructure in the old city

THF plans to continue the training programme.

Certainly the demand is great - since the 76 listed houses were labelled with the blue plaques, representatives of different house communities have been visiting the THF Lhasa office requesting the commencement of repair, restoration and upgrading activities.



Andre Alexander, co-founder and programme director. Independent researcher, photographer and writer about the old city of Lhasa since 1993; student of Tibetan architecture and history. Publications include a paper on Lhasa in the proceedings of the 1995 International Association of Tibetan Studies Seminar, annual reports on the Lhasa Old City since 1995, and a series of city development maps listed below

Pimpim de Azevedo, field director. Artist and student of Tibetan architecture and social structures in Lhasa since 1994.

Dakar, Huan Xian Ling, Jian Juen and Loden, surveys, architectural and artistic drawings.

Andrea Dell'Angelo, planning and fund-raising consultant. Engineer and Director of ASIA, an Italian non-governmental organization that has built schools and hospitals in northern and eastern Tibet

Enrico Dell'Angelo, planning consultant. Doctorate in Tibetan literature, director of the Istituto Shang-Shung, an Italian cultural institution dedicated to the preservation and development of the Tibetan cultural tradition; presently administering an Italian government medical aid project in Tibet.

John Harrison, architecture consultant. Registered Architect, and research fellow at University of Liverpool, with extensive international experience in surveying, inspection, advising, design, and construction in Nepal, India, Pakistan and Tibet. Special expertise in the conservation of historic buildings.

His many positions since 1965 have included Adviser to the Department of Archaeology, His Majesty's Government of Nepal; Member of Nepal-German Project on High Mountain Archaeology; Advisor to the Aachen School of Architecture, and participant in RWTH Technische Hochshule's survey and exhibition on Ladakh and Zanskar monasteries.

Sylvester Kaben, technical consultant. Agricultural engineer; Master of Science in Agriculture with specialty in International Agricultural Development

Andreas Bründer, water and sanitation consultant.

Chimo Migmar-la, building consultant.

Margaret Miller, technical consultant. Water engineer; extensive experience in Africa, Asia and Latin America in water supply and sanitation projects.

Alex Müller, cartographer and planning consultant. Previous positions include cartography and conservation consultation for the Berlin Municipal Grovernment and the Brandenburg State Government.

Nyima Tashi, assistant field director.

Nyima Tsering, site supervision.

Moritz Wermelskirch, architecture consultant, mapping consultant.

THF Advisory Board: Prof. Dr. Ulrich Freitag, FU Berlin; Prof. Puay-Peng Ho, Hong Kong; Prof. Janet Gyatso, Amherst College; Carol Rattray, Hong Kong.

Friends of THF: Mary Kilty, New York; Gwendy Feldman, New York; Hollis Brookover, Hong Kong; Gerald Hatherly, Hong Kong; Elke Hessel, Düsseldorf; Dede Huang, Hong Kong; Frances Howland, Kathmandu.

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Thanks also to Dr. R. Kostka and Dr. E. Heine, TU Graz, for technical assistance, and to the Department of Architecture, Chinese University of Hong Kong for assistance and collaboration.

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- Lhasa 1991 Old City Protection Plan
- Lhasa City 1985-91 municipal surveys
- Lhasa City 1998 Housing Office Old City Survey of Building Situation

Related publications by LAP / THF:

Preservation of the Historic Inner City of Lhasa: A Case Study, Berlin 1995

Tibetan Old Buildings and Urban Development in Lhasa, fold-out map, Berlin 1998, ISBN 3-933192-00-5

THF Water and Sanitation Report 1997 by Margaret Miller

THF Water and Sanitation Report 1998 by Andreas Bründer

THF Annual Reports 1996, 1997, 1998

A p p e n d i x

International Charter for the Protection of Historic Towns, as adopted 1988 by the International Commission on Monuments and Sites (reproduced in: Conservation and the City, by Peter J. Larkham, London 1996)

### I. Definitions

- 1. 'Historic towns' and 'historic districts' will be defined as all groups buildings and space that comprise human settlements and whose unity and integration into the landscape endows them with historic, artistic, architectural, urbanistic or scientific value. Such values exist irrespective of the period and the culture that gave birth to them and do not depend on the manner of their construction, which may have been planned or spontaneous. A historic town may comprise one or more historic districts. As living entities, and subject to cultural, economic and social evolution, historic towns and districts must inevitably change, as they have done in the past.
- 2. 'Protection' will be defined as all actions necessary for preserving a historic town or district and promoting its harmonious evolution. This action includes identification, conservation, restoration, rehabilitation, maintenance and revitalization.

# II. General principles and objectives

- 3. The principles set forth in the Venice Charter apply to historic towns and districts as long as it is understood that the priority objective of protection is rehabilitation.
- 4. The protection of historic towns and districts should be part of a coherent policy of economic and social development and of town planning as well. Protection must recognize the diversities in settings, cultures and economic development in the urban area, the region and the country concerned.
- 5. The protection of historic towns and districts must satisfy the needs and aspirations of residents. It must not only meet the demands of contemporary life, but also assure the preservation of cultural and architectural values.
- 6. The success of a protection plan depends on the participation of the residents, which must begin as soon as preliminary studies are undertaken and continue throughout the protection process.
- 7. Districts must not be cut off from one another, and a historic district must be linked to other districts by visible integration and through a clear definition of its role.
- 8. Wherever possible, local life styles should be preserved and encouraged. New uses of space and new activities should be compatible with those already existing, and the creation of 'museum' towns and districts destined only for tourists must be avoided. The rights and aspirations of the population must be respected, as its social and economic activities often depend on the organization of the setting.

- 9 In a historic town or district the following physical features are to be preserved:
  - a) form and shape, including the distribution of buildings, their height, mass and overall appearance, as well as the general character of the streets and squares and their layout, the rhythm of space and the distribution of land parcels;
  - b) urban fabric, meaning the connections between different districts and the road network;
  - c) the overall aspect of the town depending on the angle from which it is viewed, the relationship of masses, perspectives from within the town including breakaway views;
  - d) the harmonious relationship between the buildings and the natural setting, which, together, form a single landscape;
  - e) the specific quality of the historic town or district as reflected in the contributions made by various cultures to the architectural heritage of the ensemble;
  - f) works of symbolic value such as town halls, towers, archaeological monuments, etc.;
  - g) fortifications (walls, ramparts, towers, bastions, gates, etc.);
  - h) connections with historic monuments that are located outside a historic town or district;
  - i) the other elements that lend the townscape its specific character, such as construction materials, colours, roofs and inner courts and all decorative elements (statues, grilles, the pavement, street furniture, etc.);
  - j) parks, gardens and open spaces, and bodies of water or streams;
  - k) traditional institutions and centres that contribute to cultural and social life, including universities, places of worship, markets, shopping districts, public promenades;
  - traditional crafts and business activities that are basic to the community's cultural identity and daily life.

### III. Actions and methods

- 10. Planning for the protection of historic towns and districts must be a multidisciplinary effort involving a wide range of professionals and specialists, including archaeologists, art historians, architects, town planners, restorers, photogrammeters, civil, structural, traffic and soil mechanics engineers, jurists, sociologists, economists, etc.
- 11. When a historic town or district is located within a larger urban or metropolitan area, the plan for the historic area should be integrated into town, metropolitan and regional plans by determining the principal function and role of the heritage and values to be protected.
- 12. The protection plan must clearly set forth the principal line of action, but it must be flexible enough to allow for changes in life styles and provision should be made for periodic review of the plan.

- 13. Rehabilitation must aim at improving housing, sanitation systems necessary public utilities. It should aim at increasing employment opportunities and promoting new economic activities, as well as encouraging those traditional activities compatible with the role and function of the area and its values as determined beforehand.
- 14. Wherever possible, demolition in historic towns or districts must be avoided. If new buildings are necessary their architecture should be harmonious with the historic town or district's existing scale, character, buildings and construction materials. They must also be compatible with the town or quarter as originally conceived and they should add to the enhancement of the area. Concern for harmony must determine the choice of supports, cables, antennas and signs, as well as street furniture and pavement.
- 15. If integration of new districts within historic towns or districts is difficult to achieve, and if there is a risk that new buildings are not compatible, consideration should be given to the creation of transition zones, possibly composed of green belts.
- 16. The road network must be located outside the area while providing access to it. New roads must be compatible with the townscape. Solutions must be imagined to resolve the contradictory demands of traffic and the values to be preserved. Pedestrian zones and public transport must be favoured and parking facilities should be planned outside the district or even the agglomeration.
- 17. Historic towns and districts must be protected against the pollution, noise, shocks and vibrations caused especially by traffic. Preventive measures must be taken to protect the ensembles against the consequences of natural disasters such as earthquakes and floods.
- 18. Legislative or administrative measures must be enacted in order to provide the protection plan with the legal force necessary for rapid and efficient action. An administrative mechanism must be set up to assure financial support for the protection plan.

## IV. Social participation

- 19. The rehabilitation of a historic town or district must satisfy present needs and aspirations and meet those of the future, especially social demands. Social and economic measures must be taken to encourage the residents to remain in the town or district concerned.
- 20. The residents must be informed and their interest in the protection process awakened so that their participation will stimulate the efforts of public authorities. Technical and financial assistance must be available to encourage action on the part of the residents and reduce the inconveniences of the protection process.

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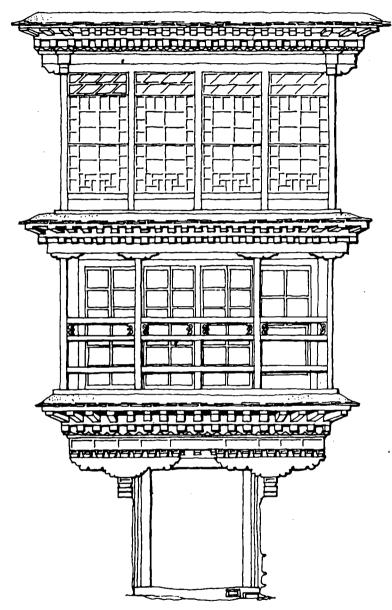
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Dakpo Trumpa House, Lhasa gate and bay windows drawing by John Harrison



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