Population of Zanzibar: 220,000
Population of Ng’Ambo: 12,000

Square kilometres:
- Zanzibar: 62
- Ng’Ambo: 1.1

Population density:
- Zanzibar: 3,548 people per square kilometre (14 people per acre)
- Ng’Ambo: 9,000 people per square kilometre (45 people per acre)

Urbanisation rates:
- Zanzibar: 26%
- Ng’Ambo: 41% rate of annual urbanisation

Other statistics:
- People below poverty line: 41%
- Average age of population: 53
- Percentage of population Muslim: 99.9%
PROJECT DESCRIPTION

This framework provides a vision for the mandatory buffer zone surrounding the UNESCO World Heritage Site of Zanzibar’s Stone Town.

This is a project spin-off of a larger study documenting elements of Outstanding Universal Value in Zanzibar’s Stone Town, the project team was initially required to provide regional analysis of the precinct surrounding the UNESCO world heritage site to facilitate consultants to prepare alternative frameworks for the buffer zone. At the project team’s urging, this two week project grew into a fully fledged proposal for the development precinct.

Context
Set 25 km [16 miles] of the Tanzanian mainland, Zanzibar’s Stone Town precinct is world renowned for both its built and natural heritage. This fact is borne out by the precincts’ recent recognition by UNESCO as a World Heritage Site. This, combined with the fact that the Stone Town area is the major economic, tourist and governmental node of the city, creates a huge demand for new development in and around the heritage precinct.

Until the 1950’s a creek separated the historic core of the city from its surrounding neighbourhoods. As a result of the 1923 British Lancaster Master plan, the creek was filled and drained, with the addition of two major routes in the city. This crossroad became the city’s major economic and transit node, growing into the city’s market area.

Flanked to the west by the well defined historic Stone Town, the space leaks out to the east into a series informal single use residential neighbourhoods, punctuated with 1960’s East German Plattenbauten [5 storey linear apartment blocks] set along the road to the interior of the island.

Goal
The project was devised to provide a transitional space between the historic dense Arabic core and the start of its sprawling suburbs. This 1.2km [0.75 mile] long precinct currently forms the only large open space in the city core.

While introducing a buffer between two precincts with vastly different characters and urban fabric, the primary goal was to reintroduce the historic links between the neighbouring precincts. These connections have been re-established in order to facilitate place making in an area of ecological importance.

As the residential area adjacent to the green open space grew organically from a squatter settlement, no provision was made for formal water supply to each residence. A series of communal taps were installed in the 1960’s, forcing inhabitants to walk in order to collect water.

These water points have been identified and individually redesigned to become the heart of each smaller district in the neighbourhood. Religious and public building have been proposed on the Maji Maraba [water squares]. By linking the points along the established routes in the neighbourhood, densification from single residential units to multi-storey row houses have been suggested. Schools, green productive and recreational spaces are provided in the courtyards created by the new building typologies.

This project should be seen as a series of focused small scale developments rather than a single developer-owner scenario. This implies that one or two existing buildings can be demolished and a new row-house building developed, without excessive disruption to its neighbours. This incremental development approach will also ensure that the entire community does not disintegrate during construction.
Development patterns should not blur or eradicate the edges of the metropolis, while development within existing urban areas conserves environmental resources, economic investment, and social fabric, while retaining marginal and abandoned areas.

In addition to the re-establishment of historic links, a series of layered thresholds have been proposed linking the project area with its surrounding neighbourhoods. The intention is to create a context derived transect, commencing at the redesigned green open space and culminating in a neighbourhood square. In order to maintain the integrity of the urban park, strong coding guidelines have been set up to provide the area with well-defined edges. These buildings respond to the adjacent markets by providing much needed market stalls on ground floor and office space and residential functions on the three floors above.

The development and redevelopment of towns and cities should respect historical patterns, boundaries, and continuity. The re-establishment of historical movement patterns and links allow users to interact in a familiar way with the built environment.

By utilising precedents from the neighbouring UNESCO World Heritage Site, the project retains the character of Stone Town rather than create an historical pastiche. An incremental development framework, context-derived building typologies and courtyard spaces ensures a coherent and recognisable genius loci. The re-establishment of historical movement patterns and links allow users to interact in a familiar way with the built environment.

Many activities of daily living should occur within walking distance, allowing independence to those who do not drive, especially the elderly and the young. Incremental development frameworks should be designed to encourage walking, reduce the number and length of automobile trips, and conserve energy. Appropriate parking / market squares have been provided on the periphery of the project area, thus ensuring pedestrian orientated streets. Typologies taken from the historical city core are proposed, with commercial functions on the ground floor and residential units above. Religious, educational and other public buildings clustered within walking distance of each other on the redesigned Maji Maraba [water squares].

Preservation and renewal of historic buildings, districts, and land-uses affirms the continuity and evolution of urban society. A comprehensive survey of the existing buildings in the project area was completed as part of the initial analysis. Buildings and spaces of historical, urban and cultural value were identified and included in the preservation framework. These buildings and space provide the neighbourhoods with a historical grounding and sense of community.

Within neighbourhoods, a broad range of housing types and price levels can bring people of diverse ages, races, and incomes into daily interaction, strengthening the personal and civic bonds, essential to an authentic community.

Concentrations of civic, institutional, and commercial activity should be embedded in neighbourhoods and districts, not isolated in remote, single-use complexes. Schools should be used and located in close proximity to enable children to walk or bicycle to them.

Cluster around the Maji Maraba [water squares], schools and other community facilities have been provided within walking distance of areas of residential density. Placed as focus points on each square, these facilities form entries to semi-private courtyard spaces, ensure adequate spill-out recreational spaces.
LESSONS LEARNED

1 Climate as informant for urban form
Shaded streets, narrow buildings and arcades ensure that hot and extremely humid days are made more comfortable. Shaded or water filled courtyards increase comfort levels in a region with limited access to electricity and air conditioning. The application of these historic principles allow buildings to operate at lower energy consumption rates and decreases the dependency on fossil fuels.

2 Low car ownership as informant for urban form
At 7 automobiles per 1000 inhabitants, Zanzibar has one of the lowest private car ownership ratios in the world. This, combined with the narrow streets of Stone Town endowed the inhabitants with a low reliance on private cars and facilitated in the development of a comprehensive [informal] public transport system.

3 Religion as informant for urban form
An increase in the intimacy gradient required as part of Muslim religious rituals are expressed in structure of the social spaces surrounding mosques and other religious buildings. This transition through a series of thresholds informed the design of the social spaces and the Maji Maraba [water squares].

4 Productive landscape as informant for urban form
A strong relationship exist between the citizens of Zanzibar and their surrounding productive landscapes. The fish, vegetables and starch which form the basis of most Zanzibar’s diet are produced and harvested within 10 km of the city centre. As residential densities increase, productive space need to enlarge and should be included in the region’s open space network.

5 Service infrastructure as informant for urban form
A indirect result of the 1960’s government program installing communal water taps in the Ng’ambó precinct, a series of small social spaces developed around each. Different in character, several small community and religious facilities developed in close proximity to each.

This project identified each water point, analysed the surrounding social space, and suggested a context specific re-design as well as the development of amenities on these squares.

By linking each square, a guideline was developed in order to density commercial and residential functions along these routes.

6 Family structure as informant for urban form
An extended family structure, with up to three generations living in a residential unit, is the norm in the Zanzibar city centre. As these units are on average quite small, the streets and square becomes social spill-out spaces. This ensures a very high level of passive surveillance and necessitates well designed exterior spaces.

In addition, live/work units from part of the traditional building typology. These mixed use buildings further decreases the city dwellers’ dependence on private transport.

05 06- Panoramic View of Green Market Edge
07- Panoramic of Existing tap / water square settlement
08- Panoramic View an existing Green Buffer Settlement edge
PROBLEM STATEMENT

09 Existing settlement pattern

10 Proposed Government settlement pattern

11 Proposed project settlement pattern
CONTEXT

Ng’ambo project area: Re-establishment of Historic links

B-1  
B-2  
B-3  
B-4:

Stone Town Precinct: Figure Ground
Ng’ambo Precinct: Figure Ground
RECOMMENDATIONS

12 Mapping of Current Movement Routes

13 Identification of community and social centres

14 Re-establishing historical connections

15 New connection
NEIGHBOURHOOD VISION

3D view of proposed project green buffer vision

Section through Stone Town through to Ng’amba
10/ Neighbourhood Vision

1. Define urban park edge
   The adherence to the coding will result in a series of 3 - 4 storey buildings forming an interactive, mixed-use edge to the new urban park. In addition, these buildings form a filter into the surrounding neighbourhoods.

2. Community facility
   includes religious buildings such as mosques and churches along with community centres and other public amenities.

3. Darajani street upgrade
   In order to increase easy permeability, permeable pavement surfaces allow pavement level pedestrian crossing and forced traffic to slow down.

4. Reinforce link to Stone Town
   Link the new urban park to Stone Town by creating a foyer space, re-establishing the tree line and providing a level crossing surface ensuring a pedestrian - orientated space.

5. Rehabilitate street tree line
   The planting of the avenue trees are encouraged to reduce the over-powering impact of the 6 storey East German housing block to an acceptable pedestrian scale.

6. New covered market
   establish a new covered marketplace to house the current traders, this building should form the edge of a new square.

7. New city Square
   establish a new city square as part of the green open space to form a transitional zone and entrance to the historical Stone Town.

8. Christ Church link
   the new square is used as a link to the existing Christ Church Cathedral with the use of permeable surfaces and continuous tree lines.

9. Community Sport facilities
   include sport fields - formal and informal- in the planning of green open space.

10. Existing park upgrade
    existing playgrounds and parks are retained and re-used with upgrade of surfaces, equipment and facilities.
STREET VISION

16  16- Existing settlement pattern of Ng’ambó

17  17- Exploded View of Design Process

18  18- Project proposal green courtyards + public buildings

19  19- Project proposal settlement pattern with water squares
1 Maji Maraba  
Informal spaces around existing water taps are developed into social and spill-out spaces.

2 Public Buildings  
Includes religious buildings such as mosques and churches along with community centres and other public amenities.

3 Public Market + Parking  
Utilising the cyclical nature of parking areas and market spaces, a courtyard with permeable paving becomes a night parking area and daytime market spill-out space. Edged with 3 - 4 storey buildings, users’ commercial need as satisfied and ground floor, with residential units on the subsequent floors.

4 Productive green space  
Forming part of the larger green space network, these spaces allow for the continuance of traditional cooperative food production.

5 Public green space courtyard  
These semi-public green spaces allow for safe and secure activities and are incorporated into the sport needs of the surrounding schools.

6 Pedestrian orientated street  
Due to low car ownership in and limited vehicle ingress into the project area, streets became social spaces linking squares and courtyards. Edged by multi-use buildings, these paved streets help alleviate the area’s storm water drainage problems.

7 Historical market quarters  
As part of the initial analysis, this quarter was identified as vital to the neighbourhood’s heritage. A responsive opposite street edge and pedestrian street surface are suggested.

8 Infill edge  
The streets connecting the Maji Maraba [water squares] are edged with multi-use buildings developed in accordance with coding guidelines set up for the area. Commercial functions on ground floor, combined with office and residential units above, ensures that there are no commercial only precincts.

9 Re-use of existing  
The East German Platten bauten [apartment blocks] are retained and upgraded into social housing. In addition to representing a major part of the city’s housing stock, these buildings have become landmarks in the area.

10 Diverse housing typologies  
Existing playgrounds and parks are retained and re-used with upgrade of surfaces, equipment and facilities.

10.1 Social Housing
10.2 Live/Work
10.3 Single Family Row House
10.4 Multi Family Apartment
18- Project proposal green courtyards + public buildings

20- Kajefichene Block Axonometric View
Source: Zanzibar: A plan for the historic Stone Town, The Aga Khan Trust for Culture

22- Historical Row House precedent

23- Historical Courtyard Building precedent

24- Panorama of existing historical Row House typology
25 - Contemporary interpretation of Row House with common ground floor

26 - Contemporary interpretation of courtyard typology as a multi-family apartment block

27 - Contemporary interpretation of larger common building with residence units above ground

Building frontage and street interface
All buildings to soften to built to line, limited setback, overhang
Courtyard entrances, galleries and arcades encouraged
Defining pedestrian walkway to line up with neighbours
Appointed trees to be planted to complete entrance frontage

Building setback
All buildings to soften to built to line
Fences to extend to the setbacks area between street edge and buffer line
Minimise setback of the permitted, promote a covered entrance, gallery or arcade is provided up to buffer line

Building frontage and street interface
All buildings to soften to built to line, limited setback, overhang
Courtyard entrances, galleries and arcades encouraged
Defining pedestrian walkway to line up with neighbours