AN URBAN TRANSIT ZONE

a permanent structure for temporary inhabitation

P5

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Dwelling, Global Housing
Affordable Housing for Sustainable Development in the Global Urban South, Addis Ababa
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**RESEARCH**
- facts and numbers; growth, migration and slums
- challenge
- research question
- themes:
  - type of movement
  - location of settlement

BASHA WOLDE CHILOT
- site survey
- qualities
- current situation

**STRATEGY**
- design hypothesis
- target groups
- concept:
  - infill vs. permanent grid
  - hierarchy of spaces
- three block types

**DESIGN PROPOSAL**
- complex:
  - design principles
  - transformation
  - masterplan 2028
- possible other locations
- cluster:
  - design principles
  - transformation
  - clusterplan 2043
  - circulation
  - climate
- block:
  - transformation
  - floorplan 2018, and possible transformations
  - elevations in transition
  - construction; technique and material
  - section and detail
- impressions

**TRANSFORMATION** through time
- to conclude
Research
World Population growth in rural and urban areas

[Graph showing population growth in rural and urban areas]


Unequal growth rates of urban agglomerations by size class

[Map showing unequal growth rates of urban agglomerations by size class]


Urban Population growth in developed and less developed areas

[Graph showing population growth in developed and less developed areas]

Source: United Nations, World Urbanisation Prospect Revision 2014, p.25

Slum Dwellers as a percentage of urban population

[Bar chart showing percentage of slum dwellers]


FACTS AND NUMBER

growth, migration and slums
Addis Ababa, growth over the past century and the Integrated Housing Development Programme
To what extent can sustainable urban transitory spaces contribute to the development of cities in the global south which await a huge growth of internal and rural migrants the coming decades?

Good urban conditions:
- access to improved water
- access to improved sanitation
- sufficient living area/not overcrowded
- structural quality/durability
- security to tenure

According report UN
the **TYPE** of movement

the **LOCATION** of these settlements

the social and spatial **QUALITIES**

their **CONTRIBUTION** to the city

the current **SITUATION** and examples

*Basha Wolde Chilot*
TYPES OF MOVEMENT on an urban scale
relocation and migration
Dense ground bound shacks
Cheap accommodation/workspace/shop
Lack of regulation → Flexibility
Close relation to the street → Public interaction

“City slums are dynamic entities where people move in and move out and where they reach success or fail hopelessly”
Peter Cutt Lloyd, 1979

“the arrival city is both populated with people in transition [...] and is itself a place of transition”
Doug Sauders, 2010

Network linking the village to the city
Entry mechanism
The establishment of an urban platform
Social mobility path towards the middle class

QUALITIES by literature and site visit
TWO OPPOSITES ON EACH SIDE OF THE RIVER

NEW DEVELOPMENT IS LACKING SOCIAL FACILITIES

LARGE UNDEFINED OPEN SPACES

UNFINISHED SPACES/BLOCK FORMATIONS

people living in the Seretanga area will have to move out in the coming years due to future development

the permanent structure as a revitaliser of ‘unfinished’ urban spaces
QUALITIES
sharing facilities, courtyards and clusters of dwellings
QUALITIES
intertwined social and infrastructural network
QUALITIES
the degree of freedom causing financial opportunities
SHARING THE GROUND FLOOR INFORMAL JOB POTENTIAL (very) AFFORDABLE FREEDOM vs. RESPONSIBILITY COSTS TRANSITION COURTYARD OPPORTUNITIES SOCIAL NETWORK SIMILARITIES BUT NOTHING IS THE SAME
CLUSTER
placed in pares/ foursome creating a social space in between or on the inside

PER BLOCK
Units: 20 / 25
Persons: 44-64 / 55-80
Beams:  
Facade (ext.): 80,2 m
80,2 x 2.52 x 0.2 = 40.42 m³
of hollow blocks
(int.): 36.2 m
36.2 x 2.52 x 0.2 = 18.25 m³
22.7 m
22.7 x 2.52 x 0.2 = 11.44 m³

Partition walls/ panels: ?
Doors (ext.): 8
(int.): 18
Windows: S 5
M 6
L 10

Units per floor: 5
Type of units: studio (1)
1 room app (1)
2 room app (2)
3 room app (1)

Persons p/floor: 11-16

Footprint: 330 m²
Area needed for placement: 427 m²
Floors: G+4/5
Staircases (stairs): 1 (4 stairs)

PER FLOOR
Residential surface: 282 m²
Corridor: 48 m²
Floor: 315 m²
315 x 0.28 = 88.2 m³
of concrete
Columns: 24
0.3 x 0.3 x 2.52 = 0.2268
0.2268 x 24 = 5.4432 m³

Beams:
Facade (ext.): 80,2 m
80,2 x 2.52 x 0.2 = 40.42 m³
of hollow blocks
(int.): 36.2 m
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CONDOMINIUM
large undefined spaces, lack of social facilities vs. grid
Strategy
Create a PERMANENT structure for TEMPORARY inhabitation, which can evolve with the changing housing needs of the future.

- Create a foothold for people whom do not possess over the economic capabilities to buy or rent a dwelling (affordable housing)
- Assist them towards permanent housing elsewhere in the city, as this is already being provided
  - Deal with ‘unfinished’ places in the existing urban fabric
  - Create a structure that can evolve through time
- Create a sustainable model concerning cheap and temporary housing which is still attractive to invest in

What kind of structure encourages transformation and is able to absorb transformation through time and how can the costs of a such a structure, providing shelter, be diminished?
WHO are in need of this temporary housing, now and in the future? Different social groups in various phases, with different needs.

- relocated
- migrants
- families/singles

complex agency
investor
government
Hierarchy of SHARED facilities;
created by:

TEMPORARY
flexible
infill

circulation system

PERMANENT
solid
structure
HIERARCHY OF SHARED FACILITIES

UNIT

SET

BLOCK

CLUSTER

COMPLEX

URBAN
kitchen, toilet, outdoor space

SET
large public square
market area
workshop
office of the agency
large indoor community centre
clinic
educational centre
kindergarten
THREE BLOCK TYPES

the single block/
parasite

106,1 m²
4-7  1-2
units per floor

load bearing
CONSTRUCTION
0,281 m³ concrete per m²

FACADE
0,821 m² ext. facade per m²

the interconnected block

210,5 m²
8-14  2-4
units per floor

load bearing
CONSTRUCTION
0,288 m³ concrete per m²

FACADE
0,691 m² ext. facade per m²

the slab

312,1 m²
10-17  3-6
units per floor

load bearing
CONSTRUCTION
0,289 m³ concrete per m²

FACADE
0,51 m² ext. facade per m²

FACADE
0,612 m² ext. facade per m²

LOAD BEARING
CONSTRUCTION
0,284 m³ concrete per m²

FACADE
0,691 m² ext. facade per m²

FACADE
0,51 m² ext. facade per m²

LOAD BEARING
CONSTRUCTION
0,288 m³ concrete per m²

FACADE
0,691 m² ext. facade per m²

FACADE
0,51 m² ext. facade per m²

LOAD BEARING
CONSTRUCTION
0,289 m³ concrete per m²

FACADE
0,51 m² ext. facade per m²

THREE BLOCK TYPES
Design proposal

How is the transient strategy applied in the case of the Basha Wolde Chilot?!
the blocks on their own can reach a density of 600 Un/h
Finalizing constructing the complex

265 Un/h
The single block implemented as a single unit leeching of the existing condominium blocks.

SERATEGNA SEFER
The block implemented as a cluster could be used to densify the area and to function as a site for people which have less financial abilities to move when the complete area will be redeveloped.

PHERIPHERY ADDIS
The block could be implemented as a cluster in large open areas or ‘unfinished’ spaces.

The strategy on other locations
First phase, relocation of people, more family units...

The permanent backbone...

First phase through time, migrants, more single/double units...

Second phase, refurbishment executed by overseeing agency...

Second phase, the block is partly (2 floors) refurbished by the overseeing agency, the other floors are sold before the organised transformation...

Transformation
First phase, relocated people, more families...

Permanent backbone...

First phase through time, migrants, more single/double units...

Second phase, refurbishment executed by overseeing agency...

Second phase, agency sells units before full refurbishment, transformation by residents and future buyers...

Second phase, the block is partly (2 floors) refurbished by the overseeing agency, the other floors are sold before the organised transformation...

BLOCK
Transformation
BLOCK
Elevation 1
BLOCK
Construction
The block is built floor by floor, to diminish extra costs of large machines.
Steel frames, the connection between permanent and temporal

Flexible infill; panels future transition

made out of split bamboo

Interior and exterior panels made out of split bamboo

Steel window frame, with an air vent, providing the rooms with fresh air
In situ casted concrete
Reinforcement bars
Prefabricated hollow concrete
Floor blocks
Prefabricated concrete beams
Plaster

Thin earth-cement slurry
(applied with Hessian bag/brush)
Compressed Earth Blocks

Block - Detail
A 1.5

BLOCK
Detail
IMPRESSION
unit
IMPRESSION

set, shared facilities
TRANSFORMATION
Scenario 2
TRANSFORMATION
Scenario 3
To conclude