

KDA HOUSING PROJECTS:

-An investigation into the Problems and Constraints of Development

By

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A thesis submitted to the Department of Urban and Regional Planning, Bangladesh University of Engineering and Technology, in partial fulfillment of the requirements for the degree of **Master of Urban and Regional Planning (MURP)**



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**Department of Urban and Regional Planning
Bangladesh University of Engineering and Technology
Dhaka, Bangladesh**

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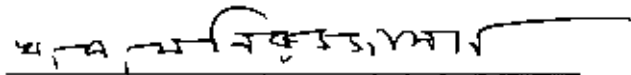
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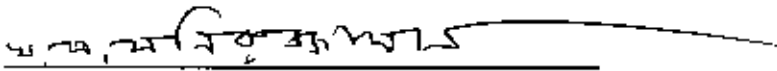
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ABBREVIATION AND ACRONYMS

BBS	: Bangladesh Bureau of Statistics
CC	: Cement Concrete
CBD	: Central Business District
CUS	: Center for Urban Studies
CDA	: Chittagong Development Authority
ECNEC	: Executive Commission for National Economic Council
GO	: Government Organization
HSD	: Housing and Settlement Directorate
KCC	: Khulna City Corporation
KDA	: Khulna Development Authority
LD Tax	: Land Development Tax
NGO	: Non-government Organization
PDB	: Power Development Board
PWD	: Public Works Department
R/A	: Residential Area
RCC	: Reinforced Cement Concrete
RDA	: Rajshahi Development Authority
Tk	: Taka

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ABSTRACT

This thesis investigates the problems and constraints of development of KDA Housing Projects in Khulna. Khulna is a small city compared to Dhaka and Chittagong. Its population and housing requirement is also small. Khulna Development Authority (KDA) has, till now, developed 8 sites and services schemes for the Khulna residents. Out of these only 2 schemes show significant progress regarding plot development (i.e. house construction); while progress of the other 6 schemes are very poor, although some of these schemes were started in 1967, before the emergence of Bangladesh. There were no investigation as to why plots in these schemes were left undeveloped, when there are severe shortages of well-serviced land for housing and also the number of quality housing. From the survey, it was evident that plot-owners were living in poor quality housing and in poor environmental condition while there was very little effort on their part to build houses on the KDA plots they owned.

Most plots were lying vacant for 10-15 years since the implementation of the sites and services schemes by KDA. The resultant effects is that the plot-owners are occupying a certain portion of the housing stock which could be made available to other home seekers if the former were living in their own plots. It is assumed that their occupation also increase house rent in the existing housing areas. On the other hand, vacant plots have given way to squatter settlements, frequent occurrence of crime, environmental pollution, etc. Basically, plot vacancy has left a trail of problems, which would not have occurred if the plots were developed and occupied by their owners. This research intends to investigate the problems faced by the plot-owners and the constraints debarring them from developing their plots.

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Chapter 1: Introduction

1.1 Introduction to the Problem

1.2 Objectives of the Study

1.3 Background of the problems and

an Overview of Housing Development in Khulna .

1.4 Scope of the Study

1.5 Rationale of the Study

1.6 Limitations of the Study

1.7 Methodology of the Study

CHAPTER 1: INTRODUCTION



1.1 Introduction to the Problem

Khulna is the second port city of Bangladesh. It is also the third largest city of Bangladesh. The population of Khulna has been gradually increasing from 0.62 million in 1991, 0.79 million in 1998 and then to 0.86 million in 2000 (KDA, 2001). In such a situation, Khulna Development Authority (KDA) and Housing and Settlement Directorate (HSD) undertook some sites and services schemes to mitigate the housing problems of Khulna City. These projects are: Sonadanga Residential Area, Sonadanga Low Cost Housing, Nirala Residential Area, Mujgunni Residential Area, Daulatpur Residential Area and Shiromoni Industrial Housing, (KDA, 2001).

Considering the demand for land for housing, KDA has provided about 3161 plots in eight planned residential areas (e.g. Sonadanga, Nirala, Mujgunni, Daulatpur, Shiromoni) in Khulna during 1967 to 2000. But till today, apart from a few houses, none of the above mentioned residential projects have been developed to their full capacity. In the Sonadanga Residential Area (1st phase), houses were constructed on 185 plots only out of a total of 205 plots. The Nirala Residential Area has only 229 plots developed out of a total of 544 plots. However, it took about 18 years to achieve this mark. Daulatpur and Shiromoni Residential Areas shows the worst performance, the former shows construction of only 12 houses among 81 plots (taking about 12 years time) and Shiromoni Residential Area only 6 plots have house construction (among 234 plots). The rate or pace of construction of houses is thus extremely poor.

Even after the completion of development phase of the Residential Areas involving huge amount of resources, time and expertise, residents are not constructing houses on these plots. Whereas these residents are living in houses elsewhere. The houses they are occupying at present would have been free for rent or sale to other people if the plot owners had lived in their houses in the residential areas. This would have reduced pressure on the already acute housing needs and demands. This thesis, aims at investigating why plot owners in the above mentioned residential areas are not developing their plots and residing in the planned residential areas. This study also

aims to investigate what problems/constraints with regard to the plot owners with regard to developing houses in these residential areas are facing.

1.2 Objectives of the Study

Specific objectives that the study aims to investigate are as follows.

- To investigate the existing condition of the eight residential areas.
- To review the existing institutional framework for executing the housing schemes of KDA.
- To investigate the reasons behind the delay in housing construction and/or plot development
- To analyze the loss / profit in rent annually of the projects of the study areas.
- To suggest possible measures to rectify this delay.

1.3 Background of the Problem and an Overview of Housing Development in Khulna

In Khulna City, poor quality housing is apparently a more serious problem than housing shortage. The problem lies in the fact that land supply in the city is not smooth for housing and urban development. Secondly, the slow growth of housing in Khulna is reflected in its cost of living index of the citizen in general and highly skewed distribution of income against a large number of poor people in the city.

Since 1960, Khulna Development Authority (KDA) and Housing and Settlement Directorate (HSD) together supplied only about 6000 serviced plots, which is insufficient, compared to the actual demand of 8300 units annually, (KDA, 1998). The private sector, therefore, remains the major supplier of urban land in Khulna supplying about 90% of houses per year. Again the supply of private sector land is determined by the availability of utility services, which is provided by Khulna City Corporation (KCC). Most of the residential areas in Khulna City were developed in a spontaneous manner. Access of the poor to serviced urban land is extremely limited in the city. Though KDA and HSD undertook several projects for the middle and low-income people, the price charged on land was not within their affordable limits.

Land value in urban areas varies substantially. The main considerations for such variation are the location, land elevation and availability of services. In Khulna City, serviced land located high-class planned residential areas is sold from Tk. 2.50 to Tk. 3.50 lakh per *katha* (720 sq.ft.). Private land adjacent to planned areas is sold from Tk.1.00 lakh to Tk. 1.50 lakh per *katha*, while land within a 3 kilometers of radius from the city center has been found to be sold at around Tk. 1.30 lakh per *katha*.

Physical quality of housing in Khulna is not at all satisfactory. In 1991, it is found that an overwhelming majority of housing structures (1,06,739) were temporary in nature (BBS, 1991). In terms of building materials (used for roofs), only about 22 % of dwelling units were made of concrete and bricks. At the national level, only 23% of all housing units in urban areas are permanent, another 23% are semi-permanent and the remaining 54% are temporary construction.

There are different types of housing delivery sub-systems in Khulna such as private, public, development authorities' sites and services schemes and slum and squatter sub-system of housing delivery. Khulna Development Authority (KDA) supplies plots among the city dwellers of various income groups under these sites and services schemes. Low-income people have little or no access at all to such land. Planned residential areas such as Sonadanga, Mujgunni, Nirala, etc. were developed under this sub-system. About 4% of the total housing is supplied by this sub-system in Khulna City, (Table 2.4).

KDA is the only public sector authority in Khulna for housing development; currently it is going ahead with low-income sites and services schemes at Mirerdanga. It has also formulated 5 other sites and services schemes, which are at various stages of approval. The 29.64 acre Mirerdanga Low Income housing project has been generate about 778 plots (KDA, 2001).

Another low-income housing project will be soon initiated near the Phulbari Gate where single story housing units will be built on 369 small plots for sale to the industrial workers and low-income people. A new project for upper income people is underway in Sonadanga area known as Sonadanga 3rd Phase. This project will

generate about 1366 plots of various sizes on 121.44 acres of land. Rupsha Satellite Town will be the first housing project of KDA on the other side of the river Bhairab-Rupsha. This project is expected to supply 321 serviced plots on 100 acres of land for a cross section of income groups. Ahsanabad Residential Area to be undertaken on the western fringe will be one of the largest housing projects of KDA. It will generate over 1500 plots of various sizes (KDA, 1998). The Sundarban Housing Project will be another large housing project of KDA near the New Market. This project will be implemented on an area of about 145 acres and will supply over 1000 serviced plots. It is estimated that KDA's ongoing and up coming projects will supply over 5474 plots in 6 to 7 years time (KDA, 2001).

The development of sites and services schemes in Khulna is quite remarkable in the sense of building construction. Although the plots were allotted in the housing estates long before the development of infrastructure, the growth is rather slow. Particularly in low income housing areas such as Boyra and Khalispur, development of housing is not fast. Lower affordability, lower demand for permanent housing, absence of HBFC loan facilities are assumed to be the major reasons for slow development of housing structures in these areas. Situation in high-income areas like Sonadanga and Nirala is comparatively better (KDA, 2001). This study intends to investigate the problems that riddles KDA housing projects and obstructs their total development

1.4 Scope of the Study

In general housing includes vast parameters of study. Like the other urban centers of Bangladesh, Khulna is developing in a spontaneous manner. Among different categories of land uses, housing is the dominant category. At present about 62% area of Khulna is used for housing purpose (Mahmud, 2000). Residential areas are usually developed privately by individual efforts. Khulna Development Authority (KDA) and Housing and Settlement Directorate (HSD) are the two main public agencies for initiating planned residential areas. Besides, some public sector agencies like Public Works Department (PWD), Bangladesh Bank and other commercial banks. Water Development Board, Port Authority, KDA, jute mills, etc. provide very good housing to their employees

This research has studied the KDA's housing projects only. This study has covered the housing project development procedure, project implementation process, constraints and problems of project development, loss/profit analysis of the projects after the implementation. From the very beginning of the project such as preparation of project proposal to the time to time proceeding of the project approval system (institutional framework) is concerned with project development procedure. Project implementation process includes the distribution method of the authority, legal framework, which is imposed for mitigating for problems related to plot distribution, etc. To investigate the slow pace development, a questionnaire survey was conducted on house owners residing in different residential areas. Finally a loss/profit analysis was done, which consists of the house rent structure, monitoring values of different types of infrastructures installed in the projects.

1.5 Rationale of the Study

There has been a rapid growth of urban population and its concentration in a few cities and towns. But there has been no concomitant construction of affordable housing. There is acute shortage of fund for the development of settlements and extension of urban infrastructure, both in the public and the private sectors in urban areas. Moreover, the continuous migration of rural poor to the urban areas, particularly to the metropolitan cities of Dhaka, Chittagong and Khulna for job opportunities, has given rise to slums and squatter settlements and created problems of transportation and environmental degradation. This has led to increasing congestion, and overcrowding in small houses, growth and development of informal settlements and increasing pressure on existing civic services.

To resolve the problems of adequate housing, in Khulna, the Khulna Development Authority (KDA) started to develop planned residential areas. KDA mainly develops the land under its jurisdiction. However, some private developers have executed a few of housing projects in Khulna but have not satisfactorily provided the required facilities in its housing projects.

At present there is a considerable number of residential areas within the KDA area. KDA acquires/procures land from local landowners, elevate them after earth filling

and then sell them to prospective buyers. This study attempted to investigate the problems that obstruct their full development. The study also tries to assess the impact of these residential projects on the growth of Khulna. This study is expected to be a helpful guide and source of useful information for both the public and private sector housing development authorities.

1.6 Limitations of the Study

Due to unavailability of the Mujgunni Residential Area's map, the lay out map of the Mujgunni R/A has not been presented in this thesis. On the other hand, newly established (2000) Mirerdanga Residential Area has been kept out of the study because of being totally vacant.

1.7 Methodology of the Study

The steps, which were taken for the completion of this thesis, are described following sequence.

1.7.1 Reconnaissance Survey

A preliminary survey visit was conducted on the study areas, which is noted as the reconnaissance survey.

1.7.2 Map Collection

The land use map of Khulna City and site plan of the study areas has been collected from Khulna Development Authority (KDA)

1.7.3 Data Collection

Secondary Data

To identify planning, execution or project period of the selected projects, documents were collected from the KDA. By studying the KDA's master plan report, the above mentioned information was gathered and noted. To obtain information about plot distribution procedure and validity period of building construction on the allotted plots, the KDA ordinance was studied and necessary information was extracted for this research.

To analyze primary data for achieving the desired result and also to accurately fulfil the objectives of the research, different types of published reports, journals, dissertations, related books, etc. have been studied procured from different libraries such as BUET, Khulna University, Center for Urban Studies, KDA, etc. But actually the secondary information was not sufficient because building construction is an on going process. So existing condition cannot be expressed by the previous documents. On the other hand, the some information like financial assistance for building construction, which the plot owners are gathering, the constraints that the plot owners are facing for construction, existing condition of the plots, existing service facilities and their present situation cannot be chalked out by secondary information. For these reasons, primary data collection was very much needed.

Primary Data

There was no up to date data related with this study either in the KDA or in other institutions such as, the Khulna University library, Khulna City Corporation office etc. therefore to investigate the existing situation and also to find out actual reasons for the present rate of residential building construction, primary data collection was essential. The primary data included information on the following:

- The plots of the selected projects were categorized according to level of construction (such as constructed (C), under construction (UC) and vacant (V)). This was recorded on the site plan

- Sample size determination---

The sample size depended on—(a) the number of units in the total population and (b) the variation in the units in the total population. In general, it was reasonable to draw a 15 to 20% sample. There are 800 plots of different housing projects had been developed and the developed plots consisted of various categories of houses. Hence 15% of the total developed plots i.e. 120 house owners were selected for questionnaire survey

- A questionnaire was prepared to collect the information about socio-economic condition of the plot owners. This questionnaire surveys also

contained information about the plot present rate of residential building construction, as how long it took the owners to construct houses on this plot, the reasons why these were delayed, the sort of financial supports they received or obtained, etc.

1.7.4 Data Compilation

To compile primary raw data, a compilation sheet was prepared by using *Microsoft Excel*. The compilation sheet consisted of the numbers of plots developed. It also contains the number of different categories of plots. The SPSS was used in tabulating data. The spatial data was stored in a digitized form using GIS.

1.7.5 Data Analysis and Presentation

All data was analyzed and presented in text, tabular and graphical forms for convenience of analysis. Thus by using different cross tables the data was analyzed to fulfill the objectives of this research. Analyzed data was presented in the forms of tables, different types of graphs (bar chart, pie chart, etc).

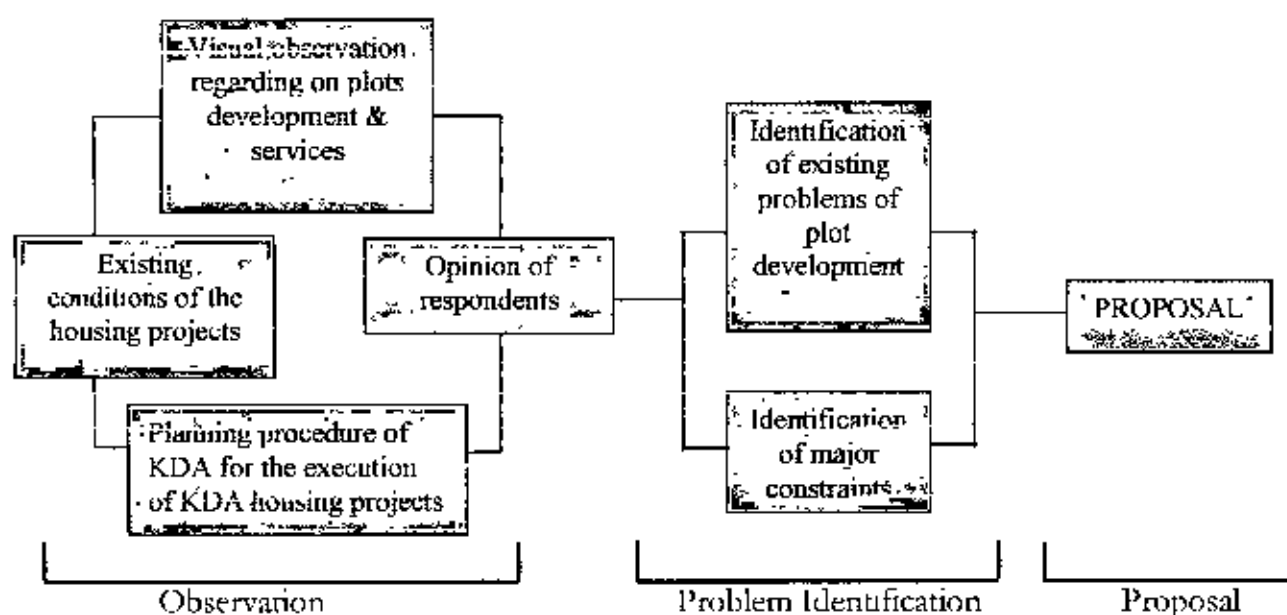


Figure 1.1: Working Pattern of the Research

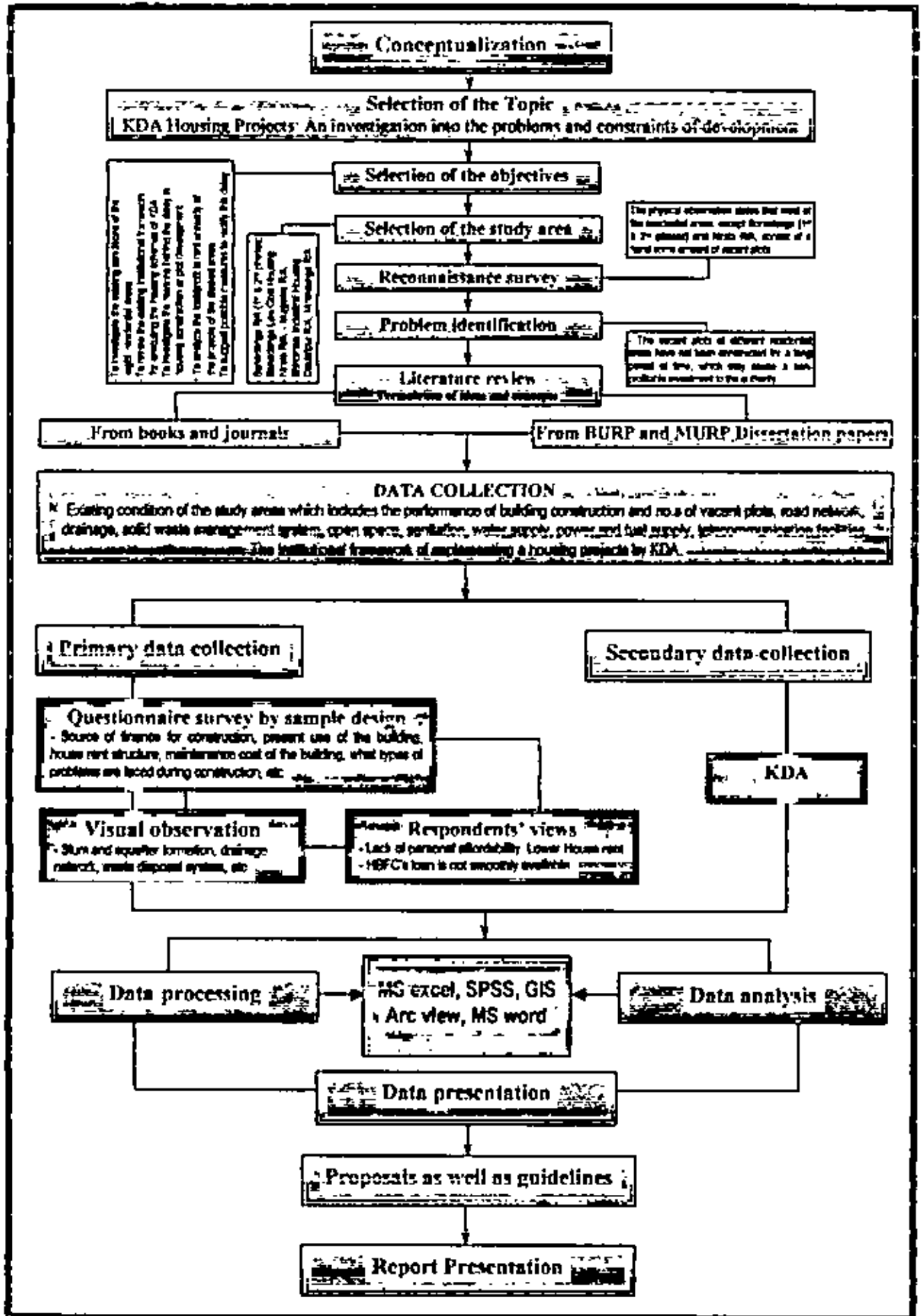


Figure 1.2: Flow Chart of Methodology

Chapter 2: Housing Provision in Khulna City

2.1 Housing Demand in Khulna City

2.2 Housing Delivery System

CHAPTER 2: HOUSING PROVISION IN KHULNA

2.1 Housing Demand in Khulna City

2.1.1 Population Growth of Khulna City

After the partition of Indian sub-continent in 1947, millions of Muslim refugees migrated to Bangladesh (the then East Pakistan) from India. Khulna being in close proximity with the Indian border, was a major area of their resettlement. There was impressive industrial growth in Khulna in the late 1960s but the trend of industrial development slowed down after 1970. Although the population of Khulna continued to rise after the liberation of Bangladesh, industrial development failed to do so. The new migrants mostly found access only to tertiary service jobs (CUS, 1997).

The demographic transition of the city was accompanied by two major political events, the partition of India 1947 and Indo-Pak war in 1965. As a result, Khulna grew rapidly, the greatest in the then East Pakistan, at an annual growth rate of 20.9 % during the period of 1951-61 (CUS, 1997).

According to the Population Census, 2001, the population of Khulna City Corporation (KCC) was about 1.8 million (BBS, 2001). During the last few decades, Khulna City showed tremendous rise of population due to industrialization and urbanization in that area.

Table 2.1: Growth of Population in KCC Area

Census year	Size of population	Annual growth rate (%)
1901	12460	-
1911	18170	5.55
1921	23500	2.57
1931	28000	1.75
1941	34000	1.94
1951	42220	2.17
1961	80220	6.42
1974	437300	13.04
1981	561950	3.58
1991	663340	1.66
1998	647580	3.50

Source: KDA Interim Report-1999, Vol. 2.

2.1.2 Housing Need in Khulna City

In Khulna City Corporation area, there were 1,50,000 households according to the Census of 1991. The dwelling unit in the same period was 1,06,700 thus, there was a housing backlog of 8,300 units. In 1998, considering 3.3% annual rate of growth in population, of Khulna City Master Plan Project estimates that in 1998, there will be 1,44,700 household with 1,29,300 dwelling units. The present backlog is about 15,000 Considering this trend in the growth rate of households and backlog the required of housing units for the year 2000, 2005, 2010, 2015 and 2020 have been calculated. It should be mentioned here that 20% replacement of existing housing units per year throughout the period have been considered (KDA, 1998)

Table 2.2: Housing Need in K.C.C. area in different Period

Year	Households	Growth rate	Dwelling unit	Backlog	Replacement	Total need
		Percentage/ Year				
1961	24535	--	21386	3149	837	--
1974	80629	9.15	63384	17245	2481	61724
1979	87202	1.57	86531	671	3387	27205
1991	114918	2.30	106739	8179	4178	32565
1998	144781	3.30	129397	15384	5065	43107
2000	156213	3.80	138087	18126	5405	32221
2005	193683	4.30	166565	27118	6519	62115
2010	246219	4.80	206002	40217	8063	87717
2015	305278	4.30	248486	56792	9726	109002
2020	369157	3.80	292331	76826	11442	132113

Source: KDA Draft Structure Plan, 2001,

The above Table shows that, the estimated growth of household between the year 1998 and 2020 and the growth of dwelling units during the same period. It clearly indicates the number of dwelling units required at various point of time in the K.C.C. area. Similarly housing units need to be replaced in various projected year are also shown. Thus from this Table it can be estimated that by the year 2020 Khulna will require an additional of 2,24,376 new dwelling units. Besides this, nearly 90,000 housing units will have to be replaced during the period. It should be noted that here this estimation is moderate and considers the present rate of growth and potentials. However, if the city has better investment and development opportunities in future, the need for housing will be much more than the number estimated (Debnath, 1999).

2.1.3 Public Sector Housing in Khulna City

KDA and HSD are two major actors in supplying of planned housing in the form of sites and services schemes. KDA is the only public sector organization in the city, which is still continuing with its housing program since its inception. Recently KDA has developed low-income sites and services housing projects at Mirerdanga. It has also formulated 5 other sites and services projects that are at various stages of approval. A new project for upper income people is underway in Sonadanga area known as Sonadanga 3rd Phase. This project will generate more than 1366 plots of various sizes on about 121.44 acres of land.

Rupsha Satellite Town (100 acres) will be the first housing project of KDA on the other side of the river Bhairab-Rupsha. This project is expected to supply a large number of serviced plots for a cross section of people from various income groups. Ahsanabad Residential Area to be undertaken on the western fringe (west of Sonadanga Bus Terminal) will be one of the largest housing projects of KDA. It will generate over 1500 plots of various sizes. It is estimated that KDA's on going and forth coming projects altogether will supply over 5474 plots in 6 to 7 years.

On the other hand, HSD has not undertaken any housing project after 1960s. Lately, it is contemplating to undertake an ambitious housing project titled "Two Million Housing Programme in Bangladesh". Under this project, 2 million housing units will be developed all over the country. Khulna Division is to get a share of 200000 housing units under the program. The development of the housing will be spreaded over divisional, district, thana headquarters and growth centers. The scope of the project covers, sites and services schemes, construction and delivery of small housing units and credit for potential builders. HSD, however, has undertaken a project in Khulna, which will provide 200 flats for the middle income people in Khalispur

2.1.4 Private Housing Scheme

There are some private real estate developers in Khulna City who has developed 18 housing projects out side the City Corporation area. According to the field survey, it has been found that maximum private housing scheme does not provide any facilities

other than road and mosque. There are only two private housing projects, which provide a primary school, snper market, play field, etc. Even there are some housing projects, which have no facilities except road.

Private housing developers are those who entail different housing scheme by buying but not acquiring barren land and selling that to the customer. There are some private developers in Khulna who performs these activities. The First private housing scheme started in 1978 in Khulna City and its name was Nabarun Housing Estate. At present, there are 19 individual private housing projects in Khulna, which are owned by 12 Real Estate Developers. Out of the seven private housing developers, only four developers have separated registered as business agency. Three of them conduct their business as a side business. Thus the developers can be classified into two groups; registered and non-registered. The following table provides a brief introduction of the private land developers and their housing projects in Khulna.

Table 2.3: Private Housing projects in Khulna

Name of the projects	Total area (in acre)	No. of plots	Location (mouza)	Distance from CBD
Nabarun Housing Estate	21.49	232	Ward # 14	2.5 km
Shahuj Palli Residential Project	10.58	126	Dubi	3.0 km
Prottasha Residential Project	12.21	100	Dubi	2.5 km
Palashbag Residential Project	5.00	69	Khola Bari	6.0 km
Arafat Residential Project	140.00	1354	Chakmothurabad	1.5 km
Monorama Residential Project	10.11	104	Thikraband	5.0 km
Shugandha Residential Project	7.12	91	Hugladanga	5.5 km
Rangdham Residential Project	5.48	67	Krishnanagar	4.5 km
Shapnapuri Residential Project	2.03	26	Krishnanagar	4.5 km
Shahibag Residential Project	6.5	82	Thikraband	6.5 km
Sharnali Residential Project	2.31	30	Krishnanagar	4.5 km
Amenabag Residential Project	2.58	33	Krishnanagar	4.25 km
Aslam-Shefa Residential Project	1	20	Thikraband	5.5km
Sonargaon Residential Project	1	18	Krishnanagar	4.5 km
Shikdar Housing Agency	2.08	25	Thikraband	5.5 km
Adorybag Housing Project	2.03	26	Krishnanagar	4.5 km
Madani Housing Project	1.5	23	Thikraband	6.5 km
Mouza Krishna Nagar Housing Project	2.03	25	Krishnanagar	4.5 km
Honolota Housing Project	2.5	30	Thikraband	5.0 km
Total	237.55	2481		

Source: Field survey, 2003

2.2 Housing Delivery System

Housing delivery system in Khulna City is dominated by private informal sector, like other cities of Bangladesh. While the cooperative housing system was found to be absent, private formal sector in Khulna City has not yet been developed properly. There are public housing sub-systems that provide housing for the employees of the government and semi-government organizations. The following table shows the major housing delivery sub-systems in Khulna.

Table 2.4 The Housing Delivery sub-system in Khulna City

Sl no.	Housing Delivery Sub-system	Percentage (%)
1	Private housing sub-system	90
2	Public housing sub-system	1.5
3	Development authorities site and service scheme	0.4
4	Slum and squatter sub-system	4.5

Source: Islam, 1997

2.2.1 Private Housing Sub-system

In K.C.C. area it has been estimated that about 90% of all housing units were provided through this sub-system. Operation of private housing sub-system takes place in two ways; formal and informal. Private formal sector in Khulna City is still limited, providing a very few site and service land. The most dominant actor in the housing market carries out housing activities informally through private initiative the private informal sub-system.

2.2.2 Public Housing Sub-system

Public Works Department (PWD) of the Government and other autonomous agencies build houses for public employees. Under this program, roughly 02% of households in the K.C.C. area were accommodated.

2.2.3 Development Authorities of Site and Service Scheme

K.D.A. supply serviced plots among the various income groups of city dwellers. Under this sub-system planned residential areas such as Sonadanga, Mujgunni, Nirala etc., were developed. In reality low-income people have little access to this type of plots. In the K.C.C. area about 04% of households were accommodated by this system.

2.2.4 Slum and Squatters Sub-system

Generally, the poor people of different occupation like rickshaw pullers, pull cart pullers, scooter drivers, small shopkeepers, household servant and labors live in this type of houses. Low income poor people, mainly the newly migrants to the city, find public and semi public land illegally. It is difficult to estimate the exact size of such population living in Khulna City. About 4.5% of household in K.C.C. area were accommodated by this system. It was observed that most of the slum dwellers have limited access to community service and facilities, although they are the citizens of the country. The quality of service and facilities was also found to be very poor (Arifeen and Mahbub 1993, CUS 1983).

By the year 2020, Khulna City will require additional 292331 new units of housing. To mitigate this housing requirement, both private and public sectors contribute residential plots for housing. The private housing projects of Khulna provide 225.41 acres of land as planned residential plots. These private residential projects provide 2314 plots. On the other hand KDA and HSD supplied 2842 plots in different site and service schemes in Khulna City.

In Khulna City, four different housing sub-systems are remaining to deliver the housing facilities. These sub-systems deliver different percentage of housing in Khulna City. Such as, private housing sub-system delivers 90 %, public housing sub-system delivers 1.5 %, development authorities site and service scheme 04 % and slum and sqnatter sub-system delivers 4.5 % of housing.

Chapter 3: KDA and Public Housing

3.1 Evolution of KDA

3.2 Institutional Arrangement of KDA for Public Housing

3.3 Process of Residential Area Development

3.4 Housing Projects undertaken by KDA

3.5 Housing Policies of KDA

CHAPTER 3: KDA AND PUBLIC HOUSING

3.1 Evolution of KDA

Khulna Development Authority (KDA) evolved in 1961. Under Khulna Development Authority Ordinance, 1961, KDA evolved. Planned development is important to create a sustainable and a better living environment in a city. KDA is a public authority, which prepares the master plan. The main functions of Khulna development authority are planning, development and development control. The following chart shows the functions and responsibilities of the KDA.

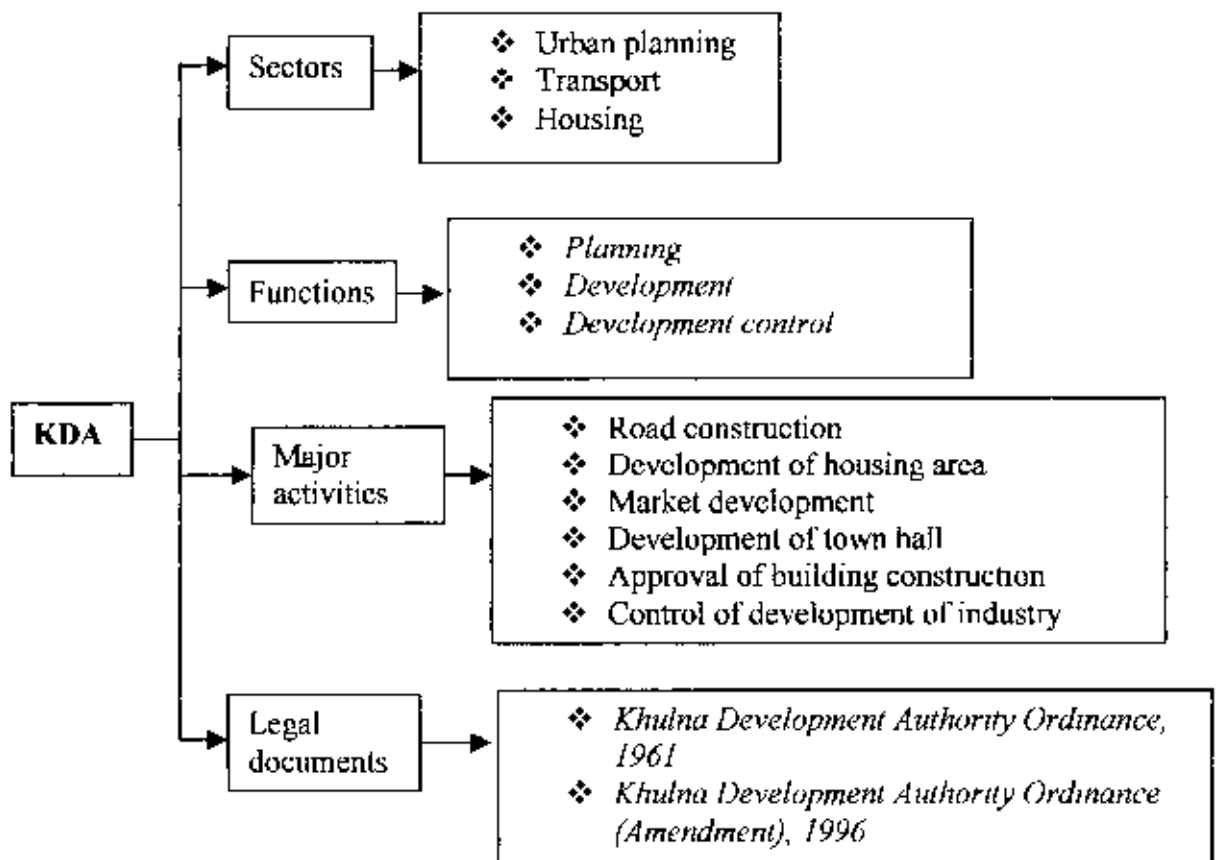
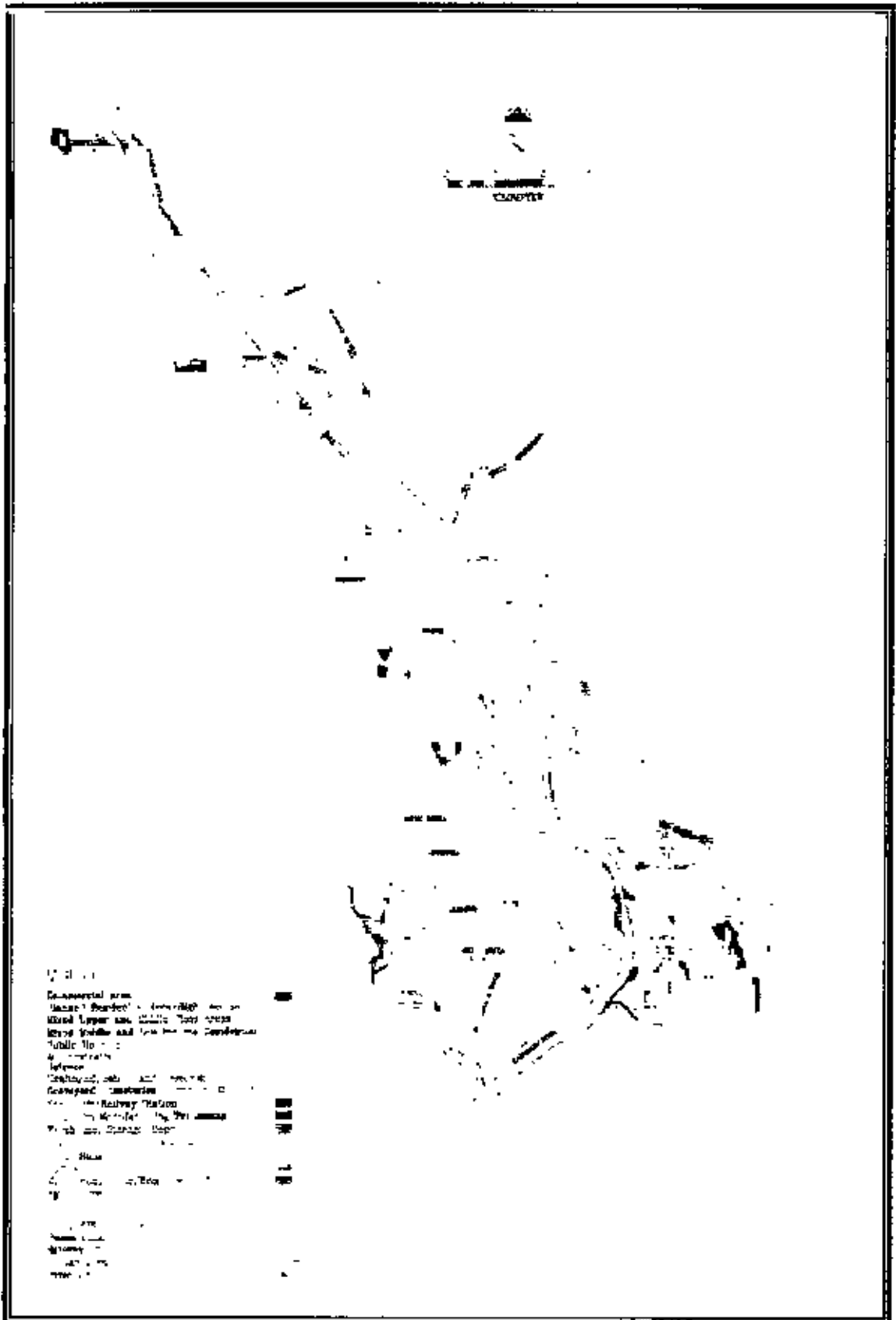


Figure 3.1: Organogram of KDA

Map 3.1: KDA Master Plan Area (Generalized Landuse Map)



Source: KDA, 2001

3.2 Institutional Arrangement of KDA for Public Housing

Housing projects are developed under---

- Sites and service schemes
- Housing development Provision in Master Plan

On going sites and services schemes

KDA and HSD supply serviced plots among the various income groups in the city dwellers. Under this sub-system planned residential areas such as Sonadanga, Mujgunni, and Nirala etc. in Khulna City were developed. In reality low-income people have little access to this type of plots. In KCC only about 4% of the population of Khulna has accommodated by this system.

Provision in the Master Plan

Preparation of master plan with the subject matter is clearly stated in the KDA ordinance. Section 22(1) of the Khulna Development Authority Ordinance 1961 is stated that, "the authority should, pursuant to the general development plan, prepare in the prescribed manner of a functional master plan relating to –

- a) Land use zoning and land reservation
- b) Water supply, sewerage and drainage
- c) Roads, highways and traffic circulation, community planning, housing, slum clearance and slum improvement.

So, housing is clearly one of the main components of the Master Plan.

3.3 Process of Residential Area Development

Khulna development authority is developing planned residential areas for providing housing through site and service projects. However, the detail process of site and service scheme, which is followed by KDA are described in the following paragraphs.

3.3.1 Decision Making

This is the first step of such process of development of residential area that KDA arrange a board meeting with its executive body consisting of 15 members (e.g. Chairman of KDA, Secretary of KDA, 1 representative of Mayor, 1 representative of

Deputy Commissioner, 2 representative of ruling political party, 1 representative of Railway, 1 representative of Public Works Department, etc.).

In the meeting, the decision about new housing project is approved. Moreover, this meeting considers the following:

- Existing housing demand and market of the city,
- Selling condition of previous housing project;
- Required capital and sources,
- Time schedule of Master Plan for new housing project;

After considering all these aspects, the Board takes decision on new housing project or new sites and services projects. Moreover, the Board also takes into account the benefits of different projects. Another important aspect is that, a donor-funded project is generally developed quicker than state funded projects.

3.3.2 Location Selection

Location of new residential area depends on the proposal of Master plan of KDA. In Plan, such proposals have identified on housing development. According to the guideline of Master Plan, KDA selects the location of new residential area. In this purpose, KDA also consider the adjacent area of new roads or vacant area which is suitable for housing or locational preference of city dwellers. However, the location may vary sometime than the proposed location in Master Plan after consideration of such aspects. This location is also marked on Cadastral Survey (CS) Map.

3.3.3 Layout Design

After selection of the location for new residential area, the planning section of KDA carries out surveys on the following:

- Household Survey for assessing dwellers income;
 - Land Use Survey for collecting information regarding the site;
 - Determining the demand of plots according to various sizes and position;
- etc.

After completion of information collection, Planning Section of KDA prepares a layout of new project with necessary consideration of such income groups, required space for community services, required space for roads, etc. Then a feasibility study



is made regarding the current project. If the project is feasible, then it is sent to the Project Section of KDA. Otherwise it makes necessary change and then sends to Project Section.

3.3.4 Project Proposal and Appraisal

Whenever the necessary layout and information arrive in project Section of KDA, then it conducts a detail survey on site, which includes:

- Existing land use,
- Necessary earth work;
- Necessary land requirement;
- Socio-economic information collection;
- Existing land value;
- Estimate future value of the plots; etc.

After collecting this information, Project Section estimates the cost of the project. Moreover, it also estimates the project output like future benefit of the project. With considering these, it prepares a project proposal and also an appraisal, which is submitted, to the Board Meeting of KDA. If the board agrees, then it goes to the line Ministry like Ministry of Housing and Public Works for approval.

In this period, KDA also notifies through the newspaper to the land owners of the project area about their new housing project. Moreover, they have also notified that the land of project area will be acquired by KDA for housing purpose and it is compulsory acquisition.

3.3.5 Project Approval

In this stage KDA has no duty on project approval. After receiving the project proposal, the Ministry of Housing and Public Works makes a feasibility study on the project. If necessary, they send their official of 'Planning Cell' of Ministry of Housing and Public Works to monitor the project feasibility. If the project is feasible, then they send it to the Planning Commission or Executive Commission for National Economic Council (ECNEC) for approval. However, if the project cost exceeds Tk. 20 million taka, only then it is approved by the ECNEC, otherwise the Planning

Commission approves it. Another important aspect is that, if any foreign investor founds the project then the project is approved quickly, otherwise it takes long time.

3.3.6 Land Acquisition

When Planning Commission or ECNEC approves the project proposal of new housing project, then KDA goes for land procurement through acquisition. For land acquisition, KDA requests the Deputy Commissioner to acquire the land of the project area. Then Deputy Commissioner forms a body with his official and Assistant Commissioner of Land (AC Land). This body collects the value of land of surrounding area for that current year through different sources like Land Registration Office, records of Land Office, and field survey. According to these values, the board selects the price for per unit of land (like khata or bigha etc). However, this board obviously notifies the land owner before collecting land value. Then Deputy Commissioner goes through compulsory acquisition of land by giving necessary compensation according to the Acquisition and Requisition Act, 1894 to the landowners within a time frame.

3.3.7 Project Implementation

After approval of the project by the Ministry of Housing and Public Works, it goes for implementation. In the implementation phase its responsibility goes beyond the Work Section of KDA. Works Section of KDA arranges invitation for bids for land development. After selection of contractor through bids, land development works starts and completion of land development, Work Section starts to subdivide the land into plots and construct roads into different length widths. Others spaces for community services are kept. On the other hand, PDB and KCC are involved to provide electricity and drainage respectively to the projects as soon as possible before hand over the plots.

3.3.8 Plot Selling and Handover

After subdivision of land into plots, KDA gives notice in news paper for invitation for bid for plot selling within a given deadline. Also the plot number and their sizes are given in the notice. According to bids, the buyers buy bid paper from Estate

Section of KDA and submit it after fulfilling the requirements. Moreover, the notice of plotted land also present in the bid paper. Buyer gives their price which they would be able to pay for a specific plot. Generally price is given for per *katha* land. After passing the deadline, KDA arrange a staff meeting about the sell of plots. Selling of plots depends on the bid quantity for respective plot. If there is only one application for one plot, then the plot is sold to that person who has give highest price in the application. However, if there found more than one same highest price for one plots. Then KDA arrange a lottery to select the plot owner. In lottery, KDA select owner of the plot who won the lottery. The Estate Section of KDA completes all these tasks.

After completion of selection of the plot owner, Estate Section also prepare necessary document for each plot against respective owner. When this task completes, Estate Section hand-overs the sold plot to the respective owner. This is the process of Residential Area Development which has been followed by Khutna Development Authority (KDA, 2003).

Table 3.1: Housing Development Process of various Development Agencies

Step	Activities	Responsible body
Decision making	Board meeting	KDA
Location selection	Location selection	KDA
		Planning section of KDA
Layout design	Household survey	Planning section of KDA
	Land use survey	Planning section of KDA
	Plot demand analysis	Planning section of KDA
Project proposal and appraisal	Detail survey	Planning section of KDA
	Cost estimation	Planning section of KDA
	Preparation of project proposal	Planning section of KDA
	Appraisal	Planning section of KDA
	Board meeting	KDA
Project approval	Appraisal	Ministry of Housing and Public Works
	Project area survey	Planning cell of Ministry of Housing and Public works
	Feasibility study	Ministry of Housing and Public Works
	Approval	Planning commission/ECNEC
Land procurement	Land acquisition	Deputy commissioner
	Compensation	Estate section of KDA
Project implementation	Land development	Works section of KDA
	Road construction	Works section of KDA
	Plot subdivision	Works section of KDA
Plot selling and handover	Invitation for bids	Estate section of KDA
	Plot owner selection	Estate section of KDA
	Handover the plots	Estate section of KDA

Source: KDA, 2003

3.4 Housing Projects undertaken by KDA

3.4.1 Completed Residential Area Development Projects of KDA

Till now KDA has developed 8 residential areas in different locations of Khinna for different income groups. KDA started to take such initiative from the Pakistan period, and till it is providing this type of service for the city dwellers. These residential areas have occupied a substantial amount of land and have produced a substantial quantity of plots of different sizes. The following table shows the detail information on developed Residential Areas by KDA.

Table 3.2: Residential Area Development Projects taken up by KDA

Name of the residential area (R/A)	Area (acre)	Project period	Total Plots
Sonadanga R/A (1 st phase)	30.69	1967—81	205
Sonadanga R/A (2 nd phase)	34.84	1987—94	443
Sonadanga low-cost Housing	4.99	1994—95	105
Nirala R/A	67.31	1967—81	544
Mujgunni R/A	67.71	1966—82	771
Daulatpur Housing Estate	5.53	1985—88	81
Shiromoni Industrial Housing	10.17	1990—94	234
Mircrdanga low-income Housing	42.55	2000	778
Total	263.79	--	3161

Source: KDA, 2003.

The above Table shows that, the Residential Areas are developed by KDA known by the name of such locations where these are situated. KDA has started to develop residential areas since 1967. During this time, it has developed 8 residential areas with 3161 plots occupying total 263.79 acres of land.

However, KDA has developed four types of residential areas like industrial housing, low-cost housing and upper and middle-income housing. The following Table shows the types of housing developed by KDA.

Table 3.3: Different Categories of Housing Projects undertaken by KDA

Categories of Housing	Occupied Area (in acres)		Provided Plots	
	Area	%	No.	%
Upper and Middle-income	206.08	78.12	2044	64.66
Low-cost	4.99	1.89	105	3.32
Industrial	10.17	3.86	234	7.40
Low-income	42.55	16.13	778	24.62
Total	263.79	100	3161	100

Source: KDA, 2003

3.5 Housing Policies of KDA

3.5.1 KDA Master Plan, 1961

In 1961 Master Plan the housing land requirement was considered gross density of population as 70 persons per acre. Railway was very important means of communication hence railway housing was given particular attention. The plan proposed 1600 dwellings for railway men. But the railway department did not execute the idea. The public sector housing agencies were recommended to build housing estate and construct core houses to assist the allottees of plots to complete development of their houses. Kutchra houses were discouraged in the plan. The plan also suggested preparing resettlement plan to rehabilitate the families affected due to implement of master plan development projects.

3.5.2 KDA Master Plan, 2001

Policy 01: The development authorities will play the role of facilitators of housing development apart from their existing role

Policy 02: Providing assistance to the government agencies in the development of housing schemes.

Policy 03: Providing assistance to undertake housing schemes under private sector

Policy 04: Making provision for housing for the low- income people

Policy 05: Providing necessary infrastructure to facilitate housing development

Policy 06: Planning interventions in the spontaneously developed areas

Policy 07 Upgrading slums and squatter settlements

Policy 08. Continuous monitoring of housing market

Policy 09. Facilitate of finance and investment in the housing sector

Policy 10: Promotion of participatory development process in the housing sector

Policy 11: Appropriate technology should be innovated to develop and promote housing particularly for the low-income people

The Master Plan, in the line with the objectives of the national housing policy 1993, aims to promote organized development within the master plan area. Such organized development will be attained in four different ways. These are:

- a) Planned housing development by public sector housing agencies
- b) Planned housing development by private sector real estate housing companies.

- c) Private cooperative housing development.
- d) Community based partnership housing area development with minimum public sector intervention.

In this Master Plan, all four provisions have been accommodated. The implementation will be made in areas allocated for housing, which is about 17002 acres or about 30.80 percent of the master plan area. In addition, over 1041 acres have been allocated as mixed area where housing activities will be accommodated.

3.5.3 Policies for Private Housing of KDA

Presently, there are over 12 private real estates like Arafat housing, *Sugandha* Housing, *Rangdhonu* housing, *Protyasha* Housing companies operating in Khuina having their projects of various sizes around the city. The number of such companies is increasing due to growing demand for land for housing in planned environment. But absence of any control mechanism the service provided in the lay out plans, including the road network, are not always up to standard. This might affect healthy and congenial to put aside at least 40% of the gross planning area for services including road network. To compel the real estate companies to follow minimum standard rules, KDA can bring necessary amendments in the KDA ordinance. However, in the meantime KDA should allow them to operate with ease as they are at least contributing to meet the increasing demand for housing land through organized development.

3.5.4 Private Cooperative Housing Development.

KDA should also encourage private organized housing area development based on cooperative act. This is a kind of self-help housing development involves little or no public expenditure. KDA can extend its assistance to such housing efforts by according land use clearance. Supplying acquired land on long term lease basis can also assist them. But to ensure sound living environment in such housing area conditions may be imposed on the standard provision of services and facilities.

Chapter 4: Case Study

4.1 Introduction

4.2 Existing Situation of Plot Development

4.3 Existing Landuse of Different Residential Area

4.4 Road Network

4.5 Water Supply

4.6 Drainage Facilities

4.7 Sanitation and Sewerage

4.8 Solid Waste Management

4.9 Power and Fuel Supply

4.10 Telecommunication

4.11 Community Facilities

CHAPTER 4: CASE STUDY

4.1 Introduction

KDA has developed eight residential areas in different locations of Khulna City for different income groups (Map 4.1). The eight planned residential areas are

- Sonadanga Residential Area (1st phase)
- Sonadanga Residential Area (2nd phase)
- Nirala Residential Area
- Mujgunni Residential Area
- Daulatpur Residential Area
- Shiromom Industrial Housing
- Sonadanga Low Cost Housing
- Mirerdanga Low-income Housing

KDA has started to take such initiative from Pakistan period, and till now it is providing this type of service to the city dwellers. These residential areas have occupied a substantial amount of land 263.79 acres and have produced a substantial quantity of plots (3161 plots) in different sizes.

4.1.1 Sonadanga Residential Area (1st phase)

The study area is located in the North West part of Khulna City. The study area is in ward no. 17 and it is near to the periphery of the city. The importance of the Ward No. 17 is very high in the context of residential area and its close proximity to the city central heart. The distance of the study area from CBD is 1 to 1.5 km and well connected with the CBD through a planned road network. There are 206 plots of about 1146.26 *katha* and in total an area of 30 acres of land. The average plot size is 5.56 *katha* (445 15 sq. yards). The area of maximum number plots is 400 sq. yards. Most of the plots of this residential area are (about 90%) developed and building under construction is 3% and rest of the plots are vacant (field survey, 2003). Near about 400 households are living in this residential area (KDA, 2003). 98% of the total built structure is permanent, where the higher income people (highest house rent providers) of Khulna are living

4.1.2 Sonadanga Residential Area (2nd phase)

Sonadanga Residential Area (2nd phase) was started in 1987 at Sonadanga of Khulna City under the management of KDA. The project has been started in 1987 and the plot distribution ended in 1994. It was one of the sites and services schemes adopted by KDA. After acquisition, the land was upgraded by providing different services and facilities and then distributed/sold to prospective house buyers.

4.1.3 Nirala Residential Area

Nirala is located in Ward No. 24 in KCC, about two kilometers away from the CBD. The residential area is located in the South-west part of the Khulna City. Nirala is a planned residential area, developed by KDA under site and services scheme program. The average contour level of the area is around 3 to 5 ft. above mean sea level, while that of the main city is 5 to 6 ft. Total area of Nirala Residential area is 67.31 acre.

4.1.4 Mujgunni Residential Area

Mujgunni Residential area was established in 1966 at Mujgunni of Khulna City under the management of Khulna Development Authority (KDA). The project was started in 1966 and the plot distribution ended in 1982. It was one of the sites and services schemes adopted by KDA.

4.1.5 Daulatpur Residential area

Daulatpur Residential area started in 1985 at Daulatpur of Khulna City under the management of KDA. The project is located 12-13 kilometers away from the center of the city. The project started in 1985 and the plot distribution is still in process (the plot distribution started in 1988). It is another sites and services schemes adopted by KDA.

4.1.6 Shiromoni Industrial Housing

Shiromoni Industrial Area started in 1990 at Shiromoni of Khulna City under the management of KDA. The project is located 15-16 kilometers away from the center of the city, which is to the north corner of Khulna City Corporation. The project

started in 1990 and the plot distribution is still in process (the plot distribution started in 1994).

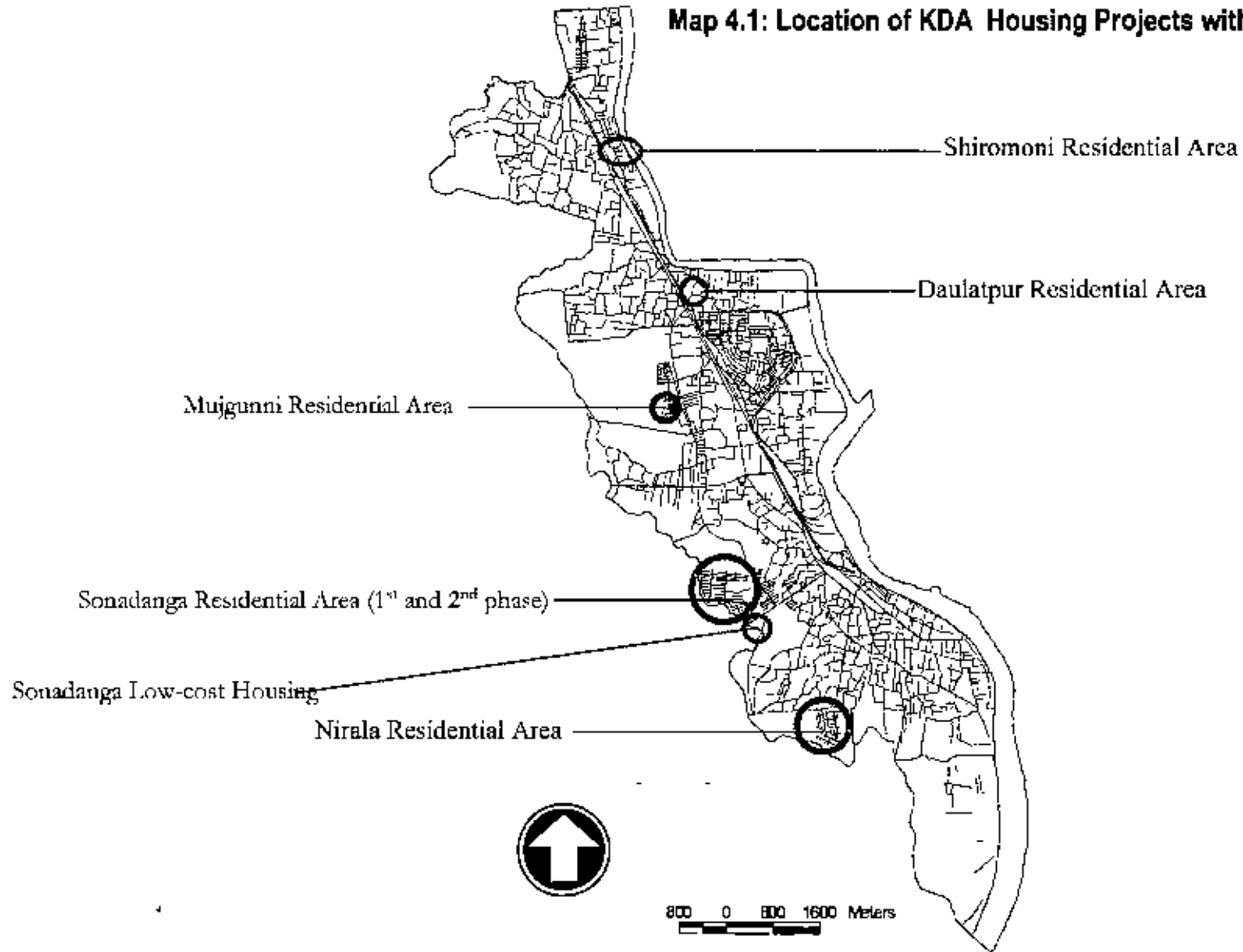
4.1.7 Sonadanga Low Cost Housing

The Sonadanga low cost housing is situated beside the Sonadanga residential area. It is located in the southwestern part of Khulna City. This land was the dumping site of Khulna municipality. Huge amount of garbage of the city was disposed there. A major portion of land filling of Sonadanga low cost housing had been done by this way. Although the area was designed by the KDA for a low cost housing but it has developed as a slum. It is by name now known as Sonadanga slum. According to an estimate of KDA, the total area of Sonadanga slum is 21,000 square meters. Sonadanga main road and Sonadanga cross road have surrounded the northern and western side of the slum area respectively. The other two sides have no access to any roads. This slum is about 3 km. away from CBD area of Khulna City. Now the Khulna City Corporation (KCC) owns the slum. Most of the dwelling units are made of relatively flimsy materials and structures mostly are *kutcha*. A number of dwellers have been living in this slum for 20 to 30 years. They have built their own houses and are living as the owners of the properties. The urban services such as water sealed latrines deep tube wells, street lights, dustbins, surface drains, foot paths, etc. have provided under slum improvement project (SIP). This is also known as the sweepers' colony in Khulna City. At present, it accommodates more than 700 poor families.

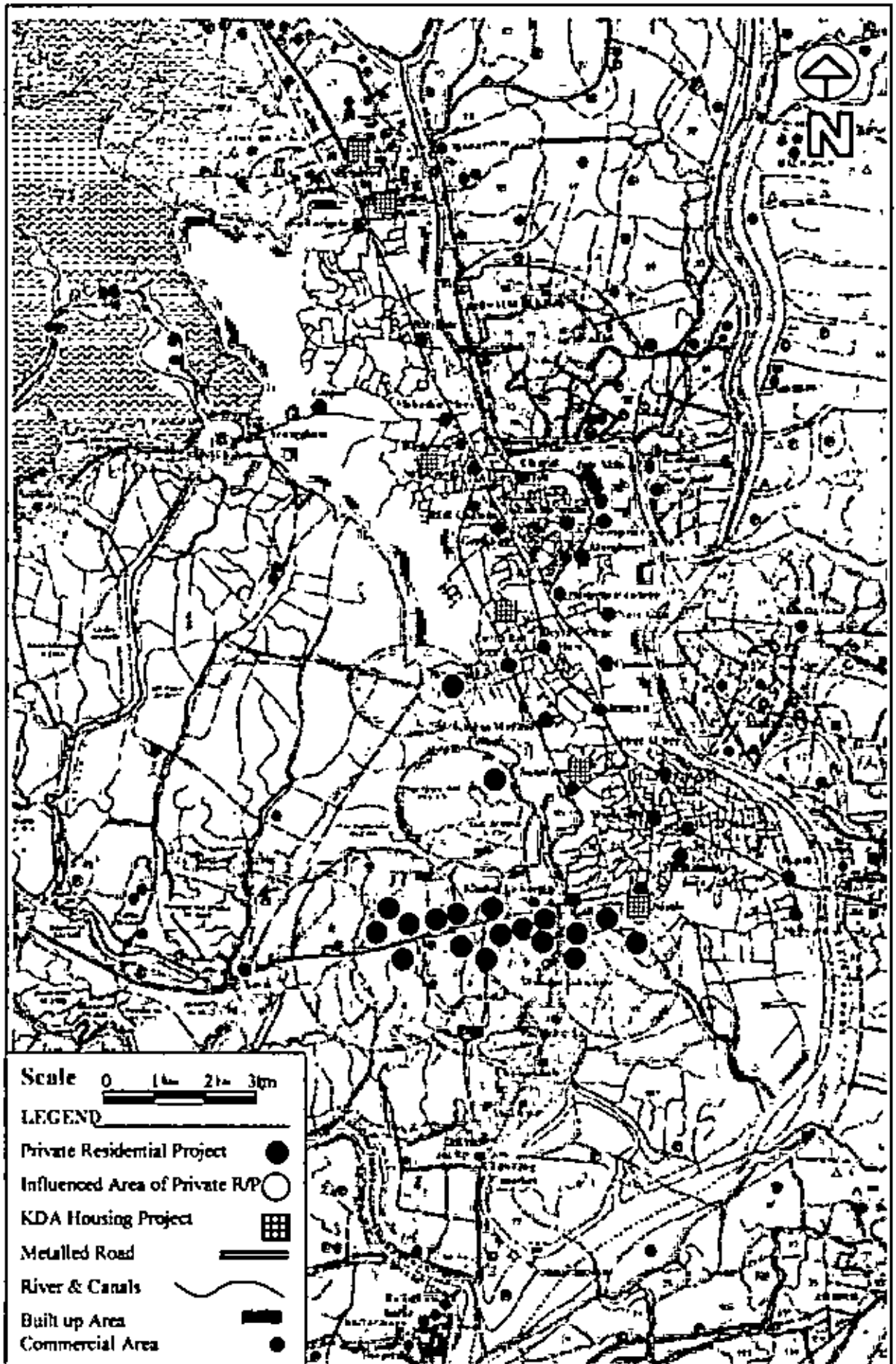
4.1.8 Mirerdanga Residential Area

This residential area is located to the northeast part of Khulna City. Khulna-Jessore road is on the West side of this residential area. But till now, no building is existed in this project. It is clearly vacant. Hence this project is kept out of the study.

Map 4.1: Location of KDA Housing Projects with respect to KCC



Map 4.2: Existing Public Housing and Private Residential Projects



4.2 Existing Situation of Plot Development

The following tables present the existing situation of plot development of study area.

Table 4.1: Existing Condition of Different Housing Projects of KDA

Name of Housing Projects	Existing Condition of Plot Development						Total	
	Developed with Structure		Under Construction		Vacant			
	No.	%	No.	%	No.	%	No.	%
Sonadanga R/A (1 st phase)	185	90.24	6	2.93	14	6.83	205	100
Sonadanga R/A (2 nd phase)	71	16.03	20	4.51	352	79.46	443	100
Sonadanga Low-cost Housing	36	34.28	2	1.90	67	63.82	105	100
Nirala R/A	229	42.09	32	5.88	283	52.03	544	100
Mujgunni R/A	261	33.85	7	0.91	503	65.24	771	100
Daulatpur Housing Estate	12	14.81	--	--	69	85.19	81	100
Shiromoni Industrial Housing	6	2.56	--	--	228	97.44	234	100
Mirerdanga Low-income Housing	--	--	--	--	778	100	778	100
Total	800	25.31	67	2.12	2294	72.57	3161	100

Source: Field Survey, 2003

Table 4.2 Types of Housing Structure in Different Housing Projects of KDA

Name of Housing Projects	Existing Use of Developed Plots						Total	
	Permanent		Semi-permanent		Temporary			
	No.	%	No.	%	No.	%	No.	%
Sonadanga R/A (1 st phase)	180	97.30	5	2.70	--	--	185	100
Sonadanga R/A (2 nd phase)	68	95.77	3	4.23	--	--	71	100
Sonadanga Low-cost Housing	5	13.89	12	33.33	19	52.78	36	100
Nirala R/A	164	71.62	31	13.54	34	14.84	229	100
Mujgunni R/A	210	80.46	42	16.09	9	3.45	261	100
Daulatpur Housing Estate	3	25.00	4	33.33	5	41.67	12	100
Shiromoni Industrial Housing	4	66.67	2	33.33	--	--	6	100
Mirerdanga Low-income Housing	--	--	--	--	--	--	--	--
Total	634	79.25	99	12.38	67	8.37	800	100

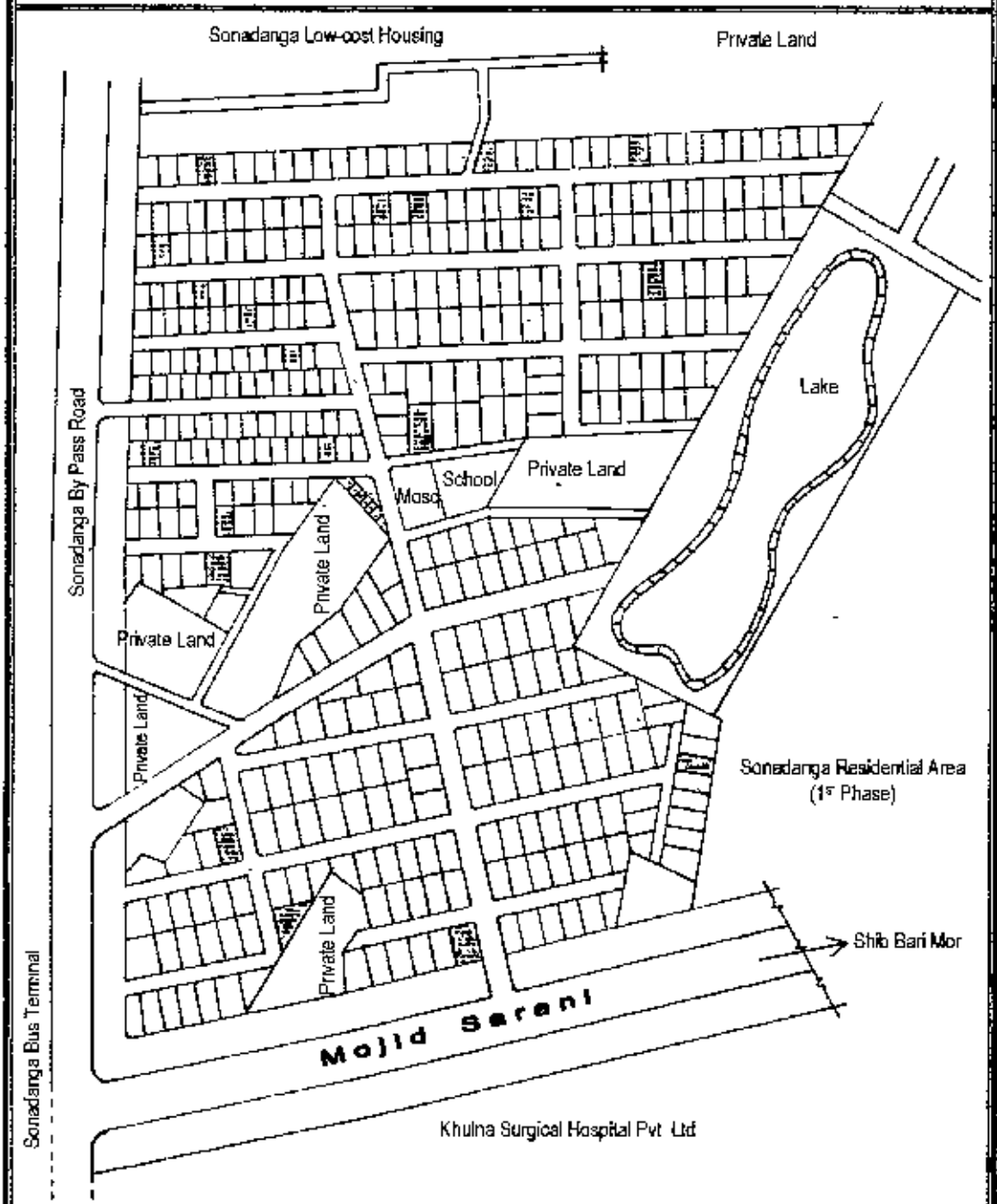
Source: Field Survey, 2003

Table 4.3: Existing Use of Developed Plots in Different Housing Projects of KDA

Name of Housing Projects	Existing Use of Developed Plots						Total	
	Residential		Commercial		Mixed			
	No.	%	No.	%	No.	%	No.	%
Sonadanga R/A (1 st phase)	134	72.43	8	4.32	43	23.25	185	100
Sonadanga R/A (2 nd phase)	60	84.51	4	5.63	7	9.86	71	100
Sonadanga Low-cost Housing	34	94.44	--	--	2	5.56	36	100
Nirala R/A	197	86.03	6	2.62	26	11.35	229	100
Mujgunni R/A	225	86.21	5	1.92	31	11.87	261	100
Daulatpur Housing Estate	10	83.33	--	--	2	16.67	12	100
Shiromoni Industrial Housing	6	100	--	--	--	--	6	100
Mirerdanga Low-income Housing	--	--	--	--	--	--	--	--
Total	666	83.25	23	2.88			800	100

Source: Field Survey, 2003

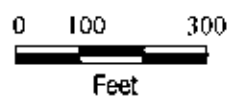
Map 4.4: Layout Plan of Sonadanga Residential Area (2nd phase)



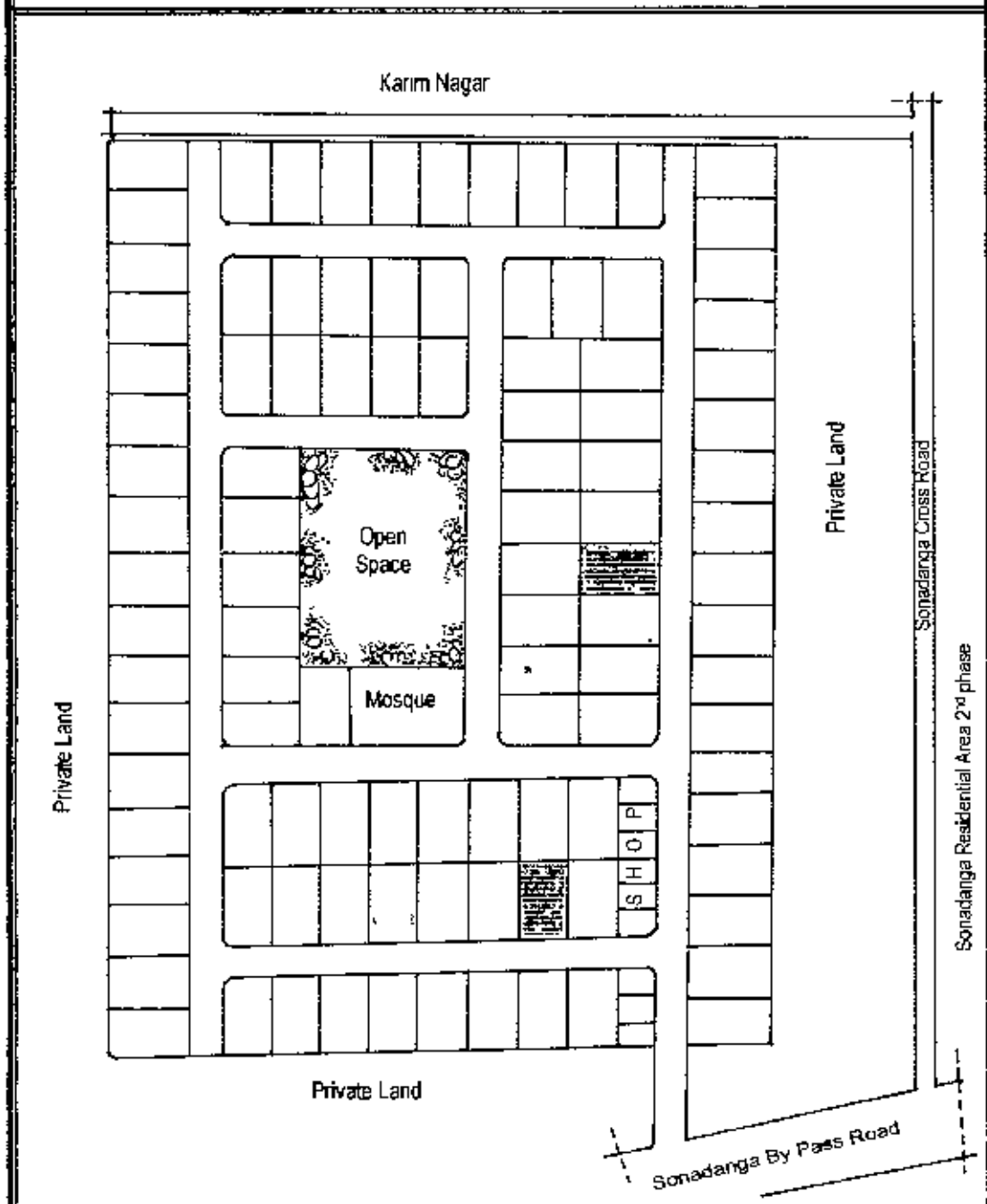
Legend

- Vacant Plot.....
- Under Construction.....
- Permanent Structure.....

Scale



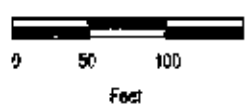
Map 4.5: Layout Plan of Sonadanga Low-cost Housing



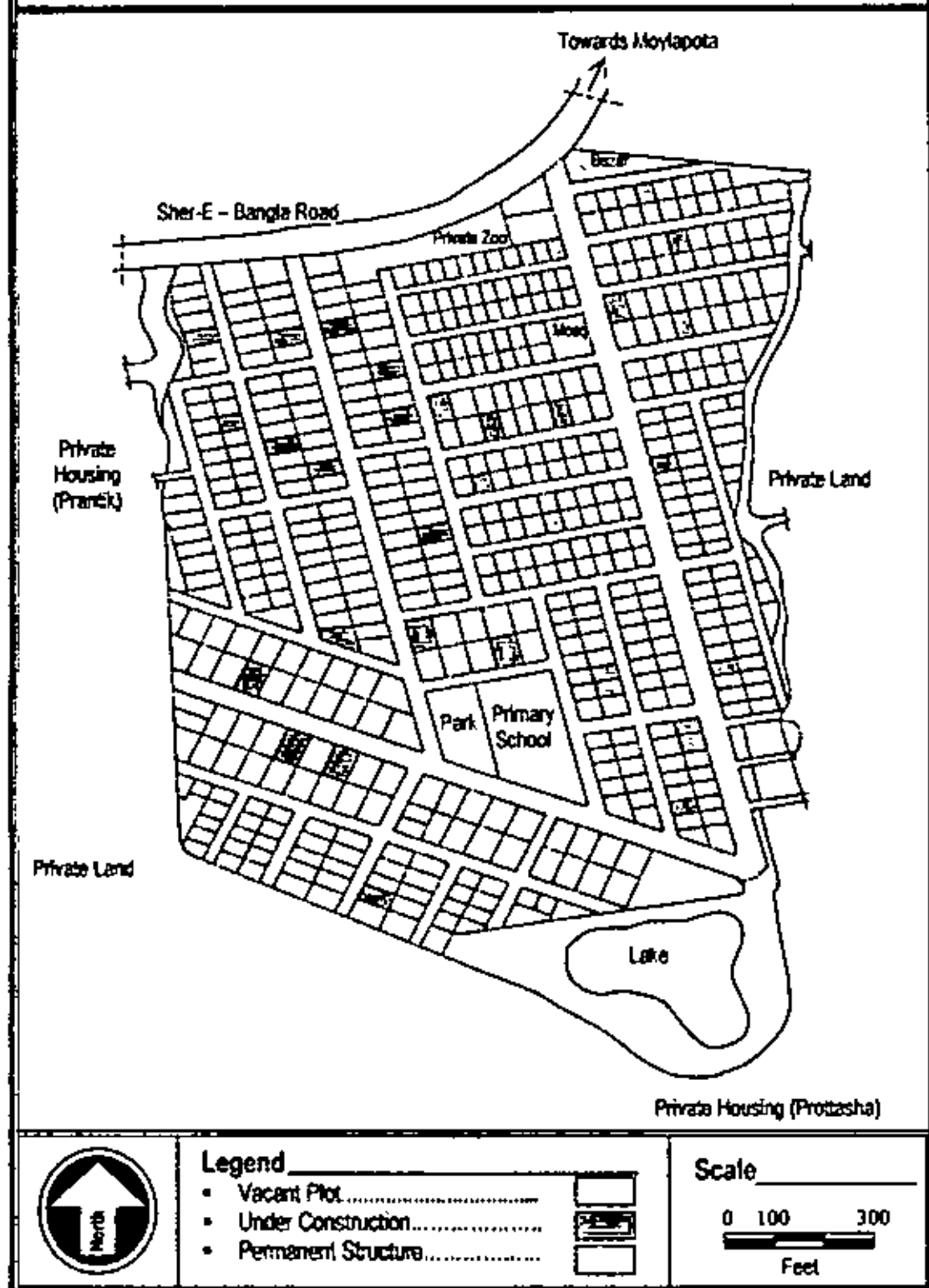
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- Vacant Plot
- Under Construction.....
- Permanent Structure.....

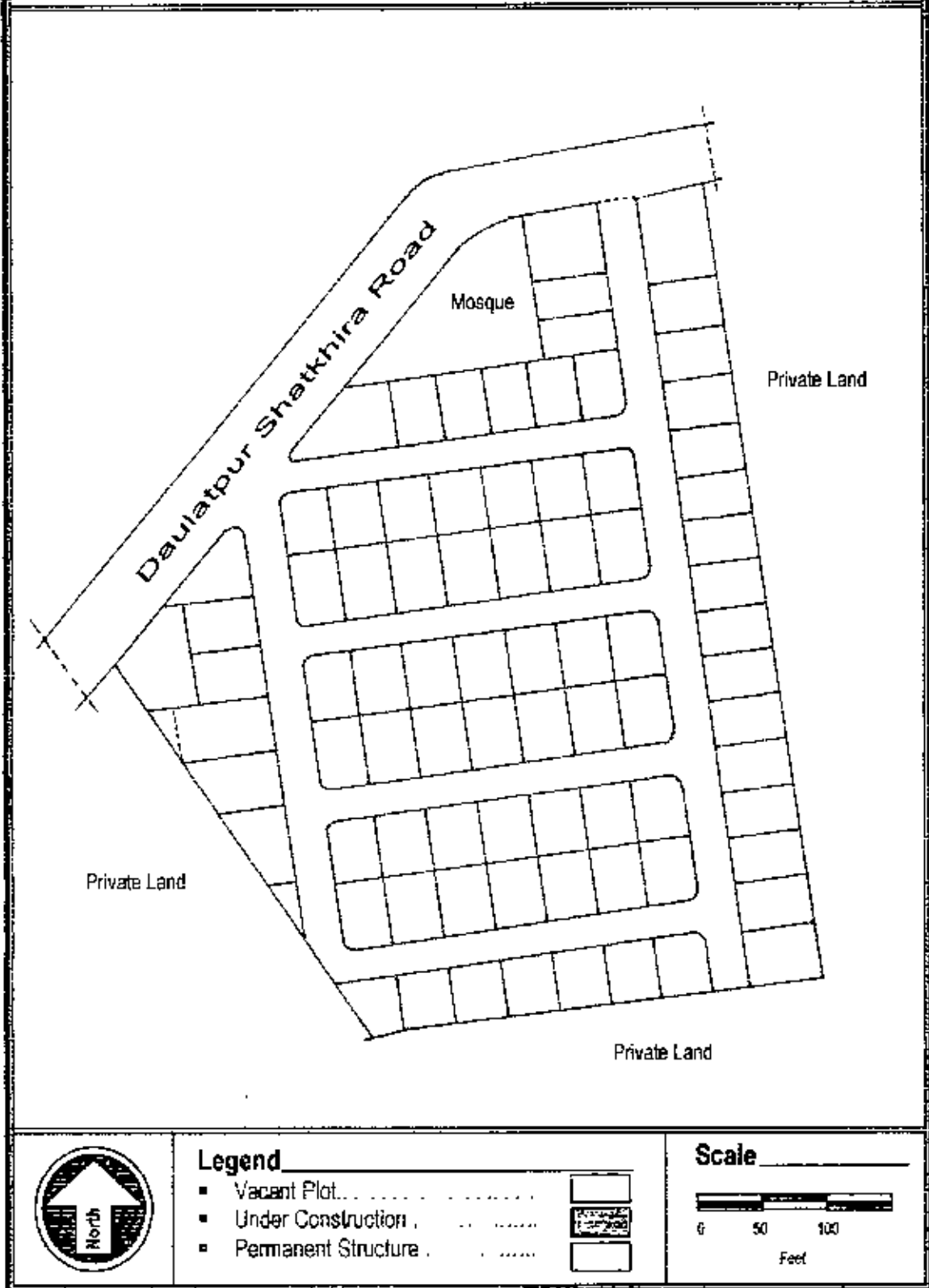
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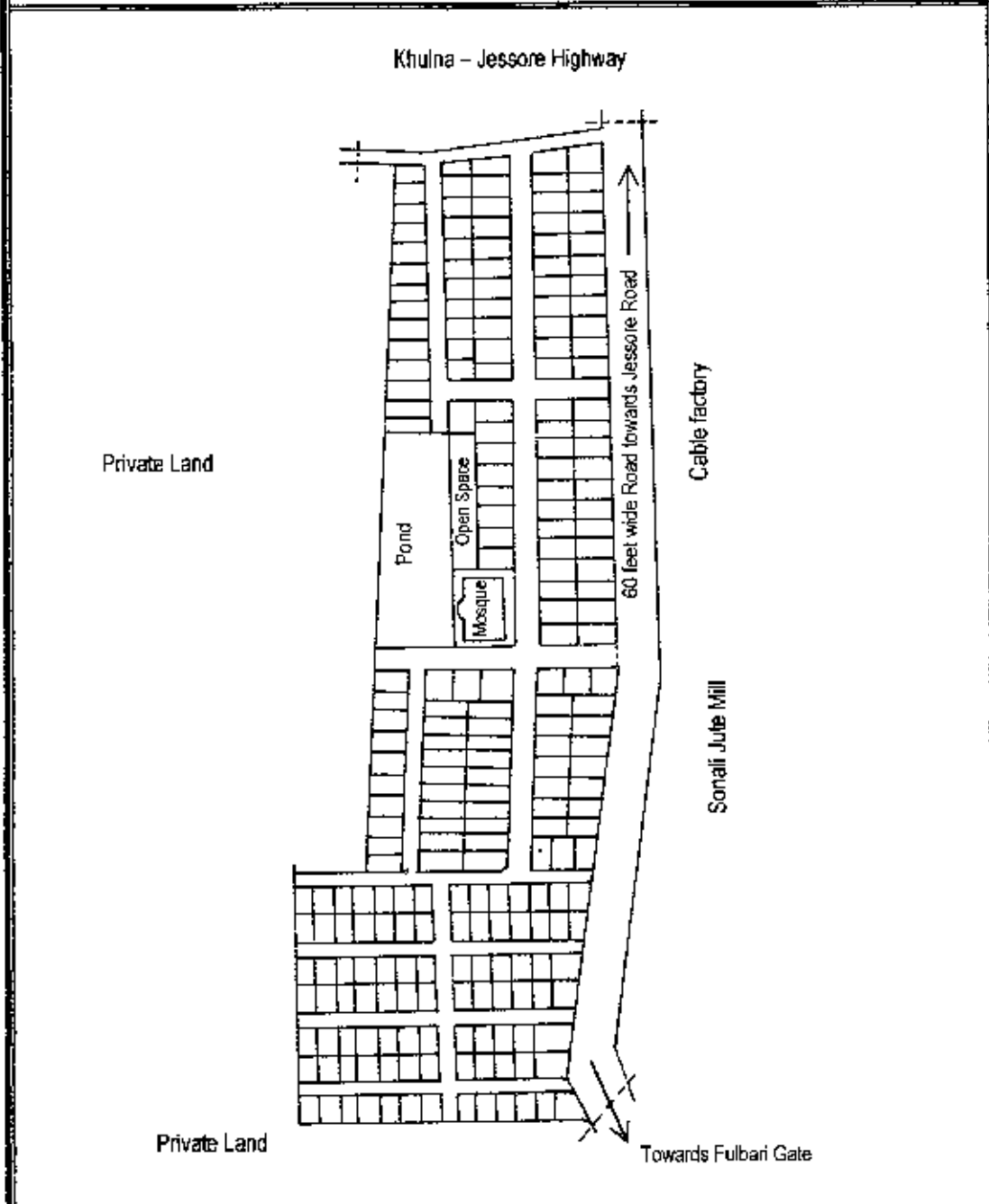
Map 4.6: Layout Plan of Nirala Residential Area



Map 4.7: Layout Plan of Daulatpur Residential Area



Map 4.8: Layout Plan of Shiromoni Industrial Housing



Legend

- Vacant Plot
- Under Construction
- Permanent Structure

Scale



Table 4.4: Height of the Permanent Buildings in Different Housing Projects of KDA

Name of Housing Projects	Height of the Building according to Storey												Total No.
	1 storey		2 storey		3 storey		4 storey		5 storey		6 storey		
	No	%	No	%	No	%	No	%	No	%	No	%	
Sonadanga R/A (1 st phase)	12	6.67	67	37.22	56	31.11	29	16.11	10	5.56	6	3.33	180
Sonadanga R/A (2 nd phase)	9	13.24	11	16.18	26	38.24	21	30.88	1	1.46	--	--	68
Sonadanga Low-cost Housing	4	80.00	1	20.00	--	--	--	--	--	--	--	--	5
Nirala R/A	32	19.51	52	31.71	32	19.51	41	25.00	7	4.27	--	--	164
Mujgunni R/A	41	19.52	73	34.76	55	26.19	38	18.10	3	1.43	--	--	210
Daulatpur Housing Estate	2	66.67	1	33.33	--	--	--	--	--	--	--	--	3
Shiromoni Industrial Housing	3	75.00	1	25.00	--	--	--	--	--	--	--	--	4
Total	103	16.25	206	32.49	169	26.66	129	20.35	21	3.31	6	0.94	634

Source: Field Survey, 2003

4.3 Existing Land Use of different Residential Areas

The following table delineates Land use of different residential areas of KDA.

Table 4.5: Landuse Pattern of Different Housing Projects of KDA

Name of Housing Projects	Landuse Pattern (area in acres)								Total Area (acres)
	Residential Plots		Roads		Community Facilities		Open Spaces		
	Area	%	Area	%	Area	%	Area	%	
Sonadanga R/A (1 st phase)	22.42	73.05	6.14	20.00	1.26	4.12	0.87	2.83	30.69
Sonadanga R/A (2 nd phase)	25.84	74.16	8.36	23.99	0.42	1.21	0.22	0.64	34.84
Sonadanga Low-cost Housing	3.46	69.34	1.08	21.64	0.24	4.80	0.21	4.21	4.99
Nirala R/A	42.71	63.46	13.38	19.89	7.42	11.02	3.79	5.63	67.31
Mujgunni R/A	43.23	63.85	13.83	20.43	3.60	5.32	7.05	10.40	67.71
Daulatpur Housing Estate	4.07	73.59	1.11	20.07	0.11	1.99	0.24	4.35	5.53
Shiromoni Industrial Housing	6.94	68.21	2.13	20.92	0.20	1.97	0.90	8.90	10.17
Mirerdanga Low-income Housing	28.62	67.26	9.33	21.93	1.39	3.28	3.21	7.53	42.55
Total	177.29	67.21	55.36	20.99	14.64	5.55	16.49	6.25	263.79

Source: KDA, 2003

4.4 Road Network

There are different kinds of roads in the Sonadanga R/A. The road *Mazid Sarani*, which is connected by the Sonadanga Bus Terminal and Lower Jessore Road has gone through the mid point of the Sonadanga R/A (1st phase). Field survey indicates that, about 65% of the plots are directly connected with 30 feet wide road. Other interior roads are also about 20 feet and 30 feet wide.

4.5 Water Supply

The main sources of the water supply of the households are

1. Piped water Supply installed in the buildings,
2. Piped water collected from outside.
3. Private hand pump (tube-well) of the house owner.
4. Public hand pump (tube-well) located beside the street.

Table 4.6: Sources of Water Supply and its use in Sonadanga R/A (1st phase)

Types of uses	Tap (%)	Tube-well (%)	Total (%)
Washing	35	25	60
Cooking	40	20	60
Drinking	50	10	60
Toilet purpose	55	05	60

Source: Field survey, 2001

The above Table shows that in the study area majority of the households use piped water for drinking purpose, which is about 55%. Only 40% of the households have access to the supply water by KCC for cooking purpose. For washing purpose 25% people use tube well.

Table 4.7: Pattern of Water Supply and its use in Sonadanga R/A 2nd Phase

Types of uses	Tap	Tube-well	Total
Washing	3	1	4
Cooking	2	2	4
Drinking	3	1	4
Toilet purpose	3	1	4

Source: field survey, 2003

In the study area 4 household are surveyed randomly on the basis of 15% sampling on the 24 constructed plots. Survey result indicates in the study area majority of the households use tap water for drinking purpose which is about 75%. Only 50% of the households have access to the supply water by KCC for cooking purpose. For washing purpose 25% people use tube-well. In this area, there is no use of water from pond.

The planned residential area of Nirala is populated by 2555 under 528 households; among them 513 households having 2493 persons. 97.57% of the total population of

the study area, have drinking water facility within their house hold. 7 households having 31 persons, 1.21% of the total population of the study area, have it within 500 feet from their households. 6 households having 22 persons 0.86% of the total population of the study area, have it within 1000 feet from their house hold. (Field survey' 2003)

4.6 Drainage Facilities

Due to rapid urbanization and increasing human settlement natural drains were occupied by human habitation. Encroachment on the drains, inadequate drainage sections and drainage outlets, lack of proper maintenance of the existing drainage system and disposal of solid waste into the drains contribute to blocking of drainage and water logging problems. Worst drainage system is one of the main reasons for polluting environments in all the housing projects of KDA. The existing drains are usually not cleaned. In the study zone about 45% of the respondents informed that their area do not have proper drainage facilities and people are not proper aware of good drainage to keep the living environment better. The drainage problem appears serious during heavy rainfall, storm and floods.

4.7 Sanitation and Sewerage

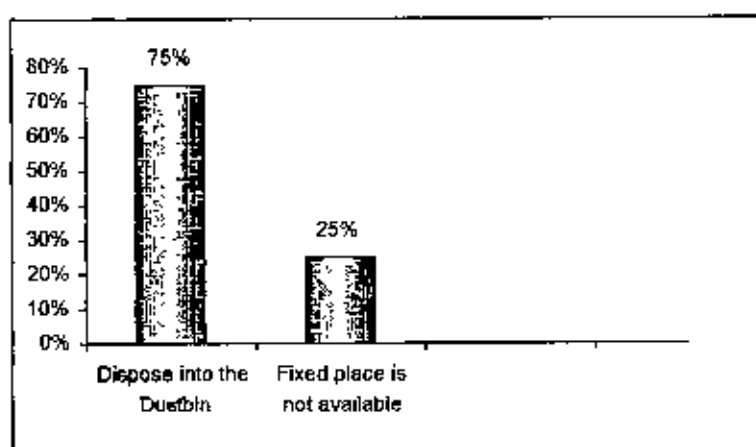
Khulna City as a whole has no sewerage network. A low cost sanitation system is being followed all over the KCC area. Sanitation facilities in the permanent building are better in all the study areas. But particularly for the temporary settlement causes the sanitation problem. A sanitary latrine has either a septic tank or a single twin pit. Unsanitary latrines create health and environmental hazards in the study areas. The survey results indicate that in the study area 95% of the households has access to sanitary or permanent water sealed latrines. Low-income people use low-cost sanitary latrines with covered pits and their percentages is 5%.

4.8 Solid Waste Management

Hazardous waste is often injurious to human health and cause death of human and animal lives. Solid waste is often called the third important pollutant after air and water. Proper management system of solid waste collection and treatment can keep the living environment sound for good health

Survey results indicates that in the study areas, about 75% of the households dispose off solid waste in the dustbins provided by KCC and 25% of the households have no fixed place for solid waste disposal. A large portion of the households disposed off solid waste on to the road or elsewhere around their rented houses or in an open space near to the dwellings. The collection of waste from street is irregular, which pollutes the environment. The existing waste collection rate is not satisfactory and this was stated by 58% of the respondents (Field survey, 2003).

Figure 4.1: Solid Waste Management in the Study Area



Source: Field survey, 2003

At present the NGOs *Prism-Bangladesh* and *Prodipon* are working for solid waste management with their partner NGOs in Sonadanga (1st & 2nd phase) and Nirala residential areas.

4.9 Power and Fuel Supply

Electricity and gas are the most important utility and service and facilities for rapid growth and development of an area and also for increasing the productivity in all aspects. The survey results indicate that the power supply network of the Power Development Board (PDB) covers the study areas.

About 90% of the households have access to electricity. The rest of the households use kerosene for lighting purpose. Since firewood is available and cheap in Khutna and because of frequent load shedding, kerosene and firewood are the predominant cooking fuel materials in the study areas. Very few households use gas cylinder for

cooking fuel. As a part of current load shedding program of PDB, the study area remains out of power supply for about 2 to 3 hours daily

4.10 Telecommunication

Now it is the time of technology application, which is directly interrelated with the telecommunication. The demand of telecommunication facilities is increasing day by day. In the study areas, a small number of households enjoy telecommunication facilities. The survey indicates that only 75% households of the study areas have the land phone facilities.

4.11 Community Facilities

Sonadanga residential areas are concentrated at the center of the city, have access to all communal facilities, such as markets, schools, playgrounds, health services, bank, post offices, judicial facilities, co-operative societies, etc. In the Sonadanga R/As, most of the services and facilities are available within 1.5 kilometer. In Khuina food and other retail markets are located almost everywhere. About 90% households of Sonadanga R/As have access to the New Market, which is located within half a kilometer distance. About 90% of the households visit shopping center located in the New Market and the Dakbangla within 2 kilometer, while the rest go farther away.

Out of other Study areas, Nirala also enjoy the better community facilities, though it is located out side the city center. The rest of the projects are far away from the city center and hence they cannot enjoy the community facilities properly.

Chapter 5:

Problems and Constraints of Housing Development

5.1 Specific Problems and Constraints of Plot Development

5.2 Generalized Problems and Constraints of Plot Development

5.3 Building Materials and Land value

5.4 Utility Service and Facilities

5.5 Distance of Different Services and Facilities

5.6 Social Aspects

5.7 Other Aspects

CHAPTER 5: PROBLEMS AND CONSTRAINTS OF HOUSING DEVELOPMENT

5.1 Specific Problems and Constraints of Plot Development

5.1.1 Lower House Rent Structure in Khulna

House rent is proportionate to the cost of house construction. When plot owners consider the existing lower house rent, they become demotivated to construct houses. Moreover, it is significant that house rent in Khulna is no more lucrative than that of the houses in Dhaka and Chittagong. A detail scenario on house rent of different aspects is narrated below.

Table 5.1: Average Rent with respect to floor spaces in Khulna City

Floor space in sq ft	Average rent in (Tk.) / month		Maximum rent in (Tk.) / month		Minimum rent in (Tk.) / month	
	Permanent Structure	Semi-permanent Structure	Permanent Structure	Semi-permanent Structure	Permanent Structure	Semi-permanent Structure
600-800	3500	1400	3500	1500	3500	1300
800-1000	3125	2000	3500	2000	2500	2000
1000-1200	4557	00	6000	00	3500	00
1200-1400	4752	00	6300	00	3500	00
1400-1600	7075	00	8500	00	6000	00
1600- 1800	7728	00	9500	00	6000	00
Above 1800	10740	00	14000	00	9700	00

Source: Field survey, 2003

Table 5.2: Trend of Rent of Different Types of Houses in Khulna

Types of Houses	Floor space in sq.ft.	Average rent in different year		
		1993	1998	2003
Permanent	600-800	2500	3000	3500
	800-1000	2800	3000	3125
	1000-1200	3500	4200	4557
	1200-1400	3500	4500	4752
	1400-1600	4000	6000	7075
	1600-1800	4500	6500	7728
	Above 2000	5500	7000	10740
Semi-permanent	600-800	1000	1200	1400
	800-1000	1200	1500	2000

Source: Field survey, 2003

Income and Expenditure on house rent of the tenants

The occupation and income level of tenants reflect that most of the tenants are from middle income group and a significant number of tenant heads (about 28%) has average earnings ranging from Taka 5000 to Taka 10000 from service and business. About 66% households belongs to higher income group. Their income or earning is above Taka 10000 per month. Only 5% tenants belongs to low income group and their income level is below Taka 5000. They are engaged in service, business and teaching profession. From the above discussion it is seen that residents are mainly of higher income group. In Sonadanga residential area, residents spends a large portion of income for house rent because it is a renowned and oldest planned residential area in Khulna City and quality of living environment is very high. The following Table shows the house rent of various income group. Most of tenants spend 20%- 30% of total earnings on house rent purpose. All the other income groups also spend a large share of their income for house rent. House rents are relatively higher in Sonadanga and Nirala R/A than in other residential areas. The cause behind it is that Khulna University and the heart of the city are located near to these areas.

5.1.2 Association of Construction Workers

None cooperation of labor association has been found as a major constraint for plot development. Construction workers are very much tricky in making alliance for their own interest. Then it becomes harder to have tenders according to the will of the owners. The workers very often possess particular groups for specific works. So, it becomes confusion for the plot owners, part to decide the issue of construction.

5.1.3 The impact of Laying off Industries in Khulna Region

Due to Continuous laying off industries, possess a negative impact on the growth of construction in the estimated plots. Since the government policy and privatization have discouraged industry, it reduces the number of plot owners who are able to construct a house.

5.1.4 Over Taxation

Recent increase of holding tax may discourage the completion of construction work in the estimated plots.

5.1.5 Land Speculation by the well of Merchants

Though minor but important fact, that some plot owners who only buy plots with a view to speculating land for maintaining their social status. This hampers the plot development.

5.1.6 Lack of Housing Finance Facilities

Housing finance is an important factor in house construction. Some times, some plot owners are unable to construct their houses due to lack of adequate fund. The existing sources for housing finance includes HBFC, personal saving funds of potential urban house builders and buyers, governments loan, government budgetary allocation, construction by internal donor agencies, commercial banks, specialized financial institutions and NGOs. The share of housing in public sector development programs has been comparatively less in Bangladesh. Banking, insurance, and investment agencies shied away from this field. Only about 5% of the housing units constructed in Bangladesh are financed from the formal sector (Hasan, 2002).

Personal Savings:

Overwhelming majority of the people in Bangladesh finances their housing from their own fund. Government finance in the housing sector goes mainly to public housing and infrastructure development. However, city development authority such as KDA, RAJUK RDA, CDA, finances indirectly the acquisition of residential land provision and services. Credit facilities are extended by HBFC for the construction of dwellings for middle and upper income groups. Hence the personal finance includes the personal savings, informal credits, provident fund, jewelry, landed property, etc.

Socio-economic survey shows that of the 60% of the households' owning dwelling units, 96% financed the construction of houses from their own sources. Only 1.4% of households have access to institutional finance such as from HBFC, bank or NGOs

etc. about two percent households borrowed from relatives and friends while a very insignificant proportion borrowed from their colleagues (Interim Report, Khulna Master Plan Project, KDA, 1999). Present condition of the housing finance in Khulna City is given in the following.

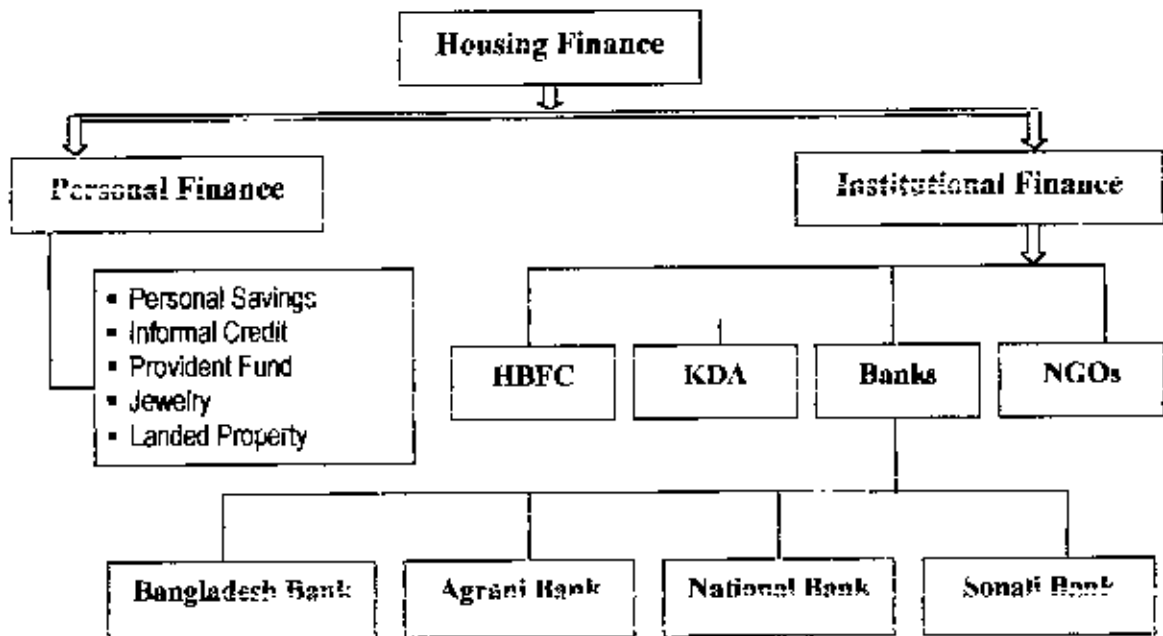


Figure5.1: Sources of Housing Finance for Construction

Institutional Finance

HBFC is the major and specialized institution that advances credit to the general public for housing in Khulna City. About 2500 applications have been entertained by HBFC till 1985. It then stopped disbursement due to large scale increase in the number of defaulters. Due to extremely low rate of rent the borrowers are unable to repay installments. However, HBFC is contemplating to resume sanctioning loan as soon as 45% of its disbursed credit is recovered. Besides HBFC, government banks are mainly for urban areas housing and as given to its employees. Huge amount of loan amounting to taka 820 crore were given by HBFC and other government banks like Sonali Bank, Rupali Bank, and Agrani Bank under the supervision of Bangladesh bank since 1981 to 1986 for urban housing (Tahmeena, 1993). Other indirect participants in housing finance are KDA, HSD, and PWD.

In Khulna City Bangladesh Bank, Agrani Bank, Sonali Bank and a few private banks provide loans for housing. Bangladesh Bank sanctions loan for both the phases to buy the land for housing and for construction of building against the proper application of its employees. The ceiling of loan disburse is between 2 lakh to 20 lakh at a 7% interest rate. The total amount of loan for housing provided by Bangladesh Bank is about 55 crore 42 lakh for 490 number of houses in Khulna city.

The Agrani Bank sanctions loan of house building for both general people and their staffs. The total 3 crore 35 lakh amount of loans are disbursed for housing purpose among the 125 buildings at the interest rate of 17%.

Sonali Bank is also provides loan of house building. But it is very difficult to identify the actual figure of amount of loan for housing purpose due to mismanagement of maintaining the defaulter sheet in head office of Sonali Bank in Khulna. The following table shows the comparison of different public sector loan disbursement organizations

Table 5.3: Comparison in different public loans disbursed in Khulna city since 2000.

Name of the public organization	Total amount of loan(in taka)	Interest rate	Total number of houses
HBFC	115 crore	10%	1000
Bangladesh bank	55 crore 42 lakh	7%	490
Agrani bank	3 crore 35 lakh	17%	125

Source: Head office, HBFC, Bangladesh bank, Agrani bank, Khulna.

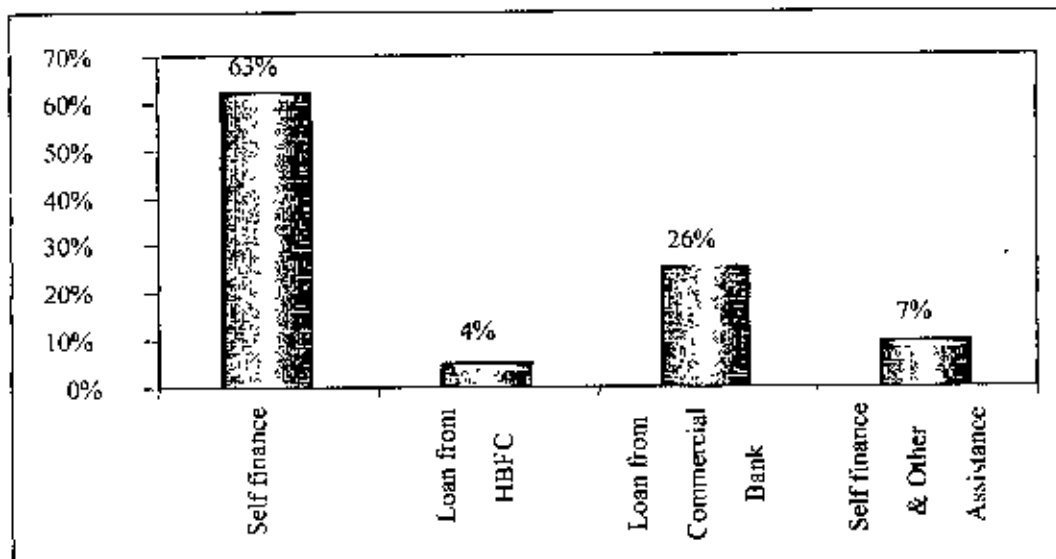
The housing finance sources of different residential areas is illustrated by the following tables and figures:

Table 5.4. Sources of Finance for Construction in Sonadanga R/A (1st phase)

Sources	No. of constructed houses	Percentage
Self finance	48	80
HBFC	3	5
Bangladesh Bank	2	3.33
Sonali Bank	3	5
Agrani Bank	1	1.67
Private Bank	3	5
Total	60	100

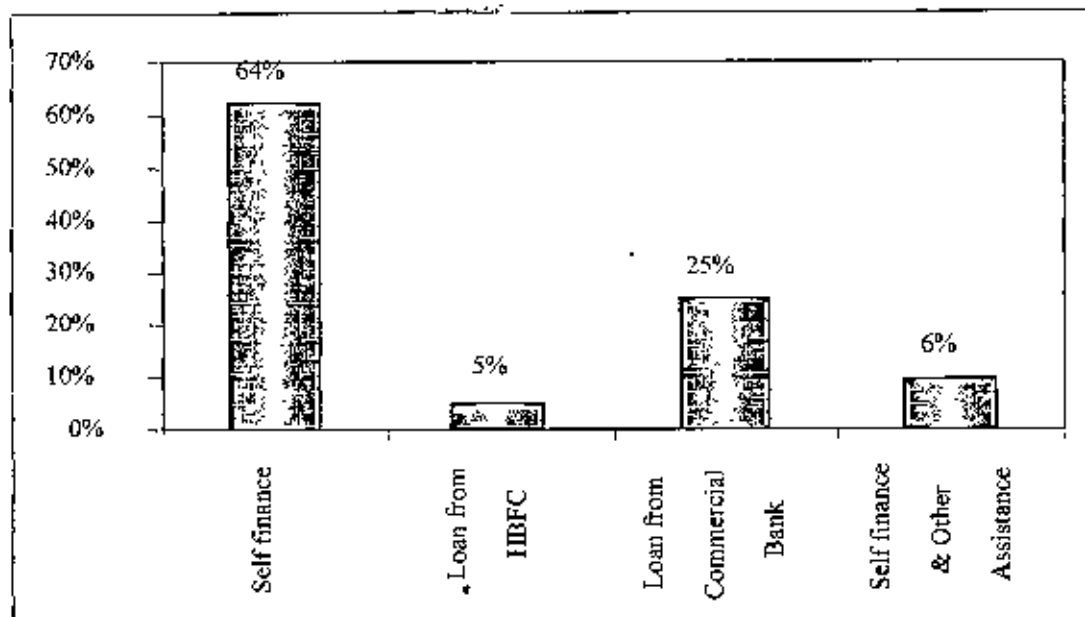
Source: Field survey, 2003

Figure 5.2: Sources of finance for house construction in Sonadanga R/A (2nd phase)



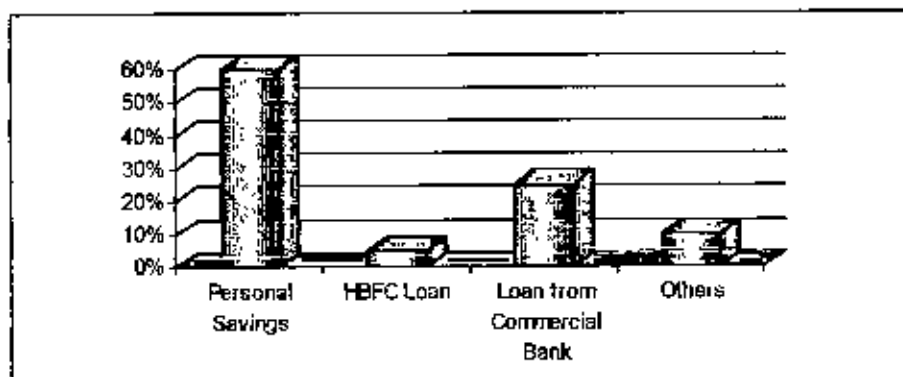
Source: Field survey, 2003

Figure 5.3 Sources of finance for house construction in Nirala Residential Area



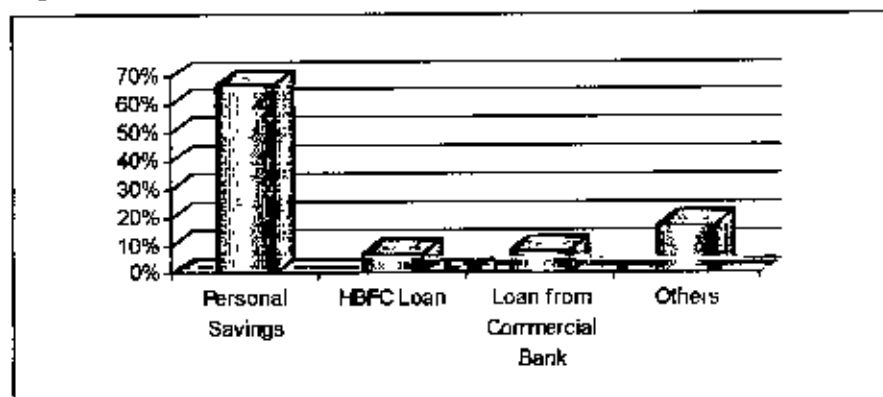
Source: Field survey, 2003

Figure 5.4 Sources of finance for house construction in Mujgunm R/A



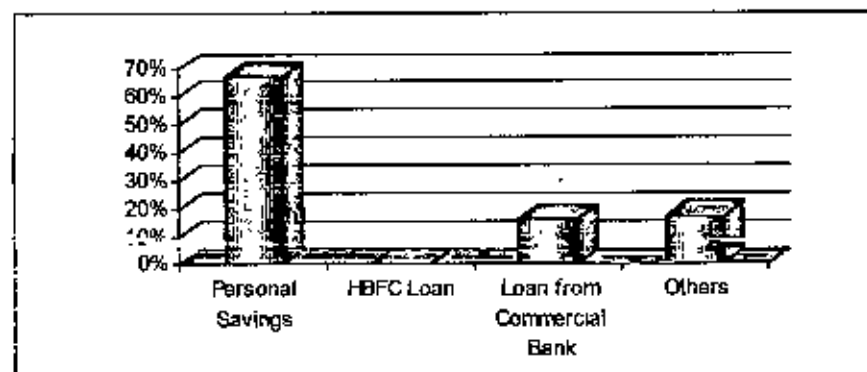
Source: Field Survey, 2003

Figure 5.5: Sources of finance for house construction in Daulatpur R/A



Source: Field Survey, 2003

Figure 5.6: Sources of finance for house construction in Shiromoni R/A



Source: Field Survey, 2003



5.2 Generalized Problems and Constraints of plot Development

5.2.1 Institutional and Legislative Problems

Institutional and legislative measures are directly related with the housing development process of KDA. But this portion of housing development process is more complicated. The KDA housing development process coincides with several limitations. These are discussed in the following:

❖ Fund and Period of Implementation

This process takes long period of time. In the case of government funding, it generally takes more time than which is not funded by the rout. So, the estimated project cost in project proposal differs with the implementation cost, because of devaluation of money in this longer period of time. For example, according to the Table 3.2, the first project started in 1966 and finished in 1982, which means it has taken around 27 years for completing its first project. However, in the case of other projects, this time duration has varied significantly. Among 8 projects, 4 projects have taken less than 5 years and rest of the 4 projects has taken more than 5 years

❖ Bureaucratic Tangles

The appraisal and approval phase of the KDA housing development process needs to go through the bureaucratic procedure. However, in Bangladesh, it is a lengthy and time-consuming procedure. If government funds the project, then generally it takes more time than other projects. However, the approval of foreign funded project takes less time. This is a drawback of lengthy bureaucratic procedure and makes injustice to fulfill the demand for good housing.

❖ Service Provision

Residential estate development takes on prime agricultural land. But, this is a threat to our agro-based economy and food security

Since, the KDA housing development process like Sites and Services Schemes develops residential areas. So, the utility services like electricity, water supply, road, drainage, sewerage etc. will be provided within the project. In reality KDA do not provides all such services except road.

The KDA housing development process can not ensure housing development on the plots or construction of dwelling units on the plots. Because, this is depends on the plot owners. If the plot owners construct dwelling unit on their plots, only then the housing situation will be improved. However, construction of dwelling units is also related to the economic ability of the plot owners.

5.5 Building Materials and Land Value

Land value and building materials are prime factors in plot development. Landowner always thinks in terms of the profits he desires to make. If cost of buying plot and building construction is high, then house rent will be high. In areas where rent is low, plot owners are not interested to develop their plots. In Sonadanga residential area, buildings were constructed in most of the plots. This area possesses one of the highest land values. Also, due to high house rent and choice location, most of the plots were developed. The following Table shows the trend of land value of the study area.

Table 5.5: Initial and Present Land Price of different Housing Projects of KDA

Housing Projects	Year of Sale by KDA	Land Price (Tk.)		
		* Initial Price	Present Price	
			** Range	Average
Sonadanga R/A 1 st phase	1981	25000	250000 - 350000	300000
Sonadanga R/A 2 nd phase	1994	65000	150000-250000	200000
Sonadanga Low-cost Housing	1995	65000	150000-200000	175000
Nirala R/A	1978	12500	200000-250000	225000
Mujgunni R/A	1980	12500	150000-200000	175000
Daulatpur Housing Estate	1984	25000	75000-100000	87500
Shiromoni Industrial Housing	1994	60000	80000-100000	90000
Mirerdanga Low-income Housing	2000	80000	80000-100000	90000

Source: Gaus, 2002

* **Initial Price** is that price, which was determined and collected by KDA

** **Range** indicates that the present price is variable because of selling by plot owners and other agents and also according to plot size and location under the project.

Table 5.6: Cost of Construction Materials over the year

Materials and labor	Unit	1993	1998	2003	% in increase
Brick	Per 1000	1800	2200	2500	10.464
Cement	Per bag	180	230	250	22.00
Sand	Per 100 cft	600	800	900	17.68
Paint	Per gallon	16200	17000	17240	2.05
Iron	Per ton	780	870	900	0.24
Timber	Per cft	1300	1600	1700	9.23
Mason	Per man	120	150	170	10.35
Helper	Per man	55	85	100	27.25
Carpenter	Per man	115	140	150	10.79
Average % in increase					12.37

Source: Field survey, 2003

At present the excessive price of building materials is another major problem for the house construction. Since most of the plots are owned by middle income or higher middle income people, so at a time the total construction is quite impossible for the plot owners. On the other hand to get the housing loan from different sources is very much complicated. And if the rent is not expected so the plot owners are being discouraged for further construction. Some times some of the construction is being delayed for the shortage of fund. So this other problem for the further plot development.

5.6 Utility Service and Facilities

Utility services and facilities are an important factor for housing development. Inadequate services and facilities hamper the living environment of the dwellers. As a result, people become less interested to live, which creates low house rent.

Lack of proper drainage facilities

Due to rapid urbanization and increasing human settlements, most of the natural drainage is occupied by human habitation and for that urban area faced different types of problem like water stagnation, unexpected flood etc.

In the study areas, the drains are not only insufficient, but also improperly laid with faulty gradients, resulting in getting checked with filthy water and refuse. Encroachment on the drainage path, inadequate drain sections, absence of outlets,

indefinite drainage outlets, lack of proper maintenance of the existing drainage system and disposal of solid wastes into drains or drainage paths contribute to the backlog of drainage and water logging problems. The seasonal tidal effect and flat topography of land also cause drainage and water logging problems in the study area. About 68.25% percent of the households have no drainage facilities in and around their premises and 31.75% of the households have some sort of drainage facilities. (Field survey 2003)

Absence of proper solid waste management system

Solid waste is the major pollutant for both the air and water. Due to lack of proper knowledge, most of the dwellers dispose their domestic waste into the near by drain or near by ditch. As a result, this waste impacts on the physical environment and pollutes the water. People use this water for many purposes, which create some diseases like as dysentery, diarrhea, cholera etc. Some of the dwellers dispose their waste inside the house in a hole, which is responsible for air pollution. KCC provide some dustbin in the study areas but those are very poor in condition and more distant from home.

Unsatisfactory water supply provided by the KCC

Unsatisfactory water supply is another problem of the dwellers. Considering the population of the study area it is evident that the supply of potable water is grossly inadequate. As a result, people wait for a long time to get water. The struggle to get some water led to heated arguments and often to quarrels. During the summer season, most of the hand pumps go dry. Another aspect of the water problem from the hand pumps is that it is likely to be contaminated because of being shallow pumps and therefore, unfiltered. Its use for drinking purpose is therefore, not safe. The availability of water to the study area is highly inadequate both in terms of quality and quantity. Hence most of the households use pond water for drinking and cooking purpose and create some diseases.

Absence of recreational facilities

The occupational life of the majority is such that they find very little time for recreation. There is no time available for leisure in the daily routine of their life. Young children suffered from lack of recreation. In the study area there is the provision of parks and playgrounds but are not yet constructed. As a result people deprived from mental refreshment.

5.5 Distance from different services and facilities

Distance of different services from residential area of KDA may be identified as a constraint for lower development. Because people want to live a place from where they can be facilitated to go to their working places, markets, educational institutes, medical services, etc. in a word, people want to live in a suitable place and also want to maintain the proper communication. The following Table shows the distances of different services from the residential areas.

Table 5.7: Distance from different location of Housing Projects of KDA

Name of Housing Projects	Approximate Distance from Important Institutions (in Km.)					
	City Center (CBD)	New Market	Khulna Varsity	Khulna Medical College	KUET	English Medium School
Sonadanga R/A (1 st phase)	2.0	1.0	3.0	1.5	7.0	0.0
Sonadanga R/A (2 nd phase)	2.2	1.2	2.8	1.3	7.0	0.2
Sonadanga Low-cost Housing	2.5	1.5	3.2	1.0	6.5	0.5
Nirala R/A	3.0	3.2	1.5	3.0	8.0	3.0
Mujgunni R/A	4.0	3.5	5.0	1.5	5.0	2.2
Daulatpur Housing Estate	7.0	6.0	11.0	5.5	2.5	6.0
Shiromoni Industrial Housing	13.0	11.5	16.0	10.5	2.0	11.0
Mirerdanga Low-income Housing	12.0	10.5	15.0	9.5	1.0	10.0

Source: Field Survey, 2003

5.8 Social Aspects

It is also very important issue for the land vacancy. Terrorism in Khulna City is increasing day by day. There are many musclemen grew and they hamper a normal life of civil society. It is also a mental pressure for the civil people. For this reason, landowners are not interested to make any kind of conflict with these musclemen. So they were not interested to do any kind of construction on their land. In Sonadanga 2nd phase and Mujgunni, people have to pay some money to local musclemen at the

building construction. For this social hindrance, land owners are not inclined to build their house. This is one of the reasons for plot development.

5.7 Other Aspects

Except these above reasons there also have some other types of problem remaining the land vacant in the study area. These problems were special case but also responsible for land vacant

Some lands also face various types of problems. In Daulatpur and Sonadanga low cost housing, some enemy properties have been found and there living illegal people in illegal way. No one to protect them and no one evicts these illegal people from these lands. So these properties remain vacant or unused.

There also found one court case problems. These cases are hanging for lasts 10 or 12 years long and not yet given any result from the court. So the owner can not use this land and remain vacant.

From these above discussion it could be easily understand that not a particular reason is responsible for land vacant. There are various types of causes are integrated to responsible for the land vacant. All these causes of the land vacancy can be integrated into a flow diagram that shown in below.

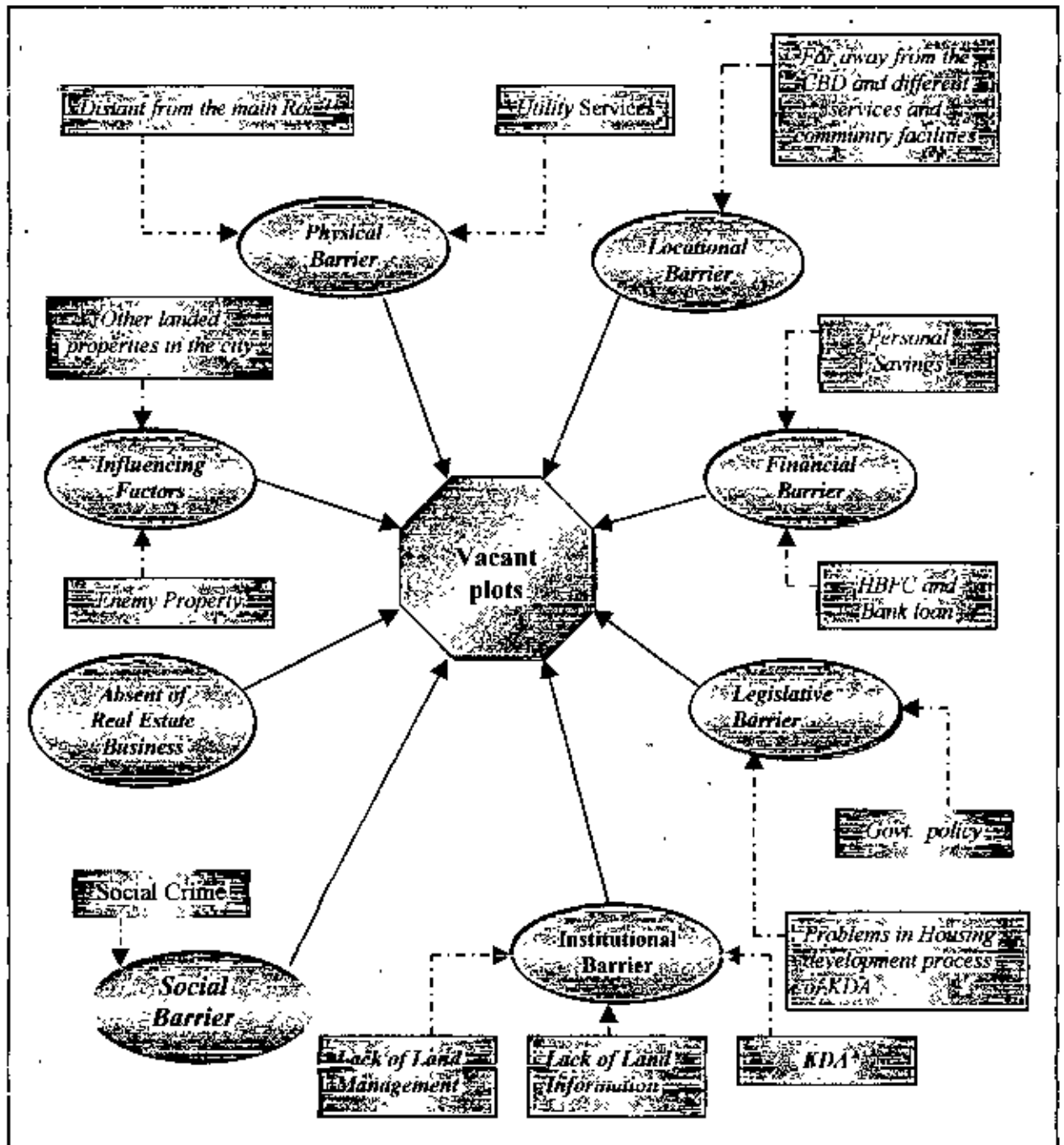


Figure 5.7: Factors influencing the Low Development of Plots in KDA Housing Projects

Chapter 6: Losses for Keeping Plots Vacant

6.1 Introduction

6.2 Losses of Holding Tax

6.3 Lower Land Value

6.4 Low Income Source

6.5 Slum Formation

6.6 Environmental Pollution

6.7 Increase Social Crime

CHAPTER 6: LOSSES FOR KEEPING PLOTS VACANT

6.1 Introduction

When a housing project does not develop in time, it creates different types of losses against the investment. Most of the KDA housing projects developed on the agricultural land. To implement a housing project, it took a long time from the acquisition of land, which made the loss of agricultural products. The infrastructures like as road, drainage, electricity, telephone line, etc. are damaging due to lay down for a long period in the housing projects. The vacant plots are unproductive for the concerned authority to earn revenue income. In this study the losses are categorized into two types: Economic and Social.

Economic losses: It includes the following points:

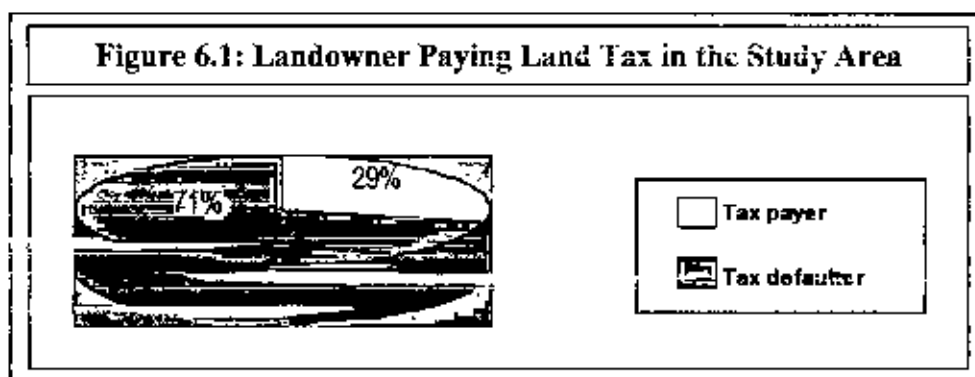
- Losses of holding tax
- Decrease the land value
- Losses of the return of services.
- Loss of commercial activities

Social Losses: It includes the following points:

- Slum formation and squatter settlement
- Environmental pollution
- Increase social crime

6.2 Losses of Holding Tax

Vacant plots are a great opportunity for the private landowners to avoid municipal service tax. The loss for Khulna City Corporation is huge in terms of money every year. Private owner is also not interested to give services tax to the authority. From the field survey it has been found that about 71% land owner do not give any municipal tax and only 29% land owner pay land taxes regularly to the KCC



Source. Field survey, 2002

Only land development tax is imposed on land. It is collected by district settlement office, Khulna. The rate of this tax is imposed on both in the municipal area and determined by the rules of Land Development (LD) Tax Ordinance, 1976. The rules for land taxes is described below:

1. All land used for industrial, commercial or residential purposes in the city area are denoted as non-agricultural land and then it is categorized as taxable or non-taxable.
2. If any land in the city/ municipal area kept left unplanted is also considered as non-agricultural land and LD Tax is imposed on this land.
3. If any land is used for industrial/ commercial land out side the city, is also considered as non- agricultural land, which is also considered as taxable land.
4. If any land is acquired for industrial, commercial or residential use or if any area is declared as industrial/ commercial or residential area, all land of this area will be considered as non-agricultural land. LD Tax will be imposed on this land too, whenever if this land is non-used for some temporary time period.

So, vacant plots in the KDA housing projects considered as non-agricultural land and LD tax is imposed according to its location. In the study area, vacant land falls into commercial area and its LD Tax imposed as commercial rate.

The rate of LD Tax for different used land in Khulna City area given below-

- Tax rate for residential use is 60 taka per decimal or 436 sq ft per year.

Most of the vacant land located in commercial zone and its LD Tax imposed as commercial rate. No LD Tax is collected from this land. So, huge amount of money become uncollected and it is a great loss for the government.

There are a total of 712 developed plots with permanent structure in the study areas. If the average plot size considers as 3.5 *katha*, then the area is counted as 2429 *katha*, i.e. 4111.8 decimal. Hence it earns Taka 246708 per year. On the other hand, the eight KDA housing projects consists of total 264 acre of land, i.e. 26141.4 decimal, which may earn annually Taka 1568484. So, the annual losses are Taka 1321776 from only land development tax.

6.3 Lower Land Value

Land is an asset. Proper use of land can bring a good result and could be a source of income. Unless, unused land can not be an asset. In KDA residential areas, most expensive land value has been seen than the residential plots of other parts of Khulna City. Vacant land extremely affects the land value. Unused land responsible to decreases the land value. It also effects to other adjacent area.

6.4 Low Income Source

The KDA housing projects are the planned residential areas in Khulna city and it is one of the major income source of the landowner in KDA housing projects because the house rent is very high in Sonadanga, Nirala and Mujgunni residential areas. Land is a major component for income sources. Proper use of land could be a great source of income. Vacant plots can not give that opportunity to the owner and also effect to the city market. Here every parcel of the land is valuable. Housing rent in already developed residential areas for residents is very high. Rent structure of all those residential areas is given Chapter Seven. So it can be easily understand that for these vacant plots in the study area owner are loosing huge amount of money and with it Khulna City also effected very much.

6.5 Slum Formation

Abandoned land could be a great opportunities for slum growth. In some of residential areas, slums are formulated in the study area. Slum has been found on all of residential areas. In vacant plots of Sonadanga (2nd phase), Mujgunni and Nirala, plots, small amount of slums is developed but in those areas, land value of residential plots is the highest in KCC area. Among all of the plots of Sonadanga low cost housing, one plot is developed and except one plot, slums are developed on all other plots. It is also a common picture on Daulatpur and Shiromoni residential areas because only few plots are developed and in maximum vacant plots, slums are developed. From those lands, limited number of revenue is very lower but their land value is very higher. Slum grew as an illegal way and without concern of the landowner but some slum grew by the permission of the concern owner.

6.6 Environmental Pollution

- Vacant plots could be the sources to pollute the environment. Unused land encourages growing weed and other bushes that is a safe position for growing and living mosquito. This insect annoyed its nearest locality and people living thereby.
- Many vacant plots are used as a dumping place by the residences. People in the study area dump their waste on vacant land. This waste creates bad smelling, odors etc that help to pollute environment.
- Water logging is also a common character on the vacant land due to lack of maintenance of the land. It can be seen more frequent during rainy season. This logged water produce huge amount of mosquito and other germs that effect to the local people.

6.7 Increase Social Crime

There are many slums grew on the land, where living low-income people. There have chances to occur many social crimes from this place. Slum area is a safe guard to do drug business. Various types of drug like Phensydyl, ganjas etc are found there. Slum area on the railway land is the sources of various types of drugs. People sold

drug easily from this place and they are out of danger from the security forces. Though it is not a major consequence but it creates great difficulties for the local people, so it can not be neglected.

From the above discussion about effects of urban vacant plots, it can be stated that its consequences are diversified. If all these effects may inter linked, a vicious cycle can be found. A cycle of effects of vacant plots on urban area is shown to the next page

Chapter 7: Recommendation and Conclusion

7.1 Introduction

7.2 Specific Recommendations

7.3 General Recommendations

7.4 Other Specific Recommendations

7.5 Conclusion



CHAPTER 7: RECOMMENDATION AND CONCLUSION

7.1 Introduction

The foregoing discussion of the state of the housing projects undertaken by the KDA, problems of housing development as well as present problems and constraints of housing development permits this study to make some recommendations. Recommendations are made in different categories like as Specific and general recommendations.

7.2 Specific Recommendations

7.2.1 Restoration of the industries of Khulna Region

If the layoff industries can be revived, it will give economic solvency to the people of the urban area. Then the plot owners will find options to construct new houses aimed at considerable house rent.

7.2.2 Allocation of loans on deposit based by HBFC

The enhancement of house loans should be made easier with a view to motivating people for the same purpose.

7.2.3 Provision of cost effective Transportation Facilities

If transportation is made cheaper and easier people can construct plots in the periphery of the city like Shiromoni, Mirerdanga and Daulatpur residential areas and maintain regular uninterrupted communication with the job sites.

7.2.4 Decentralization of Community Facilities

It is evident that Decentralization of community facilities will encourage a good development of house building in the remote areas of the city. By applying this measure, Shiromoni, Daulatpur and Mirerdanga residential areas should be developed. Besides this, it paves the way for city expansion with an effective rhythm.

7.2.5 Intervention of Private Real Estate and Land Developers Companies

The intervention of these types of companies may help the plot owners by constructing apartments building and providing house loans for plot development.

7.3 General Recommendations

Considering the housing condition in Khulna as mentioned before the following conclusion may be made:

- 1) Despite a slow growth of population, at least 225,000 housing units will be required by the year 2020.
- 2) If KDA and other government agencies carryout their on going the future housing programs, at best these can meet less than 4 percent of the total housing units will be constructed by the private individual, if future planning intervention is not made to achieve the goal.

Under the circumstances KDA, pursued the following policies to bridge the gap between the housing needs and planned production of housing units. The following policies are prepared in the light of National housing policy and fifth the housing program during the five year plan of Bangladesh.

Policy-01: The development authorities will play the role of facilitators of housing development apart from their existing role. This policy is the reflection of the proposed National Housing Policy, 1993. The approach was promoted by the UNCHS in it HABITAT conference, 1996.

Implementation

KDA and HSD will negotiate with the private developer and assist them in site selection and execution of the planned housing projects.

Control

Strict development control measure should be exercised by KDA in site selection to ensure the proposed land use of Structure plan. Private developer must get the approval of the design of their project from the planning and control authority.

Implementing Agency

- Khulna Development Authority
- Housing and Settlements Directorate
- Private Real Estate Developers

Policy-02: providing assistance to the government agencies in the development of housing schemes. KDA will provide assistance in the identification and development of sites for the government housing schemes.

Justification

Any government agency authorized to undertake housing schemes either for its employees or for the citizen should seek assistance of KDA, and KDA also should extend its assistance in the identification of sites, planning, and development of the area for housing. This will promote more planned development and inter agency coordination and development.

Implementation

KDA will discuss with the other public agencies and encourage to undertake housing schemes as per the proposals of the structure plan.

Control

KDA must be very strict with regard the proposed land use by the development agencies. So that planned development can be ensured.

Implementing agency

- Khulna development authority
- Other developing agencies in public sector

Policy-03: Providing assistance to undertake housing schemes under private sector. KDA will provide assistance in the identification and development of sites for the private sector (formal) housing development schemes.

Justification

Since the public sector development agencies can meet only a fraction of the housing needs, the private sector will obviously come forward to bridge the gap. In this situation the authority will encourage the private sector and will ensure that all sort of assistance- legal, technical, planning and if possible financial, be given to them.

Implementation

This is necessary to increase the planned development in the city. The authority may monitor the development. In fact, in this instance, the authority will act as an enabler to the private sector.

Control

KDA will ensure that the proposed land use following the structure plan.

Implementing agency

- Khulna development authority
- Private developer

Policy –04: Making provision for the low-income people. As public development authorities, KDA and HSD have to think about the housing facilities for the poor of the city. Low income housing can be provided to the low-income people.

Justification

Since the private sector housing development will be operated for profit, the low-income poor households will hardly get access to these schemes. Thus, to reduce unplanned slum type development, usually done by the poor households, the development authority may undertake projects for low-income groups.

Implementation

Low-income housing can be promoted on the basis of no loss not profit basis, or at best on the basis of marginal profits. Low-income housing schemes should be designed in such a way that no one other than the targeted people can get it.

Implementing agency

- Khulna development authority
- Housing and settlement directorate

Policy –05: Providing necessary infrastructure to facilitate housing development. Necessary infrastructures have to be provided to guide the planned housing development of the city.

Justification

Infrastructure, such as road network, water supply and power guide the development of a city. These infrastructures, if planned properly, will shift idle land into the land market. Particularly, the areas, which are already within the city limit but not yet developed as urban landscape, can be developed through such policy.

Implementation

Here infrastructure will guide development. The investment for infrastructure can be realized by imposing betterment tax.

Implementing agency

- Khulna Development Authority
- Khulna city corporation
- Local Government Engineering Department

Policy-06: Planning interventions in the spontaneously development areas. Initiative must be taken for the improvement of residential areas development without planning intervention

Justification

Most of the housing areas in cities of Bangladesh were developed spontaneously without any planning intervention. Similar experiences are available in Khulna, where substantial areas of the city have grown without plan (meeting road network, drainage, other services, etc.). Such areas over time turn into a slum where services are highly inadequate.

Implementation

Planning authority must have some necessary intervention in these areas to provide basic services, necessary road network for circulation.

Implementing agency

- Khulna Development Authority
- Khulna city corporation
- Local Government Engineering Department

Policy-07: Upgrading slums and squatter settlements. A large proportion of population lives in the slum areas of two cities. Initiatives must be taken to upgrade their quality of housing.

Justification

This is an on going program, undertaken by KCC with financial assistance from UNICEF. But such upgrading activities are limited to a few slums and squatter settlements. The slums and squatters out side the program should also get benefits of such up gradation. Where upgrading is not possible, relocation may be considered.

Implementation

KDA, KCC and other local bodies should come forward to take initiative to improve the condition of the slums and squatter settlements.

Implementing agency

- Khulna Development Authority
- Khulna city corporation
- Local Government Engineering Department
- Donor agencies.

Policy-08: Continuous monitoring of housing market. The development authority should monitor the principal aspect of housing market in Khulna. For this, it can maintain a database and can undertake studies from time to time.

Justification

The justification of the policy lies in the fact that housing constitutes a large part of the city. Secondly, KDA can undertake housing project when it feels necessary and can change its policy direction when required. Finally, it is most important, that people in the city get appropriate policy and planning direction from KDA.

Implementation

KDA and Land Registry office have maintained efficient database management system (e.g. GIS system) and can undertake studies from time to time. The principal components of housing market and housing demand, needs process of land conversion for housing and housing finance.

Implementing agency

- Khulna Development Authority
- Land Registration office

Policy-09: Facilitation of finance and investment in the housing sector. Housing finance facilities both from the public and private sector have to be provided to the people intending to build houses.

Justification

Housing finance has been emerged as one of the major problems in the promotion of housing, particularly in promoting planned development of housing. Housing finance facilities will accelerate the development process of Khulna city.

Implementation

This seems to be shared responsibility of both public and private agencies. The development authority can influence the financing authorities in providing credits. Government, on the other hand, through its policy can facilitate finance in housing.

Implementing agency

- House building finance corporation(HBFC)
- Private housing loan companies (e.g. Delta BRAC house loan company)

Policy –10: Promotion of participatory development process in the housing sector.

Justification

It has been indicated earlier that lack of participation of the people in the process of development such as in housing is responsible for not being a total success of the effort. Increasingly it is being emphasized to involve people for whom the development of housing is sought. But the process is not yet experimented by the public authorities in Bangladesh.

Implementation

Legal constraints are perhaps there as to how the partnership will be built. We have discussed in detailed the process of participation and building partnership in the working paper-2.

Implementing agency

- Khulna Development Authority
- The private sector

Policy –11: Appropriate technologies should be innovated to develop and promote housing particularly for the low-income people

Matching with the existing situation (Pattern and requirements, etc.) new type of low-income housing type should be innovated.

Justification

This type of housing unit will best suit the poor people. Many low-income housing deliveries in the past in Bangladesh failed to reach the target group due to higher standard.

Implementing agencies

- Housing and building research institute (HBRI)
- Private sector
- Non Government organizations

Among the above 11 policies adopted by the KDA no one is related to the housing finance, which is the most important cause for slow development of plots in housing areas. Till date some plots are vacant even in the Sonadanga and Nirala residential area and this is largely because of financial lacking. The KDA is planning for increasing its activities in housing sector, it is acquiring new areas and providing sites and services but in the side of house owners there are a number of problems relating to financial, locational and social problems. However, in the light of the above the following recommendations are made by this study in the following.

7.4 Other Specific Recommendations

The following policy measures could be undertaken to facilitate the growth of different types of residential buildings in the housing areas of KDA.

- **Necessary infrastructure for housing development**

Infrastructures, such as road, water, electric supply, and other community services indicate the development of any kind of area particularly the planned residential area. Planned infrastructure will generate idle land into the land market. Especially in the fringe area, which are not developed. This is particularly important for Mujgunni, Daulatpur and Sonadanga phase III for plot development.

- **Improvement of unplanned residential area**

The houses, which are developed spontaneously in a haphazard and unplanned way, have possess a low rent structure. In the KDA planned area even some plots are developed with no planning consideration. Such areas often turn into slums where services are highly inadequate as Sonadanga low-income housing. The concerned authority must undertake necessary action to provide more basic services and necessary road network and other development activities.

- **Sites and Services Schemes**

To reduce unplanned type of development, the concerned development authority may undertake site and services projects for the middle-income groups' people. Such low and middle-income housing group can be promoted on the basis of marginal

profit. Low-income housing schemes should be designed in such a way that none but the target group can get it.

- **Upgrading Slum Settlements**

Slum settlement is mainly developed and occupied by the low-income group saving poor services and facilities and there don't have basic urban services, which indicate lower construction quality of houses. There are slums nearer to the SRA which play an impact role on the surrounding entity of the residential area and pollute them. So the concerned development authority should provide basic urban services for their environmental condition.

- **Finance and Investment for the Housing Sector**

Housing finance is one of the major problems for the promotion of housing, particularly promoting the planned residential area. This seems to be a shared responsibility of both the public and private agencies. The development authority can influence the authorities to provide credit. On the other hand government can facilitate housing finance through this policy.

Due to rise the fund or capital, HBFC may undertake the program of savings and pension scheme like as a Bank. By this scheme, it may accumulate fund and provide more loan facilities for the policy holders.

- **Provide Serviced Land for Different Income Groups**

Lack of serviced land is another important problem for the development of housing sectors. There are a few amounts of people who have the ability to build houses with their own resources. The concerned authority both public and private agencies can provide serviced land for housing sectors.

- **Incentives for the Private Sector Housing Development**

It is not possible for the development of housing sectors only by the government. The government should take appropriate strategy such as reduce tax on land, increasing loan facilities and ensure legal, technical and planning assistance to

encourage the private sectors to provide serviced land. This is necessary to increase the planned residential housing units of the city.

7.5 Conclusion

From the findings and discussion of this study, it found that the main reasons of slow growth of building construction in the housing projects are due to the poor economic condition of the city dwellers in general, financial problem in particular, lack of adequate basic urban services, and partly due to poor supervision and control of the responsible organization. Like Dhaka and Chittagong where housing condition is explained by its critical shortages, in Khulna, the poor quality of housing apparently seems to be more serious than the number of units needed. A large segment of Khulna urban population belongs to low income groups. About the characteristics of semi-permanent structures of the study area are deprived of basic urban services. Increasing housing rent affects the low and middle-income groups for growing demand of houses. So from the findings and analysis it can be understood that if the KDA develops and adopts new policies with loaning facilities for housing and provide appropriate services and facilities, the housing needs of the urbanites can be minimized as well as residential houses could be maintained within affordable limit and also with adequate benefits.

Growth of Khulna City is mostly a linear pattern of settlement. Again, settlement is related to housing pattern, infrastructure facilities, population and its density and also related with the housing pattern and economic condition of the general people. As an industrial, commercial, port city and as a divisional headquarters there should be various types of office and institution in Khulna. Migration of people might be encouraged in Khulna City from other parts of the country that will have two potential roles as minimizing migration pressure of Dhaka City and influencing growth of Khulna City.

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APPENDICES

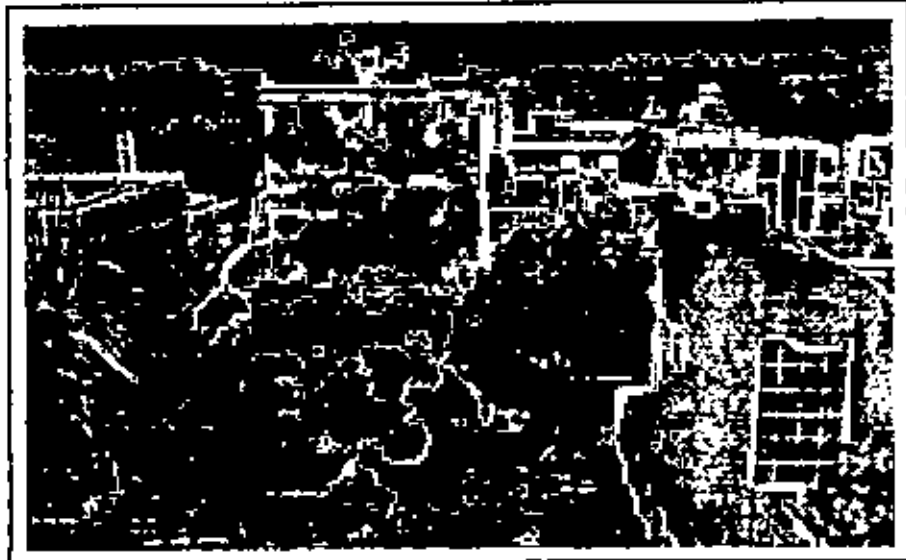


Plate 1: Existing Condition of Sonadanga Residential Area (1st phase)



Plate 2: Existing Condition of Sonadanga Residential Area (2nd phase)

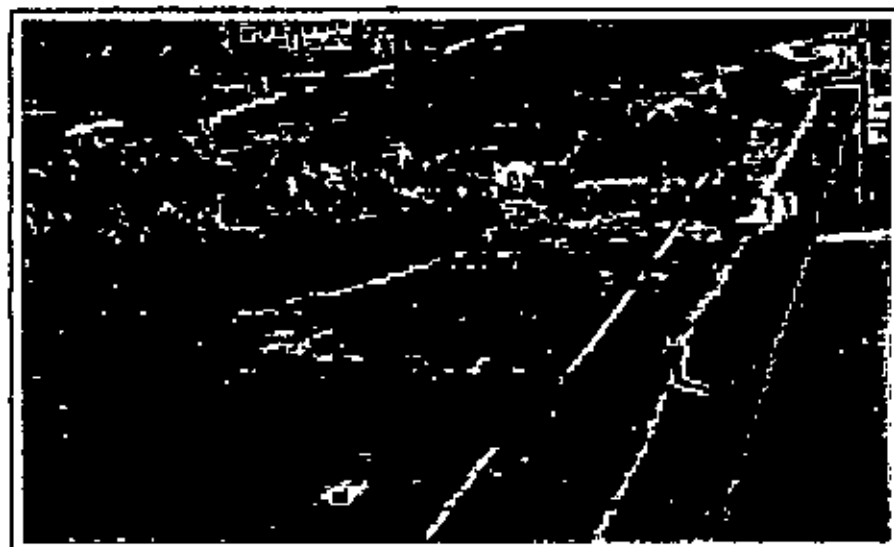


Plate 3: Existing Condition of Sonadanga Low-cost Housing



Plate 4: Existing Condition of Residential Area



Plate 5: Existing Condition of Mujgunni Residential Area



Plate 6: Existing Condition of Daulatpur Housing Estate

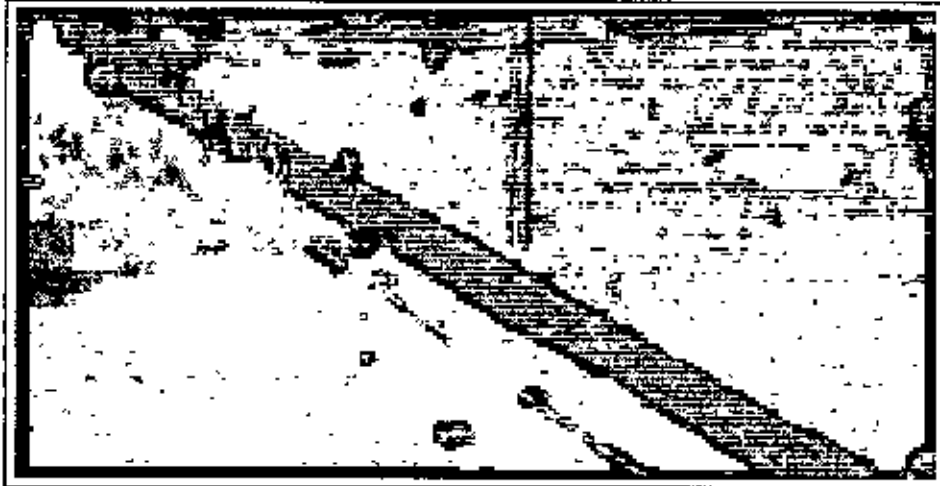


Plate 7: Existing Condition of Shiromoni Industrial Housing



Plate 8: Existing Condition of Mirerdanga Low-income Housing

Questionnaire for "KDA Housing Projects: An investigation into the problems and constraints of development"
 Department of Urban and Regional Planning
 Bangladesh University of Engineering and Technology (BUET), Dhaka

(All information will be used only for research purposes)

Date:.....

1. Identification of the plot :

- Name of the Residential Area:.....
- Road # Plot #

2. Identification of the plot owner:

- Is the respondent owner of the plot? Yes No.....
- If yes, Name of the owner.....
- Age:.....Years
- Occupation and Income:

Service Holder	
Service Types	Income (Tk./month)
Government	
Semi-govt.	
Non-govt.	
Retired	

Business Man	
Types of Business	Income (Tk./month)
Private Company	
Trading of Goods	
Industrialist	
Shrimp Culture	
Others	

- If no, who is the respondent?
 - Tenant of this building
 - Member of the owner's family
 - Relative of the plot owner
 - Other (specify)
- If the plot owner is not present, then the above mentioned information may be provided by a member of his family or the tenant or a close relative of the owner.

3. Information about the plot:

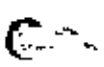
- Year of Allocation:.....
- Year of deed:
- Are there any building(s) around your plot? Yes..... No.
- Plot ownership pattern:

Allocated by KDA/HSD	
Purchased from other	
Inherited	
Gift	

- Have any of your family members got plot(s) in this residential area? Yes..... No.
 If Yes, how many plot(s)
- Have you or any of your family members got plot(s) in other residential area? Yes..... No
 If Yes, Where.....How many plot(s).....
- Have you any residential building in Khulna City? Yes..... No.....
 If Yes, Where..... No of Building(s)
- Do you want to sale this plot? Yes... ..No.....
 If Yes, Why?

4. Information about the building:

- Existing Condition of the Building
 - Complete Construction:.....slabed
 - Under Construction:.....floor



If the building construction is completed, then

- Time taken for construction: Starting Year:....., Ending Year:.....

If the building is now under construction, why the delay:

.....

5. Source of finance for building construction:

- HBFC Loan
- Government Bank Loan: [Name:....., Rate of interest:..... %]
- Commercial Bank Loan: [Name:....., Rate of interest:..... %]
- Private Bank Loan: [Name:....., Rate of interest:..... %]
- Personal Savings.
- Others (specify).....

6. Location of Residents and the Rent they pay:

Floors Specification	Flat Type (Unit)		Type of Residents		House Rent (Tk./month)
	Single	Double	Tenant	Owner	
Ground Floor					
1 st Floor					
2 nd Floor					
3 rd Floor					
4 th Floor					
5 th Floor					

Does the plot owner reside on this plot? Yes....., No....., If not, Where?

- In another planned residential area of Khulna City
- In other part of Khulna City out of planned residential area
- Other city of Bangladesh (specify).....
- Abroad (specify).....
- Village of district.

7. If the plot owner live within Khulna City, what is the type of house he/she lives at present?

Owned Rented Govt colony Staff quarter

- Other (specify).....

8. Pay for different utility services:

Type of service	Tk. / Month
Electricity	
Water	
Telephone	

- Other maintenance cost paid for this buildingTk./year

9. Present Condition of Administrative and Social Security of this area?

Good Not Bad Bad

- If Bad, What type of problems are you facing here?

.....

10. What are the factors that have contributed to present rate of growth of building construction in the planned residential areas of Khulna?

Factors that have contributed to present rate of growth of building construction		
Administrative	Bureaucratic problem to get permission for building plan	
	Others (specify)	
Financial	Lack of HBFC loan facility in Khulna	
	Complexity of Bank loan & repayment system	
	Household income is not sufficient	
	Price of building materials is not reasonable	
	Others (specify)	
Social	Constructions are yet to take place in this residential area	
	Pressure of local muscleman during construction	
	Civic facilities like school, college, community center, hospital, clinic, market etc. are not available in this residential area or nearby area	
	Utility services are not suitably available here	
	Distant from town center	
	Others (specify)	
Personal	Investment is high but profit is low because of comparatively lower house rent in Khulna	
	Land speculation is more profitable than building construction.	
	Others (specify)	

11. Please Comment:

.....

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.....

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Thank you for your cooperation

.....
Signature of the surveyor

