

THE REGION / THE NEIGHBOURHOOD/ THE STREET

CNU CHARTER AWARDS 2013

STUDENTS + FACULTY



Africa



Tanzania



Zanzibar

Ng'ambo

N'Gambo [Swahili]:
the other side,
denoting the neighbourhood
across the creek from the Stone
Town city core.

CONTEXT + PRECINCT LOCATION MAP



220 000
population of Zanzibar

12000
population of Ng'ambo

62
square kilometres
[15 320 acres]
area of Zanzibar

1.1
square kilometres
[271 acres]
area of Ng'ambo

3 548
people per square
kilometre [14 people
per acre]
Density of Zanzibar

9 000
people per square
kilometre [45 per
acre]
Ng'ambo city population

7
per 1000
people
own a
car

26%
population
urbanisation

4.7%
rate of annual
urbanisation

41%
population below
poverty line

53
age of average
life expectancy

99%
of population are
Muslim

- 1. STONE TOWN**
- 2. Ng'AMBO NEIGHBOURHOOD**
- 3. GREEN OPEN SPACE RECLAIMED CREEK**
- 4. CENTRAL MARKET**
- 5. EAST GERMAN PLATTEN BAUTEN APARTMENT BLOCKS**

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.



01 
Existing context of Zanzibar 1846



02 
The 1923 Lancaster Plan



03 
The 1958 Kendall and Mill Plan

RESPONSE TO CHARTER PRINCIPLES

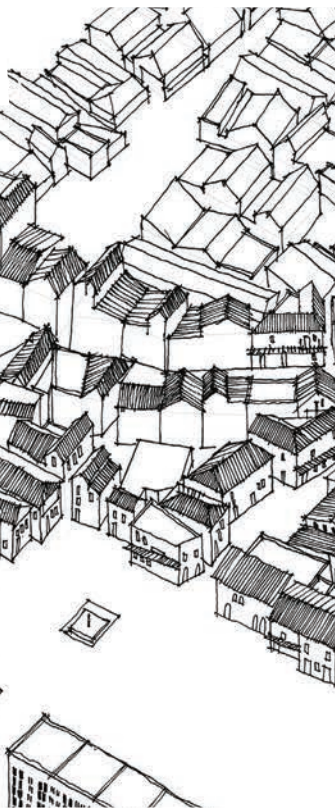
4 Development patterns should not blur or eradicate the edges of the metropolis. Infill development within existing urban areas conserves environmental resources, economic investment, and social fabric, while reclaiming marginal and abandoned areas.

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 maintain the integrity of the urban park, **strong coding guidelines** have been set up to provide the area with well defined edges. These building respond to the adjacent markets by provided much needed market stalls on ground floor and office space and residential functions on the three floors above.



6 The development and redevelopment of towns and cities should respect historical patterns, precedents, and boundaries.

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.

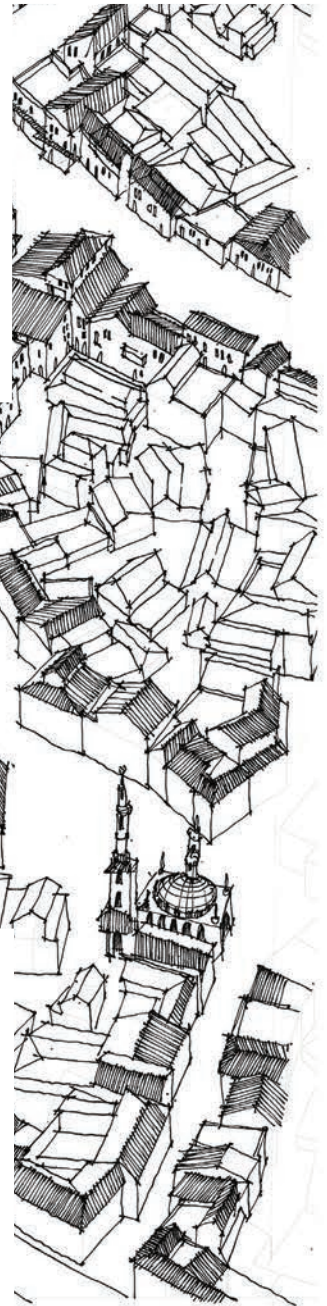


12+15 Many activities of daily living should occur within walking distance, allowing independence to those who do not drive, especially the elderly and the young. Inter-connected networks of streets should be designed to encourage walking, reduce the number and length of automobile trips, and conserve energy. // Appropriate building densities and land uses should be within walking distance of transit stops, permitting public transit to become a viable alternative to the automobile.

Focusing on existing water points, each smaller districts have been designed around a new defined square connected to a pedestrian network linked to regional routes. Due to a very low dependance on private transport, multi-use 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 building clustered within walking distance of each other on the redesigned Maji Mraba [water squares]

13 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.

In contrast with other proposals, the project team suggested that retention and upgrade of the 1960's East German Platten bauten apartment buildings as a social housing project. This combined with a series of different new housing typologies, results in a neighbourhood with a long life cycle.



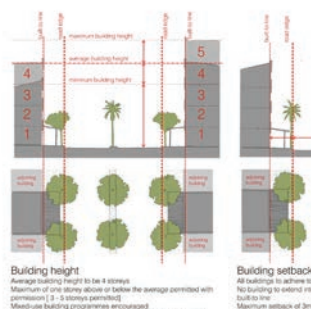
16+25 Concentrations of civic, institutional, and commercial activity should be embedded in neighbourhoods and districts, not isolated in remote, single-use complexes. Schools should be sized and located to enable children to walk or bicycle to them. // Civic buildings and public gathering places require important sites to reinforce community identity and the culture of democracy. They deserve distinctive form, because their role is different from that of other buildings and places that constitute the fabric of the city.

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 entrances to semi-private courtyard spaces, ensure adequate spill-out recreational spaces.

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 entrances to semi-private courtyard spaces, ensure adequate spill-out recreational spaces.

17 The economic health and harmonious evolution of neighbourhoods, districts, and corridors can be improved through graphic urban design codes that serve as predictable guides for change.

An **extensive set of urban design codes** have been describe for the project area. Graphic in nature, these codes are set up to be within the grasp of small scale developers not familiar with municipal regulations.



27 Preservation and renewal of historic buildings, districts, and landscapes affirm 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.**

04 3d of Ng'ambo Precinct

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.

Hundreds of 8 - 12 seater minibus taxis form an extensive network throughout the island, with the main interchange retained in the new Urban Park. **This reduces the direct dependency on fossil fuel, as well as allowing the pedestrian orientated streets to become part of the social heart of the neighbourhood.**

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].

A separate set of social spaces are required for woman, providing an additional set of parameters for the design of squares. **This, combined with extensive community participation, ensures that social spaces have place making principles at its core.**

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 Zanzibari'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.

This traditional low impact of the city's food footprint does not depend upon heavily industrialised producing processes, requires extremely low levels of packaging and transportation.



05 05- Panoramic View of Green Market Edge



06 06- Panoramic View of East German Platten bauten Block [Multi- family living blocks]

5 Service infrastructure as informant for urban form

An indirect result of the 1960's government program installing communal water taps in the Ng'ambo 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 densify 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' dependance on private transport.

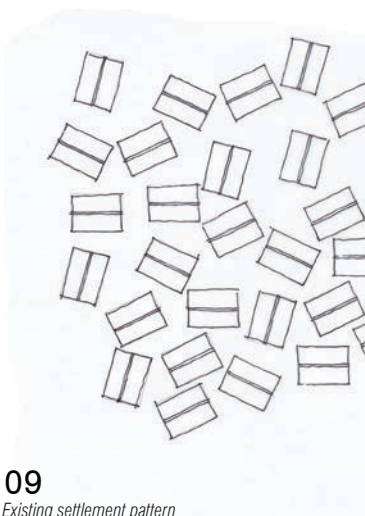
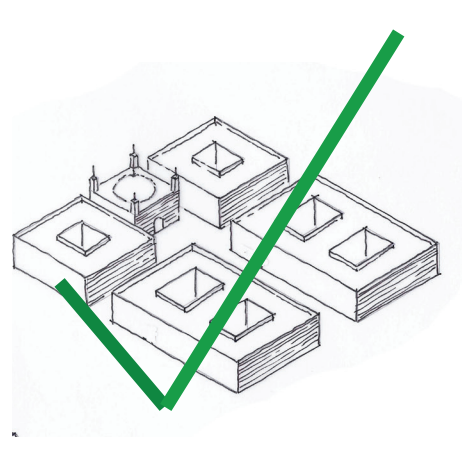
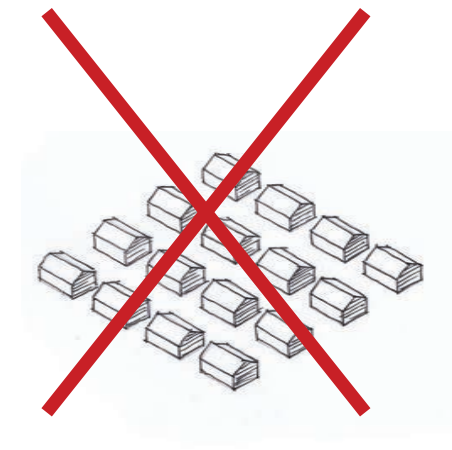


07 07- Panoramic of Existing tap / water square settlement

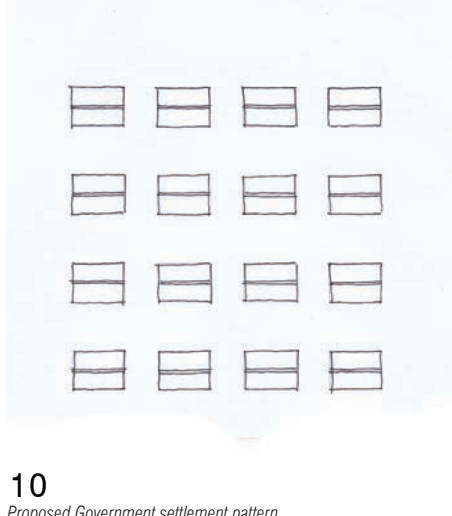


08 08- Panoramic View an existing Green Buffer Settlement edge

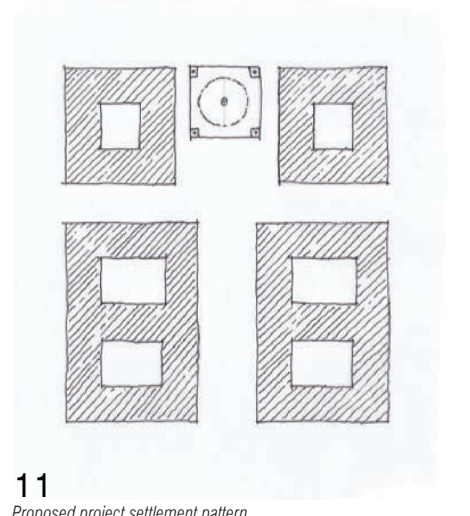
PROBLEM STATEMENT



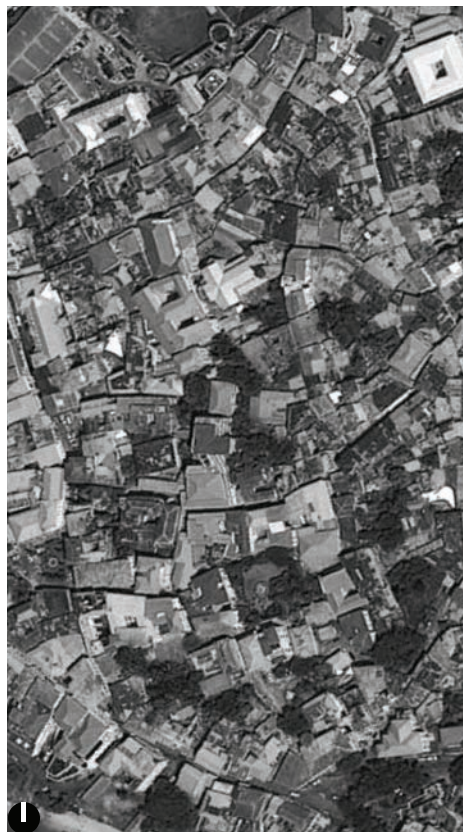
09
Existing settlement pattern



10
Proposed Government settlement pattern



11
Proposed project settlement pattern



CONTEXT



B 

Ng'ambo project area : Re-establishment of historic links



B-1 


Stone Town Precinct : Figure Ground



B-2 

Stone Town Precinct : Figure Ground



B-3 




Ng'ambo Precinct : Figure Ground




B-4 

Ng'ambo Precinct : Figure Ground

RECOMMENDATIONS

Green Buffer 
Historical Movement 
Public Buildings 




12  Mapping of Current Movement Routes



13  Identification of community and social centres

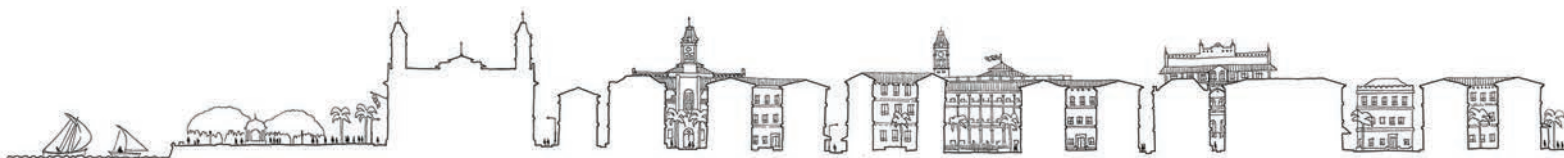
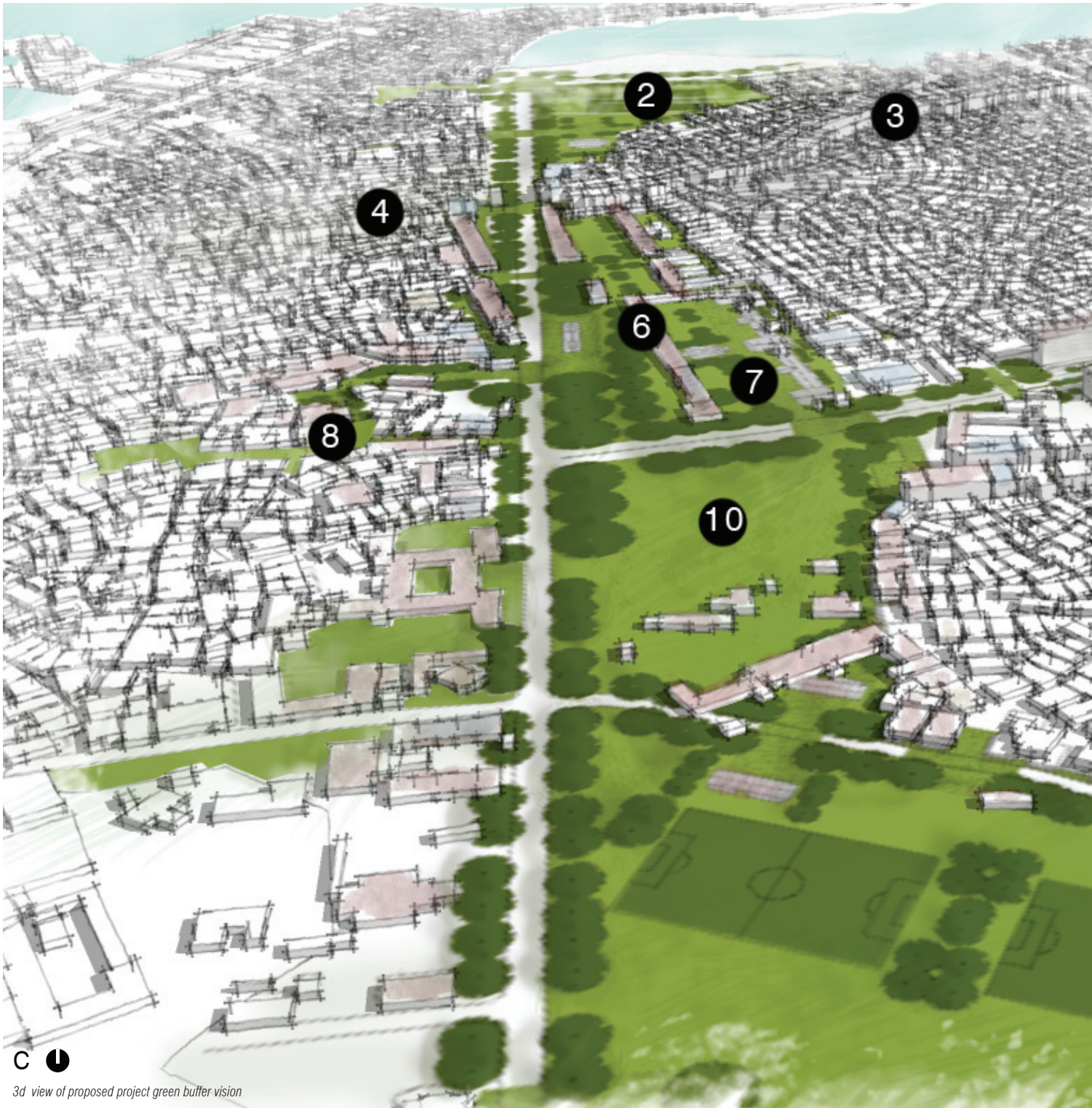


14  Re-establishing historical connections



15  New connection

NEIGHBOURHOOD VISION



C-1 Section through Stone Town through to Ng'ambo

URBAN PARK

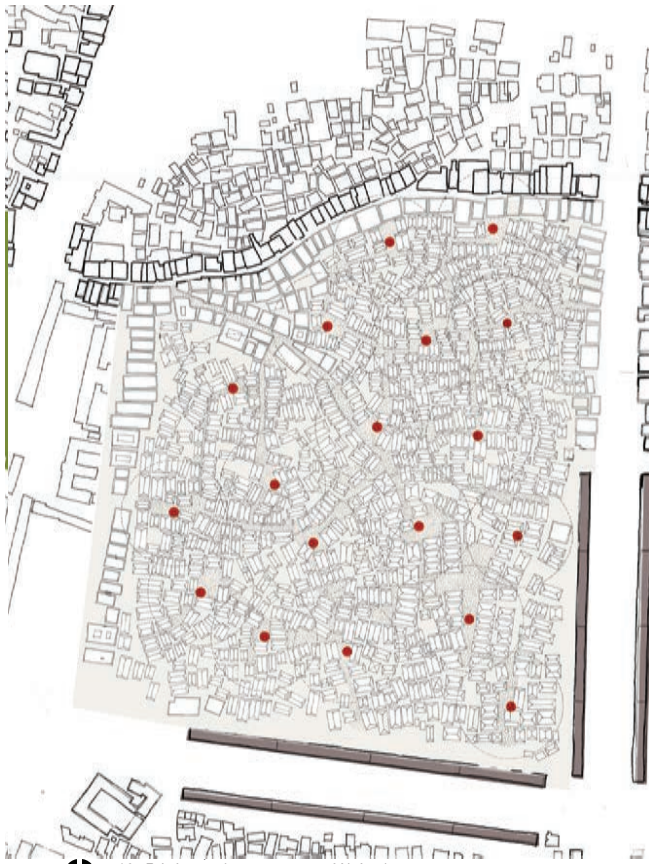


- 1. Define urban park edge**
The adherence to the coding will result in a series of 3 - 4 storey buildings forming an interactive, mixed-use edge to the new urban park. In addition, these buildings form a filter into the surrounding neighbourhoods.
- 2. Community facility**
includes religious buildings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

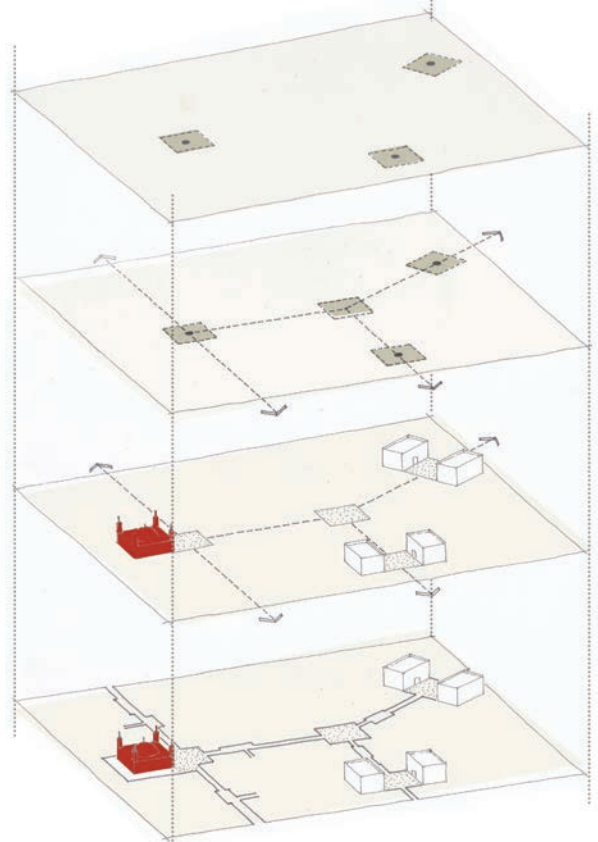


STREET VISION

- Tap/water point ●
- Public Green ■
- Productive Green ■
- Public Buildings ■
- 5min Walking circle □
- Primary Movement □



16 Existing settlement pattern of Ng'ambu



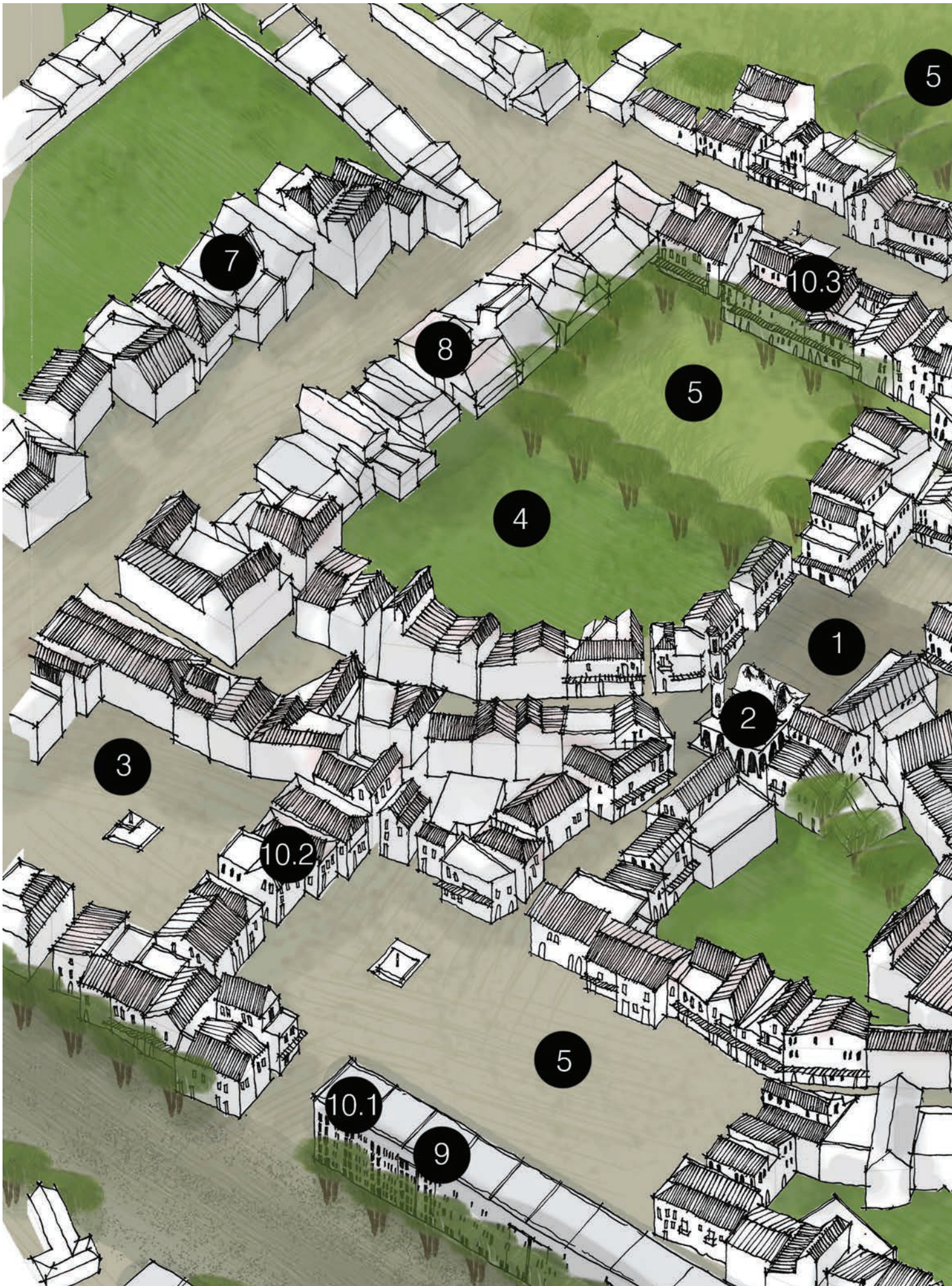
17 Exploded View of Design Process



18 Project proposal green courtyards + public buildings



19 Project proposal settlement pattern with water squares

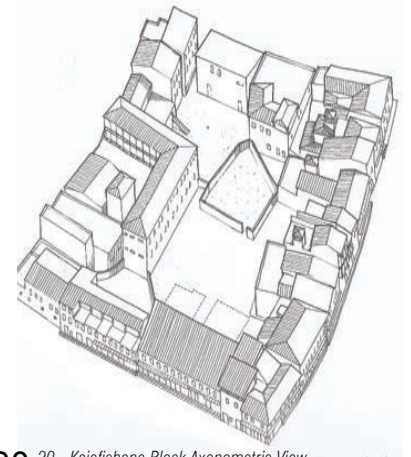


D Ng'ambo Street Vision 3d

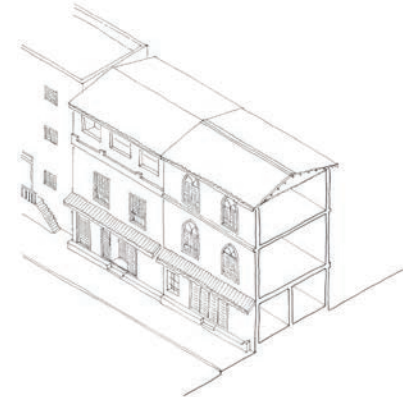


- 1 **Maji Maraba**
Informal spaces around existing water taps are developed into social and spill-out spaces
- 2 **Public Buildings**
includes religious buildings such as mosques and churches along with community centres and other public amenities.
- 3 **Public Market + Parking**
Utilising the cyclical 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 the neighbourhood's heritage. A responsive opposite street edge and pedestrian street surface are suggested.
- 8 **Infill edge**
The streets connecting the Maji Mraba [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

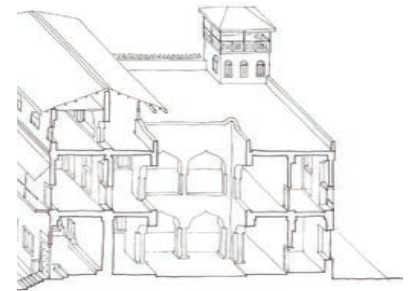
CODING



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



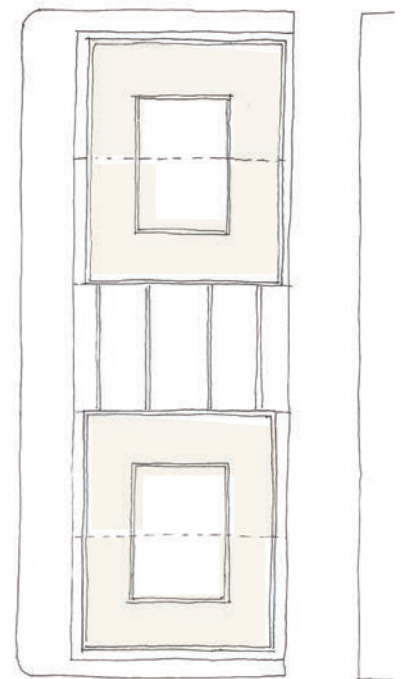
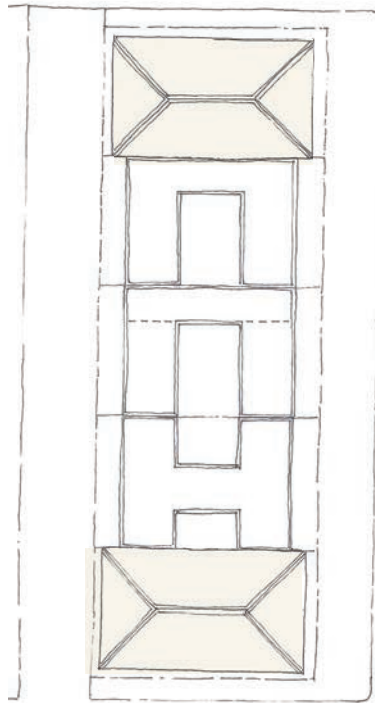
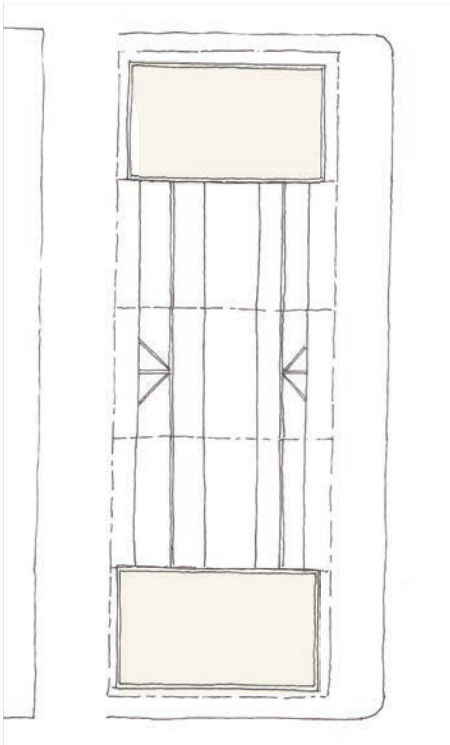
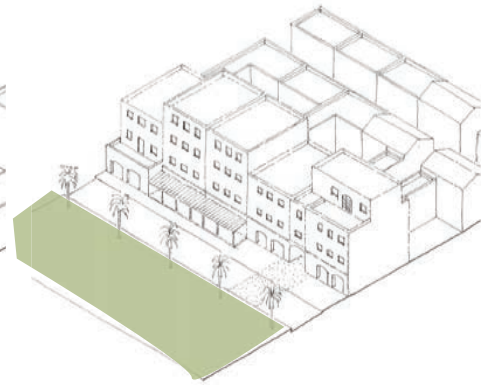
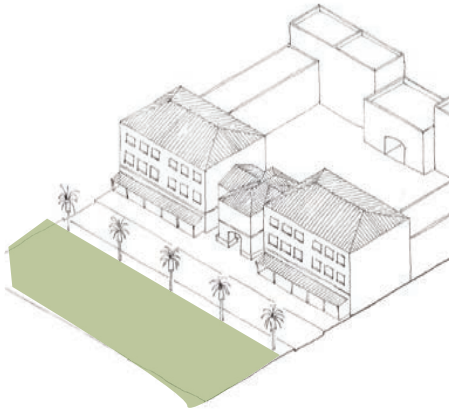
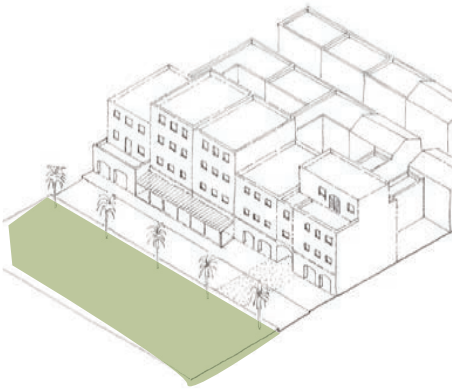
23 - Historical Courtyard Building precedent

21  18- Project proposal green courtyards + public buildings



24 24- Panorama of existing historical Row House typology

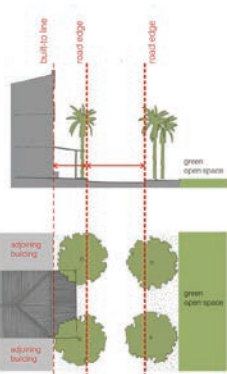
CODING



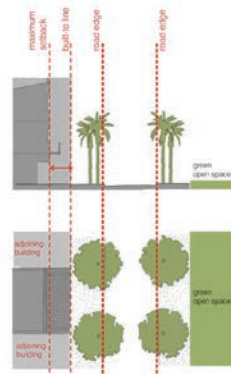
25 - Contemporary interpretation of Row House with common ground floor

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

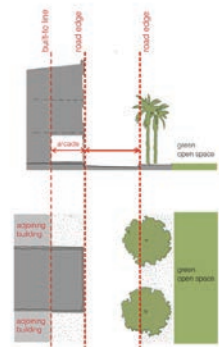
27 - Contemporary interpretation of larger common building with residence units above ground



Building frontage and street interface
 All buildings to adhere to built-to line, limited setback admitted
 Covered entrances, galleries and arcades encouraged
 Defined pedestrian walkway to line up with neighbours
 Approved trees to be planted to complete / enhance treeline



Building setback
 All buildings to adhere to built-to line
 No building to extend into the pedestrian area between street edge and built-to line
 Maximum setback of 3m permitted, provided a covered entrance, gallery or arcade is provided up to built-to line



Building frontage and street interface
 All buildings to adhere to built-to line, limited setback admitted
 Covered entrances, galleries and arcades encouraged
 Galleries and arcades to extend from the built-to line to road edge providing pedestrian access are provided
 Defined pedestrian walkway to line up with neighbours