# LOCAL DEVELOPMENT PLAN FOR INNER CITY AREAS PARTICULAR EMPHASIS BASED ON EVALUATION OF BASIC URBAN DESIGN PARAMETERS

*The case of Meskel Square Entrance Pocket Area, Addis Ababa*

MSc Thesis in Urban Design and Development

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This thesis is submitted to the Ethiopian Institute of Architecture, Building Construction and City Development (EiABC) and to the School of Graduate Studies of Addis Ababa University in fulfillment of all requirements for the degree of Masters in Urban Design and Development.

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## DECLARATION

I, the undersigned, declare that this thesis is my own and original work and has not been presented for a degree in any other university, and that all sources of material used for the thesis have been duly acknowledged, following the scientific guidelines of the institute.

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## Confirmation

The thesis can be submitted for examination with my approval as an Institute`s advisor.

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## Abbreviations

AU = African Union

AACRA = Addis Ababa City Roads Authority

BOD = Bio oxygen demand

BAR = Built up Area Ratio in relation to the plot size

BHR = Building Height Regulation

CBD = Central Business District

CSA = Central Statistical Agency

ECA = Economic Commission for Africa

EC = Ethiopian (Julian) Calendar

FAR = Floor Area Ratio in relation to the plot size

GIS = Geographical Information System

H = Height

Ha = Hectare

HIV/AIDS = Human immunodeficiency virus/Acquired Immunodeficiency Syndrome

IPPUC = Curitiba Research and Planning Institute

Km/h = kilometers per hour.

L = Length

LDPs = Local Development Plans

LRT = Light Rail Transit

MDG – NA = Millennium Development Goals Needs Assessment

NDO = Neighborhood Development Office

NGOs = Non-Governmental Organizations

ORAAMP = Office for the Revision of Addis Ababa Master Plan

P/ha = Persons per hectare

RHA = Rental Housing Administration

SWOT = Strength-Weakness-Opportunities and Threats

UN-HABITAT= United Nations Centre for Habitat

UDWB = Urban Development and Works Bureau

UN-ECA = United Nations Economic Commission for Africa

W = Width

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## Abstract

Addis Ababa is the capital as well as the political and cultural center of Ethiopia. But the slum areas in the inner city are found to be the prominent problems that hide the international image of the city. Hence, extensive redevelopment activities are under way to transform the city in to a more livable city in Africa. However, Addis Ababa faces huge challenges in redeveloping slum areas. Thus, this paper tried to assess physical aspects of the redevelopment practices of Kaza-INCHIS/ECA/Economic Commission for Africa/ area and analyze the proposed Local Development plan of Meskel square entrance pocket area.

This paper, therefore, applied snowballing random sampling method to select respondents for this paper. The paper further utilized purposive sampling to select officials in different hierarchies' and area of expertise. Both primary and secondary data are collected with the help of interviews, structured questionnaires, site reconnaissance and observation. The collected data were analyzed, interpreted and presented with the help of various software packages: MS-excel, GIS, AutoCAD, ArchiCAD, Artlantis Studio, Adobe Photoshop, Adobe Illustrator and computer programs. The results were presented in text, tables, pictures, charts, graphs and maps.

Accordingly, the research concluded that the redevelopment practice in Addis Ababa has problems with respect to physical issues of urban design concepts, absence of visual satisfaction or aesthetics, comfort, efficiency, identity and sustainability, poor proportional integration of different land uses, road hierarchy, poor consideration of urban public spaces as a breathing open space and poor landscaping among others.

Hence, the recommendations, the design concepts and spatial proposals presented in this thesis paper will pave the way for physically Livable, Vibrant and Sustainable design and implementation of redevelopment interventions in the city.

**Key word**: Urban, Redevelopment, Local Development Plan, Urban Design


**General Map of Addis Ababa**

# CHAPTER ONE: STUDY BACKGROUND AND RESEARCH METHODS

## 1.1 . Introduction

The intent of this study is to look into the aspect of urban redevelopment practice in Addis Ababa and review the redevelopment plans so far prepared to transform the inner city centers of the city. Hence, the research will examine and investigate the drawbacks of the proposed Local Development Plans and previously realized area projects from the view point of physical aspects of urban design principles. Furthermore, it will introduce a suitable Local Development Plan scheme that needs to be practiced for the time ahead in Addis Ababa.

## 1.2 . Background of the Study

Addis Ababa is the capital as well as the political and cultural center of Ethiopia. It is also a seat of African Union (AU), United Nations Economic Commission for Africa (UN-ECA) and hundreds of embassies and consular representatives, Addis Ababa is often called the "African Capital" due to its historical, diplomatic and political significance for the continent. It is located in the foot hills of the Entoto Mountain and standing with an average 2,355 meters above sea level. It is located in the geographic center of the country. Currently, the city covers 54,000 hectares of land.

The city established in 1886 and it is one of the fastest growing cities in the continent (www.addisababacity.gov.et.). Moreover its population has been dramatically increasing every decade. In 1984 the population was 1, 412, 575, in 1994 it was 2,112, 737, and in 2007 the population was 2,738,248 million (CSA, 2007).

Addis emerged first as a military camp and thereafter continued to grow haphazardly without any planning intervention. The first attempt to sketch a modern master plan for the city was made in 1936, during the Italian incursion almost half a century later from its foundation. Even thereafter, plans proposed for the city by different planners

did not go beyond the level of a blue print. Most of the key urban problems currently prevailing in Addis Ababa have grown out of mainly from the pattern of development it followed throughout its history and pilling up for many years. As a result, the original settlement pattern still continues to dominate the current structure of the City. Besides, Addis Ababa is one of the cities with large proportions of their settlements are recognized as “slum”, about 80% of it is considered slum (Elias, 2008).

Contrary to its continental importance, Addis Ababa is one of the least developed cities in Africa facing a major challenge of slum proliferation. The problem is more manifested in overcrowding, severe housing shortage and deterioration in some of its inner parts. The problem is very much pronounced due to uncontrolled population growth. Moreover, the absence of adequate facilities of infrastructure, public facility provision and services of international standard, despite its National, Regional and International importance, the city hardly meets the required urban quality and living standard of any other city in developed nations.

The overall spatial structures in the inner parts of the city are characterized by unplanned, poorly designed commercial neighborhoods, dilapidated, rundown and substandard structures, poor road alignments, and unsightly activities mostly composed of low rise buildings. This fact has called for urban redevelopment in order to bring Addis Ababa to a livable standard.

Addis Ababa faces a huge challenge in redeveloping slum areas in the core of the city areas. The redevelopment of the city represents large parts of the city area, which now faces extensive redevelopments. Just redeveloped old slum areas is not enough – the urban area as a whole need to be revitalized in proper urban design way, that they would be able to compete with the newly built world urban centers.

Meskel Square entrance pocket area is the dilapidated and shanty areas of the city core areas. By taking this reality the city administration tried to redevelop this area with a similar approach made on Kaza-INCHIS. The Kaza-INCHIS redevelopment site has witnessed multiple redevelopment design problems from its inception to the final implementation. In addition to this there is big variation on the proposed LDPs and the one that has been implemented on the site. The future redevelopment plan

for the Meskel Square entrance area has design drawbacks and this thesis tries to investigate them and provides an alternative urban redevelopment design.

## 1.3 . Statement of the Problem

According to (UN-HABITAT, 2003). Almost 1 billion people, or 32 percent of the world's urban population, live in slums, the majority of them in the developing world. Moreover, the number of slum dwellers is likely to increase in most developing countries. And if no serious action is taken, the number of slum dwellers worldwide will projected to rise over the next 30 years to about 2 billion.

Addis Ababa is one of the cities in the world in which large proportion of their settlements are recognized as slum (Elias, 2008). The inner city is dominated by slums, magnitude of slum proliferation is severing around the geographic center of the inner city of Addis. The phenomena of inner-city decay, physical dilapidation, congestion/overcrowding and lack of open spaces are major problems of the inner-city of Addis.

Thus, they are at the forefront of government redevelopment interventions through urban renewal scheme. Accordingly, the Sheraton and Kaza-INCHIS areas is the first site for redevelopment and it is followed by Lideta, Sengaterra and Basha Woldie chilot among others.

The Kaza-INCHIS redevelopment site has faced multiple redevelopment design problems at the different stages of its design and construction. There is big variation on the proposed LDP plan and the one that has been implemented on the site. Besides, some of the major physical problems observed include: building arrangement, road hierarchy, availability of open spaces and their related amenities, and absence of pedestrian lane and drainage facilities. The redevelopment issues that have been witnessed in the site are accrued as a result of failure to incorporate proper urban planning standards that integrates the different physical concerns of an area.

Due to inappropriate space arrangements, building orientations and their frontage (setback) are not enough to provide adequate space for visualization and psychological comfort. The problem is further aggravated by inappropriate road size to building height relationship due to which the proportion of open spaces in the site is insignificant. Furthermore, the LDP proposal did not provide any urban breathing space for the site.

Hence, the absence of the aforementioned physical issues has made the site to be a concrete jungle rather than an urban space fulfilling the social, economic and psychosocial feeling of a society.

It is also that the newly prepared LDP plan for Meskel Square entrance pocket area reveals the above problems replicate itself in the same manner. Moreover, the site fails to recognize the importance of road hierarchy within a predetermined spacing requirement of urban streets.

Therefore, the consolidated problem statement for this research paper is how to prepare an alternative Local Redevelopment Plan for Meskel Square entrance pocket area into a more physically Livable, Vibrant and Accessible CBD area through urban design that integrates the various approaches to deal with the physical aspects of urban design.

## 1.4 . Objectives

### 1.4.1 . General Objective

The main objective of the study is to investigate the drawbacks on the already implemented redevelopment of Kaza-INCHIS/ECA area and to prepare an alternative Local Development Plan based on basic urban design parameters for Meskel square entrance pocket area.

### 1.4.2 . Specific Objectives

The study has the following specific objectives:

- To assess the previously implemented redevelopment practices of Kaza-INCHIS/ECA-Economic Commission for Africa/ area.
- To analyze the proposed LDP plan of Meskel square entrance pocket area redevelopment plan.
- Based on the findings, to find alternative urban design solution that improves the physical setting and functionality of the area.

## 1.5 . Research Questions

The research questions that this paper will provide answer are the following:

1.5.1. What are the physical challenges of the previously implemented redevelopment site of Kaza-INCHIS/ECA area?

1.5.2. Are the proposed future Meskel Square entrance pocket redevelopment urban design physical, functional compactible in to the site and adjacent neighborhoods?

1.5.3. How can alleviate the drawbacks for the future Meskel Square entrance pocket area plans and what are the possible alternative urban design solution to redeveloped the area physically in to more livable and vibrant city center?

## 1.6 . Scope of the Study

The study covers urban redevelopment and its application in Addis Ababa city administration in Kirkos sub city woreda 19 redevelopment project. The site is known as Meskel Square entrance pocket area which covers a total area of about 34ha.

It's The subject of urban redevelopment involves various inter-related urban thematic issues: the physical, socio-economic, political, environmental and cultural aspects and some cross cutting issues like gender, crime, HIV/AIDS etc... Dealing with all these issues is unmanageable. Therefore, it was necessary to define the boundary of it's the study with respect to subject/theme. Hence, the thematic scope of the paper is to deal with the physical aspect of urban design: building arrangement, road hierarchy, open space and their related amenities, absence of pedestrian lane and drainage facilities, within the case study area.

## 1.7 . Methodology

### 1.7.1 . Selection of case study area

The following criteria's are used in order to:

- Current redevelopment area
- Location
- Iconic importance
- The urge for redevelopment
- Ready for implementation but not yet
- Attention given by city government
- Availability of public open space
- Appropriate location to demonstrate urban design

The other point that is considered when selecting the case study areas is the level of implementation. Therefore, two different cases are selected; the first one represents a case where a redevelopment project implemented partially and the other represent redevelopment projects that are totally unimplemented.

### 1.7.2 . Sample and Sampling Frame

The research adopted purposive sampling technique to select the two sites: Kaza-INCHIS/ECA and Meskel square entrance pocket area. However, the different respondents in the site are selected based on snowballing random sampling technique to reach at a comprehensive representative sample. Accordingly, a sample size of 25% respondents was taken from stakeholders and professionals to collect data for Meskel Square site. Furthermore, the officials in different hierarchies are purpose selected based on their area of expertise related to the subject matter of this paper.

### 1.7.1 . The Research Design

**Research method**

Both **Descriptive** and **Exploratory.**

**Descriptive:** Is set outs to describe and interpret what is? It looks at individuals, groups, institutions, methods and materials in order to describe, compare, contrast, classify, analyze and interpret the entities and the events that constitute the various aspects of the paper.

According to the AAU (2009, unpublished research method manual), Descriptive research, therefore, involves a variety of research methods to achieve its goal. The methods are: ***Surveys***, ***Observation studies*** and ***Case studies***. The paper describes the different attributes of the site through texts, percentages, graphs etc.

**Exploratory:** Is applied to this study what is happening in the site to get an overall picture of the events. Inventory of the physical issues is very much reliant on the exploring the different maps including base maps, LDP's among others.

### 1.7.2 . Data Collection Method

**a. Data Types and sources**

Different kinds of data are used and put together to conduct this study. Hence, to get a rich understanding on urban redevelopment both **primary** and **secondary data** were collected.

In the **primary data** sources the research used: direct observation, interviews and questionnaires were administered.

Furthermore, primary data were collected from the stakeholders: chamber of commerce, Environmental Protection Authority, Addis Ababa city Beautification, Parks & Cemetery Development & Administration Agency, different professionals, consultants engaged in the tasks related to the study, Plan commission of Addis Ababa city, Kirkose sub city, existing hotels, church, schools and etc.

In addition, **Secondary data** were collected from published and unpublished documents, books, literatures, relevant maps (Base map, LDP plans and satellite images), different reports, pictures and web sites.

**b. Data collection methods**

**Interview**

An interview was scheduled to get first hand data on the space allocation and the different design standards used in the preparation of LDP plans. In addition, data on the drawbacks of the different LDP plans have been obtained from an in-depth interview carried out with the various respondents.

**Observation**

Observation was conducted so as to have a direct impression and describe the events in the site in different maps, pictures, and graphs.

**Questionnaire**

Questionnaires were prepared and dispatched to gather primary data from different respondents: professionals, officials, and other relevant stakeholders.

### 1.7.3 . Data Analysis and presentations

To analyze data both qualitative and quantitative techniques were employed. Data gathered through questionnaires, interview and field surveys is interpreted and analyzed using various software's; MS-excel, GIS, AutoCAD, ArchiCAD, Artlantis Studio, Adobe Photoshop, Adobe Illustrator and computer programs, Apart from this, A qualitative description is also made for non-measurable traits, particularly for those related with quality. Finally, the results were presented in text, tables, pictures, charts, graphs and maps.

## 1.8 . Significance of the study

The research focus on the urban redevelopment intervention practice of slums in the city. It is prepared ultimately to investigate the drawbacks so as to drive corrective solutions. I believe, the output will be an important input it will serve as a reference

for other researchers to use it as a reference on this area. And the municipality will take the research finding and proposal for future design and implementation.

## 1.9 . Limitation of the study

The residents of the study area are already relocated and the site is cleared up which is ready for redevelopment. Hence, data collections from the residents were very difficult and cumbersome. The different stakeholders including government officials were reluctant to accurately respond to an interview of questionnaires prepared to obtain their opinion on the subject area of this paper.

## 1.10 . Organization of the Research

The study is organized in four chapters. The first chapter deals with the introductory section which depicts the overview of the research where background of the study, statement of the problem, objectives of the study, guiding research questions, methodology, significance, scope and limitation of the study are included. The Second chapter discusses about the review of related literatures having international and contextual studies with explanatory case studies. The third chapter presents the deals about discussion and interpretation of results of the research where the existing physical and future redevelopment plan of the area is well analyzed. Finally, the fourth chapter describes the recommendations, alternative local development plan proposals including different layers of plans and urban design details related to the physical aspects of the projects for Alternative local development plan of Meskel Square entrance pocket area.

# CHAPTER TWO: LITERATURE REVIEW

## 2.1 . Introduction

In this chapter, the literature review part has searched and included those literatures which are highly related to the subject matter of this paper. Hence the reviews give due attention to the following issues related to urban renewal and their potential interventions of slum in the inner-city area. Consequently the focus of the literature search is on the approaches to urban renewal, rationality for urban redevelopment and major desirable qualities in urban design physical aspects for redevelopment. These literatures are considered to pave the way for design proposals and recommendations of this paper.

## 2.2 . Definition of terms and concepts

### 2.2.1 . Inner city intervention strategies

**a. Urban Renewal**

Urban renewal has different meanings in the eyes of various scholars. It is very difficult to find a universal definition for urban renewal that applies to all urban centers. Most of the definitions are different since they are based on initial assumptions and policy direction they want to address. Some may focus on the physical aspect, while others focus on social and economic aspects.

According to Wilson J. (1966, cited in Ashenafi, 2001: 79-80) In some places renewal meant erecting a civic monument in a down town plaza; in others rehabilitating sound but decaying homes; in others, getting “undesirable” neighborhood by spot clearance, in others stabilizing blighted neighborhoods and encouraging residents to improve their properties; in others developing land that will attract new businesses in to community; and in still others assembling tracts on which subsidized low or middle income housing might be built.

Other writers have suggested that the term urban renewal is of American origin and refers there and in many other countries, to the redevelopment or rehabilitation of the older parts of town and cities, including their central business area. (Gibson, M and Langstaff, M, 1982 in Ashenafi Gossaye ,2001).

It was at the first international seminar on urban renewal held in The Hague in 1958 that experts came up with a plausible definition for urban renewal.

It can no longer be the same as slum clearance or traffic improvements or repair of deteriorated areas; it is a comprehensive activity designed to counteract functional obsolescence of the urban structure as a whole and the parts and elements of it, and to revitalize continually all elements and parts of the urban area (ibid.).

According to (Peter Robert et al, 2000, cited in Tamirat, 2006). urban renewal that states urban renewal is a comprehensive and integrated vision and action which leads to the resolution of urban problems and which seeks to bring about a lasting improvement in the economic, physical, social and environmental condition of an area that has been subject to change. According to Heyaw (2005), renewal is an act of demolishing old buildings and replacing them by new ones, so urban renewal process has been an important element for the redevelopment of inner city areas.

Therefore, urban renewal is as an essential activity carried out on specific area to boost the physical, environmental, social and economic aspects by solving specific problems

### 2.2.2 . LDPs as Vehicles for Urban Renewal

According to Dejene (2005), With regard to urban renewal in Addis Ababa, two approaches are practiced. These are area-wise renewal and plot wise renewal. The initiative of area-wise urban renewal comes from the City Government. In this approach, a specific area is designated for urban renewal program, as per the set criteria, and then the necessary Local Development Plans are prepared under the supervision of the Planning Commission. As the preparation of LDPs for the designated areas are completed the process of implementing the plans will

commence i.e. shifting existing residents and demolishing existing structures. Finally, the vacant plots are put into auction for leasing. After the winners of the respective plots acquire their plots they are supposed to start constructing the buildings as per the requirement of the LDPs.

This approach can be categorized as a conventional slum clearance activity, which belongs to the first generation of urban renewal approach. As envisaged Local Development Plans show, in most cases, forthcoming activities and structures that follow from this approach are largely different from what exists, this implies a fundamental functional and structural change to the respective project areas.

### 2.2.3 . LDPs as Urban Design Plans

Citizens of differing cities in the world have practiced different methods to solve the problems of inner city decay in their respective constituencies. Most of the countries have integrated the planned approach, physically or otherwise, to create healthy, attractive and beautiful inner city areas. One of the tools extensively used is the tool of urban design Dejene,(2005).

### 2.2.4 . Approaches to urban renewal

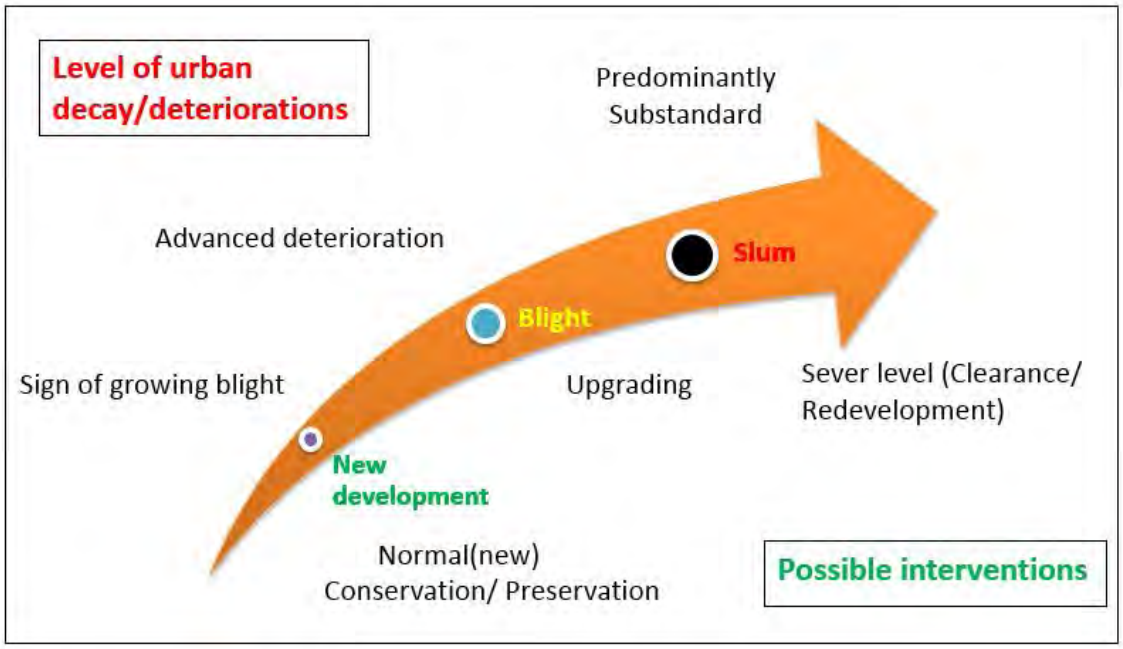
There are three common approaches to urban renewal. As shown in the figure indicates that urban blight passes through various stages from the premature infant stage of new development to a more saturated, dilapidated stage of slums Heyaw (2005). At the same time the physical planning interventions required at varies scale of blight.

So, urban Blight is a serious issue in the city area. Redevelopment of blighting properties and allowing additional uses that may be more economical and physically viable provided the severity of blight and the amount of benefits the redevelopment is expected to yield is high enough.

Hence, Redevelopment is needed when the city or an urban center is hosted with slums. The reasons for intervention and the specific mechanisms used differ according to the situation. But, often inability of private developments to produce the

desired quantity and quality of developments is the more common reason and conservation, upgrading and redevelopment are the more common mechanisms Heyaw (2005),

*Fig - 2.1: Level of urban decay and possible interventions.*




*Source: Adopted from Heyaw, (2005).*

### a. Conservation

conservation as a process of looking after a cultural heritage or a conservation area so as to retain its significance, including its maintenance, preservation, restoration, reconstruction, adaptation or a combination of two or more of these. According to Heyaw (2005) approaches have therefore shifted from a restrictive concern with preservation to a concern with revitalization and enhancement. In addition to the visual, architectural and historical qualities, consideration of the functional characteristics of areas and the activity, economic use of the protected buildings was introduce. Nevertheless, conservation is associated with environment, it is likely to faver neither the weak nor the strong contestant, as such, built mainly the physical structure.

The purpose of conservation is to prevent decay and manage changes dynamically and this is not limited to a building or a site only. Urban conservation is not merely to conserve the building but to preserve the whole ambience including cultural significance. Urban conservation is also about how people live, work and play in an area, as described by Tan (2006): How they live are inextricably linked to (historical) buildings; buildings that house their abodes; buildings where they earn their living; buildings whose shape, size and locality form the essence of their lives and how they carry it out Feilden (2003, cited in Malaysia, 2007),

**b. Upgrading**

According to Heyaw (2005), Upgrading is one of the most common methods by which urban area particularly those dominated by poor quality urban fabric are changed. In many developing countries upgrading is often employed to improve living conditions for low - income residents living in unregulated and unserviced housing areas. The original population is often maintained. As a result apart from mainly quality physical change it is not expected to lead to major change of land use or composition of social groups.

According to the Burgess model the slum is a phenomenon supposed to be limited to a single ring surrounding the CBD. In many developing cities, however, slum free areas are rare (UN-Habitat, 2003).

This implies particularly in developing countries upgrading is potentially a common mechanism by which urban areas are transformed. In addition, the fact that the original residents are maintained implies in the contested environment of central areas upgrading is basically a mechanism that favors the weaker contestants.

**c. Redevelopment**

According to Goodall (1972, cited in Heyaw, 2005: 23-24) redevelopment is a mechanism of change that is most associated with old and built up central areas of cities. Since urban areas often grow outward from the center the core becomes the oldest least up to date part of the urban area where the most redevelopment activities are concentrated there.

Redevelopment is basically an act of demolishing old dilapidated building and replacing by new one mostly slum areas, a removal of some or all structures and rebuilding of an area significantly to create higher order of urbanity to be defined in terms of economy, urban form, employment, aesthetic and etc.. Heyaw (2005).

It is a means for revitalizing certain part of a town or city for the purpose of alleviating urban deficit, renovating or replacing dilapidated buildings with new housing, public buildings, parks, roadways, industrial areas, etc…

The process of restoring the badly deteriorated areas of an urban area to a properly plan physically and economically sound conditions and the actions, which are taken to arrest the process of urban decay is designated by the terms **urban redevelopment**.

Generally, the use of urban redevelopment have many important roles in the city like Replenished urban physical parts, housing stock might be an improvement in quality.

Hence, redevelopment is a means to:

- Government and private investment
- Attracted new large scaled development
- built New houses to replace dilapidated slum houses
- Provide mixed use activities
- improve Transport links
- To provide public spaces like playground, open spaces, etc.

### 2.2.5 . Main Approaches to Inner city redevelopment

#### a. Slum clearance and resettlement

According to Ashenafi (2001:87-88), Slum clearance, often termed redevelopment, consists of the removal of existing buildings and other structures, and the reuse of cleared land for the implementation of new projects, either the same as or different form, the original use. This approach is applicable to areas in which the general lay

out of the area and the arrangement of buildings of such area does not, and cannot, provide opportunity for sound economic activity or satisfactory living conditions. As the case may be; or in which buildings are generally in seriously deteriorated condition. The impact of such areas may contribute to functional obsolescence of the urban structure.

In such cases, the demolition of substandard and obsolete housing and reconstruction of whole blocks or of small sections is often thought to be the only solution to ensure future physical part of the city comfort and safety. One of the various types of Redevelopment approaches of slum areas is renewal of the deteriorated area. But urban renewal has an impact on the urban poor .it is a series type of urban redevelopment. If it is not managed very well, it will have an impact on the urban poor. The main challenges for urban renewal are affordability and sustainability. In one hand the inner city land is very crucial for government to get revenue and tax when it is developed. On the other hand the urban poor residents want to live there since their source of income is attached with their location. So the redevelopment has to solve the paradox of equity and efficiency i.e. the redevelopment has create a win- win situation to solve affordability and sustainability problems.

### 2.2.6 . Rationality for urban redevelopment

***Economic transition and employment change:*** describes this idea by a unit building as, a building is occupied by the use for which it was designed and in the second stage, and the original use is replaced by another use or more intensive use in the same activity. In the third stage there is partial conversion or modification to better accommodate to new uses. Finally the building will be demolished and replaced by new one for more intensive and different use or similar use. Adaptation and replacement of buildings are mainly due to economic pressure than physical deterioration (Paul N Balchin et al, 2000, cited in Mathewos, 2006). Therefore, inner city area, which was active at one time, could be totally obsolete unless it adapts itself to the changing demand. Furthermore, economic development could lead to expansion of business and hence the competition for inner-city land will be intensive.

***Social and community issue:*** Inner city decline brings effects that have direct impact on the livelihood of the individuals. The problems in inner city, congestion, substandard unsanitary houses with the opening of choices of sub urban development (i.e. edge development) creates a push and pull situation whereby the affluent and middle income families move out. As communities become more marginalized, the empty building and space encourages vandalism and crime (Richard Rogers and Anne Power, 2000, cited in Mathewos 2006). Inner city areas are no longer preferred for residential locations (Peter Robert and Huge Sykes, 2000). Basic community facilities and social infrastructure are lacking in old derelict part of a city that exacerbates the already rundown economy and attitude. Therefore governments with the view to improve the chronic social problems, in such area conduct urban renewal program.

***Physical obsolescence:*** One of the most obvious manifestations of the urban problem is the physical obsolescence of much part of cities and towns. In situ decay, the functional obsolescence of buildings, derelict sites, out dated infrastructure and the change in accessibility of requirement of users of urban areas are indications of physical obsolescence which calls for renewal (Peter Robert and Huge Sykes, 2000, cited in Tamirat, 2006).

***Environmental quality and sustainable development:*** Old core areas usually lack proper green breathing space, proper garbage and sewage collection that make these urban fabrics environmentally unfriendly. The other factor that has impact on sustainable development of city in general and inner core in particular is resource. The pattern of development of urban center has impact on the consumption of energy. Water supply, electric supply and transport are challenges of city managers and planners. With rapid urbanization and out migration from inner city, resources to get going the day-to-day activities become a problem. In many cases urban areas can be seen to generate environmental costs that are not matched by benefits. These costs include the excessive consumption of energy, the inefficient use of raw materials, the neglect of open space, and the pollution of land, water and the atmosphere (Peter Robert and Huge Sykes, 2000 cited in Tamirat, 2006).

***Modernization:*** Modernization is also the other main causes for urban renewal nowadays due to the expansion of cities; different hierarchies of roads and modes of transport facilitating the transportation system. To accommodate the state of the art city functions renewing urban areas may be required. The other thing most

commonly examined is the introduction of advanced technology in building construction. This technology allows cities to have high-rise high-density development.

In general, the above explanations are some of the rationale that really call for urban redevelopment. The severity of the problems is directly related to the physical aspects of urban center developments.

## 2.3 . Urban design Variables

### 1. Visual satisfaction/Aesthetics

According to Carmona (2003), **Visual satisfaction/ Aesthetic** preferences in the dimension of urban design aesthetic appreciation of the urban environment is primarily visual and kina esthetic. Visual appreciation of urban environments is also a product of perception and cognition. The visual dimension of urban design, it is important to recognize that the general public's liking for particular environments is much broader than aesthetic criteria. Jack Nasar (1998) identified five attributes of 'liked' environments. Disliked environments tended to have the opposites of these. In each case, it was the observer's perception of the attribute that was important. The attributes translate into a series of very generalized preferences:

• *Naturalness:* environments that are natural or where there is a predominance of natural over built elements.

• *Upkeep/civilities:* environments that appear to be looked after and cared for.

• *Openness and defined space:* the blending of defined open space with panoramas and vistas of pleasant elements.

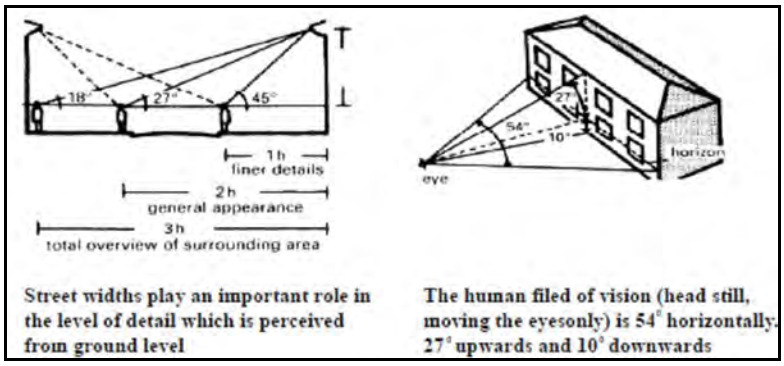
• *Historical significance/content:* environments that provoke favourable associations.

• *Order:* in terms of organisation, coherence, congruity, legibility, clarity.

**Scale and Street width to Building height ratio:**

**Scale** is measurement of one thing in terms of another or of its own parts. Urban designers are most concerned with human scale. Human scale is a measure of real size. Humans have connection to their environment through their sense organs. Among the five sense organs eye is the important media through which humans appreciate their environment.

*Fig - 2.2: Street widths in the level of eye perception.*




Street widths play an important role in the level of detail which is perceived from ground level

The human filed of vision (head still, moving the eyesonly) is 54° horizontally, 27° upwards and 10° downwards

*Source: Ernst and Peter Neufert, (2003, 3rd edition).*

According to Carmona et al (2003: pp 156) scale is the perception of an object relative to other objects around it, and to our perception of those objects. Scale concerns first, the building's dimension and all its parts relative to the dimensions of a human being (i.e. human scale) and, second is its dimensions relative to those of its setting (i.e. generic scale). Hence, a building can be understood to be of a human scale or not and, separately, to be in or out of scale with its surroundings. The human scale is the distance that one can see the facial expression and feelings of a person. This distance is approximately 15m or 27degree con of vision.

**Street:** In streets with strong physical character, their volume generally takes a positive form and possesses a strong sense of enclosure. The continuity of the street wall and the height-to-width ratio determine the sense of spatial enclosure, while the width determines how the surrounding architecture is seen. In narrow streets, vertical features become more prominent, projections are exaggerated and eye-level details more important. The observer sees facades at acute angles and, when facing along the street, only sees parts of them. In broad streets, the observer is sufficiently removed to see the surrounding facades as wholes, and their relationship - or lack of it – becomes evident, while the floors cape and skyline become important elements contributing to the street's character.

Streets that wind or have irregular frontages enhance their sense of enclosure, and provide a constantly changing prospect for the moving observer. Many commentators (e.g. Sitte, 1889; Cullen, 1961) express a preference for such streets, arguing that while straight ones have their place; their selection is often made without sufficient consideration of the terrain, circumstances, townscape effect, and the potential for visual delight and interest in the local context. The (in visual terms) successful design of straight streets generally depends on such factors as good proportions between

length and width; the kind of structures of which they are composed; and their visual termination on a building or other feature that brings the eye to rest (Carmona, 2003).

**Height to Width Ratios for Street Enclosure**

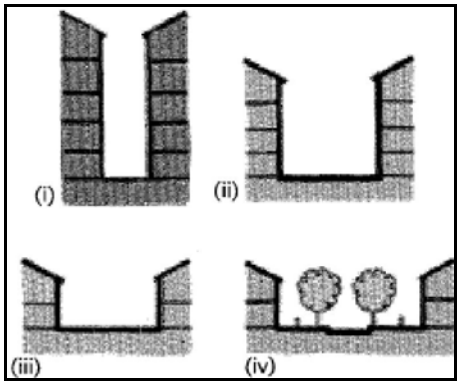
(i) Unlike a square, a street has only two walls to define space. If the walls are low in relation to the street width, outward views are not sufficiently contained to provide a sense of enclosed space. In a street with a 1:4 ratio, there is three times as much sky as wall within the range of vision, giving a weak sense of enclosure.

(ii) If the ratio is 1:2 the peripheral glimpses of sky equal the amount of visual field devoted to the street wall. The view of the sky is in the less dominant peripheral vision, so increasing the three-dimensional sense of enclosure. A ratio of between 1:2 and 1:2.5 provides a good sense of enclosure in a street.

(iii) If a street wall height that equals the street width, it severely limits any sky view and gives a strong sense of enclosure. A ratio of 1:1 is often considered the minimum for comfortable urban streets.

(iv) If the surrounding building height exceeds the width of the space then the tops of buildings will no longer be visible without looking up. Such ratios may lead to feelings of claustrophobia and will reduce light penetration into the space. In combination with other street profiles, however, they can create dramatic contrast (Carmona, 2003).

*Fig - 2.3: Height to Width Ratios for Street Enclosure.*




*Source: Public Spaces, Urban Spaces, M.Carmona,Tim Heath,(2003).*

**2. Comfort**

Comfort is a prerequisite of successful public spaces. The length of time people stay in a public space is a function and an indicator of its comfort. The dimensions of a

sense of comfort include environmental factors (e.g. relief from sun, wind, etc.) physical comfort (e.g. comfortable and sufficient seating, etc.); and social and psychological comfort. The latter is dependent on the character and ambience of the space. Carr *et 01.* (1992, p. 97) argued that this is 'a deep and pervasive need that extends to people's experiences in public places. It is a sense of security, a feeling that one's person and possessions are not vulnerable.' The sense of comfort may also be enhanced by the physical design of the space and/or by its management strategies Carmona, (2003).

Comfort is a basic need. The need for food, drink, shelter from the elements, or a place to rest when tired all require some degree of comfort to be satisfied. Without comfort it is difficult to perceive how other needs can be met, although people sometimes will endure major discomforts in attempts to enjoy themselves.

Relief from sun or access to sun is a major factor in the use of specific places, as indicated by our review of past research. That design of an outdoor space to allow maximum sunlight may be one of the most crucial factors in the success of the space Carmona, (2003).

**The relation of sun, building and building shadow**

According to (ORAAMP, Norms and Standards of the Addis Ababa Structure Plan Components, 2002). **Building layout and orientation** in allocating the buildings within a certain selected action area in the neighborhood design, one has to consider:

**Sunlight:** Sunlight penetration varies over the season and location. Ethiopia located near the equator gets overhead sun adequately. But the layout of building facing the east - west direction is not preferable as it has high sunlight penetration and create uncomfortable living environment. Therefore avoid / minimize orientation of the longer side of the building in the east – west direction.

It is clear that the position of the sun affects the shadow of the structure on the ground. It is necessary to reach a rational way of relating the shadow of a structure

on the road to that of structure's height. It is also clear that the sun goes to different position at different times of the day with a different angle. Similarly, the length of a shade on by a structure on the ground varies, depending on the height of the structure and on the position of the sun during the different months of the year. From this scenario, the meteorology office here gave the following assistance: "The annual rotation of the sun determines the declination angle of the sun at the day time. In the case of Addis Ababa, which is 9 degrees and 02 minutes north, the lowest shadow length during any time of the day is observed at local NOON. Maximum shadow at noon could be observed during the winter months that is December –January. And the angle of the sun during this time of the month at noon is 32.47 degrees of the zenith (at this time, the sun is at the southern hemisphere, Tropic of Capricorn – 23.45 degrees). There is the second maximal shadow in summer that is in June – July (at this time, the sun is at the northern hemisphere, Tropic of Cancer, 23.45 degrees). At local noon over Addis Ababa the sun is almost overhead on the 14$^{th}$ of April and 31$^{st}$ of August. That means on these dates shadow length on the local noon is almost ZERO. During the rest of the year the shadow length lies in between the two extremes". (ORAAMP, 2002)

On the other hand when the sun is overhead on the Tropic of Cancer, the sun has an angle of 14.43 degrees to the structure, which implies that the structure has the shortest shadow on the road. With the same way of understanding tan 14.43 =L/H which is L= .257/100  the shadow is 25% of the structure height. If we have a road width of 10 meters and all its width is covered by a shadow of a building, the height of the building will be 10/.257= 39.9meters height  (this is a building type of G+11). What does it mean? It means that the height of a building should not be greater than 4 times the width of the road that runs north south.
What can be concluded from the analysis is that, if we want to take into consideration the impact of a shadow of a structure on the built environment, we have to regulate the height of the building based on the result of the longest shadow scenario. That is the height of a building alongside a road should be 1.5 times the width of the road.

However, it is very important to note that to regulate the height of a building based on its impact on the built environment is more of scientific and simple but would be stiff regulation, unless otherwise such regulation is applied to certain selected urban

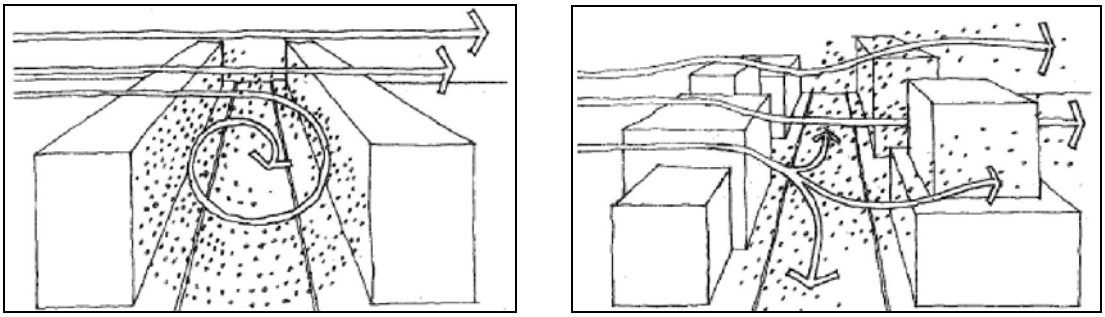
areas only. But to apply it on the overall area it would be unpractical and unproductive too. The idea here is that, both buildings could have sufficient sunshine and light as well as, healthy circulation of air between the buildings. This could be achieved by locating each building far apart and as a result, creates sufficient open spaces in between. Furthermore such application of regulation on the height and distance of a building from others also give great opportunity for the creation of quality urban spaces (built or open ones), (ORAAMP, 2002).

**Wind and topography Considerations in Urban Designs**

In allocating the buildings within a certain selected action area in the neighborhood design, one has to consider: **The wind environment -** Wind flow has a substantial effect on the comfort of pedestrians, the environmental conditions within public spaces and around building entrances and the activities that might occur there If the wind effect is to be minimized (as is usually the case), the following factors should be considered:

During analysis, identifying the pre dominate wind direction in the action area is necessary. In order to reduce wind pressure, the orientation of the longer building side should be perpendicular to the wind. Creating open space perforation through building arrangement and building height variation is also necessary to avoid wind tunnel effects and improve the air quality at street level (Carmona, 2003).

*Fig - 2.4: Air quality at street level. Street canyons lined with buildings of similar height, oriented perpendicular to the wind direction (left diagram) tend to have poorer air circulation than street canyons lined with buildings of different heights and interspersed with open areas (right diagram).*



*Source: Public Spaces, Urban Spaces, M.Carmona,Tim Heath,(2003).*

### 3. Efficiency

**The functional dimension of urban design:** This involves how places work and how urban designers can make ‘better’ places. The 'social usage' and 'visual' traditions of urban design thought each had a 'functionalist' perspective. That of the former concerned the functioning of the environment in terms of how people used it, while in the latter, the human dimension was often abstracted out and reduced to aesthetic or technical Criteria such as traffic flow, access or circulation. This one is concerned with two sets of functional considerations, taking the former first. It has four parts. The first part concerns the use of public spaces, the second concerns mixed uses and density considerations, the third environmental design, and the fourth aspects of the capital (PARTNERSHIPS, September 2007).

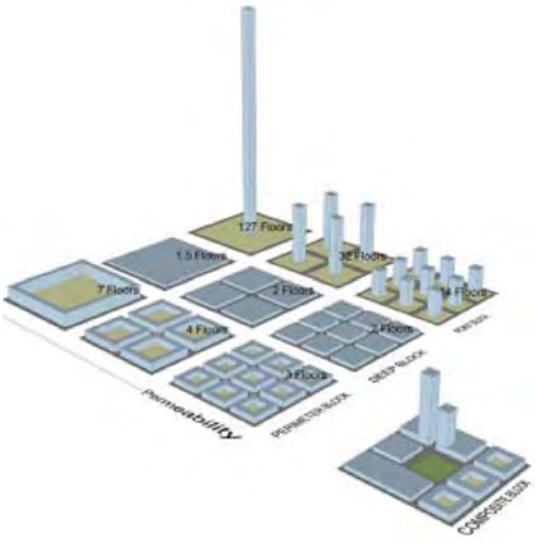
**Efficient land use Functional:** According to Carmona (2003), mixing uses, building at higher densities and coping with the existing environmental conditions and, efficient energy and infrastructure utilization

**Efficiency in circulation:** Movement of goods and people are major components of human life. There should be a good relationship between different land uses (eg residential - to work places). There should be a spatial coordination in order to reduce public expenditure, commuting costs in monetary and time aspect and to effect a better urban environment, save lives in case of accidents and disasters.

**Inefficient Land Utilization:** There are inefficiencies in land utilization resulting from excessive occupation of prime land by some governmental institutions, manufactures, embassies etc. Similarly, irregularity of plots and sparse developments in the built-up intermediate zone and the expansion areas are contributing to this inefficiency.

**Floor area ratio (FAR) or plot ratio:** Floor area ratio and plot ratio are the same. They express the ratio between gross floor area and site area. They indicate the intensity of land use and give some indication of massing volumes. Specifying minimum and maximum values is sometimes useful in development coding and for efficient land use systems. (Liewelyn, 2000).

The following is an illustration showing the effect of density on building coverage. The density is the same but FAR is different.




***Density and urban form – Wembley tall building study***

*This analysis by REAL shows how the same density can be delivered by varying building height, block size and building depth. In this example, the three-storey perimeter blocks deliver the same density as the 22-storey (check) point block (7,200m2 / ha).*

## Density

There is a strong relationship between density and design. Density is a measurement but design is a tool, which creates the built environment. Therefore, both density and design play an important role to create desirable and sustainable built environment in various cultural contexts.

Building density control is the important part of the formation of the block structure, because of the effects on the relationship between public spaces and building groups. Moreover, the capacity of the roads, infrastructure and parking spaces are the other criteria for controlling of the density. And also, it is related to environmental conditions such as natural lighting. Human scale, as the other significant factor related to effect of the building bulk to the public spaces and streets.

**Built up Density:** Worldwide the concept of creating a sustainable and compact city is being promoted as it has social, economic and environmental advantages i.e. encouraging positive interaction and diversity; improving viability of and access to community services; enhancing the economic viability of development & infrastructure; supporting public transport; increasing efficiency of energy and resource utilization.

In a neighborhood housing development program, the density range for a certain area can be given in the terms of reference based on the particular city norm and standard. Density of an area may vary not only from region to region; but also within the city based on employment opportunity, resident's interest, development trend, land value etc.

In the case of Addis Ababa, density proposal is set for the different zones on the structure plan. In core areas where the land value is high, with better service and infrastructure provision, job opportunity and transportation, dense development is foreseen relatively to maximize efficient utilization of resources.

*Table - 1: Addis Ababa, density proposal for the different zones*.

| Density Zone | Proposed Gross density Household / Hectare | Population Gross density Inhabitants / hectare |
|---|---|---|
| Core area | 190-380 | 950-2000 |
| Intermediate | 120-190 | 120-190 |
| Periphery | 54-120 | 54-120 |

*Source: Norms & standards of the A.A. city structure plan components, (2002).*

**Block size** the optimum size of blocks is determined by:

- Ease of access
- Ability to encompass a variety of building sizes and uses. Ability to change and adopt over time Square blocks offer the most flexible layout for commercial and residential buildings and for internal treatment.

A rectangular block with the short side onto the main street improves connectivity, for example blocks of about 100m have been found to be successful in inner urban areas. It may be appropriate to reduce these dimensions in more central locations (Edinburgh, 2003).

### 4. Character and Identity

At a time when many places are beginning to look alike, effective urban design policies and strategies have the potential to reinforce local character and create places with a real sense of identity. Places that grow true to their locality are likely to be sustainable, enjoyable and to attract investment – intellectual, cultural and financial. An appreciation of local climate, urban form, culture, topography, building types and materials is necessary to nurture local distinctiveness.

**Urban structure:** Success in delivering new development with a strong sense of local identity is much more likely if the roots of character are recognised in the urban structure: the relationship between landscape, settlement and movement. Movement patterns form the framework for our experience of place.

**Character and sustainability:** There is a direct link between local character and sustainable development. Local identity and sustainable development are both achieved by making full use of the resources immediately at hand: reducing, reusing and recycling.

**Movement and character:** If movement and the resulting pattern of routes is basic to our experience of place, retaining or creating the character of a place should be based on the characteristics of the movement pattern: its connections, its hierarchies, its geometry and its relation to topography.

**Retaining existing features:** Retaining existing features on a site, either in substance, position or alignment, is often far more effective in creating a tangible sense of character than a pastiche design (drawing on parts of other works, or elements of various local styles) would be. Features to be taken into consideration include existing uses and buildings, topography, watercourses, routes, boundaries and trees. Knowing what to retain and how to make best use of it will depend on careful appraisal work to determine the benefits likely to be achieved and the resources required. A sustainability appraisal may help in striking the balance.

**Urban form, activity and character:** The character and identity of a town centre will be rooted in its urban structure, and its patterns of movement and activity. That character will be expressed through the form of urban blocks, and the scale and size of the buildings that compose them. Inappropriate scales, such as large retail

buildings or shopping centres, often occupying an entire block or more, can threaten the character and identity of an existing town centre. One of the most fundamental forces at work in our psychological makeup is the need to create and maintain our own identity (PARTNERSHIPS, September 2007).

### 5. Sustainability

*Sustainability A broad conception* of *design,* extending beyond 'aesthetics' and basic 'amenity' considerations, to include a concern for environmental quality that encompasses urban design and sustainability- economic, social and environmental,

**The temporal dimension of urban design:** The pursuit of sustainable development is a long-term goal accomplished through many small scale interventions Carmona, (2003).

**Carrying-capacity analysis**

According to (James k, 2003) Carrying capacity has been a central concept in planning and environmental management for well over three decades (Mitchell, 1989). The concept emerged from the biological sciences, but when it is applied in the context of environmental planning, carrying capacity can be defined as the degree of human activity that a region can support at an acceptable quality of life without engendering significant environmental degradation (Bishop et al., 1974). Alternatively, Hayden (1975) and Cook (1972) have defined carrying capacity as the maximum ability of an environment to continuously provide resources at the level required by the population. Both definitions are valid and suggest that the interaction between population, development, and the local resource base is governed by thresholds or levels of intensity that will influence long-term sustainability.

**Three useful expressions of carrying capacity are:**

1. ***Environmental carrying capacity*** – defined by biophysical characteristics (variables) including of air and water quality, ecosystem stability, and soil erosion. These variables define thresholds such as emission standards, BOD (bio oxygen demand), and net primary productivity that can be measured and linked by theory or empirical evidence to specific consequences. Employing these measures allows careful examination of the assimilative capacity of the environment and the ability of environmental "sinks" to accommodate change.

2. ***Physical carrying capacity*** - describing the capacity of infrastructure such as roads, highways, water supply systems, landfills, etc., to maintain an acceptable level of performance under population growth and development pressures. Because physical infrastructure is designed with specific capacity levels in mind, growth forces can exceed the predetermined optima and result in a degradation of performance and environmental quality.
3. ***Psychological carrying capacity*** – directs focus to the social environment and explains the role perception, attitude, behavior, and culture play in the way people react to their surroundings. Embedded in this expression are cultural and psychological factors that influence individual behavior and responses to the quality and condition of amenity resources, recreational area, institutional settings, and the aesthetic aspects of the environment.

## 2.4 . Case study: Curitiba, Brazil

***Background:*** According to the Curitiba Research and Planning Institute (IPPUC, 2009), Latin American cities have rich experience in urban redevelopment programs. Curitiba is the capital of the state of Paraná. It is located in southern Brazil and has an area of 432 square kilometers (279 sq. mi.). The Master Plan for Curitiba has the objective of adapting the zoning and land-use requirements to the socio-economic and territorial development of the city. The transportation system in Curitiba is highly integrated with Land Use and the Road System.

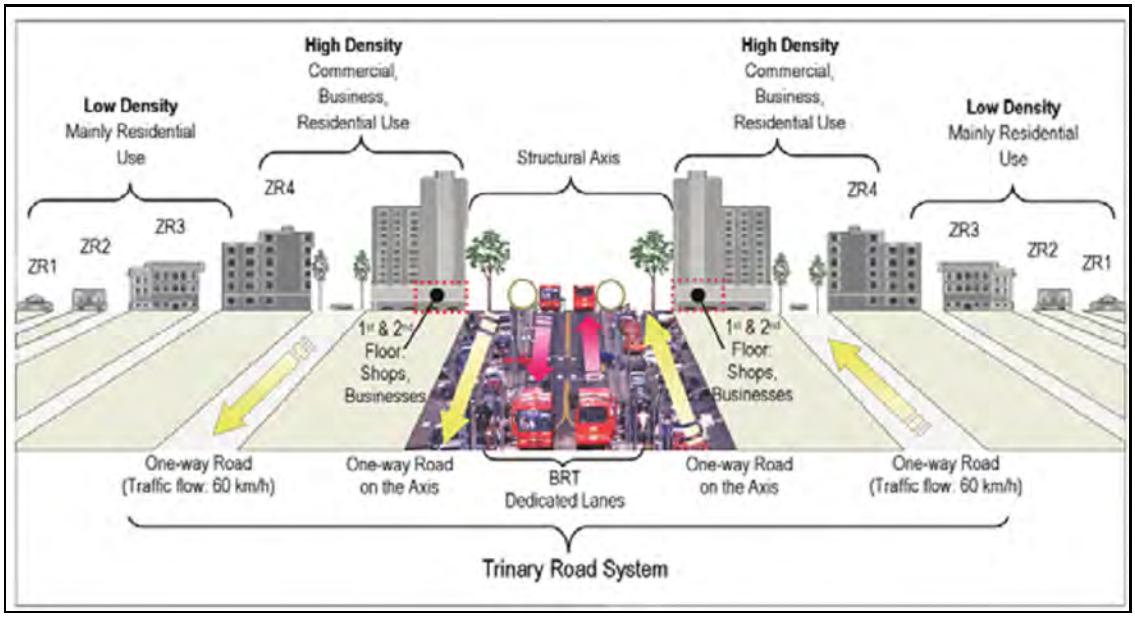
The key concept is the structural axis, the physical form around which the development of the city and its transportation network is organized. Curitiba has become an international model for sustainable development because it puts its people first and plans in a strategic and integrated way. Curitiba is a “livable” city.

***Land Use:*** The highest levels of residential and commercial development are concentrated in the two blocks at the center of the spine, with diminishing densities in the blocks to either side, thus preserving large areas for low-rise residential development in the sectors between axes.

To accommodate BRT routes and fulfill transportation needs along the axes, the city designated functions to existing roads under its trinary road system. The five major

axes now accommodate both dedicated BRT lanes and roads to access buildings. Cars that do not need to access services along the axes may bypass these areas by using roads parallel to the axes.

*Fig - 2.5: The Trinary Road System in Curitiba.*




*Source: (Hinako Maruyama) based on IPPUC (2009a), Hattori (2004), and pictures supplied by IPPUC. Note: km/h = kilometers per hour.*

In addition, to avoid concentrated traffic in the city center, a previous mayoral administration transformed selected streets in the city center into pedestrian walkways on which cars are prohibited.

Through these measures, Curitiba's spatial growth and urban land use patterns have been efficiently controlled and defined. Traffic is diverted from the city center or the axes thanks to an effective mixture of land use planning and a well-conceived public transportation network. Because housing, service facilities, and job centers have been incrementally developed along the axes and linked to the BRT system.

***Road System:*** The three-part road system of each axis is made up of one central street with exclusive lanes for efficient public transportation and slow local access traffic lanes with parking. To either side of the central street are one-way arterial streets of traffic (express lanes) headed into or away from the downtown area. This road system was created through a re-definition of the existing streets, not by resizing the streets or constructing overpasses (http://www.ippuc.org.br).

## MAJOR COMPONENTS

### *Connective corridors:*

"Concentric circles of local bus lines connect to five radial lines that go outward from the center of the city. On the radial lines, triple-compartment buses in their own traffic lanes carry 300 passengers each. They go as fast as subway cars." (Donella Meadows, cited in ICLE).

*Pic - 2.1: Bus Entry Tube and Flowers Street where street children tend the flowers Pedestrian Street.*


*Source: (garba.org/aboutme/pictures/curitiba) and* (*www.promobrazil.it*).

***Neighborhood parks:***

We wanted to build parks within a maximum of 500 metres of everybody's home: the local people convinced us that we would do better to save the remaining forests … so we got our parks in one or two months instead of having to wait 20 or 30 years for the trees to grow!"

***Civic, downtown and social spaces:*** **'**People-centric planning on a budget'

*Pic - 2.2: Tangua Park and Pedestrian Street.*


*Source: (http://www.curitiba24horas.com/Turismo/parquetangua.php) and* (*www.promobrazil.it*).

Curitiba has developed a sustainable urban environment through integrated urban planning. To avoid unplanned sprawl, Curitiba directed urban growth linearly along

strategic axes, along which the city encouraged high density commercial and residential development linked to the city's integrated master plan and land use zoning.

The green area has been increased, mainly in parks that have been created to improve flood prevention and through regulations that have enabled the transfer of development rights to preserve green areas and cultural heritage zones. As part of efforts to concentrate shops and facilities in the city center and along dense axes, Curitiba's car free central city zone (including its main streets and recreational facilities such as parks) has become more walk able, lively, and attractive to citizens. Crime has also decreased. In addition, citizens, particularly the poor, are provided with opportunities to participate in environmental activities and educational programs.

The social, economic, and environmental elements of sustainable development in Curitiba have been facilitated by integrated land use, public transportation, and street network plans Much of the success may be attributed to the Institute for Research and Urban Planning of Curitib - IPPUC (Instituto de Pesquisa e Planejamento Urbano de Curitiba), an independent public authority that handles not only research and planning, but also the implementation and supervision of urban plans. IPPUC has coordinated the various aspects of urban development and ensured continuity and consistency in planning processes amid turnover in city administrations. This is an illustration of successful path dependency in urban development in terms of the spatial, institutional, and cultural aspects.

***RESULTS,*** the population has doubled since 1974, auto traffic has declined by 30%, and atmospheric pollution is the lowest in Brazil. In addition, an inexpensive "social fare" on public transit promotes equality. The city has 200 kilometers of bike paths. Downtown areas were transformed into pedestrian streets, including a 24-hour mall with shops, restaurants and cafes and a street of flowers with gardens tended by street kids. This vibrant pedestrian zone encourages tourism, which generated US$280 million in 1994, 4% of the city's net income (ICLEI) Canada.

*KEY REPLICATION FACTORS*

- Articulation of strong, local core values in a city plan.

- Creation of an independent municipal authority such as IPPUC to ensure planning continuity and success regardless of political, economic and social challenges.
- Integrated planning processes structured to assure that planners in all areas know the strategy and are working with a shared vision and developing their plans together Curitiba, Brazil. Curitiba has become a model city because of its high quality environmental, social, and physical attributes which are primarily the result of one of the most successful city and transit planning efforts anywhere in the world during the 20th century. The plan, conceived in 1965, emphasized the integration of land use, the road system, and public transportation. It encouraged high-density development along linear structural axes running in the north-south and east-west directions.

***Lessons Learned***

- Articulation of strong, local core values in a city plan.
- *The integration of land use, road systems and mass transit is a powerful tool.* Through the use of land-use instruments, local governments can direct population growth and thereby establish effective systems of transportation.
- *Vision, leadership, and flexibility lead to success of urban planning.* Curitiba is one of the few cities that realized its urban plan. The factors of Curitiba's success are these: a clear long-term vision, strong leadership to implement the plan, and flexibility in adjustments by utilizing a step-by-step approach.
- Creation of an independent municipal authority such as IPPUC to provide continuity and implement plans, as well as to monitor planning and research to improve future efforts.
- Integrated planning processes structured to assure that planners in all areas know the strategy and are working with a shared vision and developing their plans together. This way, many problems of unlinked development (e.g., not enough provision for green space) can be avoided.
- Developing new models that provide inexpensive, creative urban solutions and reflect local values are an alternative to standard, often-higher-cost approaches.

## 2.5 . Contextual study

### 2.5.1 . Ethiopian urban center

**Development of Addis Ababa**

The growth of Addis Ababa is that, much is it represented a break from the tradition of peripatetic capitals, it at the same time continued to bear the mark of the mediaeval royal camp for a long time. After Axum and Gondar, it was the third permanent capital of the Ethiopian state. The city provides an excellent example of spontaneous growth Institute of Ethiopian studies AAU (November 24-25,1986).

Addis Ababa is an indigenous Africa city. Unlike many other African capitals, its founding, growth and development are not rooted in colonization. It is formed casually, little by little. The builders followed no formal plans that confirm to western concepts of planning and design and the form and situation of the houses and streets came out as they built them. As a result of this, today the townscape of the inner-city has an organic character (Ashenafi, 2001)

When Menelik II founded Addis Ababa in 1886, he asked the chiefs and their entourage who helped him to win victory over the Italian occupation to settle around the emperors' palace (the "Ghebi"), so he could continue to be in control of them. These small neighborhoods, called "sefer" became the motor for the development of the city. First, the "sefer" were separated by natural buffer zones as rivers, slopes or streams, but during the years, those boundaries blurred more and more due to the incredible speed of urban growth. Nevertheless, those first settlement areas stayed for the last 125 years almost as naturally preserved social communities, with people and families living up till today in a very close economic and social relationship to each other (Elias, 2008).

This marked the first land use pattern of the city which can actually be considered as old unplanned neighborhoods. Moreover, this historical origin of the city has also produced a multi-centered urban form system, where different functions and different social and economic classes still mingle and living together. (Ashenafi, 2001).

### 2.5.2 . Inner city of Addis Ababa /case study area

Case study area part of core area of the inner city. Main characteristics of slums in the inner city of Addis Ababa the oldest part of the city; it is not a pure commercial business district (CBD). Many different activities exist; some are in conflict with each other and others co-exist together. The physical and spatial fabrics, the nature of economic setting of the inner city of Addis Ababa have certain features. The spatial fabrics are characterized by poor infrastructure and congestion of houses (Berhanu W et al, 2001). Inadequate transport facilities, lack of proper parking space and poorly planned, managed road system and rundown unsanitary housing are typical character of inner city of Addis Ababa. The failure of coordinating the different utility companies on top of the meager utility service exacerbates problems of inner city.
According to the study made by Ashenafi (2001), inner city of Addis Ababa is characterized by inadequate services, deteriorating structures and overcrowding the rich and the poor live together in the inner city.

The revised Addis Ababa City Development Plan and the Millennium Development Goals Needs Assessment Study asserted that 80% of housing in Addis Ababa is slum. These houses are single story "*Chika"* (Mud and Wood) constructed houses without maintenance for a long time. These houses are physically deteriorated.

Addis Ababa: The city has more than 380,300 housing units that are below standard and are built of non-durable materials. 52% of the total housing units have mud floors, 83% have mud walls and 1.3% has thatched roofs. The over-crowdedness (2.1 persons per room) surpasses the UN-HABITAT standard, which is below 2 persons per room. A quarter of the households are living in overcrowded dwelling units. Furthermore, 26% of the housing units do not have separate cooking areas, 25% are without toilet facilities; and 11.5% have no access to improved water. More than 40% of the housing units are owned by kebeles. These houses have received little maintenance for the last 3 decades. The rent from these houses is too low to cover the maintenance and administration costs (Mathewos 2006).

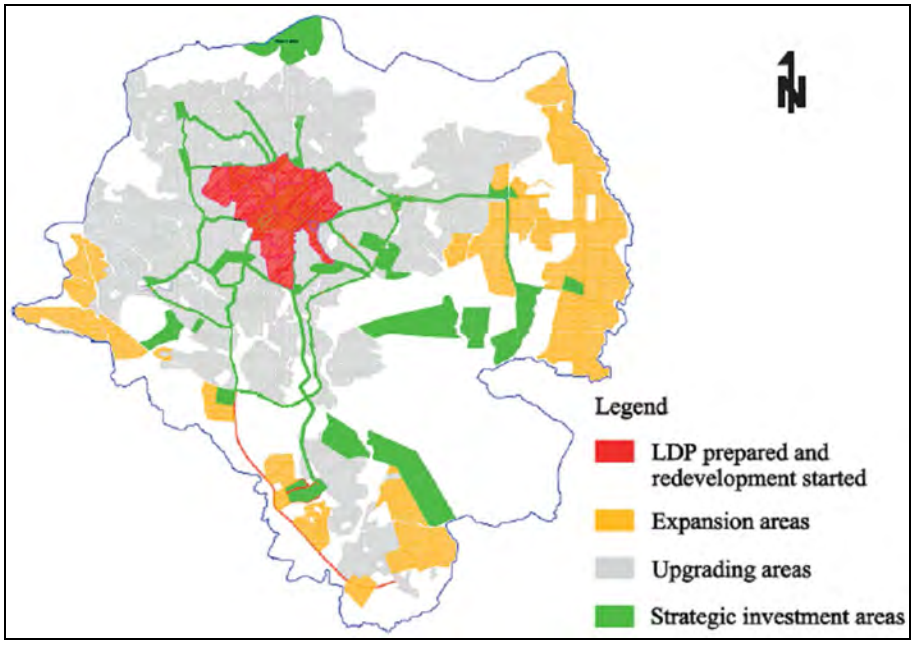
The physical/environmental feature of this type of slums is characterized by: dilapidated structures and over-crowdedness; insufficient, deteriorating and over-

burdened infrastructure services that cannot meet existing demand; and inadequate social and economic services (Mathewos 2006). Due to this reason the severity of blight is higher in the inner city.

Starting from 2003, the Addis Ababa city government has put urban renewal as one of its top development agenda. The city core area was demarcated for renewal /intervention. The city government considers urban renewal as key development strategy towards addressing urban poverty and improving **physical** image of the city.

The Structure plan of Addis Ababa enacted in 2004 (Addis Negarit Regulation No. 16/2004) clearly stipulates that in order to bring sustainable urban growth, the outward expansion and the inner development need to be balanced. Together with expansion area development, inner city renewal and upgrading strategies are planned (Tamirat, 2006).

*Map - 2.1: Inner city redevelopment plan (Intervention types in Addis Ababa).*




*Source: Addis Ababa Urban Plan information Institute (2003).*

The Structure plan of Addis Ababa delineates the inner most core areas of the city to be redeveloped through urban renewal. To accomplish this, the city government of Addis Ababa prepared local development plans that focus on renewal approaches. These approaches are assumed to regenerate the inner city socially, economically and physically. So far, more than twenty local development plans are prepared for the city. Out of this, more than three fourth are located in the inner city. Those local development plans prepared in the inner city are more of renewal types.

In this regard, the structural plan of the city, which foresees and set out the major framework of the city's development, has identified important localities within the city that need priority interventions. The inner city areas were demarcated for redevelopment. Some of these areas started redevelopment implementation through the local development plan. In changing the deteriorated inner city area demolishing of structures and is also expected to happen in the future.

# CHAPTER THREE: DISCUSSION AND INTERPRTATION OF RESULTS

## 3.1 .Case study I - Realized Redevelopment (Kaza-INCHIS/ECA area)

### 3.1.1 . History and Naming

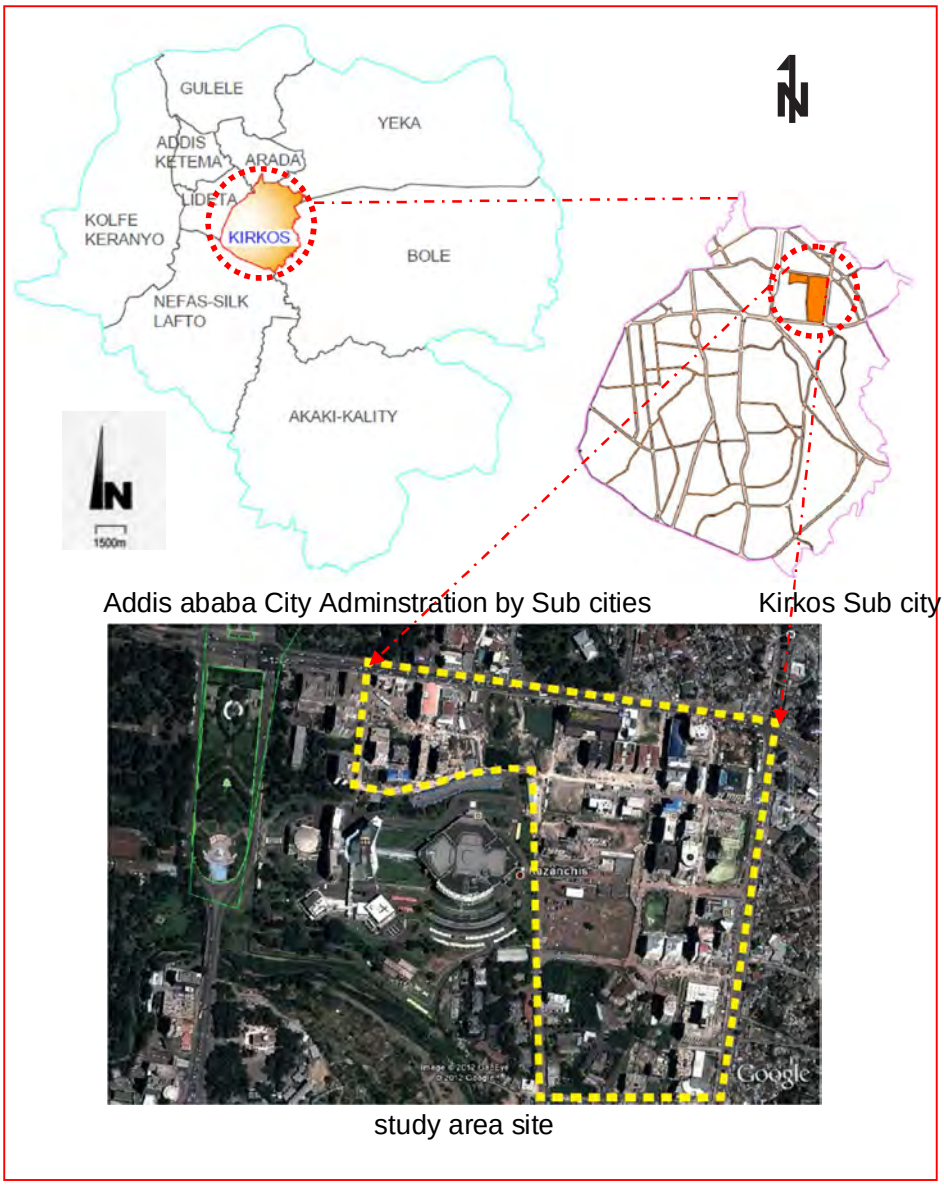
The city of Addis Ababa was established as a result of the settlement of king Minilk at Entoto along with his war lords in the different parts of the city since 1886. The present ECA area and its surrounding were allocated to one of the war lords of Minilik by the name of Ras Mulugeta. During the battle of Adowa in 1896, when King Minilik declared war with the Italians, the area served as a military camp and spring board of the soldiers of Minilik who travelled to Adowa with the King. During the Italian occupation of Ethiopia in 1936, the area started to be called by an Italian name 'Kaza-INCHIS', which in Italian means the house of commanders. The word is basically made up of two Italian words. 'Kaza' meaning 'house' and 'INCHIS' meaning 'commander', hence the name Kaza-INCHIS. During the Italian occupation the area was allocated as a residential area for the Italian military authorities. However, after the Italian occupation the area served as a residential area for distinguished government employees Dejene, (2005).

### 3.1.2 . Location of the site

Kasa-INCHIS/ECA area is located at the Eastern part of the center of Addis Ababa in Kirkos Sub City woreda 17/18 the site covering about a total area of 40.82 hectares. According to Dejene (2005), the project site covers an area of 20 ha.

The area is identified as one of the priority areas for public and private investors having a significant business corridor which is possible to create an international city center where commercial and business activities can develop. The area is bounded by major land marks of the city. These are ECA which is an international headquarter within the site, Hilton Hotel in North, National Palace in the West and St. Estifanos church in the west.

*Map - 3.1: Location map of Kasa-INCHIS/ECA area.*

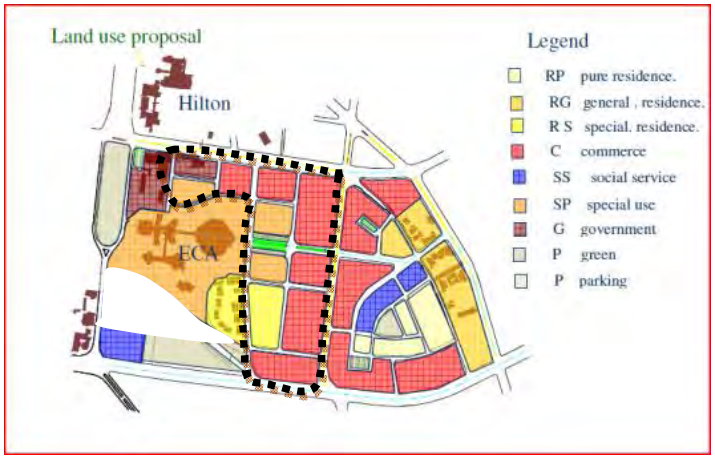



*Source: Adapted from Addis Ababa Urban Plan information Institute (2003).*

### 3.1.3 . Local Development Plan (LDP) land use Analysis.

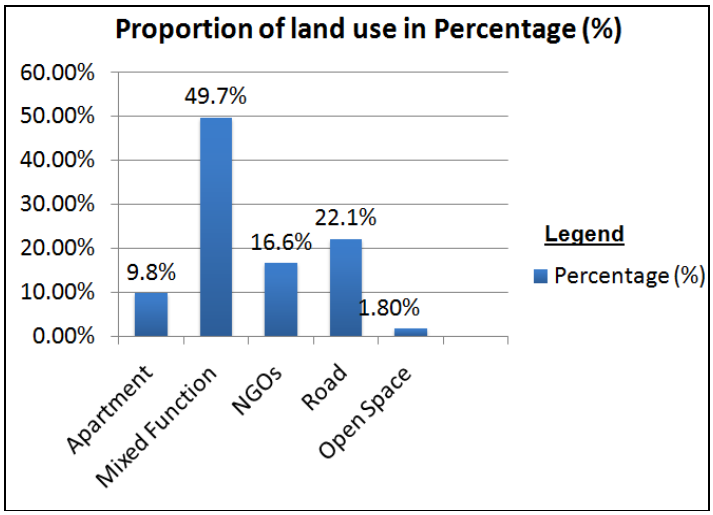
The land use plan needs to consider the physical development of the city. But the document that was prepared by the planning of this area did not show any specific urban design concept.

*Map - 3.2: Showing land use plan of the ECA LDP.*




*Source: Adapted from (Dejene, (2005).*

*Fig - 3.1: Showing the proportion of land use allocated by the ECA LDP.*




*Source: computed by the authors, 2012*

As shown in the figure about 60% of the area of the land is allocated for mixed function development that is to be developed by private investors.

Institutions like the ECA, the GTZ and the British Council have taken about 17% of the land; information from the lease office has revealed that the institutions have taken the land for free.

The proportion of open spaces is only about 2%. From this it has become very clear that the LDP did not consider green and open spaces as the integral part of its proposal.

The BAR/FAR, building footprint/morphology, and the building height are not in line with the LDP. The physical part of the area like, internal road spaces seem insufficient for circulation and urban quality.

***Plot Size***

*Map - 3.3: Showing land use plan of the ECA LDP.*

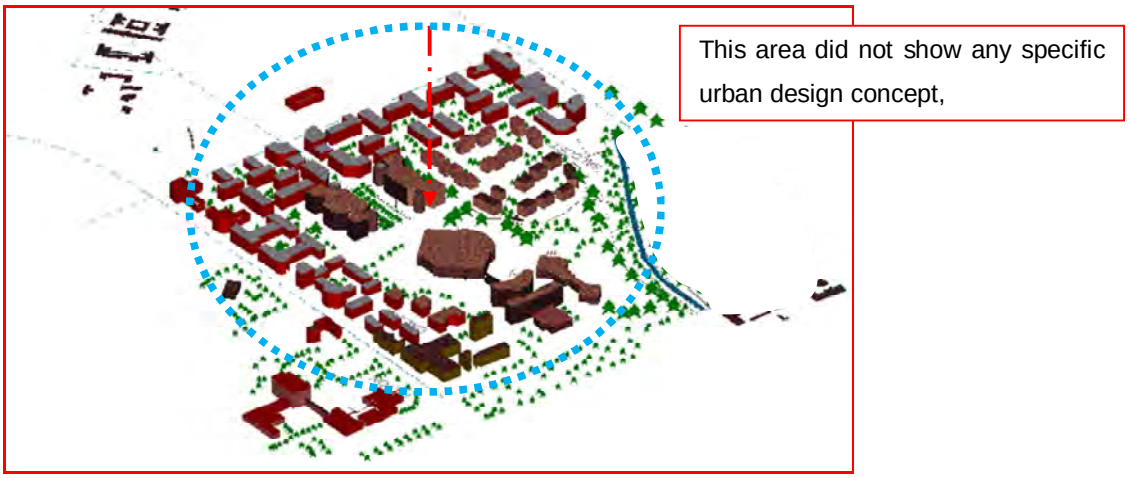

Sub-dividing development parcels into plots, which are as small and narrow as is practical, encourages a diversity of forms, uses and allows a rich variety of buildings to emerge. This also: generates more active frontage; encourages a 'human scale' and fine pedestrian grain and minimizes costly and wasteful leftover space.

*Source: ORAAMP, (2002).*

As we can see in the above map, the LDP indicated the areas where development is to take place including some guidelines about building height, density and road systems. The plots too big from the standard size.

According to Dejene (2005), About 33% of the plot areas of the LDP range between 500-999m$^2$ whereas the majority of the plots (60%) have areas ranging between 1000-3000m$^2$ and a limited no of the plots (about 8%) have areas of over 3000m$^2$.

*Fig - 3.2: The three dimensional view of Kasa-INCHIS/ECA area LDP.*




*Source: ORAAMP, (2002).*

As we can see the above picture what is easily visible in this area is the absence of a strong design concept centered on the existing ECA building which is one of the landmarks of Addis, The building arrangement and building height is similar due to this it creates the filling of monotonous. The standard of some of the new buildings is very low. No enough parking, space high density area with little breathing space.

### 3.1.4 . Road Hierarchy Analysis

Road hierarchy and landscaping related with amenity is very essential on the physical character of the area to functional activity, safety and security a city. It is also necessary to consider *Physical carrying capacity* - the capacity of infrastructure such as roads, to maintain an acceptable level of performance and development pressures. Because physical infrastructure is designed with specific capacity levels in mind, in Ksaa-INCHIS/ECA area, especially in the inner streets, there are no walk ways/foot paths for pedestrian movement. Lack of street lighting. This has resulted in car congestion. Due too insufficiently of the density of building height and the street width. It decrease day and night pedestrian activity as well as functionality and productivity of the site.

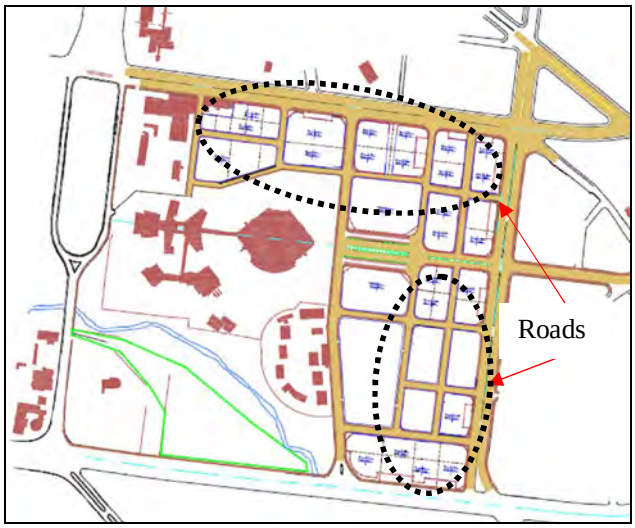
*Table - 2: Road hierarchy and differences.*

| **Streets** | **ORAAMP Proposal Streets (width) in M** | **Existing Streets (width) in M** | **Differences** |
|---|---|---|---|
| Principal Arterial Streets **(PAS-3)** | PAS-3= 40M | 30M | 10M |
| Principal Arterial Streets **(PAS-4)** | PAS-4= 30M | 30M | - |
| Sub-Arterial street **(SAS-1)** | SAS-1= 25M | 20M | 5M |
| Sub-Arterial street **(SAS-2)** | SAS-2= 20M | 15M | 5M |
| Collector Street **(CS-1)** | CS-1 = 18M | 12M | 6M |

*Source: ORAAMP, (2002).*

As shown in the table there is no detailed road design and section to show types and the proposed streets differences according to ORAAMP proposals.

*Map - 3.4: Road design of Kasa-INCHIS/ECA area LDP.*




*Source: ORAAMP, (2002).*

### 3.1.5 . Building height spacing Analysis

#### *3.1.5.1* ***. Scale***

According to (Carmona, 2003), Scale is an essential part of buildings for creating urban character based on physical quality, Regarding the perception of an object relative to other objects around it; a building can be understood to be of a human scale or not and separately to be in or out of scale with its surroundings.

As we see in the following picture the proportion of the buiding Height and to streetwidth ratio is out of human scale. That means an aesthetic aspect of the physical environment of the area is not good and comfortable for human perspectives'.

*Pic - 3.1: Building height related to street width ratio and pedestrian scale.*

*Source: field photograph, 2012*

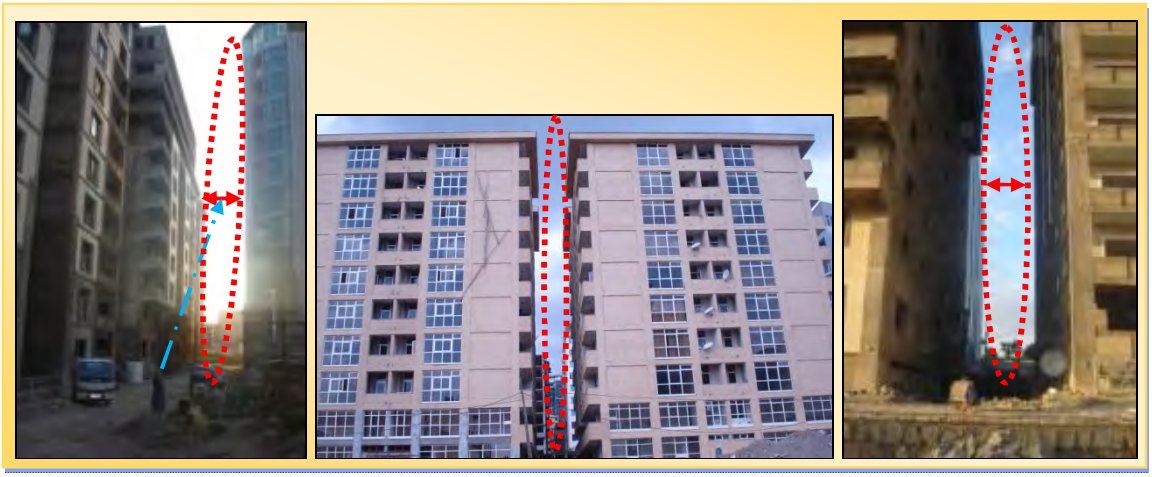
***Physical impact***, in this situation the buildings are individual, unrelated elements without containment. The new buildings that come to the area have a strong impact by affecting the quality of the space.

The design approaches used did not address how to create an urban form that functions properly for pedestrians and contributes to making. Livable and appealing neighborhoods.

### *3.1.5.2* ***Building spacing***

As we see the pictures the building spacing is not enough, Due to this there is insufficent natural light, air and privacy. It also losses the physical eastetical characterstcs quality of urban forms .

*Pic - 3.2: Building spacing and building arrangements.*

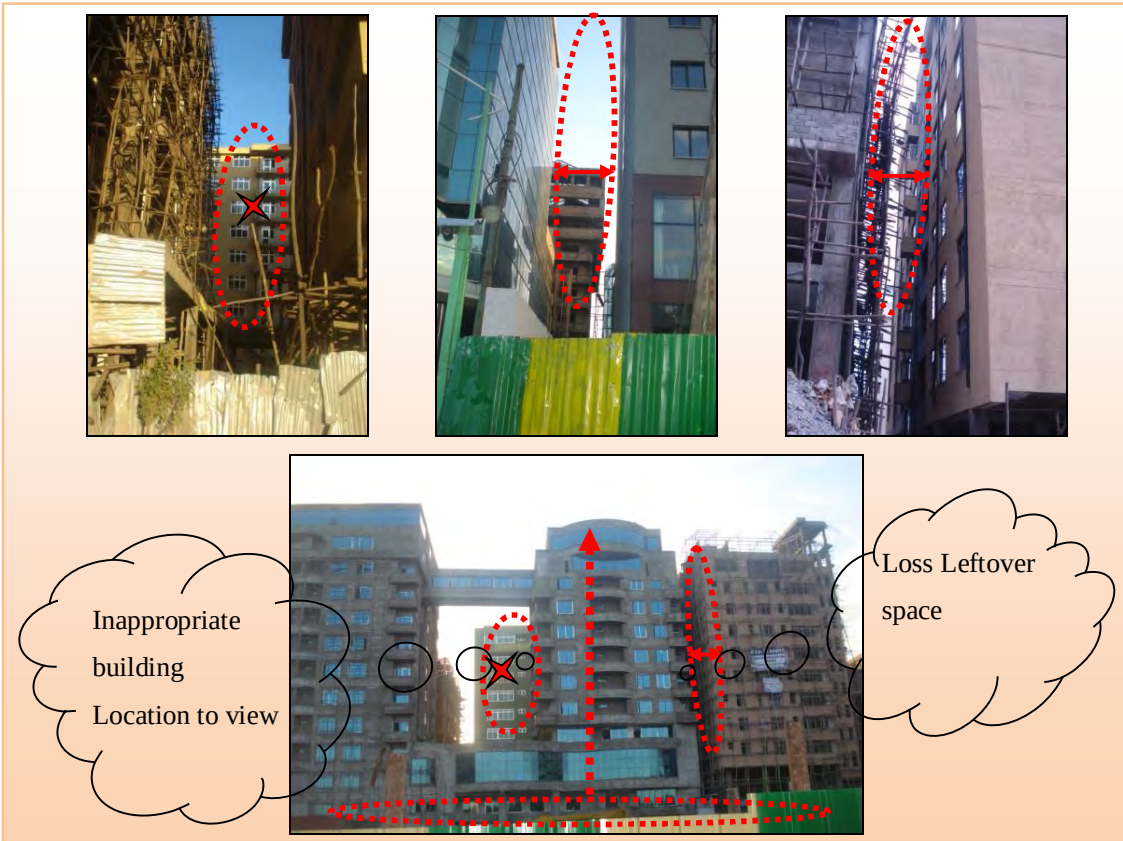


*Source: field photograph, 2012.*

**The Problem of Very narrow building spacing**

Building spacing, the ratio of street width and building height are not proportional. Consequently, loss of architectural effect was the result when the building has such a height that it cannot be viewed at a proper angle.

*Pic - 3.3: Loss of Leftover space.*




*Source: field photograph, 2012*

### *3.1.5.3* ***Building Height***

*Pic - 3.4: Building height and massing problems.*

Height of buildings in respect with the adjacent street / setback from the point of view of the general public has importance consider: Light, air, privacy and Architectural effect. Provide setbacks appropriate to the adjacent land use and functions. More over Variations in the setback are encouraged to respond to building function and to create visual interest these are directly related to the physical urban form quality.

As we can see the pictures those major important building height considerations not giving attention in the LDP, so this is weakest part of the quality of the project.

Creating open space perforation through building arrangement and building height variation is also necessary to avoid wind tunnel effects and improve the air quality at street level (Carmona, 2003). In this design it is absent,

*Source: field photograph, 2012*

### *3.1.5.4* ***Setbacks, Building height, and street width***

A setback is very essential to improve the attractiveness of the physical parts and functionality of a building and site. Setbacks also influence the relationship of buildings on a plot and the relationship of buildings to the street. The use of the buildings determines the appropriateness of the setback. On retail streets, building walls along the sidewalk should be designed to define the street and to provide a comfortable scale for pedestrians. The truth in Kasa-INCHIS/ECA area is contrary. The setbacks, building height and street width of the study area are not proportionally related as shown in the pictures.

*Pic - 3.5: Problems of the relationship of Setbacks, Streets width and building height.*

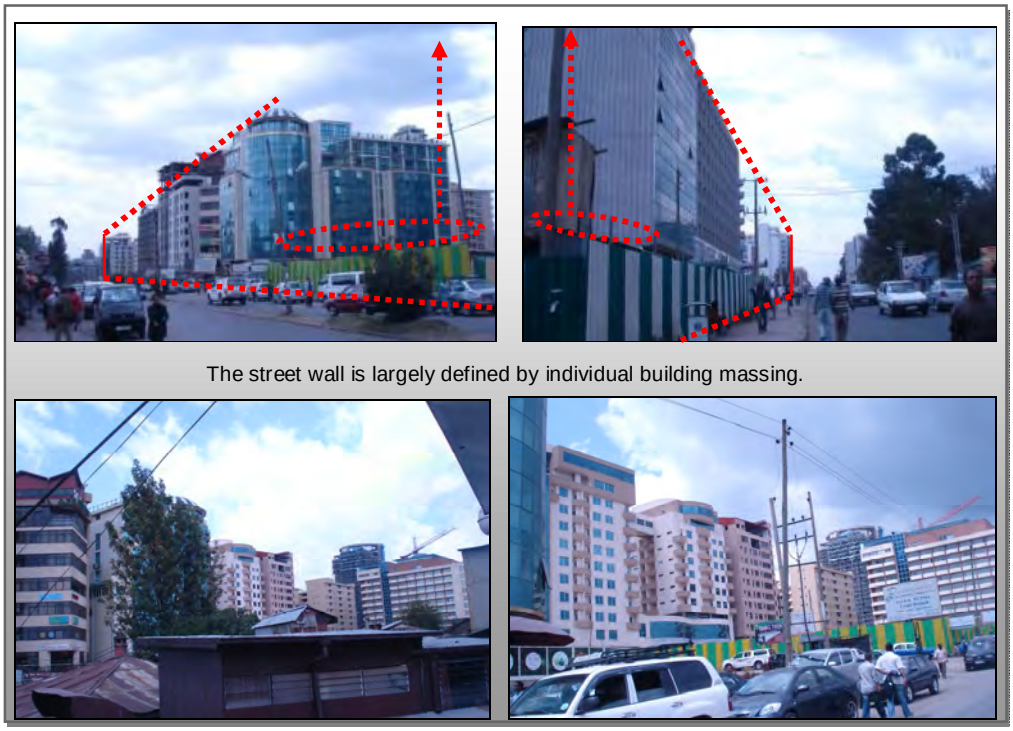
*Source: field photograph, 2012*

#### *3.1.5.5* ***MASSING***

**Design and Appearance of the Built-up Area**

The integration between one built forms with the other is totally ignored from different perspectives. The regulation specifies the minimum built-up area ratio (BAR) to be 0.5 or 50% and the maximum built-up area ratio (BAR) to be 0.75 or 75%. But some exceptional buildings have used the area of the given plot more than the limited specification in the regulation.

*Pic - 3.6: Massing problems similar street wall height and arrangement.*




*Source: field photograph, 2012*

### 3.1.6 . Open spaces Analysis

#### *3.1.6.1* ***. Open spaces or Breathing Spaces***

Providing a variety of open space, types is necessary for the movement and circulation in the site. Open space can provide a range of functions including both visual and local amenity a Buildings define different types of open space hierarchy. From this it has become very clear that the LDP did not consider green and open spaces in the integral part of the proposal.

### *3.1.6.2* ***Parking***

*Pic - 3.7: Usage of parking spaces and problems.*

**Parking** - one of the big challenges of the area is shortage of car parking, According to an observation conducted in general and in the project area particularly, little attention is given for parking with respect to international standards for commercial areas.

As we can see in the pictures there is lack of provision for car parking in the site. Consequently most cars park on the street sides. The street width is not enough to serve the purpose. So, the major problem of the area is car parking and related amenities.

### *3.1.6.3* ***Landscaping***

Natural landscape soft space elements like trees are absent in the area, the major purpose of landscape design is to create quality physical/environmental conditions, aesthetics and visually attractive space in a built-up. environment Landscaping or vegetation coverage of the area , their open space seems insufficient almost lack of, soft landscape, street side greenery, car parking , street lights, street furniture, signage and combination of both hard and soft landscape elements provision with related amenities.

## 3.2 . Case study II – Future Local Development Plan of Meskel Square entrance pocket area.

### 3.2.1 . History and Naming

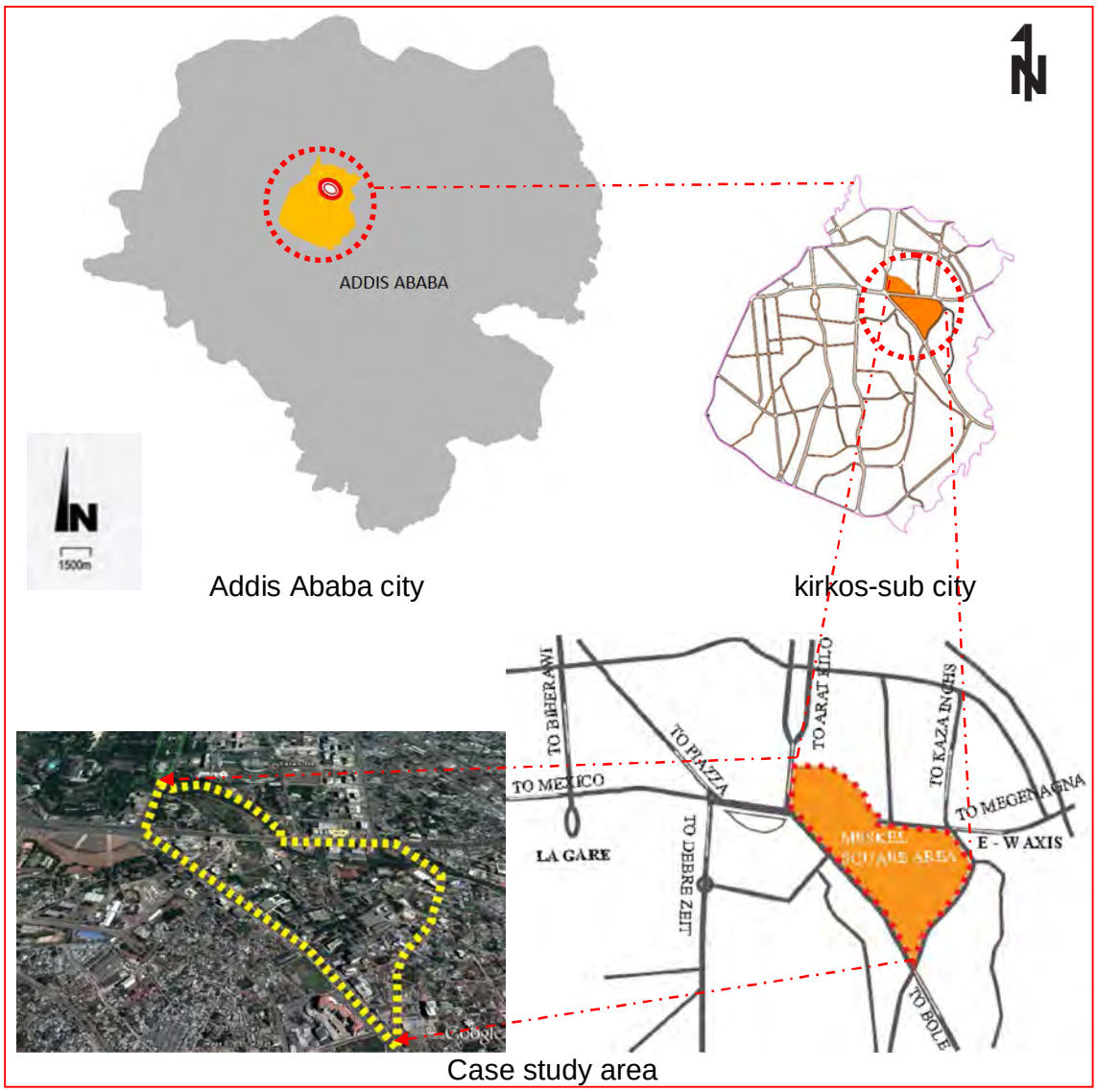
The site, Meskel Square, was given to *Ras Biru*, a royal person related to emperor Minilik *II* when the city was founded. As every other royal person, *Ras Biru* also lived at a higher level near this location (Giorghis and Gerard, 2007). The place was owned by the Ras. Thus, even at that time, the landscape had a potential to be changed in to the current shape of the square, a square with the shape of an amphitheatre.

The base for the foundation of the square was the construction of the Saint *Estifanos Church* in 1958. This church was built by Emperor *Haileselasie*. After the construction of the *Estifanos church*, in combination with the UN headquarters and the *Gion* international hotel, the place was a promising new center for the city. This led to finding a place near *Estifanos church* for the celebration of the "*Meskel*" festival (Addis Zemen, 1961, cited on Mikyas, 2011). And starting from 1961, "*Meskel*" was celebrated in this space. Accordingly the name 'Meskel square' was given to the site.

### 3.2.2 . Location of the case study area

The selected case study area, Meskal Square entrance pocket area is located in Kirkos-sub city of Addis Ababa. According to the new administration structure the project area is located in Kirkos sub city Woreda 01/19. The site is situated in the south of ECA and East of Meskal Square between the major streets that are stretched from Meskal Square to Bole and Meskal Square to Megenagena (the East-West Axis).There are many important developments within the site, There are a number of existing developments Oromiya Regional State office, Greek school, Federal Investment office, New Development in Accor and Sunshine building and different landmarks within the site neighboring the action area. Meskal Square Festival Site, St.Estifanos Church, kurtume River, ECA are some of the dominant features that influence the character of the site. The total area covered by the project is 34 ha.

*Map - 3.5: Location map of Meskel square entrance pocket area.*

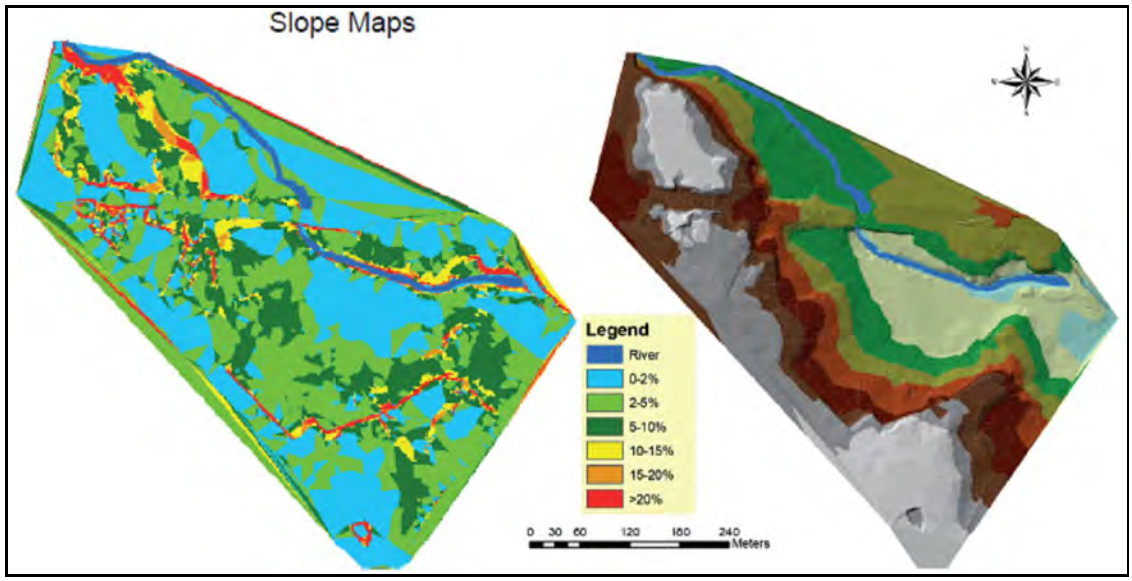



*Source: Adapted from Addis Ababa Urban Plan information Institute (2003).*

**Topography**

The topography of the area shows a relatively steep slope starting from North West raised point to the South East across the Study Area. The drainage is directed to the river. The topography is suitable for development and Elevation ranges from 2325 – 2339 mts.

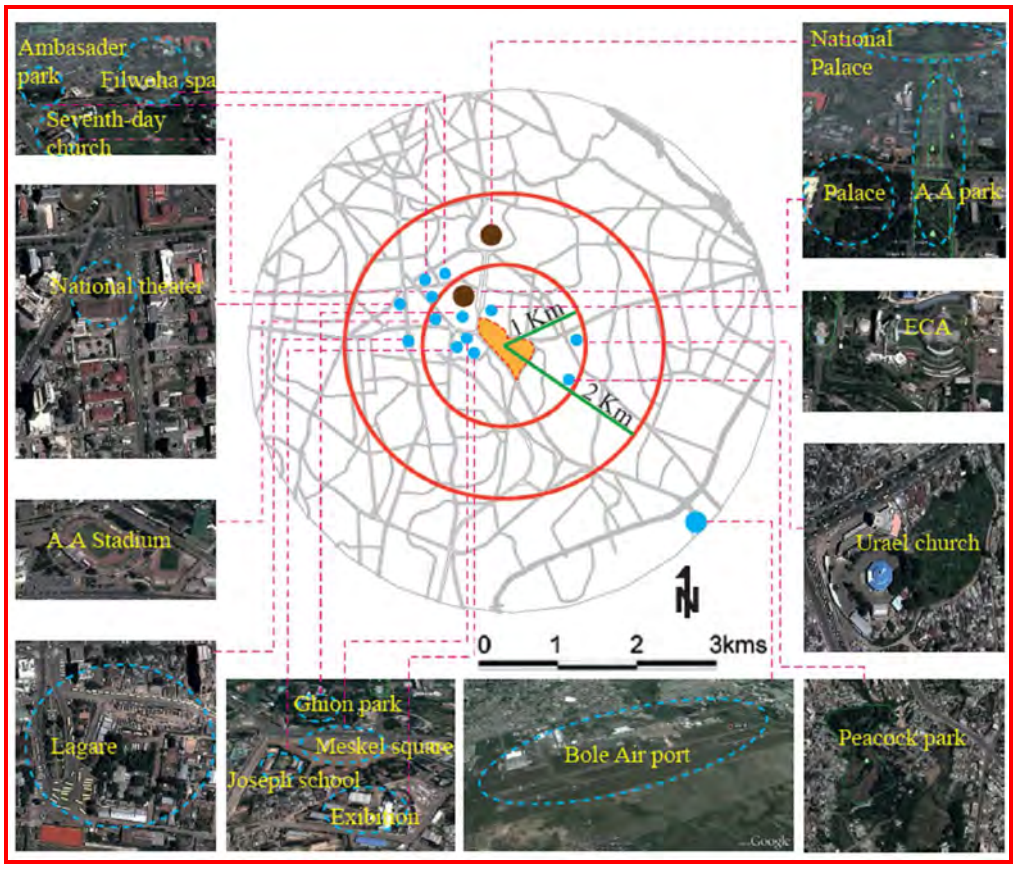
*Map - 3.6: Slope Maps of Meskel square entrance pocket area.*




*Source: Contour extracted from Addis Ababa city base map and computed by GIS software, 2012*

**Influential areas**

Map - 3.7: Functional Integration map of in the vicinity of case study area. The map showing highly influential area with in the vicinity and surrounding area of the site, administration and social services



*Source: Addis Ababa city base map and Google earth 2012*

Radiuses 1 km up to 2 km influence's areas including administration and social services. Those very important public services and facilities it increase the functionality quality of the study area.

### 3.2.3 . Existing Situation of the Case Study Area Analysis

As discussed in the previous chapters, Meskel Square entrance pocket area is a located at the main city center of Addis Ababa. The area is one of the dilapidated and shanty areas of the city core area and there are many multistory buildings that are under construction, this trend seems to continue. It is the place that accommodates a large number different functions and variety of activities.

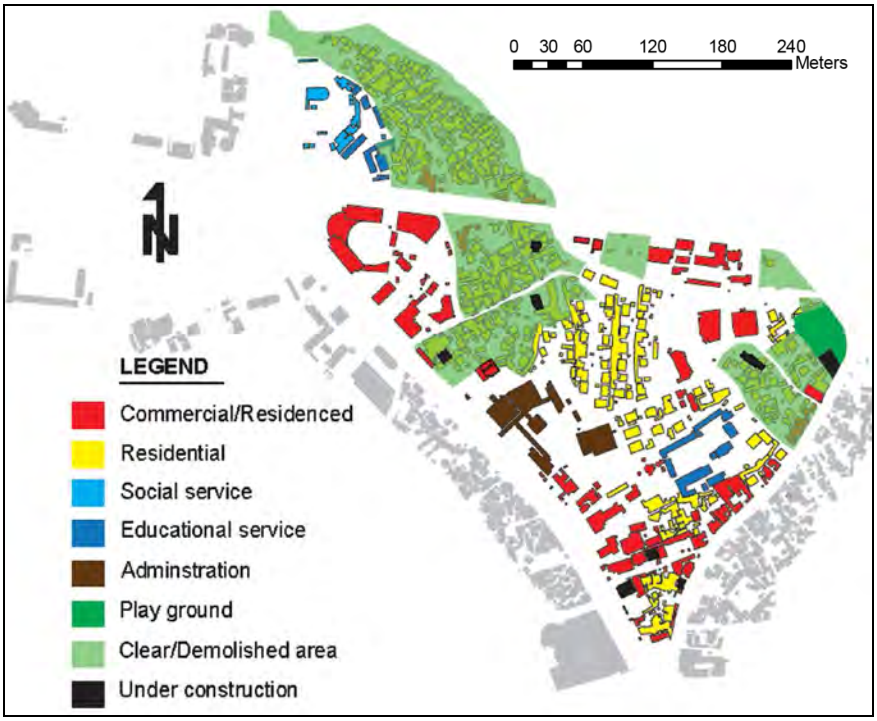
By taking this reality the city administration tried to redevelop this area similarly to the previous one by preparing local redevelopment plan. But, On the other hand there are space utilization problems on the proposed urban design plan related to the physical quality of urban form aspects.

Due to its location in the city center as well as in the main corridor to every direction of the city, the area is subjected to high vehicular traffic and as a result it is subjected to air and noise pollution.

#### *3.2.3.1* ***Existing Land Use situation Analysis***

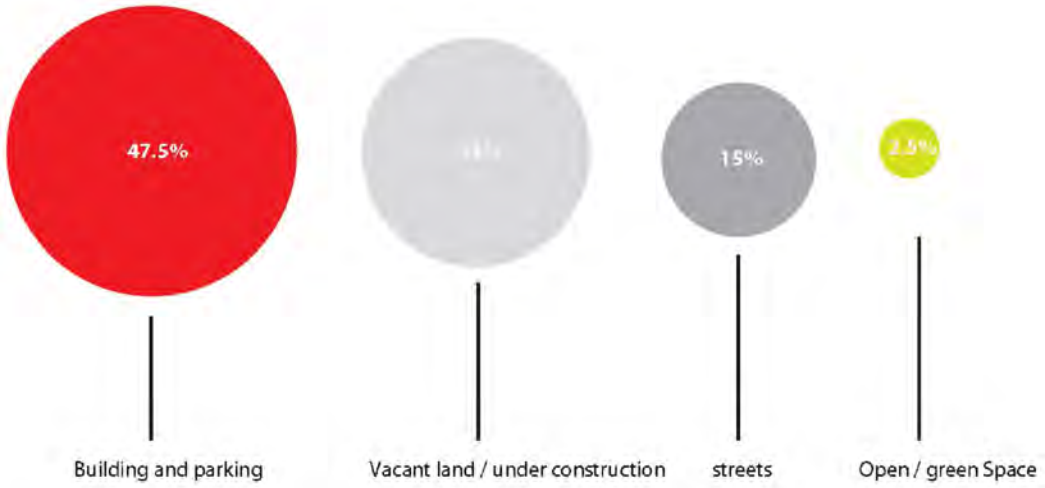
Generally the action area shows a mixed urban land use. Along the major streets corridor commercial function dominant. Administrative and social service stakes significant proportion but within the study area there is no enough space for circulation, playground, open /greens space and parking area.

*Map - 3.8: Existing Land use situation analysis.*




*Source: computed by the authors, 2012*

*Fig - 3.3: Existing different Land use function percentage.*




*Source: computed by the authors, 2012*

*Pic - 3.8: Existing Small Scale Business activity and Retails.*

*Source: field photograph, 2012*

The existing land use includes different kinds of mixed-use activities the commercial/business activities dominate along the mean streets corridors but the physical situation of commercial areas highly deteriorated and congested. Thus the spaces are not meets serve the existing demand. The characteristic of the study area promotes maximizing different mixed public use activities.

The major problem in Addis Ababa is not only the urban decay/ or urban blight but also space utilization for different activities and circulations in the city. So, if we create good physical quality urban spaces for different mixed activities, we can create better functionally useable/ productive and physically attractive city center.

**Mixed use development on the study area.**

**Recent and ongoing Development** Many constructions are taking place around and within the site. Being a motive for further development, the new and ongoing development in the site needs to be integrated to the local development plan currently in progress.

*Pic - 3.9: Mixed/Commercial and Office building in the study area partial views.*


*Source: field photograph, 2012*

**Social Service**

There are some educational and church facilities in the action area. The Greece community school and the Finfinne primary school adjacent to St' Estifanos church the available educational services within the site.

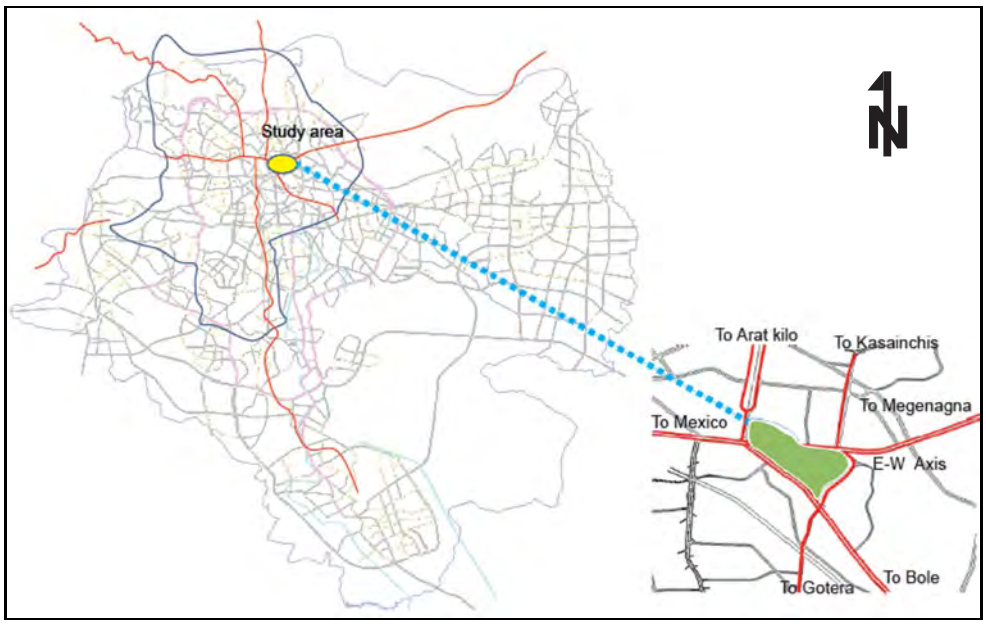
*Pic - 3.10: Schools and church within the site.*


*Source: field photograph, 2012 and Google earth 2012*

### Road and Accessibility

As observed on the plans the action area is linked to the major part of the city though different arterial streets connects the site to Bole area, Megenagna (the East-West Axis) and western part of the town. Furthermore, the north part of the town connected with the action area through different arterial streets. Generally speaking the site do not have accessibility problem from the neighboring development.

*Map - 3.9: Road network of the study area.*




*Source: Addis Ababa city base map and site observation.*

### River Side Development and Pollution

One river passes through the North part of the action area. It is extremely polluted, in fact, the river gets polluted all along its way from is beginning in some areas the buildings are erected on the retaining wall. The dwellers can easily release solid and liquid wastes to the River.

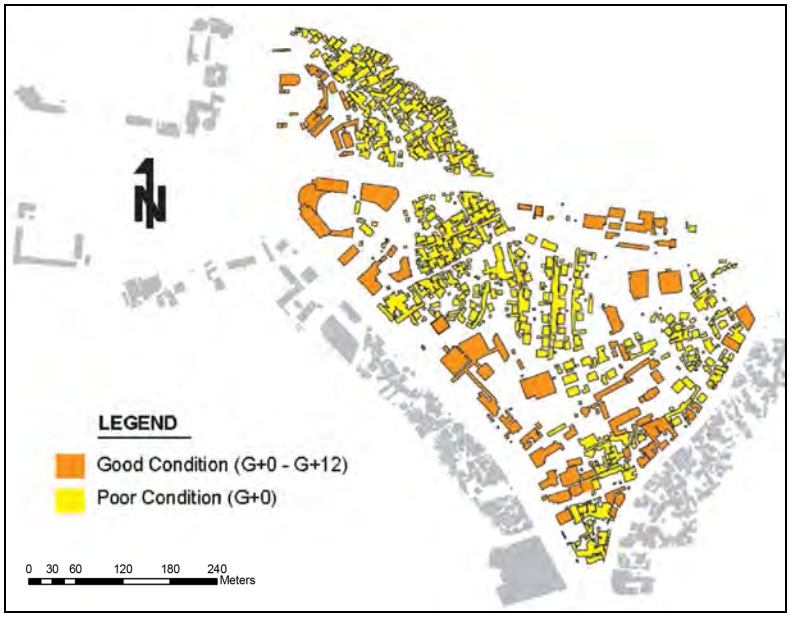
*Pic - 3.91: River Side Development and Pollution.*


*Source: field photograph, 2012*

### *3.2.3.2* ***Existing Morphology (Housing Condition) Analysis***

In the study area there are good housing conditions as well as bad housing conditions in the site. From visual observation there an area with congested settlement and dominated by houses made of mud and wood with no or little facilities like toilet with bad conditioned housing areas and in contrary there are also good quality houses with adequate provision of the necessary facilities and services.

*Map - 3.10: Existing Morphology (Housing Condition) analysis.*




*Source: computed by the authors, 2012*

*Pic - 3.102: Existing different Poor Housing Condition.*

*Source: field photograph, 2012*

Meskel square Enterance pocket area is one of the oldest parts of the city of Addis. The primary Building materials used on the site are Mud, Wood, and CIS. Most of the Houses are highly deteriorated and are no longer usable.

The problem with these unused buildings and spaces has direct relationship with the physical quality of urban form aspects and the area increase functional activities because; the location is strategic area of city core business and developments take a great advantage to investors in these areas

Meskel square entrance pocket area is physical characters of the area deteriorated with low rise and congested buildings along the main road with minimum infrastructure.

Since the site is located at the center of the city and the land value is relatively high, as a resource it should be developed so as to give maximum benefits. Additionally, there are no enough open spaces as a compensation for the height of the buildings.

The street side development has a minimum density and a very poor housing condition. Not only the housing condition is poor but also the functional and economic activities are limited in small scale retails so it cannot meet the demands.

*Pic - 3.113: A slum in the project area and Underutilization of urban land its partial views.*


*Source: field photograph, 2013.*

*3.2.3.3* ***Existing street condition analysis:***

*Pic - 3.124: Existing poor Street condition.*

Except the main arterial streets that bound the site, many streets in the inner block areas are substandard, narrow and proportionally insufficient. Most are surfaced with gravel, and some asphalt streets are in bad shape In general with respect to safe and attractive mobility, space for on street and off street parking, the existing street networks are below the required standard.

The existing street pattern is poor quality street design, poor pedestrians' walkways, misuse of and encroachment on the available street space. Regarding the street system of the area, the streets are very deep, congested and of much use while the street system is not compatible with the use of the area.

The Street system lacks hierarchy, There is lack of relationship between buildings' and the street and Poor or no landscaping and street lighting.

*Source: field photograph, 2012*

*Pic - 3.135: Poor Pedestrians, Sanitation and landscaping in the study area partial views.*

Lack of, landscaping, Pedestrians walk way and The street with Poor landscaping.

*Source: field photograph, 2012*

The street pattern is the network which provides the circulation of the vehicular or pedestrian access into the different mixing of uses in the city. Also, the street patterns have a hierarchy based on their pedestrian and vehicular loads.

Existing road analysis

- The existing street pattern in the area is **badly constrained** by poor **quality street design**, poor pedestrians' walkways, misuse of and encroachment on the available street space.

**The following is the assessments by observation:**

- Street and street junctions lack convenience to all users.
- There is lack of relationship between buildings' and the street.
- Poor or no landscaping and street lighting.
- Buildings on busy street corners are not designed appropriately.
- Urban space does not create any sense of place.
- No hierarchy and pattern in local and collector roads.
- Acute angle intersections in the collector roads and arterial streets.

**Landscape Character**

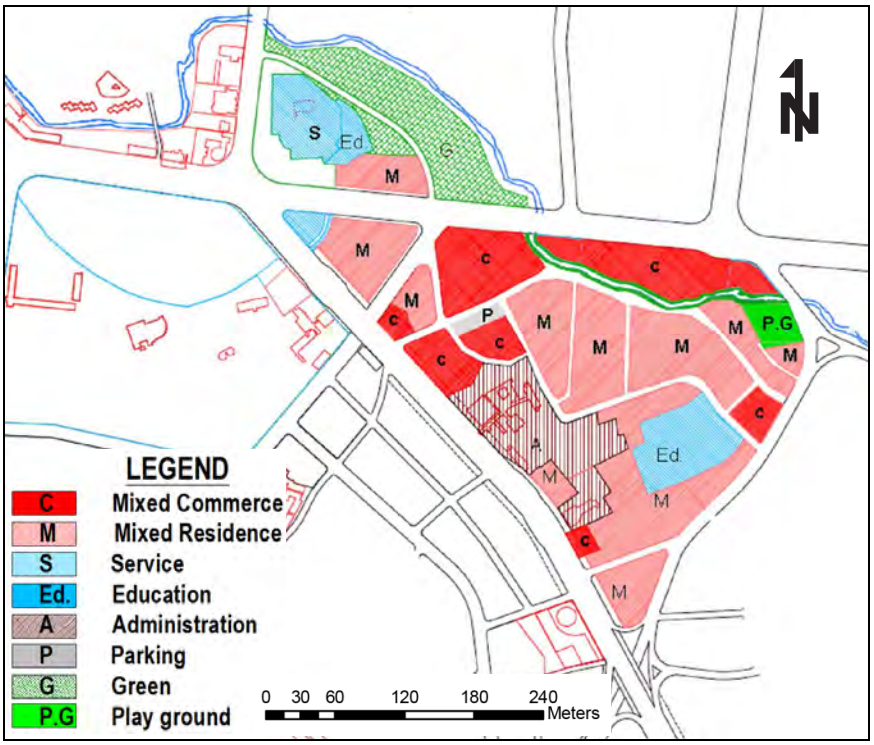
There is a lack of landscaping on the site as most open space either have full site coverage or hard-paved surfaces, mainly serving as car parking. There is some planting and a few small trees in the front residential street corridors and the river side.

### 3.2.4 . Proposed Land Use plan Assessment

The proposed (LDP) of the study area shows a mixed urban land use. Administrative and social services takes significant proportion but there is lack of Hierarchy of; Open space, Building height arrangements, Roads, Green area, playground, parking space and related amenities. All the problems related with the physical quality aspects and similarly like the pervious redevelopment practice of Kasa-INCHIS/ECA area.

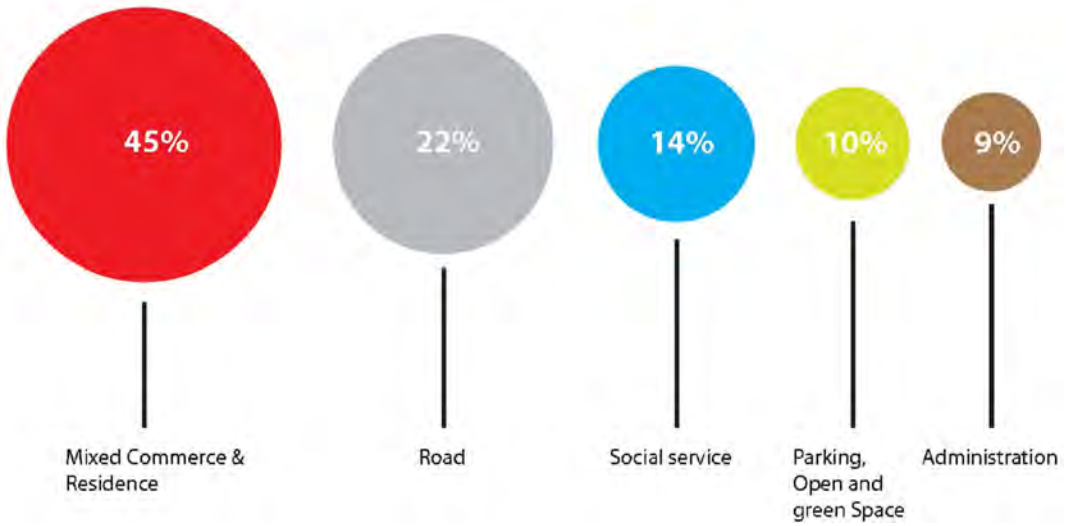
The land use types effect the formation of the block structure, because of the requirements of the uses. Especially, for mixed use development necessitate the special considerations because of the physical quality requirements of urban form and functional uses this main point is missed in the proposed land use plan.

*Map - 3.11: Proposed LDP Land use plan.*



*Source: City Government Of Addis Ababa Works & Urban Development Bureau, 2003 and Addis Ababa city administration urban and information institute, 2009*

*Fig - 3.4: propose Land use function percentage.*




*Source: computed by the authors, 2012*

### *Block size*

*Map - 3.12: Proposed LDP Block size.*

*Source: Urban and information institute, 2009*

Blocks sizes are a basic determinant of urban form. The proposed LDP block size too long it is difficulty to pedestrian movement.

The size of blocks will be influenced by the expected nature and mix of land-use activity on the site and the attempt to optimize efficiencies in terms of pedestrian and vehicular movement.

Small block size is beautiful: In considering the optimum size of development blocks,

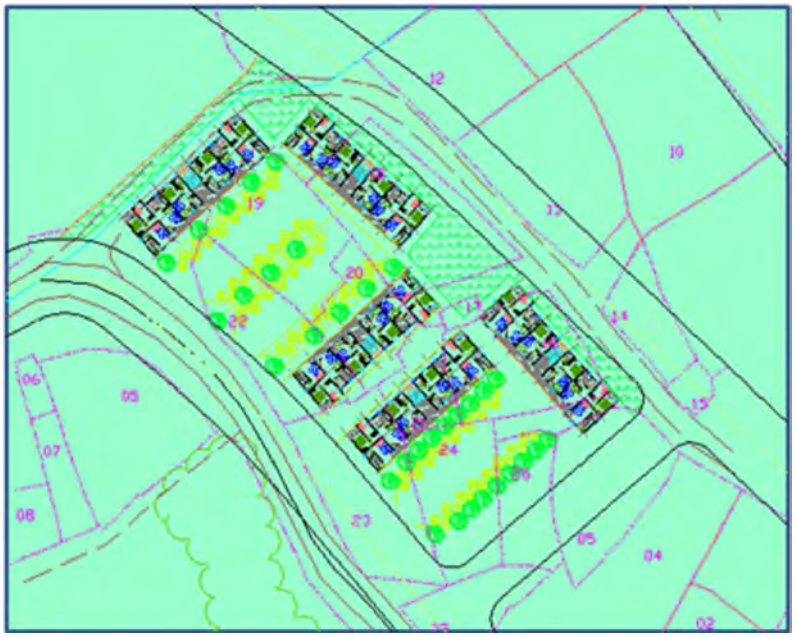
**Block size** the optimum size of blocks is determined by: Ease of access and Ability to encompass a variety of building sizes and uses, mixed use neighborhoods should contain a range of block sizes to promote variety (Liewelyn, 2000). By keeping blocks small a more human scale, 'walkable' and user friendly public realm is created. But the truth in the study area proposal is contrary from this block size vary large it is not easily accessible for pedestrians movement.

***On Site Relocation***

As clearly stated on the objectives one of the major assumptions of local development plan in particular pocket site redevelopment is contained growth

Those that could not cope with the desired development will not be thrown away rather will be accommodated in the condominium house development subsidized by the government. In addition private plot owners that could not have the capability to develop as per the stated regulation will be allowed to organize themselves and construct their own house based on condominium law.

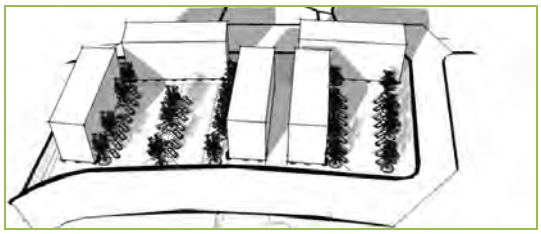
*Fig - 3.6: Proposed Condominium. Building arrangements*



As shown on the previous map the area allocated for condominium development are identified In the site five apartment buildings that accommodate 150 households could be erected.

Sample three dimensional view of the site selected for condominium development

Proposed LDP condominium buildings



The area is planned with the average density of 300 hh/he, within the general frame work of the structure plan; the standard is in the core area 125-380 hh/he is allowed. Space for parking also planned for the condominium houses. One parking lot for three household is planned.

The ongoing development in the condominium site for different functional use

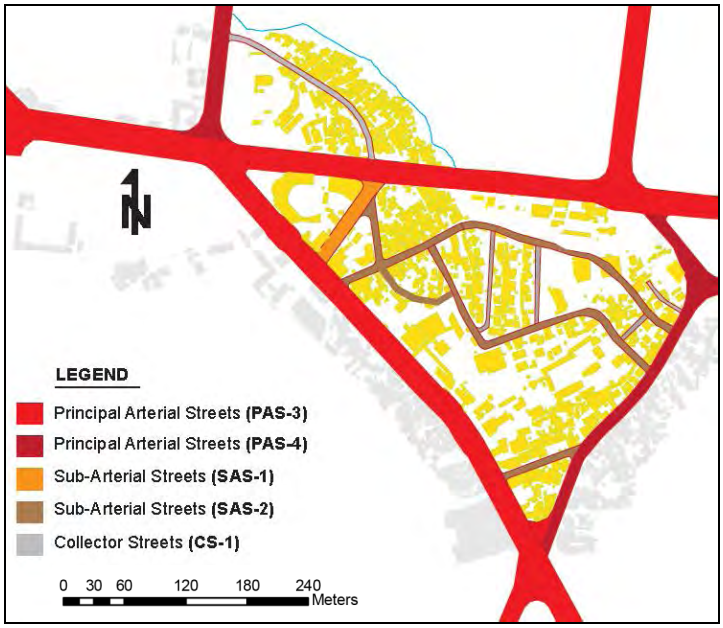
This is very important but lack in the implementation currently the area is given for another development project currently the project under construction as shown the figure.

*Source: Urban Information And Plan Institute, 2009 and field photograph, 2012*

### 3.2.5 . Proposed street type Analysis

Street one of strong physical character of the urban form, their volume generally takes a positive form and possesses a strong sense of enclosure. The height-to-width ratios determine the sense of spatial enclosure, while the width determines how the surrounding architecture is seen. Streets are the most public of all open spaces. Streets communicate the quality of the public environment and the car a city has for its users. So hierarchy of streets width is very important according to the proposed street wall and functional activities of the area that means it helps to create attractive and quality physical urban form. In the proposed LDP streets width different related to ORRAMP proposal additionally the proposed building height with the streets width ratio the proposed building height exceeds the width of the space.

*Map - 3.13: Proposed streets.*




*Source: Urban Information And Plan Institute, 2009*

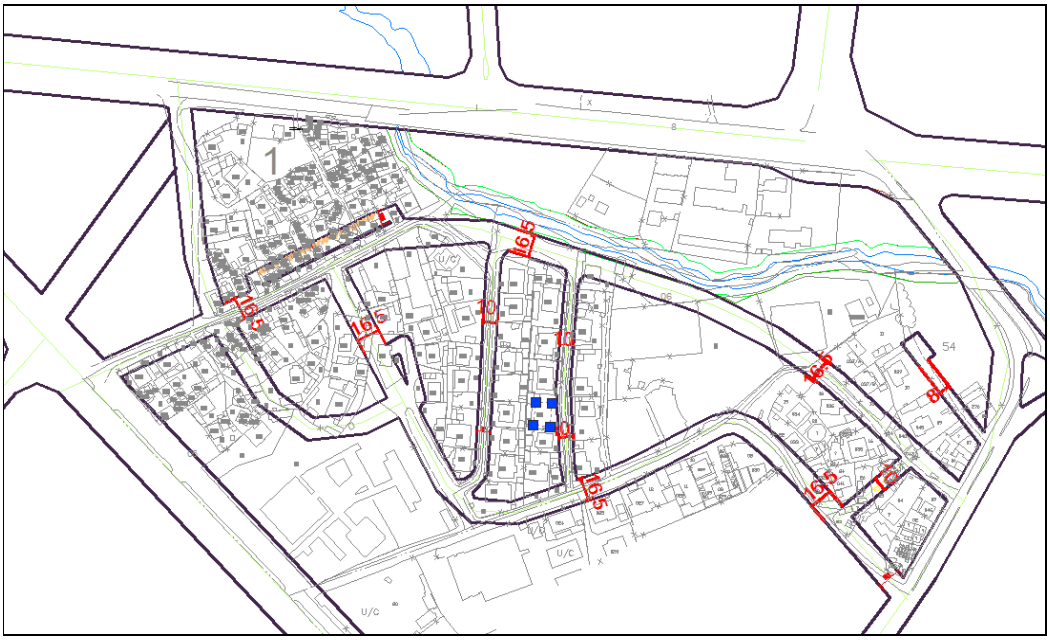
*Table - 3: Streets width ORAAMP proposal and Existing Streets differences.*

| **Streets** | **ORAAMP Proposal Streets (width) in M** | **Existing Streets (width) in M** | **Differences** |
|---|---|---|---|
| Principal Arterial Streets **(PAS-3)** | PAS-3= 40M | 40-35M | 5M |
| Principal Arterial Streets **(PAS-4)** | PAS-4= 30M | 27M | 3M |
| Sub-Arterial street **(SAS-1)** | SAS-1= 25M | 18 & 20M | 5M &7M |
| Sub-Arterial street **(SAS-2)** | SAS-2= 20M | 16.5M | 3.5M |
| Collector Street **(CS-1)** | CS-1 = 18M | 8 and 10M | 8M &10M |

*Source: ORAAMP, (2002) and Filed survey, 2012*

*Map - 3.14: Proposed streets hierarchy width.*

Proposed Road arrangement and hierarchy less than to ORAAMP standards.




*Source: Urban Information And Plan Institute, 2009.*

### *3.2.6* . Proposed Building height Analysis

#### *3.2.6.1 . Scale*

Scale means relates to the size of the building in relation to its surroundings and the size of an individual element in relation to the size of the other elements. Inappropriate scale and proportion not only relates to the building within the area but also repeatedly within other scale.

Scale is the one of the basic physical aspects of design parameters of urban design, which is consisted of volume, height, massing, grain etc…

*Pic - 3.14: building scale related to street width.*

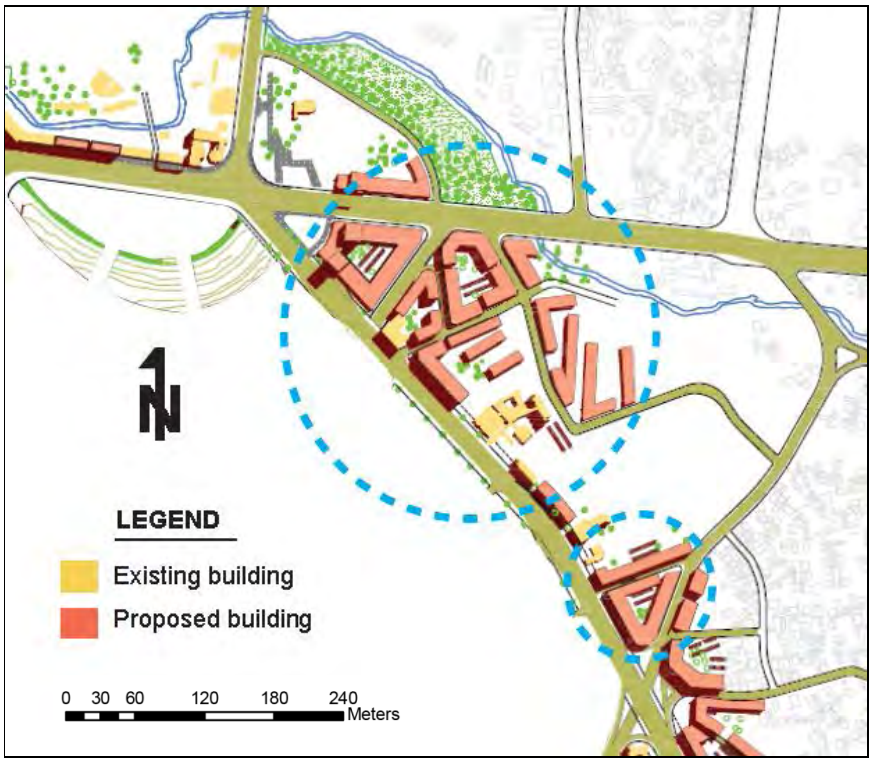
*Source: field photograph, 2012*

Scale is created by the size of a building as it relates to a person, to neighboring buildings, as well as to its own location and site. Specific design features can further consider the human scale or emphasize that of the structure.

But, common idea of the scale is the appropriateness of the new development to the existing structure of the city parts, which can be near or inside of the parts with regard to this the proposed design, Lack of the size of the building height related with streets width, open space and existing physical surrounding.

### 3.2.7 . Building form

*Map - 3.15: Proposed LDP tower spacing and building arrangements.*



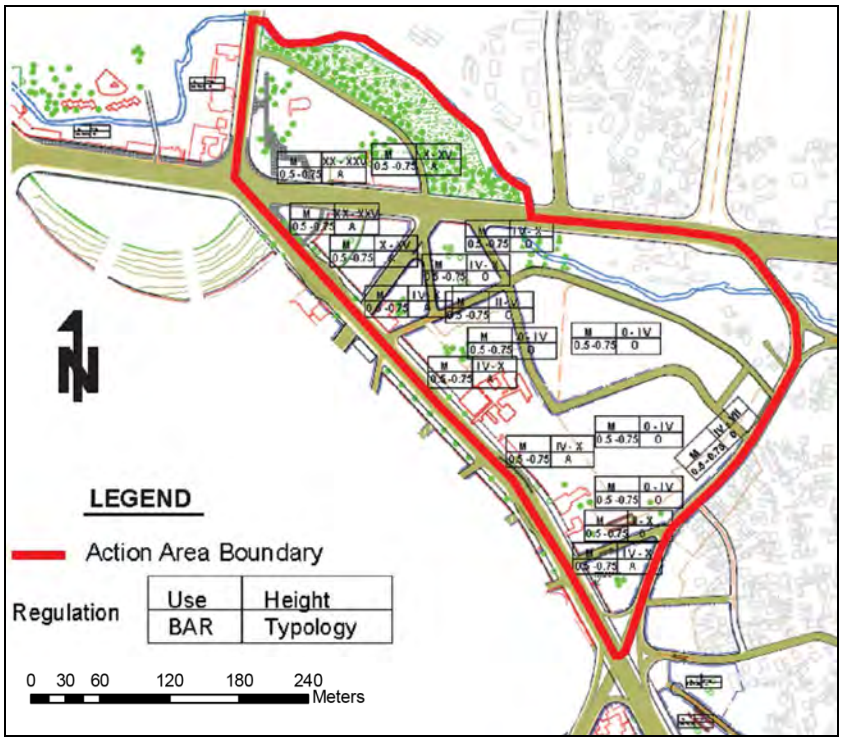

*Source: Urban Information And Plan Institute, 2009*

**Urban Form**

- The study area (the proposal) lacks spatial definition, the urban form, overall does not contribute to the legibility and hierarchy of its streets and places
- Buildings height of like the internal parts of main streets and streets width not proper proportion with its lack of active street frontage and so reduces safety and security.
- Buildings have varying setbacks to the street, generally attributed by the building's use. It is not consider in this proposal.
- This lack of consistency results in poor built form streetscapes and a lack of spatial definition of the street and street edge.

### *3.2.7.1 Building Height*

*Map - 3.16: Proposed LDP building height.*




*Source: Urban Information And Plan Institute, 2009*

The proposed building height would be substantially different in height, form, size But the proposed street width have problems In terms of building use, bulk, type, and setbacks, a significant impact would result if an action would alter that aspect of land use that defines urban design character, or if the size and mass of the proposed action would be substantially different from that prevailing in the area. Furthermore the currently most development in the site different from the proposed LDP another problem of the site,

### 3.2.8 . Building Masses

In urban design building masses is the one of the essential element for scale of urban design, which is constituted by ground surface, buildings and objects in space. Arrangement of these elements can be formed the urban space and urban activity patterns. Urban spaces can be shaped successfully using the proportions and activities of building masses in a creative design. Hence it did not giving enough consideration in the proposed design.

Massing is often mentioned as a design consideration, which provides to control building bulk and the disposition of floor space on the site. This control ensures important opportunities to hide building bulk in order to create a good enclosure, to

adjacent buildings or open spaces by stepping down or stepping up, Articulation on the horizontal and vertical scales create a more dynamic streetscape and adds physically visual interest for pedestrians. Massing also helps frame views, create space, and add definition to a space but this important essential element for scale of urban design it is lack in the proposal.

### 3.2.9 . Setbacks, Building height and street width

Setbacks have a number of purposes: They provide uniformity to a neighborhood and determine the relationships and placement between the structures, Setbacks allow a certain measure of privacy between neighbors, provide space for light and air circulation, and provide open space for landscaping and recreational use, and Setbacks also improve street visibility. Building setbacks adjacent to mixed use buildings provide a transition between the public and private realm, allowing users to have private spaces with visual access to the public realm. The truth in Meskel square entrance pocket area is the contrary.

*Pic - 3.157: Proposed LDP Setbacks, building height and street width problems.*

*Source: field photograph, 2012*

The recent and ongoing developments in the study area building height and space utilizations are not consider with the LDPs even the proposed redevelopment urban design have many problems related to the physical aspect urban quality of the existing context identity and functional activity of the area.

As buildings rise up, they need an optimum amount of space on the ground but the design is not fulfill this. The proposed building height with the streets width ratio the surrounding building height exceeds the width of the space then the tops of buildings will no longer be visible without looking up. Such ratios may lead to feelings of claustrophobia and will reduce light penetration into the space.

### *3.2.9.1 Proposed spaces Analysis*

*Map - 3.17: Proposed LDP spaces.*


*Source: Urban Information And Plan Institute, 2009*

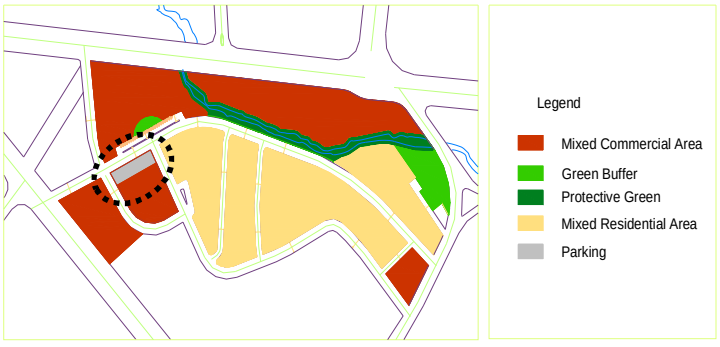
In the proposed LDP design it gives less attention to hierarchy of spaces, open space and landscaping elements related to the other space utilization only one public park space propose that so, the site lack of provision of a variety of public open space types it is necessary to the functional and physical quality aspects of the site. Different kinds of hierarchy of space it helps to create more physically attractiveness for the urban form space and functional active it also

Open spaces are provided so as to give maximum psychological, physical, and social fulfillment and satisfaction. Each block should have needs its own open and green spaces.

### 3.2.10 . Parking

The availability of parking is a key issue for most city center and main street business owners and users. But The propose LDP plans assigned as car parking as common one parking area as shown the plan very small parking lots its insufficient space proportionally for the other provision of functions. It also the location not average distance far from the whole parts of the site area. Best urban redevelopment design presentation

*Map - 3.18: Proposed LDP parking area.*




*Source: Urban Information And Plan Institute, 2009*

### 3.2.11 . Landscaping

*Map - 3.19: Proposed LDP landscape design..*

*Source: Urban Information And Plan Institute, 2009*

Properly land scape designed and constructed soft landscape treatments such as shrub beds, tree planting and ground covers can create interesting and dynamic public spaces within the urban environment. But this plan shows absent of landscaping, landscape elements and related amenities in the proposed design.

*Pic - 3.16: current situation of the area.*

*Source: field photograph, 2012*

In the site as most open space either have full site coverage or hard-paved surfaces, but only the park space as a soft green area even in the park area did not showing landscape elements and detail park landscaping.

There is some planting and a few small trees in the park site. Apart from all Streets side and the area missed landscape elements.

## 3.1 . Summary of Majors research findings

**Kasa- INCHIS/ECA area realized redevelopment findings**

The redevelopment practice major problems of the area currently directly related to the physical issues of urban design concepts, absence of visual satisfaction or aesthetics, comfort, efficiency, character/identity and sustainability.
Poor proportional integration of different land uses, road hierarchy, poor consideration of urban public spaces as a breathing open space and poor landscaping among others.

Urban design physical aspect problems in the site are like; building arrangements, building height related to street width, scale, massing, setback, street hierarchy, open space, parking lots, hard and soft landscape element etc…

- Kasa-inchis LDP implementation level is estimated at 75%.
- The BAR/FAR, building footprint/morphology, and the building height are not in line with the LDP. The internal road spaces seem insufficient for circulation and urban quality.
- Absence of the public realm facility
- Development management is poor, as far as the site is cleaned once, the objective was to redevelop it in a planned manner but it is not managed likewise. Few investors had finished construction and started operation while more are still under construction. Road development is not taking place and few roads are closed. This, in addition to the dusty and muddy environment, is now penalizing the real and committed investors who are under operation.
- The land provided for ECA is not yet developed.
- The positive effect of a redevelopment is not observed because of lack of guiding or enforcing development based on the LDP concepts

The main problem associated with urban design is physical aspect of the redevelopment practice of kasa-INCHIS/ECA area and implementation is dealt at the LDP level. As discussed above, the local development plan (LDP) of the area has not incorporated properly planned detailed urban design to redevelop the area. Hence, the problem has been in the implementation of the LDP. Due too many problems, specifically due to less priority given to urban design, the LDP proposals were left at paper level. The practical implementation has been very different. Incremental modification has led to gaps and inconsistencies.

**Major Findings of Meskel Square Entrance Pocket area LDP**

- The Meskel Square entrance pocket area redevelopment Plan addresses urban design at many levels. While some urban design elements of the plan have provided clear priorities and enduring direction for the site area, others have become either infeasible or irrelevant. Specifically: In the context of an urban design assessment, *Local development Plan*: Physical issues parts of urban design elements like, land use, building arrangements, building height related to street width proportion, scale, street hierarchy, open space, parking lots, landscape elements and related amenities are the major problems of the study area.
- The urban design proposal poor consideration to the public realm.
- There are many multistory buildings that are under construction this trend seems to continue though it is not purely result of the action area redevelopment plan (LDP) and the river that passes through the action area is highly polluted.
- The inner areas (blocks) do not have proper sufficient street network Insufficient or no parking lots space along all streets or in the blocks. Some blocks have lofty space while others do not have even sufficient built up areas.
- **Incremental modification has led to gaps and inconsistencies.** The composite of currently LDP no longer reflects what is happening on the ground.
- **The context has changed**. Some areas within the study area have developed, in a different direction or at a different pace than the plan's expectations. New centers of activity necessitate a re-evaluation of connections, open space needs, and urban form.

### 3.2 . SWOT Analysis.

Kasa-INCHIS/ECA Area redevelopment practice and Meskel square entrance pocket area LDP's.

*Table - 4: SWOT Analysis (Strength, weakness, Opportunity and Threat).*

| **SWOT Analysis** | **Kasa-INCHIS/ECA area redevelopment practice** | **Meskel Square Entrance Pocket area LDP** |
|---|---|---|
| **STRENGTH** | ▪ Easy accessibility from all over the city<br>▪ Its location within the main CBD of the city<br>▪ The presence of the main office of the ECA and subsidiary offices is a strong asset to invest in the area<br>▪ suitability of the area for construction<br>▪ well-developed infrastructure | ▪ Easy accessibility from all over the city<br>▪ Its location within the main CBD of the city<br>▪ Availability of infrastructure<br>▪ Existing private development<br>▪ High investment attraction area<br>▪ Preparedness of the community for renewal.<br>▪ Existing of major landmark elements Meskel square<br>▪ Presence of social services both in the planning area and its vicinity. E.g. Churches, entertaining places etc. |

| | | |
|---|---|---|
| **WEAKNESS** | ▪ Gap between the LDP and the implemented<br>▪ Lack of building height, street , open space relationship and arrangements<br>▪ Poor physical/ environmental condition<br>▪ overcrowding in building and space arrangement of the areas<br>▪ Lack of road hierarchy and uniformity in width<br>▪ Lack of open spaces, street furniture and entertainment facilities, and the related amenities<br>▪ Lack of building setback<br>▪ Lack of parking area<br>▪ Absence of activity at night or absence of mixed land use activity<br>▪ Absence of children play ground<br>▪ Surrounded by low quality residential and business area<br>▪ The old settlement is fully displaced<br>▪ Development management is poor,<br>▪ Lack of city comfort elements on the pedestrian walkway and open spaces | ▪ Lack of building height, street , open space relationship and arrangements<br>▪ Lack of road hierarchy and uniformity in width<br>▪ Lack of building height with street width proportions<br>▪ Lack of building setback<br>▪ Lack of building height with providing enough open space and parking services<br>▪ Lack of proper landscape elements and vegetation coverage and related amenities<br>▪ Absence of children play ground<br>▪ Lack of full proper detailed urban design<br>▪ Development management is poor,<br>▪ The proposed LDP and the recent ongoing new development have different.<br>▪ Lack of city comfort elements on the pedestrian walkway and open spaces<br>▪ Surrounded by low quality residential and business area<br>▪ Luck of mixity<br>▪ The administration offices use large plot of land |

| | | |
|---|---|---|
| **OPPORTUNITY** | ▪ location, at the center of the city<br>▪ development push from the surrounding area<br>▪ In terms of circulation the area is well connected to all important Centers and main transport routes of the city.<br>▪ proximity to international standard hotels such as the Hilton, Sheraton hotels<br>▪ The formation of regional level union initiatives and its impact on Africa (example is EU) | ▪ location, at the center of the city<br>▪ Propose future plan Meskel square improve the physical image and functional activity<br>▪ 'Mixed urban activities' is the main character of the project area vicinity<br>▪ Emphasis of the Governing body for the site<br>▪ Recent and Ongoing Development Many constructions are taking place around and within the.<br>▪ Proposed mass transport line along<br>E- W axis and LRT<br>▪ Meskel square to bole road improvement<br>▪ LDP proposal |
| **THREAT** | ▪ Over demand<br>▪ Climate change<br>▪ Other countries like Libya trying to contest the African capital status of Addis Ababa.<br>▪ Traffic congestion at Junctions & parking problem at some points. | ▪ Over demand<br>▪ Climate change<br>▪ Lack of coordination among the sector office<br>▪ Pollution of the river Minimum green frame upstream of the river area |

*Source: produced by the author, 2012*

# CHAPTER FOUR: RECOMMENDATIONS,

## ALTRNATIVE LOCAL DEVELOPMENT PLAN URBAN DESIGN PROPOSAL SCHEME

### 4.1 . Recommendations

The Urban redevelopment design for the future in order to solve the problems, I suggest the following recommendations.

- It is recommended urban redevelopment design should be based on a proper research and scientific methods on what is needed the local context and the spatial or physical aspects the design should be studied as well. Quality Physical Design for People. The city and country must to take all reasonable steps to ensure that public and private development and redevelopment be designed in a manner that is sensitive to physical, social, functional, environmental, and psychological needs. Their benefits in all aspects.
- They should be studied in relation to the public realm, physical, functional, economy and environment. This will help in enhancing the priority level of urban design and the government will give the needed attention along with the other priorities. If this is done, there could be better physical urban space in the city which would be functionally interesting for all users.
- It is also recommended The Local development plan (LDP) should incorporate existing context, identical characteristics of area and relocate on the site the original settlers as much as possible.
- Establish context-based block patterns and identify the relationships between buildings, streets, open space and pedestrian ways with related amenities.
- Building scale, massing, and articulation are all important factors that influence the character and identity of a city. The right configuration of buildings can shape human-scaled public spaces.
- Further recommendation on Physical issues lies on Redevelopment Urban design proposal an Urban Form Concept that provides greater clarity on: Street Hierarchy, Open Space Network, Physical Urban Form, Catalytic

Projects/Opportunity Sites, LDP's of the area that correspond to a larger plan and 3D expressions of desired urban form of the area.

## 4.2 . Design proposals

### 4.2.1 . Vision

***"A vision is to create a Livable, Vibrant and Accessible Mixed use city center. That is integrated with The Existing Development of the Surrounding Area."***

According to Addis Ababa city Vision Addis Ababa would be a safe and livable city, by the end of the planning period the basis for all its undertaking. Hence, by 2010." Addis Ababa will be a safe and livable city."

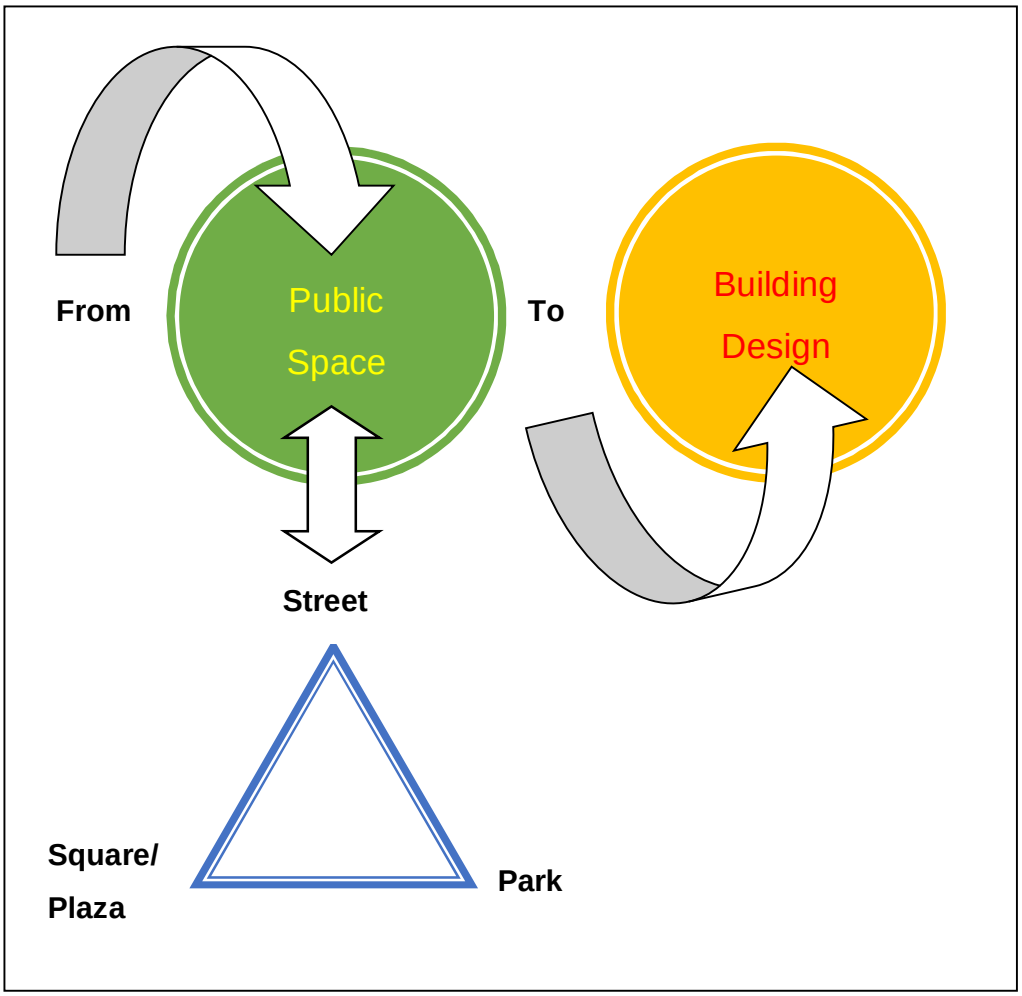
### 4.2.2 . Design Objectives

The objectives of urban design for the Meskel square entrance pocket area are:

- To create a better public spaces.
- To create a *sense of place* and ensure that an area has identity, where public and private spaces are clearly distinguished yet integrated with local context.
- To create a vibrant attractive urban center with a mixed uses, variety of form and choice and diverse activities for Public Enjoyment
- sensitivity to human scale
- To project a distinctive identity for the Central Business District (CBD) and the Street front.
- To create successful urban areas by integrating time tasted ideas with new ideas, including how people relate to, feel about, and use their places
- To create an attractive city center with high quality public and private Developments and Open space in a good landscape setting
- To create a harmonious visual and physical relationship with the existing development of the surrounding area, Meskel square entrance pocket area setting and the CBD.

### 4.2.3 . Design Concepts

***From Public space to building design.***




**The public realm provides key functions and strongly influences in the physical aspects of urban design character and aesthetics in a city area to create public spaces.**

The public realm or space includes: streets, squares/plazas, parks and other urban outdoor spaces. The design of the public realm plays a major role in defining the character, identity and aesthetic quality of the city overall and individual neighborhoods.

The proposed public spaces are to be linked by improved streetscape treatment. Public art, planting, lighting and water features will be incorporated into the design to enhanced spaces. Comfortable street level activity is important, both for civic and event purposes.

**Public Spaces**

The influence of pedestrian environments and public spaces is far greater than simple aesthetic appeal. Eating at an outdoor table, browsing the windows of a bustling shopping street, and passing time watching crowds walk by are more than just pleasant diversions, they are components of urban social life that attract residents, businesses, and visitors. A public space should be:

• Located where it is visible and easily accessible to potential users.
• Available for public use and inviting to all.
• Beautiful from both the outside and the inside.
• Secure and safe.
• Accessible to children and disabled people.

***Public spaces elements***

- **Streets** - Streets definitions: mixed use buildings, streetscapes, pathways, corridors, street furniture, street trees and etc.

***FUNCTIONS OF THE STREET***

Streets, the main public places of a city, are its most vital organs. Roadside planting and high quality hard landscape such as paving, sculpture, etc. should be provided to improve the quality of the street environment. Tree planting, shrub beds, landscaped areas should be incorporated to soften the hard edges and to reduce heat build-up of street environment.

Street – part of public space inside a neighborhood area whose main function is to enable flow of people and goods. Depending on its importance, function, location and spatial shape, the width different.

- **Plaza / squares.** One of the most important elements of city design is the square or plaza. It is possibly the most important way of designing a good setting for public and commercial buildings or civic buildings in cities. A square or plaza is both an area framed by buildings and an area designed to exhibit its buildings to the greatest advantage.

Urban Plaza is an open area for public use on a zoning lot. It is publicly accessible and visible, and meets the requirements to ensure the quality of public space.
**Square** - represents a complex morphological element, a space in town with clearly defined relationship between public space and nearby traffic arteries or built structures which define it, and which, by their specific purpose and position, have a certain social purpose;

**FUNCTION AND THE SQUARE**

Activity in a square is important for its vitality and, therefore, also for its visual attraction. The types of space needed in a city are: the setting for a civic building; the principal meeting places; places for great ceremonial occasions; spaces for entertainment around buildings such as theatres, cinemas, restaurants and cafes; spaces for shopping, shopping street, arcades and markets; spaces around which offices are grouped; spaces of a semi-public nature around which residential accommodation is arranged; and, finally, the spaces associated with urban traffic junctions.

By public realm is meant the streets, squares/plaza and public parks together with the building facades that define them.

Buildings should give positive definition and enclosure to the shape and function of public space encouraging a range of activities to take place. Outdoor space and buildings should make direct contact with each other.

**Plazas:** A plaza is a mostly hard-surfaced, outdoor public space. Its main function is to provide a place for sitting, eating, and public events. A public plaza usually includes various landscape elements, such as trees, flowers, fountains, sculptures,

and public art. Pedestrian malls, or former streets converted for exclusive pedestrian use, are similar to plazas in design and function.

- **Parks** - Parks are a type of public space. Parks defined by mixed use mixed use building. Business Centers and identified city Centers or mixed-use activity centers.

**Function/Purpose of park**

The purpose and function of urban parks is to provide public spaces for human interaction and outdoor enjoyment in the urban context. Urban parks should include facilities that are pedestrian-oriented and provide visual enhancement, a sense of identity, and opportunities for social interactions, enjoyment of outdoor open space, small-scale recreation and performing and visual arts. Short-term, informal activities and programmed events during lunch hours and after-work hours are intended to foster social interactions among users, provide leisure opportunities, and create a visual identity to strengthen a sense of place and orientation. From an urban design perspective, urban parks also assist in breaking up the building massing and in creating a rhythm for the development pattern. Urban parks help to establish the character and identity of an area.

Urban park functions may vary with features and facilities that range from social interaction and enjoying the outdoors to more active pursuits related to recreation amenities that may be included. Urban parks can also function as central civic space for community building activities.

### 4.2.4 . Conceptual Design Principles / Urban Design Principles

The Key Principles are:

1. Establishing Diverse Public Spaces, to create a sense of place and integration with local context.
2. Promoting an Active and Working Street front.
3. Creating appropriate physically urban form Integration with mixed activity of the area. Facilitating a Mix of Uses and Activities

4. Integration with public transport/ Provide better social facilities and physical amenities.
5. Sensitivity to human scale, priority to pedestrian Open Spaces and Connections- Creating pedestrian spaces and linkages throughout the area Avoid/minimize relocation outside the study area.
6. Street hierarchy developed in accordance with required size and function; topography natural features determine lot and street layout;
7. Ensure that street patterns provide maximum physical and visual connectivity;

### 4.2.5 . Design programs

| No. | Design programs | Description |
|---|---|---|
| **1.** | **Connectivity** | ▪ Extending the city functions<br>▪ Providing street connections<br>▪ Linking the city green frame and park |
| **2** | **Improve Pedestrian facility/activities.** | Provision of better pedestrian walk way<br>▪ Provision of street furniture like rest areas, street trees, street light, dust bin etc…,<br>▪ Provision of car parking in appropriate areas. |
| **3.** | **Promoting Publicness** | ▪ Redesigning public Park<br>▪ Provision of public plazas<br>▪ Provision of youth recreation center<br>▪ River edge |
| **4.** | Promoting Mixed Use Activity | ▪ A greater feeling of safety, with 'eyes on streets'<br>▪ Greater and more efficient use of space and buildings<br>▪ More consumer choice of lifestyle, location and building type<br>▪ Urban vitality and street life<br>▪ Increased viability of urban facilities<br>▪ Give character for areas<br>▪ Compatible uses-<br>▪ Mixed forms, uses |

### 4.2.6 . Urban design

### 4.2.7 . Implementation Strategy

**Identified stakeholders**

The major stakeholders of the renewal process include

- Land bank land & land development project office
- Addis Ababa Housing Development Project
- Addis Ababa Road Authority
- Addis Ababa Environmental Protection Authority
- Urban local body (Sub city and woreda /Kebele)
- Addis Ababa Trade And Industry
- Addis Ababa Works And Urban Development Office
- Beautification and Park Development Agency
- NGOs
- The Private Sector
- The Locality's Community
- Local Associations and Community Leaders

The city government plays a leading role in mobilizing resources and coordinating different stakeholders. Private sector operators in the study area have a strong willing to develop their own area as per the proposed urban design of the area.

**Phasing**

Preparing a phasing scheme is the most important mechanism in allowing a sound implementation. In phasing there is a more controlled urban design that gives a better utilization of land.

In the first phase of development, part of the site **public spaces** project the **streets, Square/plaza** and **parks** developed by government or private investor.

In the second phase of development, the portion of the site that is implementing the different projects like the civic building, mixed use building and condominium blocks according to through the proposed LDP developed.

Source of Finance

- The major expected sources of finance for this renewal scheme are lease revenue, service charges /taxes and income from the housing sector.

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www.Addis Ababa Meskel Square development Proposed – SkyscraperCity files.

www.unhabitat.org.

www.promobrazil.it.

http://www.ippuc.org.br.

http://www.iclei.org/index.php.

http://www.curitiba24horas.com/Turismo/parquetangua.php

**APPENDICES**

## Appendix A. Questionnaires - To Stakeholders

1. How do you see the current urban redevelopment and/or revitalization in Addis Ababa.? _____
   _____
   _____
2. What do you observe the potential benefits of redevelopment programs?
   _____
   _____
   _____
3. Do you think the redevelopment plans have given due emphasis to open space, road hierarchies, building arrangements, setbacks, spacing between adjacent buildings? _____
   _____
   _____
4. Have you modified the spaces to match the needs of the investors in order to collect much money from the lease of land? (If [yes] why?)
   _____
   _____
   _____
5. What negative impacts do the development programs have brought?
   _____
   _____
6. What are the urban designs related defects encountered during preparation and implementation of LDP? _____
   _____
   _____
7. How would you like the city of Addis to develop in balancing the physical, functional, social, cultural and environmental factors and population, transport, infrastructural and other elements of urban redevelopment?
   _____
   _____
   _____
8. What are your recommendations to improve the trends on the preparation of redevelopment plans? _____
   _____
   _____

## Appendix B. Questionnaires - To Government officials and professionals

**Back ground & Physical aspects of the preparation of Local Development Plan (LDP's).**

1. What is the urban design stands used for the preparation of LDP?

   _____
   _____
   _____

2. Proportion of land use zoning used in the preparation of redevelopment LDP plans?

*Table - 5: Proportion of land use function in percentage.*

| No. | Proportion of Land use functions | In Percentage (%). |
|---|---|---|
| 1. | Mixed use | |
| 2. | Commerce | |
| 3. | Green and open space | |
| 4. | Road and parking<br>Other uses | |
| | **Total** | |

3. What are the principles used for building arrangements?

*Table - 6: Building arrangements.*

| No. | Building arrangements | minimum & maximum |
|---|---|---|
| 1. | Building height | |
| 2. | Set back | |
| 3. | Massing BAR/FAR | |
| 4. | Car parking | |

4. What are the urban designs related defects encountered during preparation and implementation of LDP?

   _____
   _____
   _____
   _____

5. How would you like to balance in neighbourhood planning the different uses and activities; for example, educational, residential, environmental, urban farming, infrastructural (energy, roads, waste and water management), urban landscaping, recreational and cultural aspects?

   _____
   _____
   _____
   _____

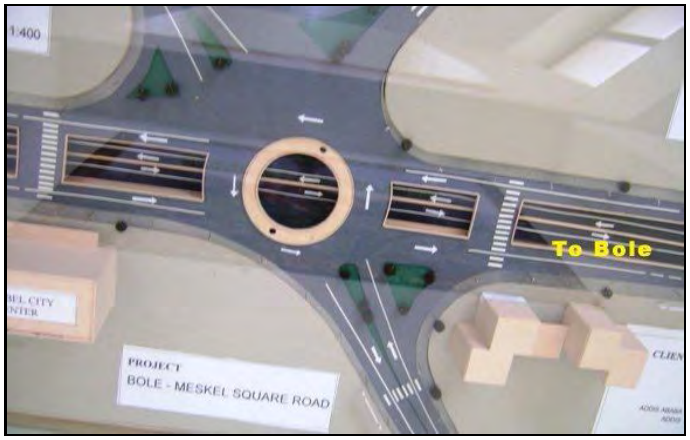
6. What are your recommendations to improve the trends on the preparation of redevelopment plans?

   _____
   _____
   _____
   _____

7. How will the city of Addis Ababa be used as a ‘best practice’ for the user-friendly and sustainable human settlement planning and redevelopment of other cities in Addis?

   _____
   _____
   _____
   _____

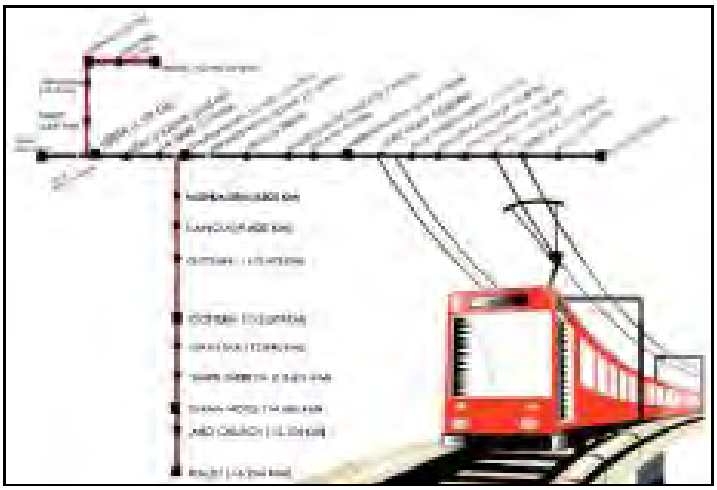
## Appendix C. Meskel square to bole road project





The Addis Ababa City **Roads** Authority (AACRA) is to finally launch construction of the African avenue. Upgrading of the 4.2-km **road** from **Meskel Square** to **Bole** Ring **Road** in Addis Ababa

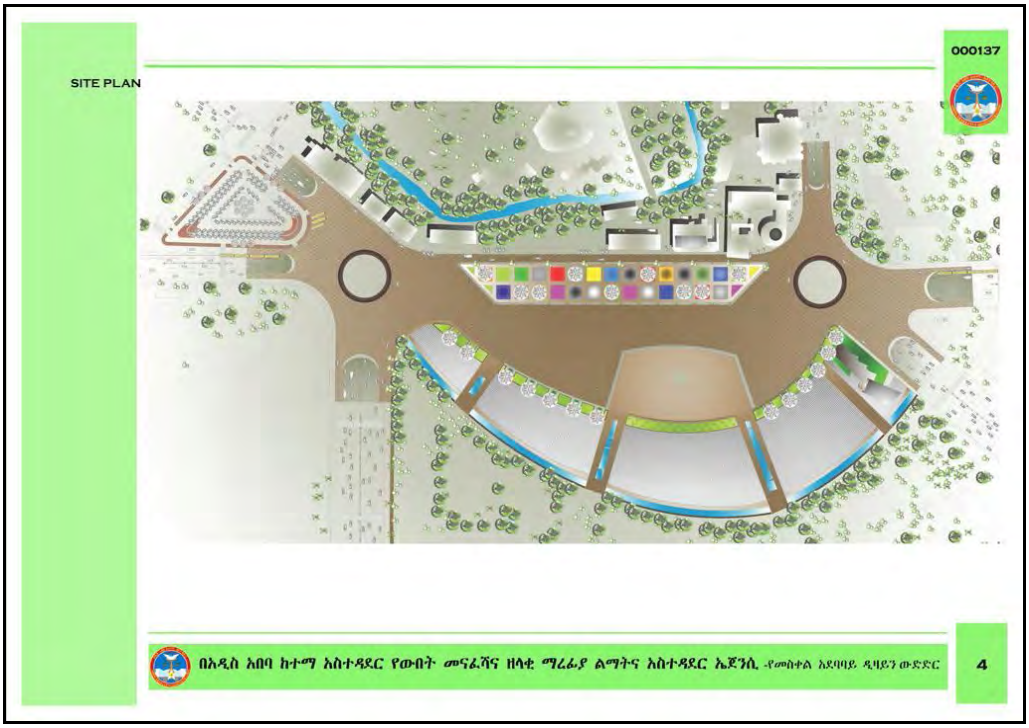
## Appendix D. Proposed mass transport line along East- West axis The Light Rail Train project.



Proposed mass transport line along E- W axis The Light Rail Transit (LRT) project following the recommendation of the Master Plan of Addis Ababa City Government and of the transport Master Plan, Ethiopian authorities have decided to implement a North – South and East – West Mass Transport system. The proposal for the Phase 1 of the LRT system comprises an East – West Line from Ayat to Tor Hailoch (17.26 km) and a North – South Line (16.25 km) from Shiromeda to Kalitiy. The total length of Phase 1 will be 33.5 km. The two lines share common tracks between Meskel Square.

## Appendix E. Meskel Square Development proposal.

Meskel Square development  Proposed - SkyscraperCity.htm


**The Addis Ababa City Administration is set to completely change the appearance of Maskal Square, the grand square at the heart of the metropolis.**

## Appendix F. Regulations related to the study.

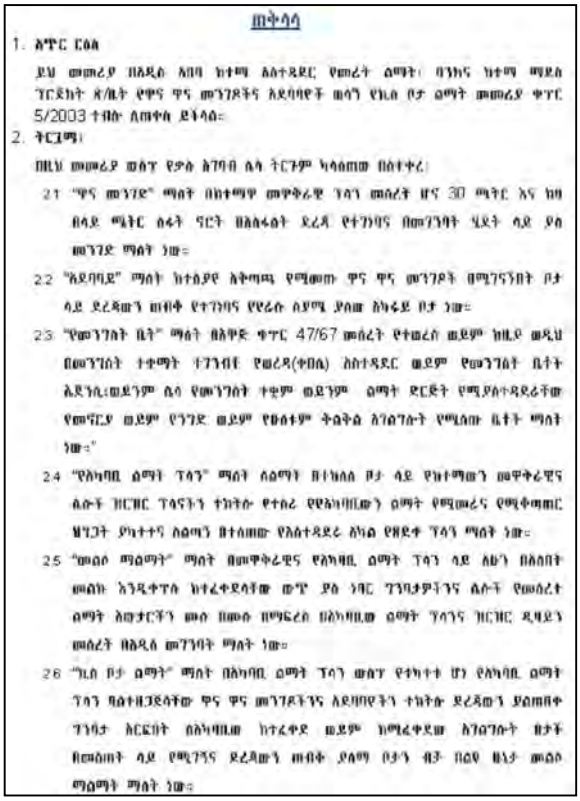
በአዲስ አበባ ከተማ የዋና ዋና መንገዶች እና አደባባዮች

ወሳኝ የኪስ ቦታ ልማት መመሪያ ቁጥር 5 /2003

የመሬት ልማት፣ባንክና ከተማ ማደስ ፕ/ጽ/ቤት

የካቲት /2003 ዓ.ም

አዲስ አበባ



መቅድም

1. አጭር ርዕስ

ይህ መመሪያ በአዲስ አበባ ከተማ አስተዳደር የመሬት ልማት፣ ባንክና ከተማ ማደስ ፕሮጀክት ጽ/ቤት የዋና ዋና መንገዶችና አደባባዮች ወሳኝ የኪስ ቦታ ልማት መመሪያ ቁጥር 5/2003 ተብሎ ለጠቀሰ ይችላል።

2. ትርጓሜ፣

በዚህ መመሪያ ውስጥ የቃሉ አገባብ ሌላ ትርጉም ካላሰጠው በስተቀር፣

2.1 "ዋና መንገድ" ማለት በከተማዋ መዋቅራዊ ፕላን መሰረት ሆና 30 ሜትር እና ከዛ በላይ ሜትር ስፋት ኖሮት በአስፋልት ደረጃ የተገነባና በመገንባት ሂደት ላይ ያለ መንገድ ማለት ነው።

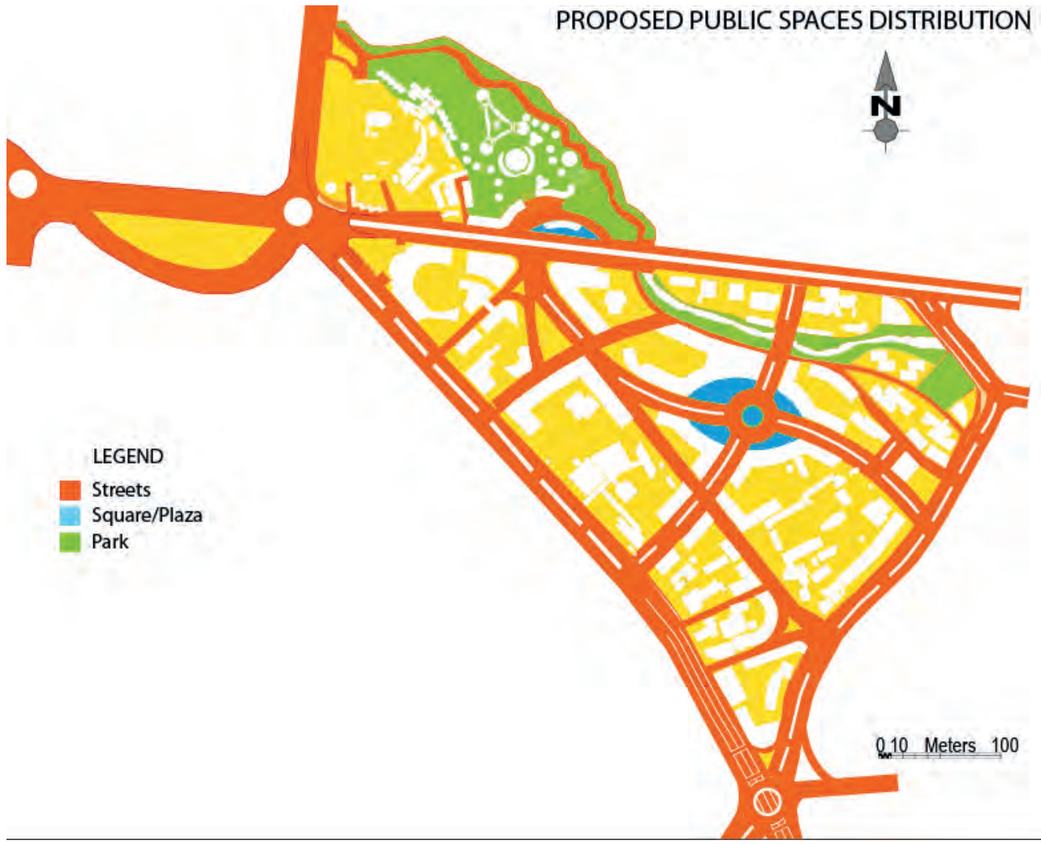
2.2 "አደባባይ" ማለት ከተሰያየ አቅጣጫ የሚመጡ ዋና ዋና መንገዶች በሚገናኙበት ቦታ ላይ ደረጃውን ጠብቆ የተገነባና የሆራሱ ስያሜ ያለው ክፍት ቦታ ነው።

2.3 "የመንገስት ቤት" ማለት በአዋጅ ቁጥር 47/67 መሰረት የተወረሰ ወይም ከዚህ ወዲህ በመንግስት ተቋማት ተገንብቶ የወረዳ(ቀበሌ) አስተዳደር ወይም የመንገስት ቤቶት አደንሲ፣ወይንም ሌላ የመንግስት ተቋም ወይንም ልማት ድርጅት የሚያስተዳድራቸው የመኖርያ ወይም የንግድ ወይም የፀሐፉም ትልቅል አገልግሎት የሚሰጡ ቤቶት ማለት ነው።"

2.4 "የአካባቢ ልማት ፕላን" ማለት ለልማት በተከለለ ቦታ ላይ የከተማውን መዋቅራዊና ሴክተር ዝርዝር ፕላኖችን ተከትሎ የተሰራ የየአካባቢውን ልማት የሚመራና የሚቆጣጠር ሂግጋት ያካተተና ስልጣን በተሰጠው የአስተዳደሩ አካል የጸደቀ ፕላን ማለት ነው።

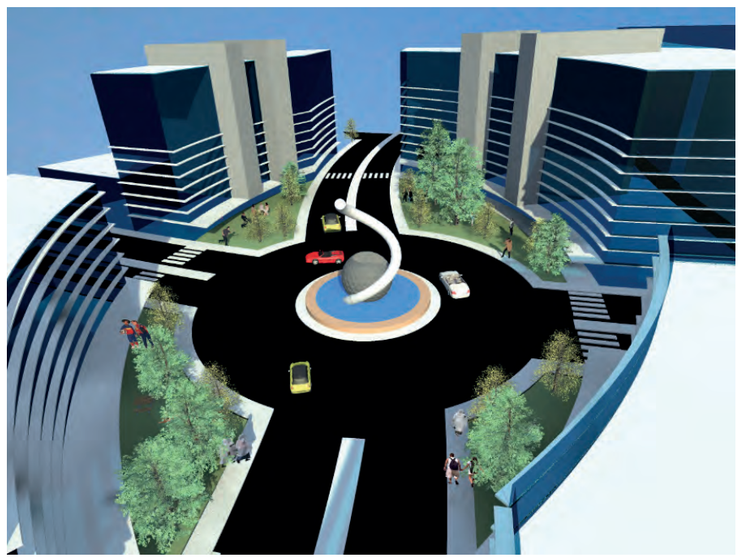
2.5 "መልሶ ማልማት" ማለት በመዋቅራዊና የአካባቢ ልማት ፕላን ላይ ለሁን በአስበት መልኩ አንዲቀጥሉ ከተፈቀደላቸው ውጭ ያሉ ነባር ግንባታዎችንና ሴሎች የመሰረቱ ልማት እንቃቃርችን ሙሉ በሙሉ በማፍረስ በአካባቢው ልማት ፕላንና ዝርዝር ዲዛይን መሰረት በአዲስ መገንባት ማለት ነው።

2.6 "ኪስ ቦታ ልማት" ማለት በአካባቢ ልማት ፕላን ውስጥ የተካተተ ሆነ የአካባቢ ልማት ፕላን ባልተዘጋጀላቸው ዋና ዋና መንገዶችንና አደባባዮችን ተከትሎ ደረጃውን ያልጠበቀ ግንባታ እርርሀት በአካባቢው ከተፈቀደ ወይም ከጣፈቀደው አገልግሎት ፀታች በጠሰጠት ላይ የሚገኝና ደረጃውን ጠብቆ ያለማ ቦታን ብቻ በልዩ ዘኒታ መልሶ ማልማት ማለት ነው።

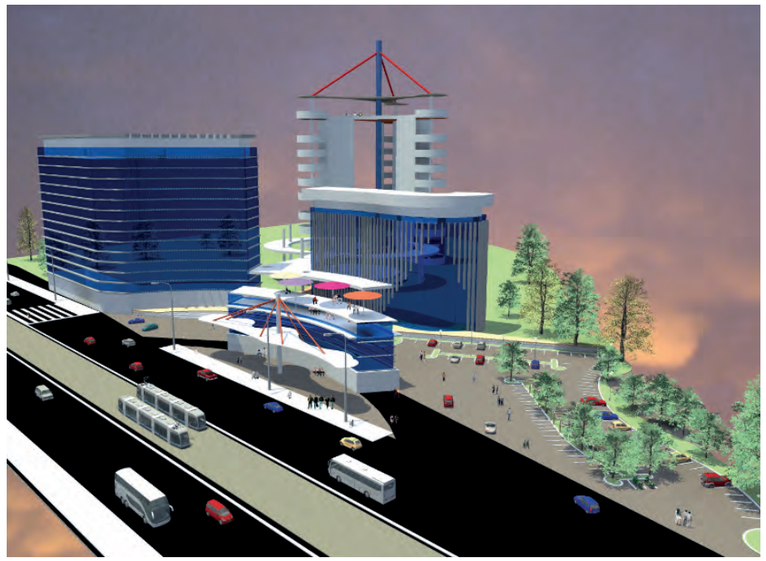



Proposed 3D- view

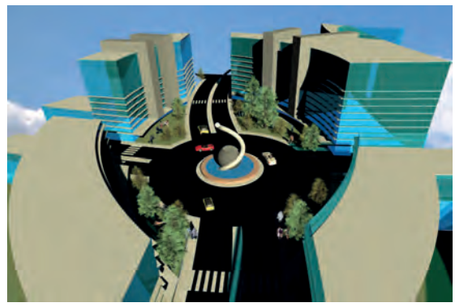
Proposed Square/plaza and civic buildings



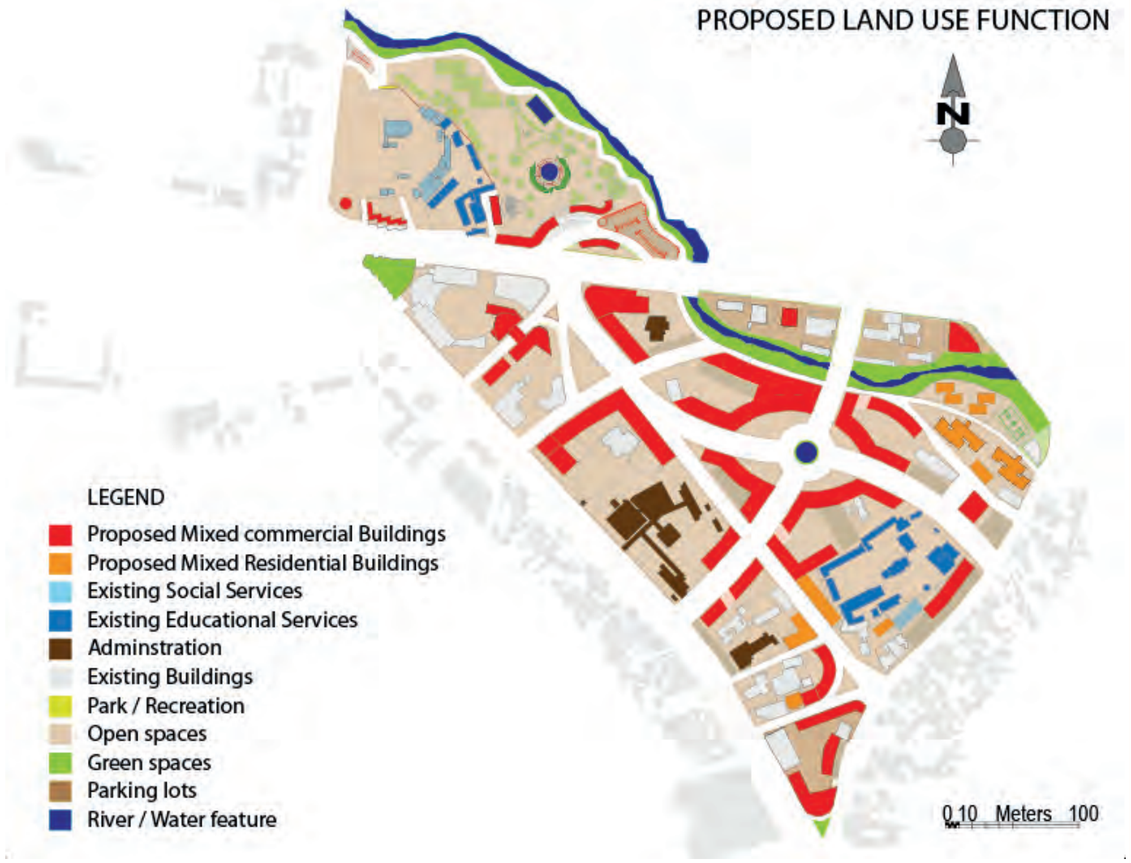
Park entrance, car parking lots and waching tower



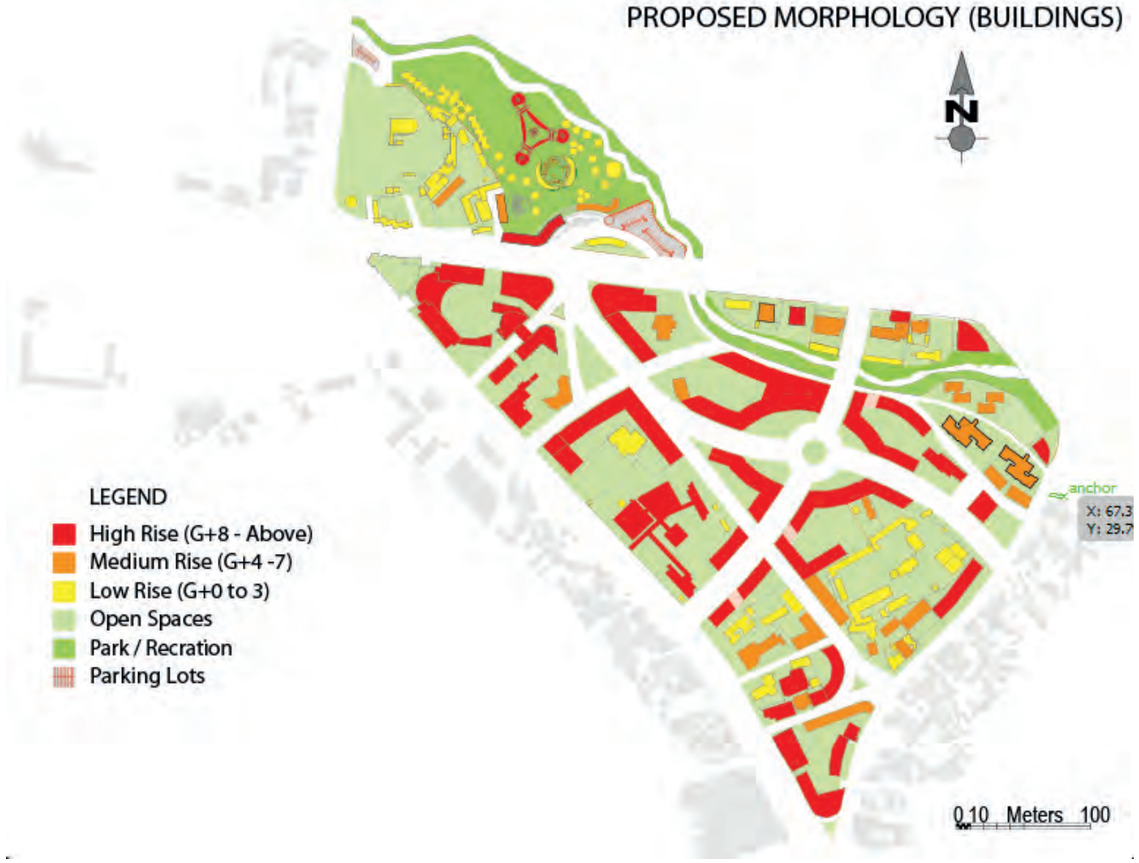
Amphitheatre



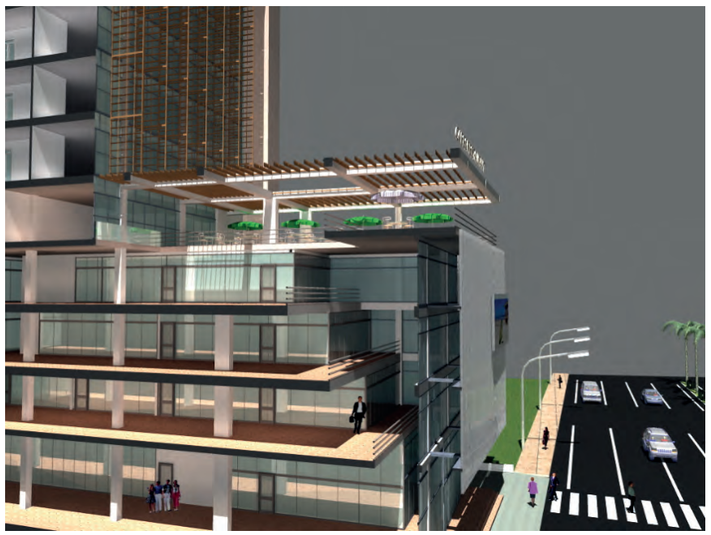
## PROPOSED LAND USE FUNCTION



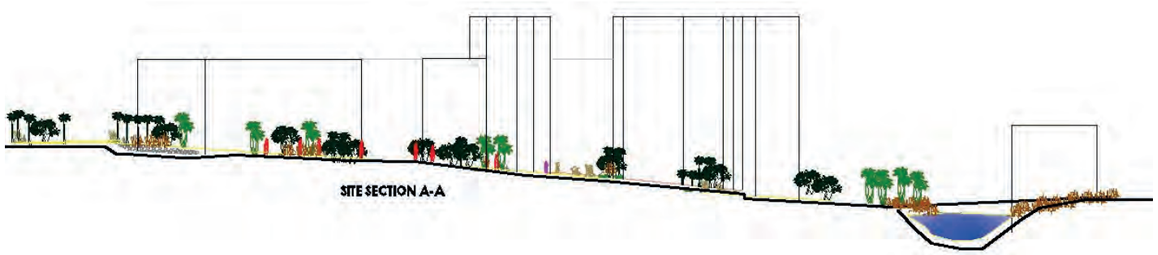

## PROPOSED MORPHOLOGY (BUILDINGS)

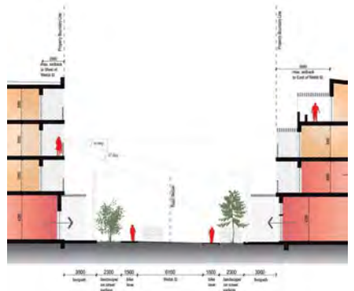



Proposed 3D – images of different mixed use buildings



Proposed Condominium G+7 the firts two floors for business

30 METERS WIDE TWO WAY TRAFFIC STREET

ROAD SECTION

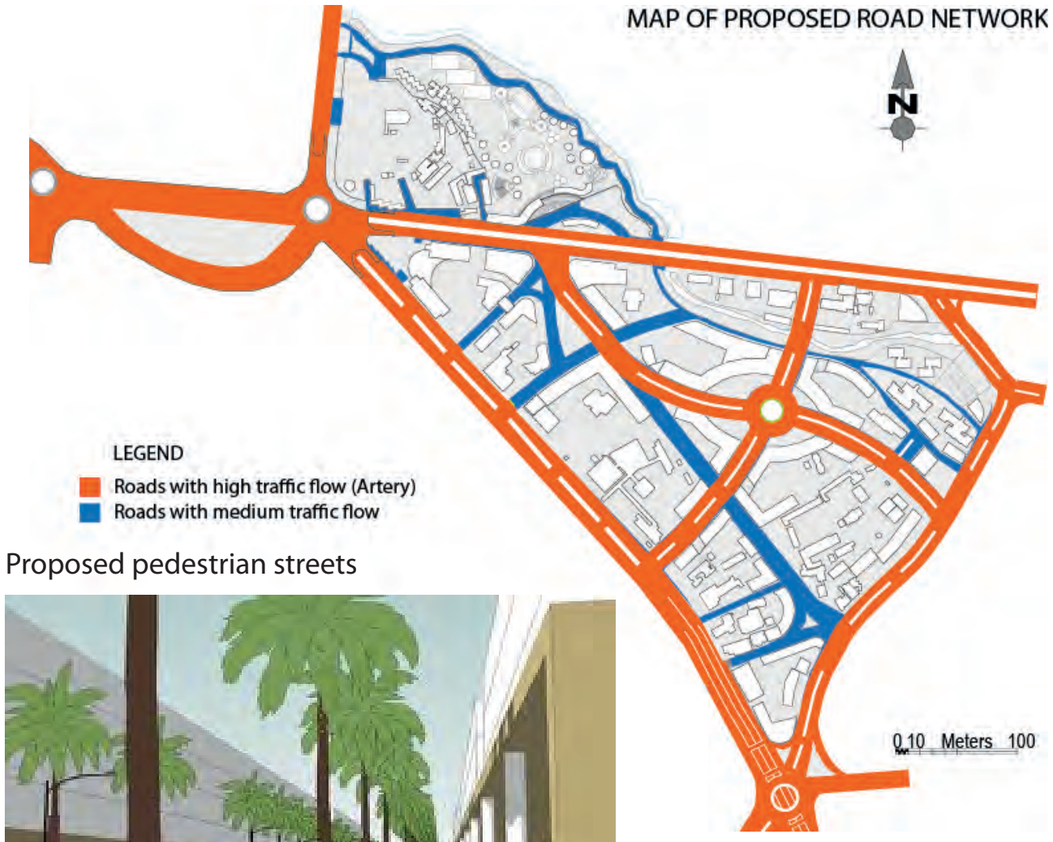
25 METERS TWO WAY TRAFFIC STREET

ROAD SECTION

15 METERS WIDE PEDESTRIAN WALKWAY

ROAD SECTION

RIVER SIDE SECTION





Proposed pedestrian streets

Proposed play ground and greenery


Proposed 3D- view

Proposed 3D- view

Picnic shelter

Recrational area

The proposal conciders the existing and future plan of site

Traditional shops

Cultural Houses

Proposed Condominium buildings G+5 and G+7