

Historic Cities Support Programme

ZANZIBAR STONE TOWN PROJECTS



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INTRODUCTION

By Stefano Bianca, Director, Historic Cities Support Programme

F*ollowing the restoration of Baltit Fort in Northern Pakistan, the Old Dispensary in Zanzibar is the second major historic building restored by the Aga Khan Trust for Culture since its establishment of the Historic Cities Support Programme in 1992. As in the case of Baltit Fort, the Zanzibar restoration project was complemented by a wider urban planning and conservation effort, with a view to guiding and controlling future development in the sensitive area of the Stone Town. A cosmopolitan city which developed and flourished in the context of Arab and European marine trade, Zanzibar has now become an attractive tourist destination, and the Stone Town is subject to increasing pressure as a result of modern development. The planning surveys and proposals, carried out in close co-operation with the Zanzibar Stone Town Conservation and Development Authority on the basis of earlier efforts sponsored by UNCHS Habitat (United Nations Conference for Human Settlements), are presented in this brochure in summary form, since a separate monograph entitled Zanzibar: A Plan for the Historic Stone Town has recently been published by the Trust.*

Of the four "action areas" presented in the Stone Town Conservation Plan, the sea front is perhaps the most representative quarter. It is here that boats from Portugal, from the Arabian peninsula, from India, from England, and even from the Americas crossed each other, exchanging merchandise and contributing to the cosmopolitan character of Zanzibar. It is here that the Omani Sultans, their dignitaries, and rich Indian merchants built their palaces, government buildings, and public facilities. It is here that a sequence of formal and informal open spaces emerged and still constitutes, today, the open-air "living room" and the most prominent focus of the growing city.

The sea front thus became the focus of the Trust's endeavours, which include not only the restoration of the Old Dispensary at the north-eastern end of the contemporary pier, but also assistance to convert an important but abandoned structure located at the south-eastern edge of the Stone Town, the former telecommunications building erected on a highly visible and strategic site on the sea front in the 1930's. A corresponding grant was provided to Tourism Promotion Services, another institution of the Aga Khan Development Network, thus enabling the transformation of the building into a viable hotel facility, sensitive to its urban and cultural context.

The new hotel - the Zanzibar Serena Inn - will be inaugurated at the same time as the restored Stone Town Cultural Centre, in early March 1997. Both projects constitute models for the wide range of interventions needed in the on-going conservation and revitalisation process of the Stone Town. The state-of-the-art restoration of the Old Dispensary, a key historic building, includes research and adaptation of the original building technologies. The conversion and adaptation of the telecommunications building ensured the survival of this abandoned structure which, if permitted to further fall into disrepair or if replaced by a less appropriate new building, would have threatened to become an eyesore in the old city. Identifying appropriate new uses for old buildings is a key issue in the revitalisation of historic districts, and the structure of the Old Dispensary, though almost entirely brought back to its original state, had to allow for new uses which will ensure its social and economic viability.

Between the two buildings, which lie at each end of the main sea front, is a series of important public open spaces, including the Banyan Tree Square, the waterfront promenades, Forodhani Park, and Kelele Square. Considering their value for the local community, their attraction for visitors to the island, and their interaction with the landmark buildings facing the sea, the Trust has attached specific importance to the design and enhancement of these open spaces within the master planning concept. For one of them, Kelele Square, the Trust has developed and implemented a detailed beautification project, as this open green space was intimately linked to the conversion of the former telecommunications building into a hotel and might have suffered from this change, if not handled in a sensitive manner. All of the existing trees were preserved, and landscaping details were developed which could be replicated in other places in Zanzibar. For the other public open spaces, such as Forodhani Park, design concepts have been proposed and await funding from donors interested in the rehabilitation of the Stone Town.

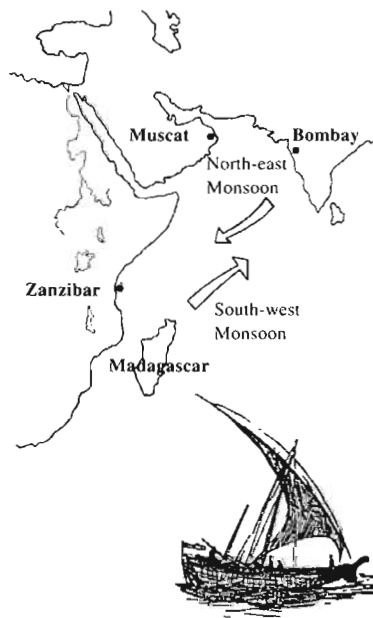
As demonstrated by the projects initiated by the Aga Khan Trust for Culture, urban conservation is a multi-faceted and highly complex process. Therefore, continued and effective co-operation between local institutions, non-governmental organisations, donors, and planners is needed. The Trust's Conservation Plan has tried to achieve a common framework for defining, co-ordinating, and monitoring future development, while its restoration and public space improvement projects, now completed, have set examples for future implementation. UNESCO and the European Union have been extremely helpful in the initial co-ordination process. It is hoped that other donors can be convinced to join the effort, thus helping to materialise the established planning framework in co-operation with the Zanzibari government.

The present planning and conservation efforts could not have been brought to fruition without the continuous encouragement of the Zanzibari authorities, headed by His Excellency President Salmin Amour who graciously extended his support to the Trust's activities. I would also like to acknowledge the guidance provided by the ministries and offices of the Zanzibar Government during the preparation of the Stone Town Conservation Plan, from June 1992 to July 1994. For their most valuable support and participation, I would in particular like to thank Mohamed Bakari Hassan, Principal Secretary for Special Duties, State House; Ali Abdalla, Principal Secretary, Chief Minister's Office; Muhammad Salim Sulaiman, Principal Secretary, Ministry of Water, Construction, Energy, Lands, and Environment; the Honourable Salim Juma Othman, Regional Commissioner for the Urban and West Regions; and Ahmed Sheikh, Director General of the Zanzibar Stone Town Conservation and Development Authority.

Finally, my special thanks go to the dedicated teams of architects, engineers, project managers, artisans, and craftsmen whose efforts allowed this project to materialise and made it a success. Many of them are acknowledged at the end of this brochure; many others have provided anonymous, but equally precious contributions, which I would like to recognise on behalf of the Trust.

A LANDMARK BUILDING IN THE STONE TOWN

By Stephen Battle
and Francesco Siravo



A RICH AND DIVERSE HERITAGE

The Stone Town is the product of at least three centuries of continuous settlement, but it was only from 1830 that Zanzibar took on a wholly urban character and that stone buildings were built in significant numbers. Until that time, the majority of houses were made of mud and wattle, and roofed with palm-leaf thatch. Very few large-scale structures could be distinguished, besides the Fort and a few small mosques.

At the beginning of the nineteenth century, the town occupied only the north-eastern portion of the peninsula, extending from Shangani Point toward the creek's narrowest crossing at Darajani. After the Omani Sultan's permanent move to the island in 1832, the Stone Town quickly expanded during the middle of the century, filling in the areas of upper Sokomuhogo, Forodhani, Kajificheni, and Kiponda. The



Omanis erected palaces and residences along and behind the sea front, and tradesmen from the Indian sub-continent built up the bazaar streets with shop-front houses, and sea-faring merchants built houses, sheds, and warehouses near the waterfront. After 1850, stone buildings spread further and began to extend north into Malindi, south into the lower portion of Sokomuhogo, and east to Mkunazini, areas which up to this time had been mostly occupied by mud buildings. As contact with western trading markets increased, particularly once the Suez Canal opened in 1869, and later with the establishment of the British administration in 1890, specialised structures - larger civic buildings in particular - began to appear. The building up of the Stone Town was more or less completed and the present limits defined by the first quarter of the twentieth century: the new port area to the north had been reclaimed, the area south of Shangani built up, the European garden suburb of Vuga laid out, and the programme to fill the creek bordering the peninsula to the east gradually put into effect.

Below Left: Zanzibar harbour in 1885, with the Fort in the foreground, and beyond, the cannons of the Royal magazine.

Below: View of Forodhani, taken from the sea in front of the "House of Wonders" in 1890. The Sultan's palace can be seen to the right, and the timber balcony of the Old Dispensary can be detected at the far end of the port.



The Old Dispensary in 1900, then known as the "Khoja Haji Nasser Nur Mahomed Charitable Dispensary". When it was built, the building stood square to the sea.

Thus, within the relatively short span of one hundred and fifty years, the confluence of several distinct cultures and the island's intense cosmopolitan development produced the rich and diverse architectural heritage we see today. In some cases, the diversity of the original imports is still evident in different sections of town; in others, the borrowing and adaptation of forms from other contexts produced a cross-fertilisation of different building traditions. In yet other cases, buildings were gradually transformed over time as newcomers adapted existing structures to their tastes and preferences, thus determining a further hybridisation of forms. This variety produced the diverse spaces and surprising contrasts of the Zanzibar townscape, where pedestrians move from the imposing row of sea front structures to the crowded and lively atmosphere of the Indian bazaars, and the quiet, intimate spaces of the narrower residential streets. Thus, although the different forms and building types and their origins - African, Arab, Indian, or European - can be recognised, it is the synthesis of these cultures and influences that creates Zanzibar's unique urban and architectural environment.



EARLY HISTORY OF THE OLD DISPENSARY

The Old Dispensary gained its name because it long housed a dispensary on the ground floor, with a pharmacy and a resident doctor. An inscription made of large cement letters filled a panel on the front façade, and read: “The Khoja Haji Nasser Nur Mahomed Charitable Dispensary”. But this name replaced that of another, because before it celebrated the good works of Nasser Nur Mahomed, before the port was even built, and the building stood square to the sea, it was known as the “Tharia Topan Jubilee Hospital”. The foundation stone of the Jubilee Hospital was laid on 8th July 1887, to commemorate the fiftieth anniversary of Queen Victoria’s reign.

The man whose munificence gave rise to the building did not attend the ceremony. Tharia Topan, who in his prime had dominated commerce in Zanzibar, was in Bombay, feeble and nearly blind, already at the end of his life. Born in 1823 in a village of the state of Kutch in north-west India, he had come to Zanzibar as a young man, in 1843, with other Indian merchants sent by the ruler of Kutch at the request of the Omani Sultan Sayyid Saïd, who was eager to promote trade on the island. The economy of Zanzibar indeed expanded nearly five-fold in the first half of the nineteenth century, exporting local spices and ivory from the mainland, and importing goods such as cotton from Great Britain and North America, and rice from Karachi. Topan played an important role in this development, and eventually controlled the collection of customs duties - a right he had bought from the Sultan. After the Sultan’s death in 1856, one of his sons, Majid, acceded to power with British support, while the second son, Barghash, was sent into exile to Bombay, where he became acquainted with the opulence and sophistication of the British Raj. With the death of Majid in 1870, Barghash returned to Zanzibar and, together with Topan (whom he appointed as honorary prime minister), was largely responsible for Zanzibar’s urban and architectural development. Barghash was a lavish patron and builder, and within a few years, he transformed the city by erecting important new buildings on the waterfront, constructing roads and new housing, and introducing modern infrastructure. The Sultan completed his masterpiece, “Beit al Ajjab”, or the “House of Wonders”, in 1883, when Tharia Topan started thinking about sponsoring a school or a hospital of his own on the Zanzibar waterfront.

However, time worked against Topan. The spectacular rise of Zanzibar had whetted the appetite of European powers, and during the last fifteen years of the nineteenth century, they appropriated most of the empire



*Sultan Sayyid Barghash
(seated at centre) surrounded by
his advisors, circa 1880.
Tharia Topan stands directly
behind the Sultan.*



Above: Portrait of Sir Tharia Topan, circa 1885.

Below: British Consul Sir Gerald Portal was appointed in 1891, and during his brief tenure instituted many important reforms. The photograph was probably taken around 1893, shortly before Portal left Zanzibar for England.

of Zanzibar for themselves, including significant possessions on the mainland. This political decline is reflected in the chequered history of Topan's hospital building. In 1885, at the age of sixty-two and already ailing, he travelled to Bombay to make the necessary arrangements for the construction, but was never to return to Zanzibar. The foundations of what was to become the Old Dispensary were laid by his nephew, Hashem Virjee Patel, and left to weather and consolidate for two years, following local practise. During this time, the Bombay-based firm of Gostling and Morris completed the design of the building and supervised production of all the joinery, which Patel brought to Zanzibar in 1885. After a dispute between Topan and Patel, a new foreman, Haji Mistry, was appointed, and he travelled to Zanzibar in 1890 with a crew of Indian craftsmen and masons from Kutch to complete the building. In the same year, Topan was knighted by Queen Victoria, in recognition of his political and philanthropic achievements during this crucial period of Zanzibar's history.

COMPLETION AND FURTHER HISTORY OF THE BUILDING

But Sir Tharia Topan was seriously ill, and his death in 1891 resulted in further interruption of the construction. Haji Mistry sent his crew home to India pending the outcome of a dispute over the terms of Topan's will. Due to the personal initiative of Sir Gerald Portal, the new British Consul who was eager to maintain and enhance Zanzibar's urban heritage, Topan's widow, Lady Janbai, decided to resume the works, and in 1892, Haji Mistry was again sent out to Zanzibar with his crew of craftsmen. By then, it appears that Haji Mistry had started adding elaborate ornamental work not contained in the original plans, a fact which may reflect the customary discretion of master craftsmen or perhaps his determination to produce a masterpiece. The budget set aside by Lady Janbai was exhausted in 1893, before completion of the building. Yet, the workmanship was excellent, as acknowledged by Frederick Pordage, the consulting engineer of the British Consul, who eventually saw the building through to completion in early 1894.

After Portal's death in 1895, it seems that furnishing and staffing of the completed building became a problem, and the hospital could not open. Lady Janbai, living in Bombay, eventually decided to sell the building. It was bought in 1900 by the estate of another rich Zanzibari merchant, Nasser Nur Mahomed, with the intention to use it as a charitable institution. Nur Mohamed's trustees set up a dispensary on the ground floor of the building, and subdivided the upper two floors

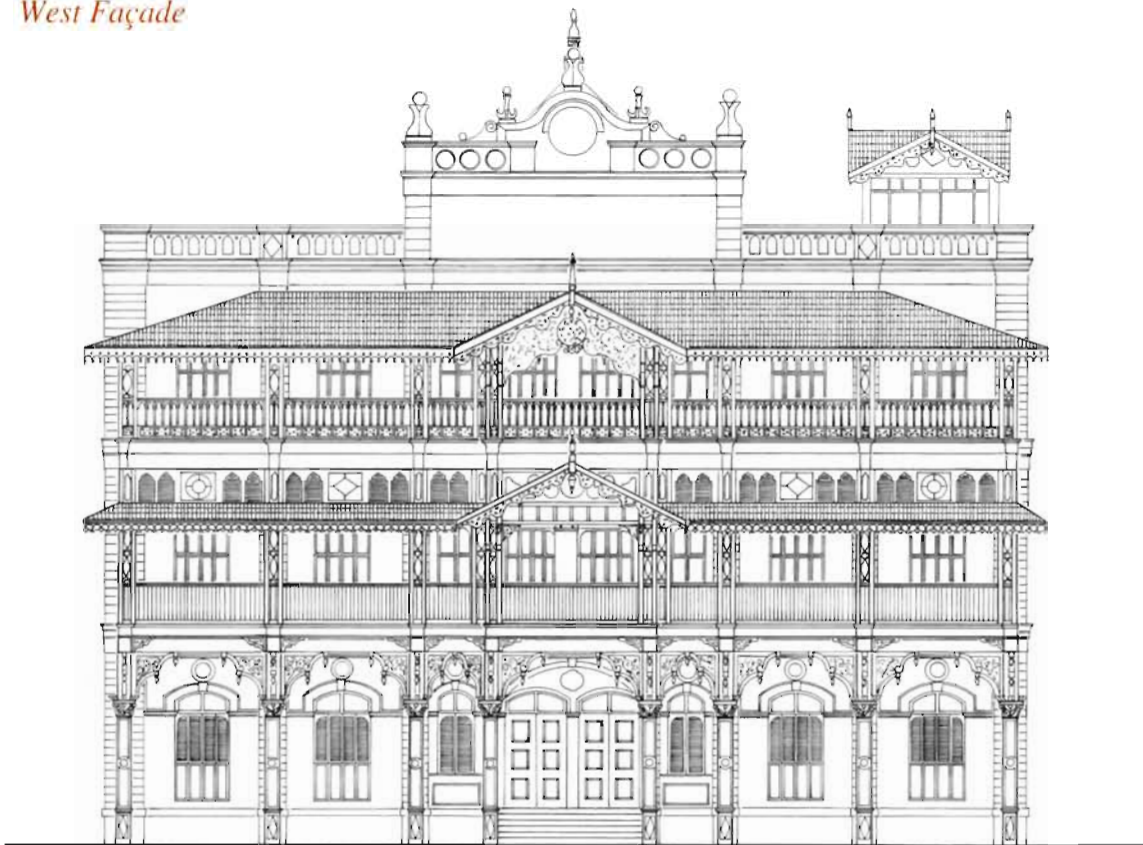
into apartments. This mixed use of the building continued until the revolution in 1964, when the occupants fled the island and the dispensary fell into disuse. As with most other structures in Zanzibar, the Old Dispensary passed into government ownership and control.

A change in government policies in 1985 paved the way for a more liberal economic development policy, and at the same time raised questions about the maintenance of state-owned building stock in the Stone Town - much of it of considerable historic value. Since the mid-1980's, a large number of houses were sold to private individuals, again with the condition that they should be properly restored. In October 1990, the Aga Khan Trust for Culture, through its local operating entity (Aga Khan Cultural Services-Zanzibar), leased the Old Dispensary from the government in order to restore this major landmark to its former splendour. After an initial phase of research, recording, and design, the construction contract for the restoration of the building was signed in April 1994, exactly one hundred years after its first completion.



Detail of the second floor balcony and tympanum.

West Façade



FROM THE OLD DISPENSARY TO THE STONE TOWN CULTURAL CENTRE

By Archibald Walls,
Conservation Architect

THE QUALITIES OF THE BUILDING

Since its inauguration about one hundred years ago, the Old Dispensary has been hailed as a symbol of multi-cultural Zanzibari architecture. Its design, its rich decoration, and its construction techniques are of exceptional quality. The plan of the U-shaped building follows a traditional pattern and is characterised by a series of rather small, mostly independent rooms arranged along interior arcades facing a central courtyard. The shape of the site was difficult to deal with, yet the architects turned it to advantage and created a stunning interior space. At ground, first, and second floor levels, the substantial piers with arched openings and prominent plaster *quoins* and *voussoirs* create a grand setting. Two bridges assist in defining the space, and the horizontal plaster mouldings accentuate the feeling of height and underscore the first-class quality

*The main façade of the restored
Old Dispensary.*



of the original workmanship. However, the tour de force is the courtyard's exaggerated perspective, produced by the side walls converging half-way along the length of the courtyard. This is suddenly reversed by one wall breaking forward to introduce a diverging line, complemented on the other side of the courtyard by the introduction of a one-storey block which narrows the space yet further.

The architects and master craftsmen also excelled in the conception and execution of the cubical reception room on the second upper floor, which crowns the cellular plan of the building, and in the elaborate balconies facing both the sea and the interior courtyard. The cubical room - with its rusticated *dado*, incised plaster wall panels, ornate plaster frieze, and painted timber ceiling - exudes an ambience of opulence, reminiscent of a royal palace. Its dimensions equal the combined widths of the rooms and corridors below and, as a consequence, it features an internal balcony (which is actually a bridge between the north and south wings), in addition to the external one. Although this small internal balcony is easily ignored, one is led to believe that the relationships set up by these balconies may have been important to the architects; they certainly provide different views and feelings than those offered by the rooms elsewhere in the complex. There is no mistaking the Indian influence of the exquisitely carved timber work on the balcony and the high quality of the plaster work. The prominent front balconies are typical features found along the East African coast and the Indian subcontinent. Incidentally, a contemporary building with similar features is known in the city of Gwadur, in the province of Baluchistan.

Environmentally appropriate climatic controls which require no maintenance are an integral part of the building design: the external and internal balconies, like the window and door designs, provide the building occupants with shelter from the heat and provide, at the same time, cooling draughts of air. During the day, as the land heats up and forms convection currents, damp and cooler air is pulled in from over the sea, and is then channelled through the balconies into the interior of the building. To some extent, the internal courtyard acts as a flue and assists the process of air circulation. At night, the direction of air movement is reversed. This natural principle for cooling air has been used for centuries, if not millennia, by people living near tropical seas, and represents a valid tool for contemporary design.



View of the restored inner courtyard, looking toward the main entrance.



The second floor balcony faces the sea and will be used as an extension to the restaurant.

The masonry construction technique used in the Old Dispensary has surprising international antecedents that can be traced back more than three thousand years. The characteristic features of this technique are that the walls were built in layers (each approximately the length of a man's forearm), and were then completely covered with a render. This had the great advantage that scaffolding was not necessary. Similar indigenous building techniques are found from the Euphrates River in Iraq, down through the whole of the Arabian peninsula, and along the east coast of Africa. The layering technique was used first in mud-brick construction. Later in its technical development, more permanent materials were introduced, such as stone and harder, gypsum-based renders. The earliest example of the technique so far identified is found in the stone gateway of a palace in Bahrain from the eighth century B.C. Intriguingly, this is also the most accomplished model, with ashlar stones on the outer face of the wall and with visible layers responding to the ashlar heights on the inner face. In the context of Zanzibar, and, we suggest, in the greater context of the East African coast, the identification of this technique is a significant archaeological discovery, because the twelfth-century mosques, houses, and palace buildings on the island of Tumbatu, which lie off the north-west coast of Zanzibar, were constructed using the same technique. In the vicinity of the Old Dispensary, there are further examples to be seen: the Portuguese masonry still extant within Zanzibar Fort, many of the old boundary and garden walls, and some of the buildings in the centre of the Stone Town.

A CONSERVATION PROJECT

Although the Old Dispensary project is often referred to as a restoration project, it should more accurately be viewed as one of conservation. The first and foremost aim of conservation must be to respect the historic fabric of the existing building, and to try to understand the different building phases. Furthermore, it must be ensured that all materials used in the works correspond to or are compatible with the original ones; particularly, the use of cement must be avoided, or minimised, as it is seldom compatible with historic buildings. At the same time, a way must be found to ensure that the building envelope is weather-tight, as leakages are the main cause of deterioration. Finally, any changes which may have become necessary during the works must be carefully recorded and identified as added new elements.

Such a process requires that a conservation audit is started, at least in the architect's mind. Any proposed change to the building must be

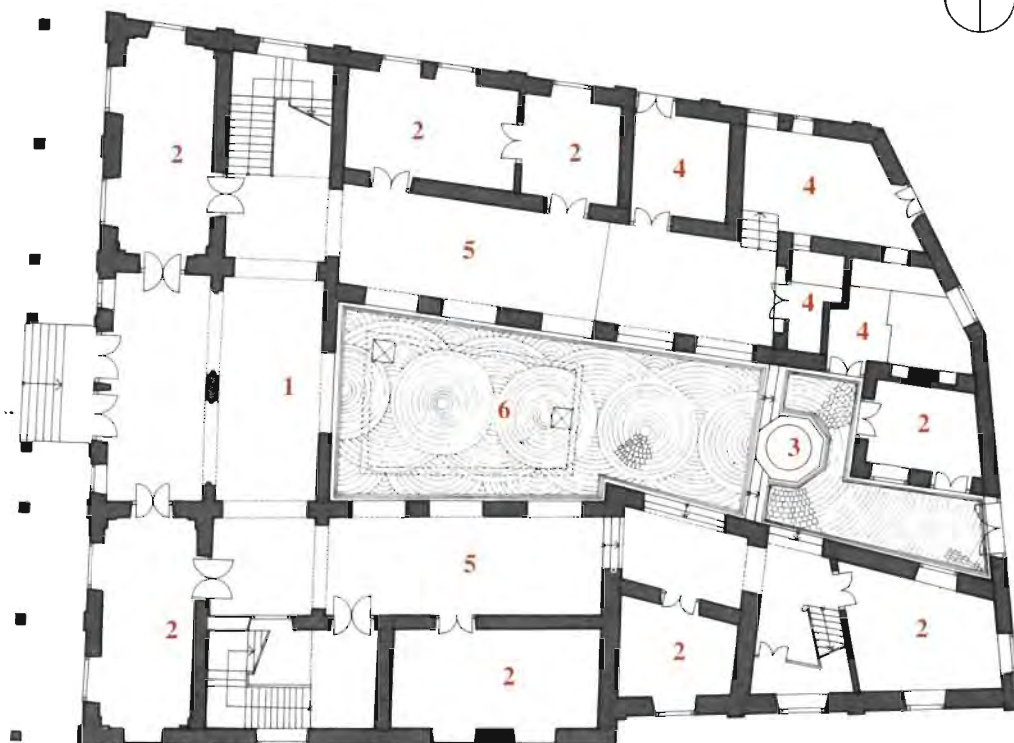
considered and judged against varying criteria: Will the change destroy, modify, or disguise historic material? Will the change destroy the aesthetic qualities? Is it appropriate or is it compatible with the building? Is it essential for the proposed purpose of the building? Having balanced the arguments for and against, a decision can then be made. In one sense, the architect is the building's main advocate - if he fights on behalf of the building, the owner and consultants will also give their support and understand the reasoning behind decisions.

In 1993, when the conservation architect first spent time investigating the building, it appeared to be in a dreadful condition. Only when the layers of paint and lime washes were removed to expose the precision of the details did it become apparent that most of the existing elements could be preserved or restored. Wholesale restoration work was only required to rectify damaged plaster work in the cubical room on the second floor where, over decades, water had flooded down through the masonry walls from the roofs, destroying the plaster cornice beyond the point where it could be effectively and efficiently preserved. In all other parts of the building, the timber-joisted ceilings were retained instead of replacing them with reinforced concrete floors and joists.



- 1. Entry Hall
- 2. Shops and Offices
- 3. Fountain
- 4. Service Rooms
- 5. Arcade
- 6. Courtyard

Ground Floor



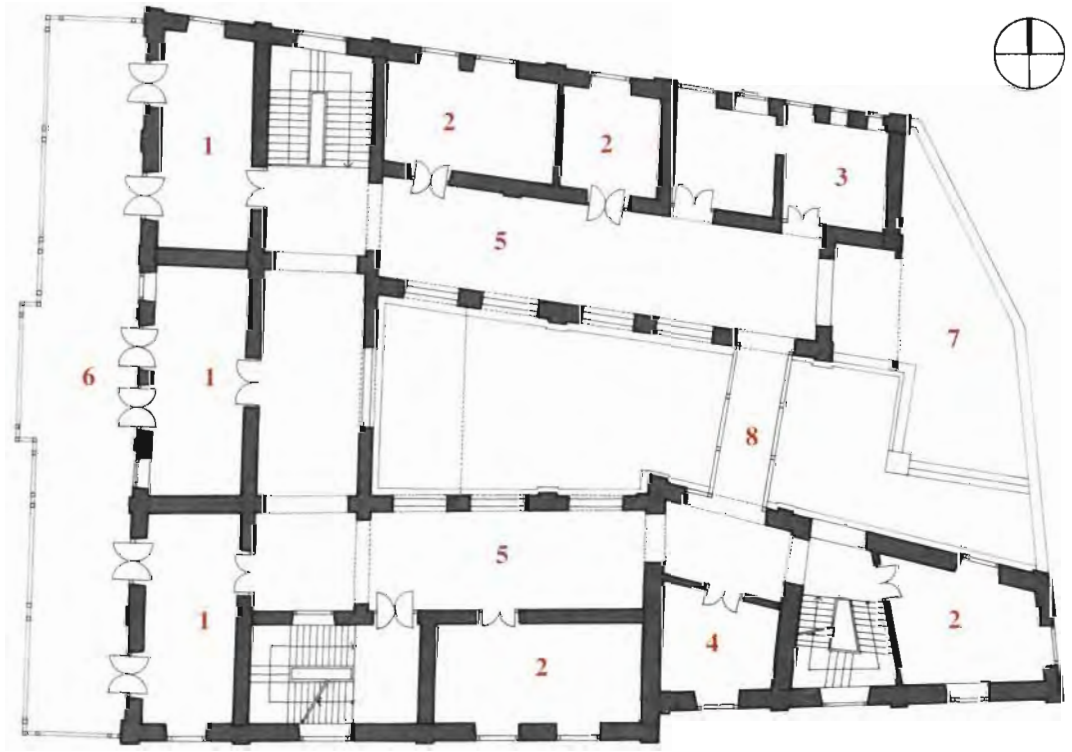


The system of lime plaster floors was re-used with selective reinforcements, as it had withstood a century of wear; the team did, however, make a concession to modern shoes by applying a resin finish to protect the plaster surface. All of the teak doors and windows were retained, and repaired where necessary by recycling old timber fragments from the original building. To the extent possible, the original plaster mouldings were made good rather than being re-run in modern gypsum plaster. Apart from service pipes, etc., passing through walls and floors, only three new window or door openings were introduced. Thus, a minimal amount of the historic fabric was lost in the change from the Old Dispensary to the Stone Town Cultural Centre.

- 1. Exhibition Space
- 2. Offices
- 3. Administration
- 4. Service Room
- 5. Arcade
- 6. Front Balcony
- 7. Rear Balcony
- 8. Bridge

All the later cement additions were removed from the walls, and repairs and additions were made using lime-based materials which closely matched the original composition. The only exception was the underground water storage tank below the courtyard, where concrete was acceptable, as it did not interfere with any of the historic fabric. Finding a suitable source on Zanzibar for the lime, and ensuring its production and quality control, took a

First Floor



tremendous amount of time and effort during the project, as people had forgotten how to use traditional materials and were unaware of their inherent advantages.

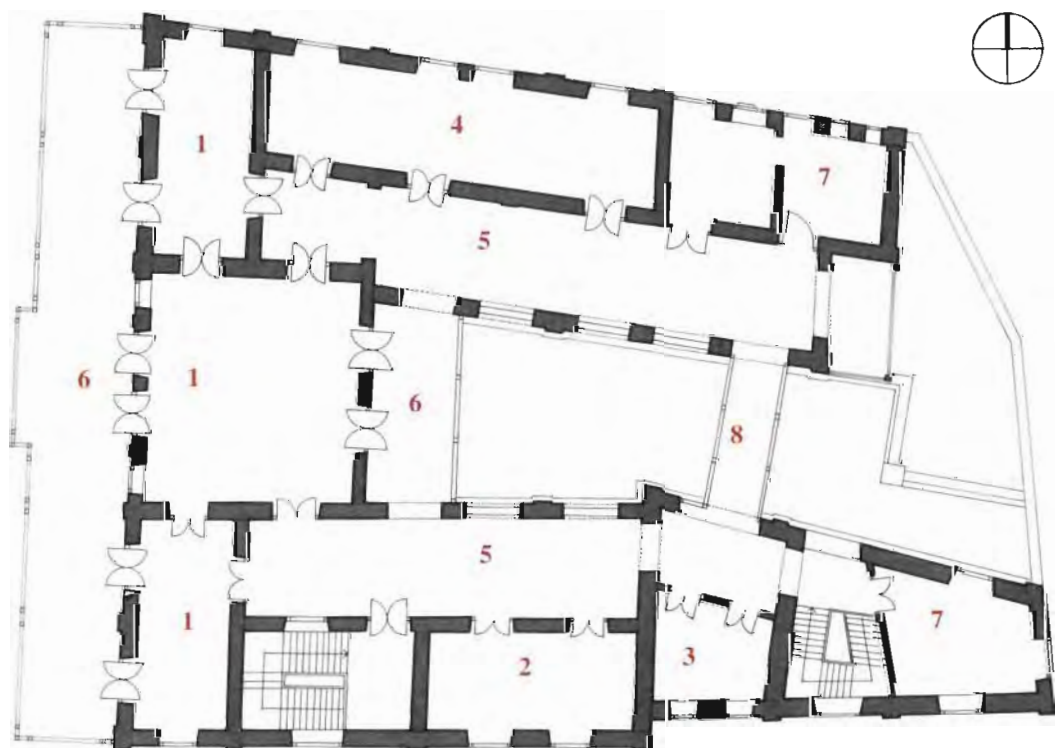
Notwithstanding the strict adherence to employing original materials and construction techniques, certain concessions had to be made in the roof area, in the interest of protecting the building. Ensuring that the roof can shed water efficiently was a crucial part of the conservation process, and implied using a well-tested, modern roofing system that would be compatible with the historic fabric and permit efficient water drainage.



Around the foot of the building, ground water had migrated up through the masonry walls and evaporated at higher levels. This physical process entails risks for the rendered wall surface and the masonry, if not controlled properly. In an attempt to overcome this problem, a waterproof skirt was introduced one-and-a-half metres deep against the foundations, with a French drain wrapped in a geotextile beside it. The drain is connected to the main drainage system, and this combination should dramatically reduce water damage over

- 1. Restaurant / Function Rooms
- 2. Kitchen
- 3. Service Room
- 4. Audio-Visual
- 5. Arcade
- 6. Balconies
- 7. Apartment
- 8. Bridge

Second Floor



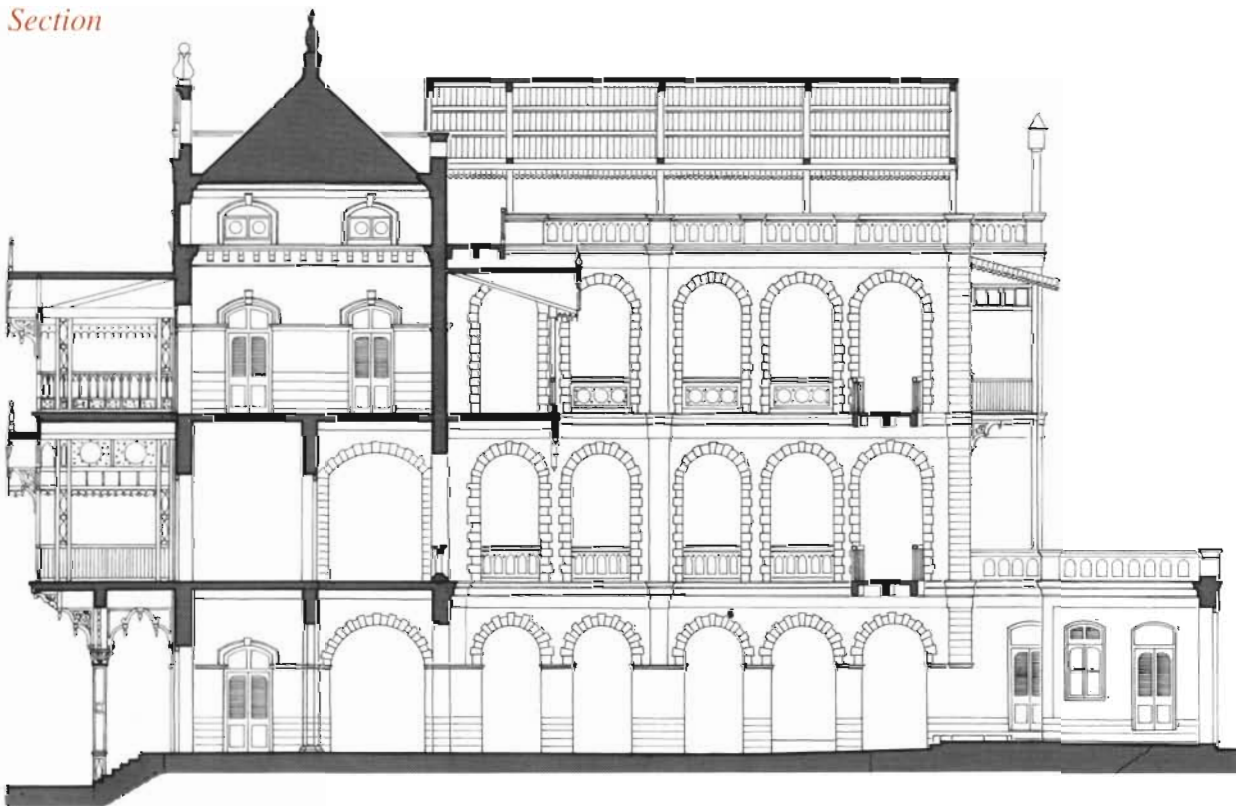


time. Since moisture is ever-present in the tropics, the preventive measures must be coupled with scrupulous maintenance procedures to minimise future water damage.

INTRODUCING NEW FUNCTIONS

In a wider sense, conservation can be defined as the re-animation of the old in the context of change. This necessarily means introducing new functions into an existing shell, functions which may be different from the original use, but which must be compatible with the original historic structure. Ideally, and especially in the case of landmark buildings, the re-use should not alter the historic features; more importantly, it should highlight the qualities of the original structure, take the best advantage of them, and make them accessible to a wider public. But potential new uses must also generate the income necessary to ensure the building's future maintenance while, at the same time, they need to preserve and promote its aesthetic and visual qualities in the context of a culturally meaningful public function.

Section

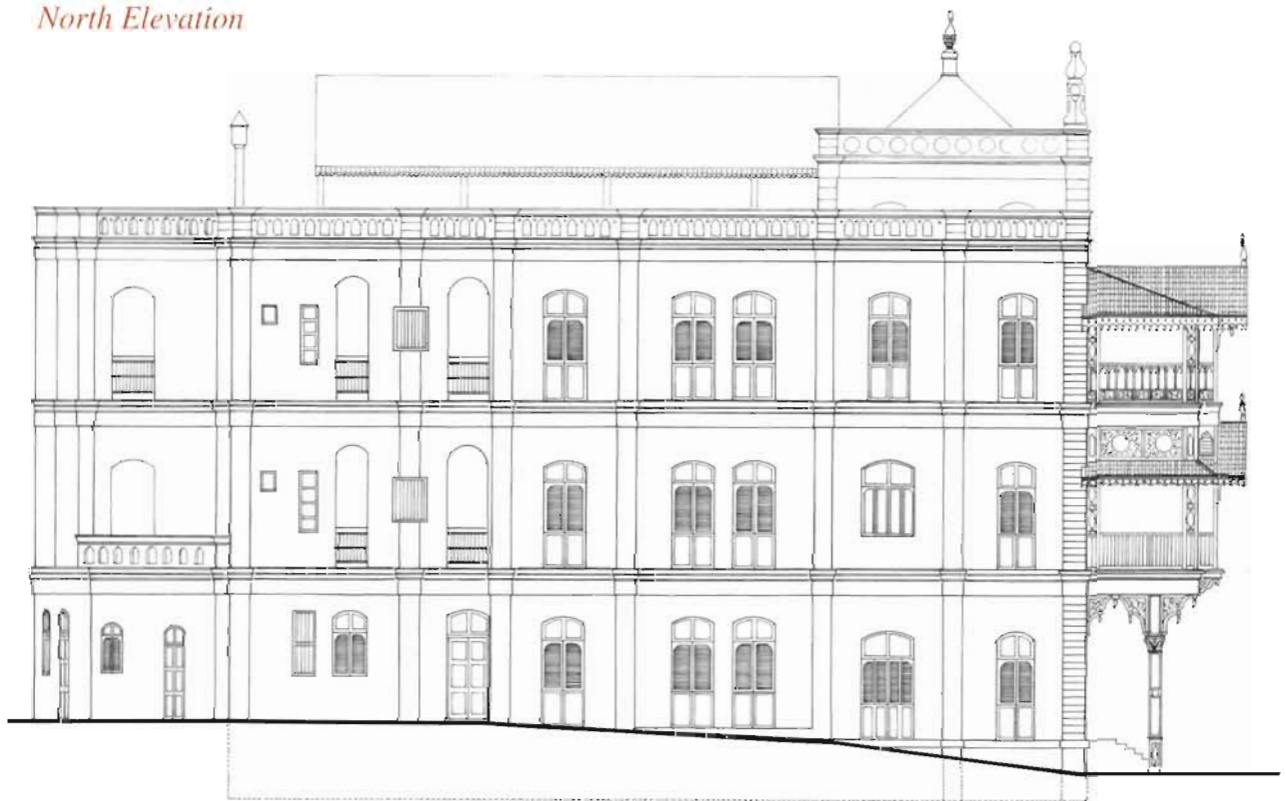


The objective of our re-use project thus was to take advantage of the ground floor courtyard as a major public space with new retail outlets and offices, and to highlight the second floor reception room and the two balconies by making them accessible - and enjoyable - to visitors. Together with the economic constraints, this eventually led to the idea of transforming the former dispensary into a combined service, retail, and cultural centre. However, new functions and tenants had to be carefully selected, in order not to conflict with the conservation aims of the restoration project.

The upper floor meeting room, with its superb views of the sea through the ornate framing of the balcony, was considered an excellent setting for a restaurant, under the condition that no part of the original decoration be changed or damaged. A small kitchen could be inserted in one of the adjacent, small rooms. The three, smaller rooms on the first floor, below the restaurant, were identified as exhibition spaces for the new Stone Town Cultural Centre, with the idea that the future cultural institution located in this building may also want to consider other appropriate spaces in the Stone Town for larger cultural events. The first floor arcades and, in some instances, even the ground



North Elevation





Detail of a sculpted plaster capital on the ground floor veranda.

floor courtyards, will allow extension of the exhibition space in informal ways. On the far end of the upper floor arcades, at some distance from the cultural centre and the restaurant, two small, double-height studios have been provided for lease to resident staff or visitors. The combination of shops and a small food and beverage outlet on the ground floor, a cultural centre and business centre on the first floor, and a restaurant on the top floor is intended to create lively interaction between a variety of public uses. The existence of two parallel staircases in the building - originally motivated by the need for different circuits for men and women - now gives the opportunity to separate the flow of visitors between the cultural centre and the restaurant, whenever necessary.

Wherever new elements were required, particular attention was given to clearly differentiate their design from the original building components. For example, the new sleeping areas and the shower and lavatory accommodations in the studio apartments very clearly demonstrate the technology and aesthetics of today's design. Likewise, the courtyard pavers are also contemporary, though they have been laid in a pattern of concentric circles to emphasise the original courtyard axis. Three ascending steps and a fountain, also new, conclude this important axis, and further accentuate the unique and exaggerated perspective of the original courtyard design. Different design approaches are also clearly evident in other parts of the building, such as for the cupboards located beneath each of the three staircases. The new cupboard details were conceived to blend with older ones, but the proportions employed clearly distinguish them from the original woodwork.

The most controversial design problem in the re-use of a historic building is the introduction of new water and service elements to ensure modern standards of comfort and hygiene. It is easy to bring water into a building, but may become difficult to evacuate it again without leakages. Avoiding such risks is therefore a major design consideration in historic buildings, and the positioning of vertical ducts has to be established early in the design process to determine where services



View of one of two main stairwells, seen through the ground floor arcade.



can be provided. In the Old Dispensary, all of the wet areas, kitchens, etc., have been located adjacent to five vertical ducts, four of which extend the full height of the building, and these ducts have also determined the location of air-conditioning units.

Night-time illumination of the Stone Town Cultural Centre, seen from the sea front.

Modern services require more space and better access, yet the necessary interventions had to be planned with minimal changes to the historic structure. The only place where a service unit could be located without destroying the building's integrity was on the roof, and a series of ducts was therefore planned to run from the roof vertically down through the building, carrying pipe-work and cabling. To minimise the intervention and ensure easy maintenance, the ducts were isolated from the rest of the building fabric, thereby minimising the risk of leakage, but also imposing a major constraint on space planning. Most of the cabling was buried in the floors, to avoid interference with the decorated walls. Air-conditioning was installed selectively, thereby reducing the required service space on the roof. Instead, most of the building will be cooled in the same way that it always has been, by the sea breeze channelled through the courtyard.

THE CONSERVATION WORKS IN THE FORMER OLD DISPENSARY

By Stephen Battle,
Site Architect

EXISTING CONDITIONS

When the Aga Khan Cultural Services-Zanzibar took possession of the former Old Dispensary in March 1991, the building was not in good condition, due to the harsh climate of Zanzibar, and thirty years of neglect. Water infiltration, combined with rising damp, lack of maintenance, and inappropriate repairs were the main causes of deterioration. On the exterior, the plaster was severely eroded, leaving exposed the rough coral block-work beneath. The front balcony tilted alarmingly, all roof areas were leaking, and tufts of vegetation sprouted in the crevices of the mould-spotted façade. Inside, most of the windows had been broken and the openings shuttered with old timber and rusting sheets of corrugated iron. Temporary screens had been thrown across corridors to subdivide

*The front façade of the
Old Dispensary in 1993,
prior to restoration.*





spaces, and rooms were piled high with refuse. Some rooms had been used as kitchens, and the smoke from the charcoal stoves had left them black, with a thick and pungent crust of carbon. Other rooms had been converted to bathrooms, by punching a small hole for water disposal through the outside wall. Streams of running water had in many places eroded the plaster and intricate mouldings.

*Condition of the sea front
façade prior to restoration,
showing the severe erosion of the
outer wall layers, and exposure of
the coralline-limestone blocks.*

The first stage of the conservation process involved the reconstruction of an idea of the original building through patient research and recording. More than 300 drawings were produced to document and analyse every elevation and the damage to the plaster work. A survey of all important elements of the building fabric was produced, including an analysis of the original materials and methods of construction. Laboratory analyses were carried out on the materials, and historical research in the Zanzibar Government Archives revealed important information about the earlier planning and uses of the building. From careful study of the collected information, the shape of the original building emerged. Thus, it became possible to distinguish new from old, and to track different types of successive interventions.

In the courtyard, for example, the main roof structure appeared to be at odds with the original geometry of the building. The support posts rest on the flat roof without much alignment to the joists below, and



Interior view of the courtyard before restoration, showing severe deterioration of the base coat plaster walls, and timber balconies.

were punched through the parapet walls around the courtyard without respect for the rhythm of the wall openings. This suggested that the main roof was a later addition, although the decision may well have been taken before the completion of the building. Evidence for this was discovered when the crust of lime wash was cleaned away from an adjacent wall, exposing the original plaster surface: it revealed a pencil sketch of the roof truss, the kind of sketch a foreman would make on site to explain a task to his carpenters. Perhaps Mr. Pordage, the Chief Engineer of the Public Works Department who took over the site, after Topan's death in 1891, ordered a complete roof thrown over the space. As this roof helped preserve the plaster on the inner façades during rainstorms and allows the courtyard to be used for purposes other than circulation, the team took the pragmatic decision to maintain it.

The recording exercise revealed other anomalies, or what might seem to be mistakes. For instance, the screens found in the ground floor arcades of the courtyard were puzzling, because although they bore some hallmarks of the original joinery work, their way of subdividing spaces and the use of cement qualified them as later additions. Then it was discovered that they were made up of missing doors from the upper floor which could now be reinstated. Another anomaly was found in the ground floor entrance hallway, where the level of the upper string course moulding on one side of a doorway is considerably higher than on the other. The continuous moulding passes through every public space on the ground floor, and most of it might have been completed by the time the foreman realised this miscalculation. The recording exercise revealed other points where the original order had been changed: some infill panels were misplaced in the angle brackets between columns and the underside of the front balcony; other panels have not been finished properly, and the relief carving has been omitted, suggesting that the building was completed hurriedly, with whatever resources were readily available. Whatever the causes, such flaws are a valuable part of the historical texture of the building.

A detailed assessment of the materials and construction methods was a critical part of the research process. The internal anatomy of the building was systematically examined, in order to establish which materials were originally used and the methods and techniques by which they had been applied. This became the basis for an appropriate and effective conservation process. In certain areas, the outer layers of walls were peeled back and incisions made; in others, parts were extracted, sifted, and categorised. Joints were located and prised open, and other elements were opened up to reveal their exact composition

and order. This process also allowed the identification of damage caused by inappropriate repairs using Portland cement, a common practise in the Stone Town. Damage was particularly evident at the base of walls, where problems of rising damp and wear-and-tear had caused severe erosion. Since cement, unlike lime, does not allow humidity to evaporate, it causes the plaster coat to crack under the accumulating pressure; water is then allowed to enter the walls, causing further damage. Whenever cement is used against rising damp, its impermeability does not actually resolve the problem; the damp simply moves higher and appears again, often in more sensitive spots. Repairs using lime are more likely to bond with the original, and whilst this does not resolve the problem of rising damp, the permeability of lime ensures that the damp will stay close to the floor and remain easier to control.



Interior detail of extensive plaster damage in the large cubical room, on the second floor.

WALLS

Most walls were painted sky-blue, the same colour lime wash used on many mosques in the Stone Town. Flakes came away easily from the wall and, underneath the outer layer of blue paint, there were six successive layers of lime wash. Water and passing hands had worn the wash away in places, exposing the fine plaster finish on the wall below. Such smooth, delicate plaster work is rare in Zanzibar.



View of the north façade in 1990, indicating large areas of failed plaster work.

Laboratory analysis showed that the finish plasters were composed of four parts lime to one part very fine aggregate; the average size of the sand particles was less than one tenth of a millimetre.

Beneath the finish plaster was another, thicker, and far coarser layer of plaster that, from a distance, appeared orange-red in colour. On closer inspection, the surface was seen to be mottled and composed mostly of earth and sand, with occasional black shards of charcoal, the residue of the kilns in which the lime was burnt. There are also small, light-brown sea-shells, which suggests that some of the sand may have been beach sand. And there are many lumps of bright white lime powder, both large and small, which were left by poor mixing. Laboratory analysis showed that the base coat plaster was composed of two parts coarse aggregate to one part lime.

Elaborate scaffolding was required for the intricate repair of the timber balconies.

The body of the walls - most of them fifty centimetres thick - was built of roughly squared blocks of coralline-limestone (or fossil coral) from the island of Unguja; the stone would have been taken from a quarry close to town. It has been used for construction along the East African coast for centuries, but it is extremely rare for boulders to be worked; more commonly, courses are built up of rough rubble, or rag. The squared blocks are packed out with large fragments of porite coral, a species of coral that inhabits the inter-tidal zone. At very low tide, the blue and green porite formations lie scattered across the sand and can be easily picked up. After drying, porite coral becomes soft and brittle, and is light and easy to cut. Large, complete corals were used as lightweight building blocks in thin, unsupported partition walls, and in some places, worked porite was used as reinforcement for mouldings¹. The quality of the building was demonstrated by the fact that although grouting was considered in the beginning, it eventually proved unnecessary, as the walls had little or no cavities, in contrast to most other buildings in the Stone Town.

Coralline-limestone is also the source of lime. Building lime, or *chokaa* as it is called in Kiswahili, is the ingredient that binds the mortar and plaster together in a durable form. It has been used in construction along the East African coast for centuries, and is made by burning rocks of coralline-limestone at high temperatures. Most lime is produced in make-shift kilns constructed from coconut palm logs and boulders. In the kiln, carbon dioxide is burnt off from the limestone, and as soon as it comes back into contact with air, it begins to take up carbon dioxide again. Over time, the chemical composition of lime reverts to stone. The burning process can take weeks, and the kilns glow red along the foreshore at night. When



the fire goes out, the kiln is broken open, and the lumps of quicklime are gathered from the core.

PLASTER MOULDINGS

No other building in Zanzibar is so lavishly decorated as the Old Dispensary. The style of the plaster mouldings is classical, and its origin probably lies in the *beaux-arts* training of the architect, Hashem Virjee Patel, and the milieu in which he worked. Patel made his designs in Bombay, which at the time was growing quickly under the British Raj. Before restoration, most of the mouldings had deteriorated. Dark fissures ran along the string courses, the applied plaster *quoins* were hollow or missing, and many of the plaster keystones had broken. Lines of rusting nail stumps protruded where mouldings had come away from the wall; the nails were originally used for the keying of the mouldings, but had corroded, causing the plaster to crack and fail. Similar wrought-iron nails were more commonly used in dhow construction, and are still made in Zanzibar in make-shift forges close to the mud flats where dhows are careened at low tide. In the large, cubical room on the second floor, the cornice was reinforced with timber battens set into the wall; these had shrivelled, and ficus roots filled the holes.

The restoration sought to preserve as many of the original mouldings as possible. Where they were too badly damaged, they had to be fully or partly replaced; new mouldings were built up using brass dowels as reinforcement. The plaster was applied in three or more layers, and each layer was a different mix. The string courses were run with a mould cut from hardwood; where the mouldings are more decorative, they were sculpted by hand. Repair of the mouldings was a major part of the restoration process, and required many skilled man-hours.



A fine coat of smooth, white finish plaster applied to a moulding.

¹ The ways in which both coralline-limestone and porite coral are used is curious. Peter Garlake, an authority on the history of the East African coast, has noted that worked coralline-limestone blocks are characteristic of mosque construction before the fourteenth century, but rare afterwards. His research has also shown that worked porite coral was commonly used to reinforce plaster mouldings before the seventeenth century, and occasionally in the eighteenth century, but not afterwards. It is interesting to observe the revival of this old technique in the construction of a hospital in the nineteenth century. See Garlake, Peter S., *The Early Islamic Architecture of the East African Coast*. Oxford University Press, Nairobi and London, 1966.



High roof level, with view of deteriorated stair bulkhead, courtyard, and roofs, prior to restoration.

FLOORS

All the original timber used throughout the building is Asian teak. The floor boards are twenty-five millimetres thick, with grooves on both sides, and are joined by tongues made of thin strips of rolled iron, a construction technique more commonly used in boat building. Where the iron had been regularly saturated with moisture, it was badly corroded; where it remained dry, it still carries the original white lead primer. The boards worked as a lost shutter for the lime-concrete screed (or surfacing) on the floor above. The screed had become worn down, and in many places, repaired with a cement skim. Indeed, the entire floor surface was a patchwork of repairs.

Lime-concrete was traditionally used for floors in the Stone Town, but here it seems coarse amidst the sumptuous plaster and timber work. It was common in the Stone Town for palaces to be finished with square marble tiles, and the House of Wonders is tiled throughout. Perhaps marble had been ordered, but then sold, as a result of Topan's premature death and the subsequent disputes over his will. Indeed, a pencil drawing was found on the original plaster surface, showing a rectangle with proportions the same as those of the surrounding space, divided into a chequered pattern that looked much like a paving layout.

ROOFS

The flat roofs were constructed in the same way as the floors, with fixed joists bearing on wall plates set deep in the walls; decking boards are laid over and nailed with iron nails, and then surfaced with a hard lime-concrete finish varying in thickness between ten and twenty centimetres. Roof terraces are a common feature of domestic architecture in Zanzibar, but are a source of many problems in a tropical region subject to ferocious downpours of rain. In the Old Dispensary, water had penetrated the roof slab at the sumps and through cracks in the surface, saturating joists and decking boards, and exposing them to rot and attacks by insects. Where the bearing ends of joists had disintegrated, they were replaced or repaired. All repairs were carried out *in situ*. Bad timber was cut away and replacement sections attached using a scarf joint and dowels. In some rooms, particularly those that had been used for washing and cooking, all the joists were damaged; here, whole sections of floors were taken away and replaced.

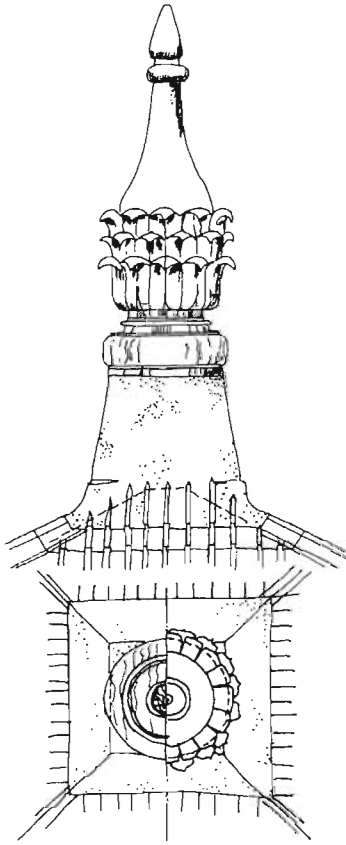
Both flat roofs were entirely dismantled. After repair of the joists, the necessary falls were created with new screed, but the weathering surface is quite different from the original. The new finish is a bitumen roofing sheet, with tiles laid over as protection, and was necessary because the condition of the second floor indicated that the original lime finish had failed.



Detail of timber pitched roof construction technique.



Roof summit overlooking the front plaza and sea front, with new terracotta roof tiles visible.



The roof over the large, cubical room on the second floor held the most surprises. It was supported by a massive, single king-post truss across the centre of the space, with a span of over seven metres; secondary rafters cross from corner to corner. The rafters and truss supported purlins, on which were laid boards and then clay tiles, and the roof drained into a parallel gutter along the base of the parapet. The defective gutter had allowed water to enter and saturate the wall. When the roof cover was stripped back, it revealed a dark brown humus in the slots where the bearing ends of the truss and rafters should have been; except for one, these had all rotted. The entire roof was being supported only by a thin timber strip-moulding applied at the junction of ceiling and wall. Eventually, the king-post truss and rafters were retained and the bearing ends were repaired with scarf joints. Steel beams were fixed under the members as supplementary supports.

FRONT BALCONY

It is important to remember that when the building was built, it stood directly on the sea front; the port area that now partially obscures it was reclaimed in the 1920's. Topan's hospital joined a select group of palaces and grand town houses along the shore, and its front balcony celebrates the generosity of its donor. The timber carving is unlike any other in the Stone Town in its sheer abundance and vivacity, and contrasts with the more restrained plaster work. Carved tendrils and stalks twist and curl through gables, flowers



Example of the fine wood-carving used extensively on the balcony and roof areas.

erupt from the brackets, and pineapples sprout from the ridges. Amidst the carved foliage, bright red, green, and blue panes of glass glitter like jewels. Eight massive columns, each one a single piece of timber forty centimetres square and over five metres long, support the principal beams running perpendicular and parallel to the façade. The foremost part of the balcony is cantilevered from the columns. Carved angle brackets, fitted with ornate in-fill panels and hung with bosses, provide lateral support between the columns and beams, and the columns rest on massive sandstone pads.

Prior to restoration, the foundations had subsided at both ends, and the balcony was listing. Debris had built up around the base of the columns, and was cleared away during the pre-construction phase of the project. But, where the spade should have been knocking on hard timber, it sunk into a mass of brown, spongy pulp: the bases of four of the eight columns had entirely disintegrated. Rather than supporting the balcony, four of the columns were actually hanging from it, and it was possible to push a hand underneath them. The repair of the balcony was one of the more daunting tasks of the conservation process. At first, a complicated and cost-intensive method to level the balcony was considered. Eventually, it was decided to use simple jacks between the individual columns, accepting that a minor tilt was part of the historic aspect, should it remain. A large, steel frame was fixed underneath as a prop, and new, reinforced concrete pad-foundations were cast. The base of each column was cut back to healthy timber, and two large wedges of solid teak were then hammered into place under the column stumps, taking the weight of the superstructure as the two slid together. The base of each column was damp-proofed with lead sheet.

JOINERY

The windows are an adaptation of a system characteristic of Zanzibari architecture: the bottom section is fitted with cast-iron rails on the inside to increase air circulation, and solid timber shutters on the outside. The centre section is fitted with louvered shutters on the exterior, preserving privacy and reducing solar gain, and with glazed shutters on the interior, which prevent rain from entering. The third, upper section is a glazed tympanum, unusual for Zanzibar. The doors vary according to function and location, but share a common set of details and finishes with the windows. Evidence of the thoroughness of the original joinery work is hidden in the walls: the arches and transoms of the frames are joined to the mullions with tusk-tenon joints. In such a joint, the spur of the tenon carries through the mullion, protruding on the outside of the frame as a tusk, and is fixed with a wedge driven into it. In this system, as the timber dried



Views of the front balcony, wood joinery, and ornament, before (above) and after (below) restoration.



The roof of the second floor balcony under repair: The roof was reconstructed in its entirety, one half at a time.

and shrank, the joints were caused to re-open and the wedge was then driven further into the tusk, tightening and re-closing the joint.

Most of the damage occurred where the timber had been saturated for long periods, allowing water to break down the natural oils in the wood. The oils repelled insects, and once gone, the timber was vulnerable to attack. Wear-and-tear, plunder, and vandalism had also taken their toll. The joinery was repaired with sound pieces of timber re-cycled from discarded elements. The logic behind the timber finishes had been obscured by later adaptations, but it was clear that finish paint had originally been applied over an original, white lead primer; where the timber was self-finishing, it was protected by teak oil. These same finishes were revived in the restoration procedures.

THE ISSUE OF TRADITIONAL CRAFTS

The restoration sought to revive as much as possible of the original construction and detailing process. This was complicated due to the impoverishment of the local crafts base, brought about by social and demographic changes in Zanzibar over the past forty years. One of the aims of the project thus was to train a group in traditional craft skills and so contribute to replenishing the limited pool of skilled craftsmen. The contractor chose to bring his master craftsmen from India, a procedure reminiscent of the original construction process, as most of the men employed to build the building originally were, like Tharia Topan, from Kutch, in north-west India.

By nature, however, traditional craft techniques are slow and time consuming. While they could not be disregarded, the constraints of budget, man-power, and time also had to be considered. All the participants in this project did their best to overcome this conflict and to optimise the results within the given framework - not an easy task. Through a series of trials, a repertory of solutions to most problems was developed: methods of repair, appropriate mixes and materials, and ways of joining, covering, and finishing were agreed upon. Each aspect of the work grew out of the interaction of professional advice, the experience of the craftsmen on site, and testing. It is hoped that the methods developed in this project can thus be of use to other forthcoming restoration works in the Stone Town.

A complex texture had been given to the fabric of the original building. For example, three grades of sand were used originally: a coarse sand

in the base coat plaster, a well-graded medium sand in the dub coat, and a very fine sand in the finish coat. Some of this sand may have been beach sand; shells are present in the base coat, and the fine aggregate in the finish coat resembles the brilliant white sand on the beaches of the east coast. Nowadays, however, sand is sold in one size only, and it is illegal to procure it from the beach. Thus, alternative strategies had to be devised to replicate the original materials. Fine sand was made by laboriously sieving other sands, and the coarse sand was produced by cutting the medium grade with a proportion of crushed coral aggregate.

Today, the absence of a discerning market has affected the quality of traditional materials, and this is particularly true of building lime, which is still used extensively on the island, but seldom handled properly. Most lime is sold in powder form, and stored in piles or bagged in old rice sacks and kept in small huts by the side of the road. It may have been quickly slaked following burning, but is then kept in the open air for as long as it takes to sell. When exposed in this way, lime begins to re-absorb the carbon dioxide burnt off in the kiln, and as it does so, it quickly loses its efficacy as a stabiliser. The restoration project imposed a greater rigour on this process, and required the contractor to become involved at every stage of production. Negotiations with the supplier took place even before the kiln was built. Slaking occurred within three days of burning in a unit specially constructed on site. The lime was run into tanks and stored as putty, and for finish coat plaster, was kept for a minimum of three months before being used, or one month for base coat plaster. When removed from the tanks, the putty was as smooth and white as yoghurt.

Most traditional buildings were built using materials close to hand, and the sand, lime, and stone used to construct the Old Dispensary building almost certainly came from the island of Unguja. The Indian teak, however, was probably brought to Zanzibar as ballast in the holds of Topan's spice ships. As the rain forests from which the original teak was taken have almost all disappeared, the teak used for the restoration had to be imported from a plantation in the Usambara Mountains on the African mainland. But the teak timber is only one part of the building's exotic patrimony, as the project team found yellow fire-bricks manufactured in Gartcraig, Glasgow; the stained glass may have come from Venice; Garrick Brothers of Glasgow made the vent-pipe fans; and the clay tiles were produced by Martin Frères of Marseilles in France. When the building was first completed, Zanzibar was at the centre of a trading network that spread across the globe, and its patron ranged further than most to obtain the materials for his building.



Lime production on site. The quicklime is slaked into cauldrons and then stored in tanks as putty until it is ready to be used.

A PLAN FOR THE HISTORIC STONE TOWN

By Francesco Siravo,
Architect and Planner

Zanzibar's sea front seen from the harbour, with the former Sultan's Palace and the "House of Wonders" to the right.

From the time the Trust became involved in Zanzibar, it was recognised that individual conservation initiatives could have a long-lasting effect and contribute to the general improvement of the historic area only if they were an integral part of a co-ordinated and comprehensive planning effort. Such an effort appeared all the more urgent in Zanzibar since the vast majority of the town's historic structures were in poor condition and dozens of old buildings had already collapsed. At the same time, scores of new buildings were being built, often replacing valuable existing structures, and more than a third of the traditional building stock had already been substantially altered. In the late 1980's, this combination of decay and uncontrolled transformation had begun to jeopardise Zanzibar's integrity, giving rise to growing concern for the future of the Stone Town and calling for sustained planning action to rehabilitate East Africa's largest historic town.



In 1992, upon the request of the Government of Zanzibar and in recognition of the Stone Town's special significance, the Aga Khan Trust for Culture's Historic Cities Support Programme joined forces with the Stone Town Conservation and Development Authority to prepare a Conservation Plan for Zanzibar's historic centre. The Conservation Plan was produced and adopted by the government in the summer of 1994, and eventually published by the Trust in 1996 as *Zanzibar: A Plan for the Historic Stone Town*. The publication is intended as a reference for administrators and professionals, and as a resource to help co-ordinate donor support and public initiatives.

ZANZIBAR'S TWO HALVES

Today, the Stone Town is the centre of the greater city of Zanzibar, located half-way down the western coast of Unguja, the largest island of the Zanzibar archipelago. As the capital city of the archipelago, Zanzibar Town is the economic, political, and cultural centre of the islands, and the administrative headquarters of the Zanzibar Government. Much of the capital's commercial and government activity is actually located in the Stone Town, which is the original nucleus of present day Zanzibar. The extension across the onetime creek was called, then as now, Ng'ambo, meaning "the land on the other side". Today, with the filling in of the creek during the early part of this century, Zanzibar's two halves are no longer physically separated, though many differences remain in the relative size and appearance of the two settlements. These differences have become more pronounced with the rapid transformation of the outer expansion areas of Ng'ambo during recent decades.

The recent development of greater Zanzibar Town must be viewed against the background of the unprecedented population growth in the urban area, especially from the late 1970's. Current estimates put the population of Zanzibar Town at over 195,000 people, and predict about double that number twenty years from now. Largely as a result of the rapidly expanding population, the total built-up area of Zanzibar Town today covers an area of sixteen hundred hectares, approximately seventeen times the size of the Stone Town.



Shop-front buildings line a narrow bazaar street in the Stone Town.



Above: A silhouette of the bandstand in the Jubilee Gardens, in front of the "House of Wonders" (Beit al-Ajjab).

Below: Roofscape view of the densely built-up Stone Town, punctuated by the spires of St. Joseph's Cathedral.



Urban development in Zanzibar Town has taken place largely outside public control, directed by an ever-expanding informal land and housing market. The result has been the progressive filling in of the older parts of Ng'ambo and the spontaneous incremental expansion of scattered new settlements along the city outskirts. Because of the rapid and unplanned growth, schools and health facilities in these areas are scarce or totally lacking, nor are there adequate market facilities and public services, a fact that augments the already excessive and unhealthy dependency of greater Zanzibar Town upon the historic centre, with thousands of people commuting daily in and out of the Stone Town. By necessity, the city cannot grow without putting ever-greater pressure on the historic centre.

It is in the light of this close and mutually unsatisfactory relationship between greater Zanzibar and the Stone Town that future planning decisions for the entire city must be considered and resolved. In the long run, only a co-ordinated and integrated approach to planning and managing all of the urban area can guarantee both balanced growth for greater Zanzibar and the preservation and appropriate development of the historic Stone Town.

AN UNCERTAIN FUTURE

Prior to formulating the present Conservation Plan, a comprehensive survey of the population, land and building use, infrastructure, and the buildings themselves was carried out in 1992 throughout the Stone Town. The data collected provided an updated picture and revealed the full extent of the changes and pressures that had developed since the last physical survey was carried out by UNCHS Habitat (United Nations Centre for Human Settlements) in 1982. The results of the 1992 survey showed contradicting trends and pointed to an uncertain future for the Stone Town.

Among the positive trends identified was the manageable growth of the historic area's population, which promises to increase only slightly from its present 16,000 to approximately 18,000 people in the year 2018. A static population, combined with the liberalisation of the economy and further increase in private ownership of land, could lead to a general upgrading of the town's building stock. At the same time, there remains a large amount of high quality land and buildings in public ownership: as the single largest landowner, the government remains in the best position to play the leading role in the development of the Stone Town's planning and conservation efforts. This role may

Conservation and Development Plan



be enhanced through donor funding and direct government involvement in the planning of the town's major public areas, including the port and the central market.

Another positive aspect is the considerable size and relative integrity of the town's historic urban fabric. More than forty percent of the old buildings, though in poor condition, are still preserved. This stock of houses constitutes a sound foundation upon which to build a comprehensive conservation programme which can have a positive



This view of the interior of the Stone Town shows that Zanzibar's traditional urban landscape, though in poor condition, is largely intact and worthy of preservation.

impact on the economy of the town as a whole. Finally, the Stone Town has a well designed and fairly solid, if derelict, infrastructure system. This system can still be repaired and upgraded without seriously disrupting the surrounding historic buildings.

Despite these positive aspects, one must consider the negative pressures on the Stone Town which are likely to increase with the anticipated rapid population growth in the rest of Zanzibar Town. This growth will undoubtedly lead to a demand for more commercial and service activities as well as increased government use, all at the expense of residential use in the historic area. More public offices and expanded commercial use will, in turn, increase the number of commuters as well as raise the amount of goods flowing in and out of the central area, exacerbating the already difficult traffic and parking problems in and around the Stone Town.

Further negative aspects that must be addressed are the continued lack of maintenance and the resulting deterioration of most buildings, open spaces, and public infrastructure. Funding for the upkeep of government-owned structures is very scarce, and maintenance has often been neglected in the face of more pressing social problems. Private funding for rehabilitation work has also been limited, in part because tenants' and owners' doubts about their tenure persist, and in part because rent levels are generally too low to support any maintenance or



improvement of the houses. The physical condition of the traditional building stock throughout the town has now reached a critical point, with over eighty-five percent of structures in deteriorating or poor condition. Although these buildings are resilient, their past performance cannot be considered a guarantee of their future endurance.

Prolonged structural decay combined with uncontrolled new development will most certainly and irretrievably change the appearance of the Stone Town.

Equally serious is the quickening pace of uncontrolled and inappropriate construction. This trend is in part the result of pressure from expanding households for discrete living spaces. Uncontrolled development is likely to escalate and result in ever more radical transformations, and the eventual loss of traditional buildings, as an increasing number of residents take it upon themselves to partition, alter, add onto, or demolish and replace the traditional buildings with new structures. More and more radical alterations must also be expected as a result of the on-going and foreseeable expansion of private commercial activity, often fostered by misguided notions of progress.

If left unchecked, there can be little doubt that the combination of neglect and uncontrolled new development will erode the traditional structure and appearance of the Stone Town. Aggravating these threats are the persistent problems of an unclear system of land tenure together with an unsatisfactory institutional setting that has impeded the development and application of consistent policies to manage the



Above: Still standing at the northern end of the sea front, an outstanding group of massive Omani courtyard houses.

Below: Elevation of the Forodhani sea front, from the Banyan Tree to the "House of Wonders", showing the proposed improvements.

historic area. In the face of these problems and uncertain prospects, a new planning framework for the historic area was urgently needed, both to enhance the opportunities for positive intervention and counteract the negative trends discussed above.

A NEW PLANNING FRAMEWORK

Following the completion of the survey, the joint team of the Aga Khan Trust for Culture and the Stone Town Conservation and Development Authority initiated work on the Conservation Plan for the old city. Phase one covered preparation of the draft plan. During the subsequent review period, the draft was circulated among government departments and constituencies. Comments and



amendments were then incorporated during phase two, which led to the preparation of the advanced draft of the plan that was eventually submitted to the relevant public bodies for final approval.

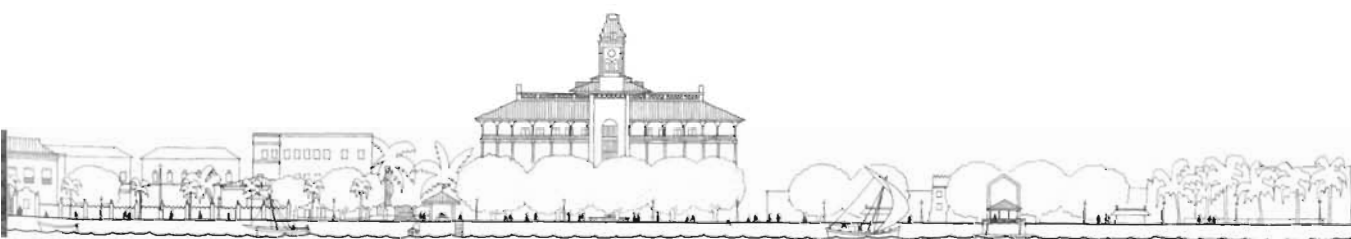
Throughout the planning process, general guidance was provided by Zanzibar's Ministry of Water, Construction, Energy, Lands, and Environment in close co-ordination with the various government planning authorities, including the Director of the Stone Town Conservation and Development Authority, the Chief Town Planner, members of the Commission of Lands and Environment, and representatives from the Municipal Council. The plan's technical documents were prepared by a joint team comprising seven staff members seconded by the Zanzibar Government and six consultants engaged by the Trust. The planning team's work was organised in such a way as to lay the foundation for the establishment of a permanent planning office, which would then also be able to monitor the implementation of the plan over the long term and advance detailed planning work.

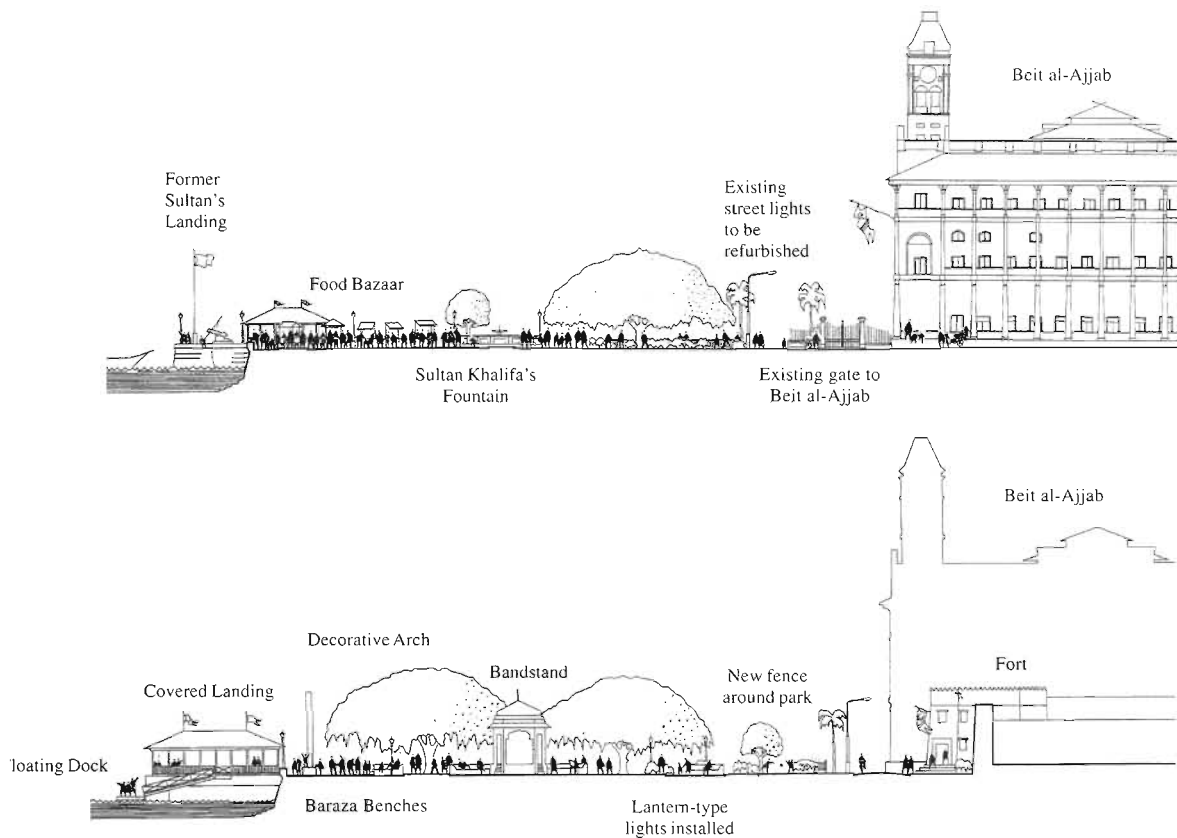
The Stone Town Conservation Plan, approved by the Zanzibar Government in July 1994, comprises the built-up portion of the Stone Town and the open areas along its eastern border, as well as the older part of Darajani Street. It pursues its objectives through two distinct but complementary levels of action.

The first level was the establishment of a *general planning framework* which establishes the broad conservation and development policies for the Stone Town. This includes controls on the use and development of land, measures to protect individual buildings, street elements, and open areas, as well as measures to develop and improve parcels of land and other larger spaces in the central area. The planning framework also includes a set of measures designed to improve parking and circulation of vehicular traffic in and around the Stone Town, and incorporates the principal



The clock tower atop the "House of Wonders" has served as the island's major landmark since it was added to the building at the turn of the century.





Two cross sections from the sea front action area, with the proposed re-landscaping of the gardens into three distinct parts: play area, passive park, and food bazaar.

schemes which have been planned by the relevant government agencies to improve public utilities and infrastructure.

The second level of action was the identification of areas to be upgraded within the town, and the development of preliminary planning proposals for four *action areas*. The latter correspond to the most critical parts of the Stone Town which are presently suffering from conflicting pressures and urgently require an integrated and comprehensive planning approach, combining conservation and adapted development components.

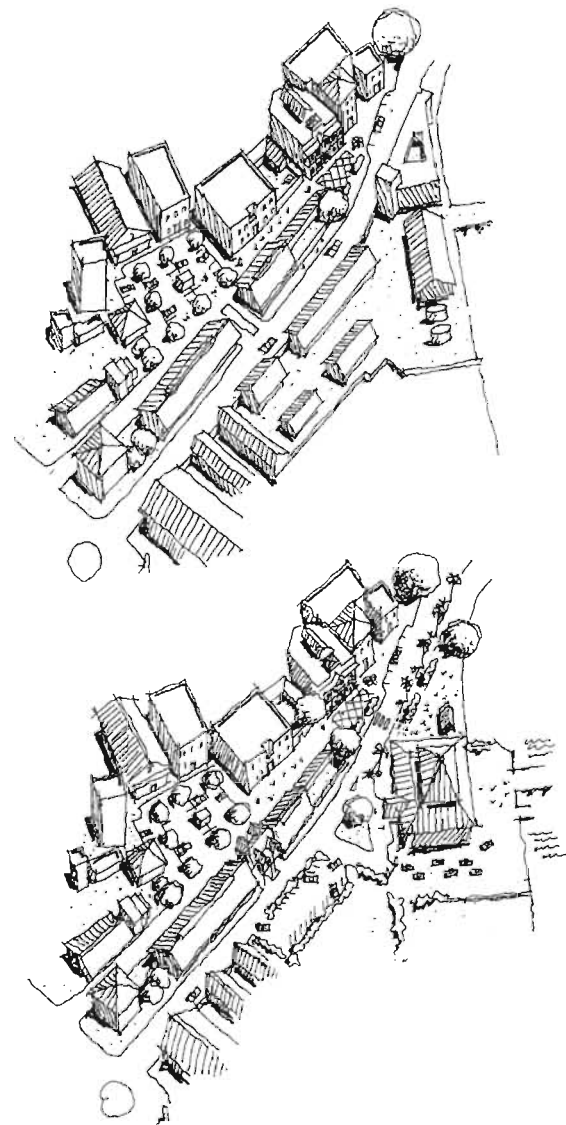
The studies developed on these two levels were synthesised into specific recommendations, guidelines, and proposals, as well as maps and proposals covering land use, conservation and development, future traffic and parking, and infrastructure. The maps are complemented by a new set of building regulations. The plans and proposals should be considered as complementary elements of a single planning strategy. Together, they constitute the basic tenets of the Conservation Plan, as documented in the book *Zanzibar: A Plan for the Historic Stone Town*.

THE ACTION AREA PLANS

Within the general planning framework, the development of detailed planning programmes for four of the Stone Town's major public areas provided an opportunity to address in greater detail a number of key problems which affect the entire town. Moreover, the detailed schemes for these action areas were intended to stimulate official interest and public support for the Conservation Plan as a whole, and offer a model for future interventions in other critical parts of the town.

The four areas earmarked for detailed planning - the sea front, the port entrance, the Central Market, and a proposed commercial area in Malindi - are outlined below.

- First, *the sea front*, with its outstanding buildings and generous open space would be reorganised to enhance its use as the town's major social, cultural, and recreational amenity. The proposals for reorganising the sea front focus on arresting the general deterioration of the area, on resolving potential conflicts of land use, on using spaces more efficiently, and on improving the appearance of the sea front for the benefit of the entire community. The Conservation Plan proposals do not suggest radical changes. Rather, they seek to enhance and support the area's character as well as the lively range of existing activities through a programme of priority repairs and improvements to the area's infrastructure, circulation, building façades, landscape, and street furniture.
- Second, *the redevelopment of the port*, which is being sponsored by the European Union, foresees a new passenger terminal away from the cargo handling facilities, an opportunity to add an important amenity to the town and to restructure the go-downs (warehouses) in the port area. The Conservation Plan foresees a three-stage programme of gradual transformation. The port project was harmonised with the surrounding fabric in order to improve pedestrian access to the town, re-integrate the harbour and northern sea front with the rest of the town, and stimulate a general revitalisation of the upper portion of Mizingani Road.
- Third, *the rehabilitation of the Central Market*, with possible financing from the United Nations Capital Development Fund (UNCDF) and the potential of generating more investment from private sources, could lead within a short period of time to the complete reorganisation of the town's major commercial and transportation hub. The detailed proposals for the market area, developed as part of the



Two sketches of the port entrance action area.
Above: the existing situation.
Below: the proposed scheme which calls for a new public square and passenger terminal.

The future of the old buildings cannot be separated from the needs of the people who live and work in them. Public participation will be fundamental to implementing the Conservation Plan.



Conservation Plan, took into account UNCDF's recommendations and sought to address the reorganisation of both sides of Creek Road: the retail system on the western side, with its meat and fish market, sheds, open vending areas, and shops, and the transportation hub on the opposite side of Creek Road, with its terminals and parking, concourse and auction space, containers, and informal vending areas.

- Fourth, *the establishment of a new commercial and mixed use area in Malindi*, along the north-eastern edge of the Stone Town, which would provide a convenient alternative to the present pattern of haphazard and piecemeal commercial developments. Present facilities are often poorly sited, harmful to the historic properties, and lack appropriate car parking areas. In developing the proposals for the commercial area in Malindi, an attempt was made to design contemporary structures which are coherent, and physically and visually compatible with the surrounding historic fabric, while fulfilling the current needs of businesses and commercial operations.

For each of the four areas, the preliminary design schemes prepared as part of the Conservation Plan suggest concrete ways in which specific issues can be resolved in the short and medium term, taking advantage of existing as well as potential donor interest.

PARTICIPATORY PLANNING AND IMPLEMENTATION

The conservation and future development of the Stone Town cannot be tackled at the planning level alone. The measures foreseen by the Conservation Plan can become operational only when they are sustained by political will and public support, backed by the necessary legal and institutional framework, and implemented through effective urban management.

The involvement and active participation of public institutions, constituencies, donors, and private groups active in the historic area have been essential in preparing, reviewing, and endorsing the Conservation Plan, but will need to be reinforced and expanded during the implementation phase. Public participation and partnership arrangements in Zanzibar can be developed in many different sectors. A number of initiatives and proposals have been discussed and could rapidly be developed to stimulate private investment from the business sector, involve government tenants in the improvement of government housing, rehabilitate historic buildings as public facilities, and better the delivery of public services. Although individually these initiatives can only have

a limited impact on the town as a whole, strong action at the general planning level, combined with careful co-ordination between government institutions and external organisations, and sustained dialogue with the historic area's community, can bring about a climate of confidence and trust, and thus the consensus needed to act.

This requires that the Stone Town Conservation and Development Authority, recently designated as the principal public institution responsible for the historic area, pursue its mandate actively and effectively. At the implementation level, the Authority will have to determine the priority and complementary actions needed to achieve the Conservation Plan's objectives, identify resources and possible partners to carry out the desired programmes, and assume the role of broker to promote initiatives and mediate between the different groups, constituencies, and organisations active in the historic area. In terms of management, it means striving for an efficient and fair administration, ensuring - either directly or through other parties - the monitoring of building activities, delivery of services, maintenance of public structures, and unbiased control of resources and public spaces in the best interest of the entire community.

AN AGENDA FOR ACTION

No plan is ever final. If it is to serve the town over time, it must be flexible enough to respond and adapt to changing circumstances and requirements. While open and responsive, however, a plan must also promote and stimulate concrete actions today in order that the planning process may be carried toward implementation as rapidly as possible. The following agenda summarises the actions and priority issues to be addressed in Zanzibar in the immediate future.

Institutional strengthening, by building up the capacity of the Stone Town Conservation and Development Authority's technical staff and advisory committees to enable the Authority to carry out its expanded mandate.

Land use controls and protection of the Stone Town's traditional fabric, by promptly reviewing and ruling on building applications, monitoring private and public construction activities, enforcing the sanctions indicated by the law in case of abuses, and providing free pre-construction advice.

Building repair and maintenance, by promoting public awareness and practical training in conservation, establishing public policies, and providing incentives to repair and maintain residential and public buildings.



The sensitive adaptive re-use of historic buildings can attract private investment and provide economic development opportunities for the townspeople.

Traffic and circulation control, by putting the traffic regulations indicated in the Conservation Plan into effect and positioning indicative street signs and other regulatory devices dealing with parking restrictions, speed limits, and the banning of trucks in the historic area.

Infrastructure improvement, by ensuring co-ordination between the ongoing and planned infrastructure improvement programmes for water, sanitation, and electricity; and monitoring the nature of interventions and the selection of materials to be sure these are environmentally sensitive and aesthetically appropriate to the Stone Town.

Delivery of services, by reviewing the principal shortcomings and difficulties of operating public services as well as the problems related to staff training and management and collecting revenues.

The revitalisation of Kelele Square, a key open space, is an example of private development interests and public sector working together to upgrade an area according to the recently adopted Conservation Plan.

Upgrading of specific action areas, by clarifying the respective roles and responsibilities of the government offices concerned, by confirming the briefs and design options presented in the Conservation Plan through further consultations with the concerned public offices, private interest groups, residents, and users; and by promoting negotiations with donors and other prospective partners to determine the modalities of financing and phasing of identified projects.



Mobilisation of resources, by exploring either directly or in co-ordination with other agencies and institutions (or on behalf of groups of residents and users), the possibilities of increasing direct revenues by raising capital from external donor and private sources in the form of grants, loans, and joint venture agreements, and by activating self-help capabilities and private sector initiatives with the participation by residents and other groups in the Stone Town.

The above-summarised agenda, illustrates the wide range of issues to be addressed as well as the different public and private entities and interests that are likely to be affected by the Conservation Plan's implementation. Although many of the actions identified come under the responsibility of other government offices, it is the Stone Town Conservation and Development Authority that will have to provide the essential stimuli and co-ordinate the different planning activities over time. Donors, non-governmental organisations, political constituencies, community groups, religious entities, professionals, users, and private individuals can and should also play a role in the implementation of the different actions envisaged by the Conservation Plan. Their support and active participation will gain momentum as positive results and direct benefits to users and residents become apparent. Both the public administration and the private sector have much to gain from a thriving, well maintained historic area, and both can contribute in very important ways to its improvement.

The proposals contained in the newly-approved Conservation Plan provide the necessary framework to create a living and working environment in the Stone Town that is in line with Zanzibar's traditional urban character and attuned to contemporary requirements. These proposals are both realistic and achievable: realistic because they are based on an in-depth review of the current situation and, as such, are designed to enhance and build on the potentials and positive trends identified in the Stone Town; achievable because the majority of the measures proposed do not require the implementation of far-fetched programmes or complex technical measures. What is required is a shift in attitude - a more sensitive approach to the Stone Town's fabric, based on a recognition of the specialised nature of conservation action, a reorganisation of the institutional arrangements and administrative procedures, and better overall co-ordination of investment and planning activities. Ultimately, it is only through concerted and continued effort at all levels - political, institutional, economic, technical, and community - that the present cycle of deterioration and unplanned change can be stopped and a process of conservation and sustained development for the Stone Town begin.



The massive, carved wooden doors are one of Zanzibar's most characteristic architectural features, and have been designated for protection in the Conservation Plan.

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KELELE SQUARE/ OLD DISPENSARY EXTERNAL WORKS:

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