ETHEKWINI MUNICIPALITY
HOUSING TYPOLOGIES STUDY
PRECEDEANTS AND BIBLIOGRAPHY
PRESENTATION 1/5
1 INTRODUCTION

- This project has been initiated by the Architecture Department of the Ethekwini Municipality to develop housing typologies for the delivery of new projects and existing settlement upgrade projects in the Ethekwini Municipal Region.
- The study is to integrate town planning, urban design and architecture components.
- The intention is to identify practices which optimise both the quality and sustainability of resultant living environments.

2 BACKGROUND

- Despite the delivery of almost 2 mill housing units by government since 1994, the dominant housing typology continues to be detached, single family homes on larger free hold plots.
- The increasing pressure on urban land, demands for optimising existing service infrastructure and the negative socio-economic implications of developing on the urban periphery have necessitated a review of the location and desired densities of housing settlements.
- It has become necessary that the supply of housing be more receptive to the redevelopment of sites located within already serviced and developed areas as well as the upgrading of existing settlements.
- A study and development of affordable housing typologies applicable to prevailing local conditions (typography, climate, technologies and finance) will assist in meeting the urban housing challenge with greater authority, efficiency and understanding.
3 PROJECT OBJECTIVES

- TO INFORM THE OPTIMISATION OF QUALITY AND SUSTAINABILITY IN THE DESIGN AND ONGOING DELIVERY OF SUBSIDY HOUSING
- TO DETERMINE OPTIMAL HOUSING TYPOLOGIES FOR APPLICATION IN INFORMAL SETTLEMENT UPGRADING AND GREENFIELD PROJECTS WITHIN THE URBAN AREA OF ETHEKWINI

4 DEFINING HOUSING TYPOLOGY

- HOUSING TYPOLOGY ENCOMPASSES ATTRIBUTES OF FUNCTION AND CONFIGURATION CHARACTERISTICS OF PUBLIC AND PRIVATE BUILDINGS AND THE SPACES AROUND THESE BUILDINGS THROUGH CONSTRUCTION
- TYPOLOGY MUST CONSIDER ASPECTS OF TOWN PLANNING AND URBAN DESIGN AS WELL AS THE DETAIL OF MULTI-UNITS OR RESIDENTIAL CLUSTERS
- TYPOLOGY HAS A TIME DIMENSION AND THEREFORE MUST CONSIDER FLEXIBILITY, ADAPTABILITY AND TRANSFORMATION OVER TIME
- IN ETHEKWINI THE CONSIDERATION OF TYPOLOGY IN RELATION TO TOPOGRAPHY IS CRITICAL AS MANY INFORMAL SETTLEMENTS ARE FOUND ON STEEP AND UNSTABLE LAND. STEEP SLOPES IMPOSE HIGHER BUILDING AND INFRASTRUCTURE COSTS AND CREATE DIFFICULTIES OF ACCESS REQUIRING GREATER CARE IN THE DESIGN AND LAYOUT OF HOUSES
1 PRECEDENTS AND LITERATURE OVERVIEW
2 PILOT PROJECT OVERVIEW
3 BUILDING THE PRINCIPLES
4 MATRIX OF TYPOLGIES
5 DESIGN CONSIDERATIONS
1 PRECEDENTS AND BIBLIOGRAPHY
   ▪ KEY ISSUES TO INFORM THE BRIEF
   ▪ BIBLIOGRAPHY AND SYNOPSIS OF RELEVANT LITERATURE
   ▪ REVIEW OF CASE STUDIES
   ▪ FINDINGS TO OFF SET NEGATIVE TRENDS

2 PILOT PROJECT OVERVIEW
   ▪ AREA / INFRASTRUCTURE AUDIT
   ▪ SITE ANALYSIS
   ▪ READINESS FOR DEVELOPMENT AND IMPLICATIONS FOR TYPOLOGY SELECTION

3 BUILDING THE PRINCIPLES
   ▪ GUIDING PRINCIPLES FOR HOUSE DESIGN AND URBAN LAYOUTS

4 MATRIX OF TYPOLOGIES
   ▪ SUMMARY OF HOUSING TYPOLOGIES
   ▪ FINAL HOUSING TYPOLOGY DESIGNS
   ▪ COSTINGS

5 DESIGN CONSIDERATIONS
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   ▪ MATERIALS AND MINIMUM QUALITY LEVEL CONSIDERATIONS
   ▪ SERVICING AND SUSTAINABILITY CONSIDERATIONS
PRECEDEENTS AND BIBLIOGRAPHY
CONTENTS

1 PRECEDEINTS
IN WHICH TYPICAL RESPONSES TO THE ISSUES FACED IN PROVIDING MASS LOW INCOME HOUSING INTERNATIONALLY AS WELL AS IN SOUTH AFRICA IS ILLUSTRATED.

2 BIBLIOGRAPHY
IN WHICH A BIBLIOGRAPHY HAS BEEN SELECTED WITH THE AIM OF PROVIDING A GENERAL OVERVIEW OF THE ISSUES FACED AND APPROACHES ADOPTED IN PLANNING FOR AND DELIVERING MASS LOW INCOME HOUSING PROJECTS.
THE BIBLIOGRAPHY SUPPLIES A REFERENCE SOURCE THAT CAN BE ADDED TO AS ADDITIONAL WORKS COME TO LIGHT.
Solutions to the problems of providing mass low income housing internationally has often been sought by developing high-rise, high-density projects. This has been the approach in many parts of the world including the favelas of Sao Paulo, the barrios of Mexico as well as in many parts of Europe, America and Asia. In South Africa high rise developments are inappropriate as they do not qualify for housing subsidies and are difficult to administer from a sectional title and management point of view.

Whilst this approach has provided the high numbers of units required it is also expensive and has often been, at least partly, to blame for the socio-economic ills so prevalent in many such projects. The provision of impersonal, alienating housing typologies which have little semblance to the informal, high-density low-rise and fine-grained informal settlements they replaced can break apart communities and alienate people from their neighbours and surroundings.

South African low income housing has, on the other hand, attempted to provide mass housing using a low rise, low-density housing layout and typology model. However, due to the locating of these projects on marginalised land, impersonal unit design, poor layouts and low quality construction, this approach too has often resulted in unsustainable, alienating environments and poverty entrapment.

Typology design and quality has often been compromised because of financial constraints with housing projects being financially and politically driven and with little involvement by architects and urban designers.
SYNOPSIS

GENERALLY THERE IS ALSO LITTLE INVESTMENT IN THE PUBLIC REALM OR IN SOCIAL FACILITIES WITH THE RESULT THAT ALTHOUGH HOUSES MAY HAVE BEEN PROVIDED, THE RESULT IS MARGINALISED URBAN GHETTOES DISASSOCIATED FROM THE CITY, EXPENSIVE TO SERVICE AND COMPLETE WITH A RANGE OF SOCIAL PROBLEMS.

THE HOUSING ITSELF THEREFORE CONTRIBUTES SIGNIFICANTLY TO THE MARGINALISATION AND EXCLUSION OF THE COMMUNITIES WHO RESIDE IN THEM WITH LITTLE CHANCE OF THEIR ECONOMIC GROWTH AND SOCIAL INTEGRATION.

THIS PROJECT THEREFORE AIMS TO SEARCH FOR NEW HIGH DENSITY, LOW RISE TYPOLOGIES THAT CAN PROVIDE EFFICIENT, SUSTAINABLE AND EQUITABLE HOUSING IN ENVIRONMENTS THAT OFFER OPPORTUNITIES FOR GROWTH AND PERSONAL DEVELOPMENT.

WE BELIEVE THAT APPROPRIATE SOLUTIONS CAN BE SOUGHT IN EMULATING THE EXISTING TYPOLOGIES AND URBAN LAYOUTS WHICH HAVE BEEN DEVELOPED INFORMALLY ON SITES WHERE HIGH DENSITY, LOW RISE UNITS HAVE BEEN SELF-BUILT IN PEDESTRIAN DOMINATED ENVIRONMENTS.
PRECEDENTS
TYPICAL SUBSIDISED HOUSING IN SOUTH AFRICA ILLUSTRATES THE RESULTANT POOR QUALITY LIVING ENVIRONMENT AND LACK OF VARIATION IN TYPOLOGY. DENSITIES ALSO REMAIN LOW.
WINTERVELD – TYPICAL INFORMAL HOUSING IN SOUTH AFRICA. FORMALISATION OF SUCH AREAS REQUIRES EXTENSIVE DENSIFICATION AND DIVERSIFICATION WITH THE INCLUSION OF SOCIAL AND ECONOMIC FACILITIES
TYPICAL INFORMAL, SELF-BUILT, HIGH-DENSITY, LOW-RISE UNITS IN SAO PAULO AND RIO.
THE INFORMAL BUILT FORM IS SIMILAR THROUGHOUT THE WORLD, INCLUDING SOUTH AFRICA, AND IS BASED ON PEDESTRIAN
DOMINATED ENVIRONMENTS AND MINIMUM ROOM SIZES BUILT TO ACCOMMODATE BASIC FURNITURE REQUIREMENTS.
THE CLEARING OF SLUMS TO ACCOMMODATE HIGH RISE TYPOLOGIES IS CLEAR IN THESE IMAGES FROM MEXICO. THE CHANGE IN CHARACTER AND RESULTANT DISRUPTION OF COMMUNITY LIFE AND SUPPORT NETWORKS IS APPARENT.
Attempts have been made internationally to increase densities using a medium-rise typology and provide a basic unit that can be expanded by residents over time. The placement of units to create communities and reduce costs has also been carefully considered.
CHARLES CORREA  ARCHITECT : INDIA

Quadrant of typ.
BRICKFIELDS, JOHANNESBURG WAS THE FIRST MULTI-STOREY AFFORDABLE HOUSING PROJECT IN JOHANNESBURG’S INNER CITY. IT INCLUDES PRIVATE SPACE, PARKS, A CRÈCHE AND RETAIL UNITS. IT IS RENTAL ACCOMMODATION ONLY.
INSPIRATION FOR ALTERNATIVE HOUSING TYPOLOGIES IN SOUTH AFRICA THAT INCREASE DENSITIES, ARE MORE EFFICIENT AND SUSTAINABLE AND PROVIDE GOOD URBAN FORM CAN BE FOUND IN AREAS SUCH AS THE HISTORIC DISTRICT OF BO-KAAP IN CAPE TOWN.
THESE IMAGES ILLUSTRATE SOUTH AFRICAN PROJECTS THAT HAVE ATTEMPTED TO IMPROVE URBAN QUALITY AND PROVIDE HOUSING THAT IS COST EFFICIENT AND SUSTAINABLE, YET ALSO MANAGE TO INCREASE DENSITIES.
THE FOLLOWING SLIDES ILLUSTRATE A NUMBER OF AFFORDABLE HOUSING PROJECTS, PRIMARILY IN SOUTH AFRICA, THAT HAVE ATTEMPTED TO FOLLOW GOOD URBAN FORM PRINCIPLES TO BREAK THE MOULD OF TYPICAL; LOW INCOME HOUSING PROJECTS AND CREATE NEW, VIBRANT, FUNCTIONAL AND EQUITABLE URBAN ENVIRONMENTS.
MABOPANE - CREATING COMMUNITIES

The development of the streetscape

Street entrances

The development of the streetscape

Typical house unit - Street elevation
CREATION OF NEIGHBOURHOODS WITHIN RESIDENTIAL PRECINCTS
DEVELOP A VARIETY OF HOUSING TYPES FOR DIFFERENT INCOME GROUPS.
CREATION AND FRAMING OF OPEN SPACE
RESTRICT BOUNDARY WALL HEIGHTS AND CREATE PRIVACY THRESHOLDS
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LOCATION OF LOW COST HOUSING


DENSITY

  Section 1: Introduction.
  Section 2: Housing Densification & Sustainability.
  Section 3: The South African Housing Context.
  Section 4: Guidelines for Sustainable Medium Density Housing.
  Section 5: Voices of the people: Case studies of medium-density housing
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PRECEDENT / CASE STUDIES

BIBLIOGRAPHY & SYNOPSIS OF RELEVANT LITERATURE

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