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Sites and Services Projects
in
India's Secondary Cities
An Evaluation Study

(Prepared for the Ministry of Urban Development)

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AN INVESTIGATION OF THE
ELECTRIC PROPERTIES OF
SOLIDS
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PREFACE

For over a decade, the question how to meet the shelter needs of the growing number of low-income and poor households has assumed a high priority in most developing countries. Almost universally the experiences have shown that conventional solutions involving the provisions of built houses are neither feasible nor financially viable in the context of the conditions prevailing in the developing countries.

Of the many options, the one involving the provision of sites with services to the low-income and poor households is currently on trial in many countries including India. It offers scope for self construction. Unlike other forms of low-income housing, it brings security of tenure to such households. Two questions have arisen with regard to the concept and approach of the "sites and services":

- i. Does the sites and services approach offer an alternative to conventional low-income housing?
- ii. What has been the performance of the sites and services projects? Have these served the purpose for which they were designed?

This report deals with the second question, and presents the results of an evaluation study of sites and services projects in two cities, namely (1) Kota and (2) Ghaziabad. These projects have different legacies. The Kota projects have been designed by the Urban Improvement Trust, Kota as a part of its overall efforts to increase the supply of low-income housing in Kota. The Ghaziabad project came into being as a pilot project under the International Year of Shelter for the Homeless.

My two colleagues, namely Dr.M.P. Mathur and Mr. K.K. Pandey have carried out this study and prepared the report. They deserve to be complimented for the hard work they have put in this study. I would also like to place on record my thanks to the Housing and Urban Development Corporation (HUDCO), the Urban Improvement Trust, Kota the Ghaziabad Development Authority and other agencies in the two cities

This study is, at best a pilot attempt on the part of the National Institute of Urban Affairs to evaluate the sites and services projects in the country. We at this Institute consider it important that "sites and services" as an approach to providing low-income housing should be examined on the national scale. Within a matter of years of this approach coming into being, doubts have arisen whether this is the most efficient and effective way of dealing with shelter problems of low-income and poor households. It is thus only appropriate that a larger study be undertaken to evaluate its efficacy and relevance in the Indian context.

This study traces the history of these projects from their very inception. It has examined in this regard the pre-project preparatory work that was undertaken and carried out by the concerned agencies. It has analysed the total processes of planning and implementation of the selected projects. It has identified the inadequacies in their planning and implementation and management, and has offered suggestions for improvement in the future designing of sites and services projects.

for their assistance and cooperation on this study. I would like to
thank the Ministry of Urban Development for entrusting this pilot
study to us.

January 1988

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CONTENTS

Preface	iii - v
Study Team	vi
List of Tables and Maps	ix - xli
Executive Summary	xlii - xxxvii
Chapter I : APPROACH TO THE STUDY	1 - 5
Background	1
Scope and Objectives	3
Methodology	4
Chapter II : THE PROJECT SETTING	6 - 12
City Context	6
Identification of Projects Selected	9
Location	11
Chapter III : EFFICIENCY OF PROJECT OPERATIONS: PLANNING AND DESIGNING ASPECTS	13 - 33
Initiation and Preparation	13
Planning and Designing Standards	
- Distribution of Landuse	
- Density estimates	
- Infrastructural standards	
- On-plot provisions	
- Design-structure	
User Consultation and Participation	28
Application, Approval and Allotment Procedures	30

Chapter IV	: EFFICIENCY OF PROJECT OPERATIONS : ACHIEVEMENT OF OBJECTIVES AND TARGETS	34 - 54
	Achievement of Physical Objectives	34
	Selection of Allottees	38
	Project Financing, Pricing and Cost- recovery	40
	Monitoring and Follow-up	50
Chapter V	: USER INTERACTION AND THE PROJECT IMPACT	55 - 84
	User's Profile	55
	Project Affordability	60
	Project Impact	71
References		85 - 87
	NIVA Publications of Related Interest	88

LIST OF TABLES

<u>No.</u>	<u>Title</u>	<u>Page</u>
1.	Evaluation of Project Designing	16
2.	Evaluation of Project Organisation	19
3.	Comparison of Project Objectives/Targets and Achievements	21
4.	Efficiency of the Project Implementation	24
5.	Indicators of the Project Impact	27
2.1	Urban Growth: Kota, 1961-1981	7
2.2	Urban Growth: Ghaziabad, 1961-81	8
2.3	Identification of Projects Selected	9
2.4	Ghaziabad Project: Specifications of Options Offered	10
3.1	Institutional Framework: Roles and Responsibilities	14
3.2	Proposed Land Use Pattern in Selected Projects	16
3.3	Density Pattern as Proposed in Selected Projects	17
3.4	Circulation Pattern in Reviewed Projects	18
3.5	Water Supply Options	19
3.6	Liquid Waste Disposal System	20
3.7	Proposed Solid Waste Collection	21
3.8	Social Infrastructure Proposals	23
3.9	Provision of open Spaces and Greenery	24
3.10	Composition of On-plot Provisions	25
3.11	Plot Area Ratio - As Proposed	26
3.12	Designing for User-Interaction	28
3.13	Selection and Application Procedures	32
4.1	Development of Land and Proposed Infrastructure	34
4.2	Development of On-plot Provisions	37

<u>No.</u>	<u>Title</u>	<u>Page</u>
4.3	Selection of Allottees	38
4.4	Composition of Project Financing	40
4.5	Composition of Project Financing as per Respective Options	41
4.6	Composition of Option-wise Loans of at Ghaziabad	42
4.7	Scheduling and Timing of Loans Disbursement	43
4.8	Composition of Pricing of S/S Plots	44
4.9	Cost-Recovery & Repayment Mechanism for Loan Finance	47
4.10	Mechanism of Cost Recovery from Allottees	48
4.11	Expenditure and Physical Progress	50
4.12	Secondary Infrastructure	51
5.1	Distribution of Households by Caste	56
5.2	Distribution of Households by Family Size	56
5.3	Migrant Status	57
5.4	Education Levels of the Respondents	57
5.5	Occupation Structure of the Allottees (Household Heads)	58
5.6	Average Household Income of the Respondents (Allottees)	60
5.7	Repayment Situation	61
5.8	Reasons for Irregular Payment of Instalments	62
5.9	Distance of Work Place from the Allotted Site in Kota	63
5.10	Reasons for not Putting up the Shelter on the Allotted Site in Kota S/S Projects	64
5.11	Shelter Planning at Kota	64
5.12	Sources of Funding for House Construction	65
5.13	Shelter Structure (Ghaziabad)	66
5.14	Use of Space	67

<u>No.</u>	<u>Title</u>	<u>Page</u>
67	5.15 Housing Activity	67
68	5.16 Respondents' Satisfaction with the Present Accommodation	68
68	5.17 Future Plans	68
69	5.18 Money Spent on House Construction	69
70	5.19 Reported Cost of Construction per Plot Option	70
71	5.20 Money Arrangements	71
72	5.21 Original and Existing Living Places of Respondents in Kota	72
73	5.22 Shelter Tenurial Status of Respondents (Kota)	73
74	5.23 Shelter Structure (Kota)	74
74	5.24 No. of Rooms Per Dwelling Unit (Kota)	74
75	5.25 Distance of Work Place from Original and Existing Living Place in Kota	75
76	5.26 Sources of Water Supply (Kota)	76
77	5.27 Night Soil Disposal System (Kota)	77
77	5.28 Waste Water Disposal System (Kota)	77
78	5.29 Former Places of Living (Ghaziabad)	78
79	5.30 Shelter Tenurial Status of Respondents (Ghaziabad)	79
80	5.31 Work Place and Living Place Relationship (Ghaziabad)	80
82	5.32 Sources of Water Supply (Ghaziabad)	82
82	5.33 Night Soil Disposal System (Ghaziabad)	82
83	5.34 Waste Water Disposal System (Ghaziabad)	83
84	5.35 Electricity (Ghaziabad)	84

Maps

- i. Lay Out Plan: Keshopura VI S/S kota
- ii. Lay Out Plan: Keshopura VII S/S kota
- iii. Lay Out Plan: Vijai Nagar S/S Ghaziabad

Executive Summary

The concept of public sector intervention in the field of low income housing is intended to meet the basic needs of the urban poor. In recent years the 'Sites and Services' (S/S) projects have been one of the most widely applied tools to facilitate the low income urban population in terms of incremental rather than the conventional housing. In India too, these projects have been replicated on a large scale in all types of towns. However, most of these projects form a part of composite housing schemes.*

Unlike the metropolitan and major cities the small and intermediate cities have limited technical, managerial and financial resource capability. The 'top-down' approach as applied in this regard has at times resulted in a failure or partial success of such projects in the sense that they either do not get realised fully or pass into the hands of higher income groups due to varied reasons. The main constraints remain in the financing, generation, realisation and absorption processes. The present study tends to look into these reasons and processes in order to suggest how the S/S approach can be more effectively applied to facilitate the low-income urban population in the wider context of improvements in the access to shelter and infrastructure and urban community development.

The Sites and Services (S/S) projects selected for the study belong to representative small and intermediate cities in India: Kota in Rajasthan and Ghaziabad in Uttar Pradesh. Care was taken to select

* Composite housing schemes here comprise the housing options of plotted and flat development for high, middle and low income groups.

one project from the average S/S type, apart from a project executed within stipulated time (Kota Projects) and one pilot project specifically geared for the provision of shelter and improvement of infrastructure for a low-income population (Ghaziabad Project). In Kota, the projects selected (Keshopura - VI & VII) are adjacent to each other practically forming a single project site, with the same dates of commencement and completion. One of the Kota projects won the first prize from HUDCO for timely completion (Keshopura VI). The Ghaziabad project (Vijai Nagar S/S), has been formed by clubbing together the S/S components of five different, composite housing projects into one project site.

The study indicates the Kota experience to be a failure when compared to the better conceived case of Ghaziabad. It is imperative to understand at this stage the indicators and reasons that can be attributed to the success or failure as also the negative and positive elements of both cases.

Finally, the implications of such studies on policy formulation and the replicability of S/S projects in a similar context are the major issues that form the broad objectives of this study. (For detailed objectives please refer to chapter 1 of the main report).

Tables 1 to 5 summarise the main conclusions of the report in respect of project designing, organisation, comparison of objectives and achievements, efficiency of implementation and indicators of project impact. Each of these items is discussed at length in the main report.

The costing and funding of S/S projects in Ghaziabad, in the context of composite housing schemes are not correlated with proportionate funding and the numerical housing supports available to

making it difficult to have a meaningful performance evaluation. GDA's accounting system is not based upon performance budgeting, Ghaziabad Development Authority (GDA) — and project financing. The of the internal organisation of the development agencies — here the components are quite adequately organised with the exception perhaps while formulating the project. At Ghaziabad, however, the same ordination, user interaction and financing are components ignored agencies such as Urban Improvement Trust (UIT), interagency co- Kota. Initiation, planning, internal organisation of development Table 2 shows that the project organisation is throughout poor in

agencies concerned. which helped form a powerful pressure group to interact with all the the successful occupation by allottees at the post allotment stage enabled the formation of intended target groups. This has resulted in spot registrations and verification of slum/squatter dwellers have identification of actual priorities. However, in Ghaziabad on-the- consultation in both the cities has resulted in a lack of life needs of implicit target groups. An almost total neglect of user infrastructure—both utility and social were not based on the real the project components such as locations, types of plot options, were poorly designed in comparison with those at Ghaziabad, because Table 1 indicates that the sites and services projects at Kota

various income groups in the sense of increasing the housing stock to the extent possible.

Table 3 summarises the project achievements and progress as compared to targets and objectives. The investment in the Kota project has been to the tune of nearly Rs.5 million. But, due to lack of operation and maintenance, the waste disposal and circulation network, plantation and green provision are among the facilities that are getting destroyed. No plans have been made regarding the provision of secondary infrastructure. Symptoms of deterioration are visible and an almost total absence of the shelter consolidation process: only two out of a total number of 1390 allottees have put up some form of shelter. Bottlenecks in planning, designing, organisation and implementation — virtually all along the line — can be cited as reasons for the failure of the scheme (Tables 1, 2 and 4).

In the case of Ghaziabad, Table 3 further reveals that the development of land, shelter consolidation and primary infrastructure has been well conceived. But the position in respect of secondary infrastructure development is not very encouraging. The components of such infrastructure are still in the process of being established. Even the development agency (GDA) has delayed the construction of commercial support. Public sector development agencies often delay auctions of such plots in order to maximise sale prices: a case of development agencies displaying a commercial outlook.

Table 4 summarises the efficiency of project implementation. In Kota land development has yet to be completed, even though plots have

The impact on policy relevance as noticed in Ghaziabad seems to be very useful innovative responses to low-income housing problems in terms of project formation and standards. The manner in which the users are selected, standards are lowered to a reasonable level, and the linkages are maintained with slum - improvement and reconstruction strategies, it appears, has made it possible to realise that a project can be called in real terms a low cost/low-income option. Project financing at both the places indicates a number of remedial measures to be taken to improve policy relevance in terms of a more

than in Ghaziabad.

The impact on the city in terms of additions to the existing housing stock, environmental improvement and upgrading the social status of low-income people has again been negative, more so in Kota

squatter and slum settlements (Table - 5).

It has been noticed that the project impact on users in terms of improvements in their access to social and utility infrastructure, tenurial rights of land, shelter structure and space has been positive in Ghaziabad. In contrast the Kota users could not enjoy such access except the tenurial rights to allotted plots which too remained ineffective as they - the intended target group - still live in

mostly by intended target groups.

appears to be well-conceived: the project site is completely occupied are almost unoccupied. Unlike Kota, however, the Ghaziabad project monitoring, post allotment support and follow-up, projects initiated been allotted. Owing to lack of locational and land development,

Thus there is a case for improving existing information systems for low income housing both at the project and city scales. This will help the project initiation, realisation and replicability stages in order to identify the real-life needs, affordability and accessibility for the urban poor who are the implicit target groups for S/S projects.

level. outdated not only at the development agency level, but also at city demand and informal sector housing supply is utterly lacking and low income settlement types, existing housing backlog, effective section of users and functionalities in both cities. Information about was collected through personal interviews and meetings with a cross - achievements. The information given in the main body of this report information in regard to project objectives and targets vis-a-vis and Ghaziabad it was somewhat difficult to obtain the requisite In the absence of a single project document as such in both Kota

INFORMATION SYSTEM FOR LOW INCOME HOUSING

during project operations. The issues outlined here are in the order in which they normally occur project operation stages obtainable in low income/low cost housing. evaluation, the subsequent implications on policy formulation and what follows are the issues that emerge from the present providing some more incentives for putting up a shelter. rational project financing, costing and facilitating users by

In both Kota and Ghaziabad no demand survey or evaluation of similar projects already executed have been undertaken to identify actual priorities and operational precautions. Such surveys ensure

PROJECT INITIATION AND PREPARATION

Groups. It has been observed that housing support meant for the urban poor often goes to income groups that are at least a bracket higher. This diversion is attributed to the mismatch of supply and demand of overall housing development. Care should, therefore, be taken in this context to simultaneously provide adequate housing to Middle Income Groups.

The existing scale of the projects selected is far below the effective existing demand in both cities. It is a generally accepted conclusion that the entire housing backlog, particularly in low-income housing, cannot be met with the meagre resources that most developing countries have at their disposal. Low-income housing backlogs, however, are not just the absence of four walls and a roof but a more important need in this regard is the improvement of existing infrastructural back-up. Thus, the sites and services programme must work parallel to infrastructural improvement in the existing low-income housing areas. As achieved in Ghaziabad, at the initial stage the S/S users should belong to the clusters or lanes in slums that need relocation to make better utility and social infrastructure available to them.

NATURE AND TYPE OF PROJECT SCALE

Recovery is not the only concern of the financing agent (HUDCO), a
The role of the financing agency should be defined properly.

agency to obtain land at suitable locations.
be evolved to finance land acquisition which enables the development
failure. With a proper cross-subsidisation mechanism, a system should
relevance upon which a project may be pronounced a success or a
cost. Land is the most important factor that decides the locational
Financing of S/S projects, at present, does not include the land

FINANCING AND COST RECOVERY

case the 'rural background' that the target groups inherit/belong.
'affordability' which normally reflects the social behaviour in this
important aspect is the 'willingness to pay' rather than the
keeping the standards as low as possible. At the same time another
divert the attraction of the demand from higher income brackets by
neighbourhoods. It is thus essential in this regard to avoid and
these are reduced to reasonable levels for the formation of low-income
planning and designing standards facilitate low-income groups only if
As may be seen from the success of the Ghaziabad project, the

PLANNING AND DESIGNING STANDARDS

intended target groups.
ensured shelter consolidation but also kept the site affordable for
intended target group. This was done in Ghaziabad which not only
sites should be based on a positive work-place relationship for the
smooth operation and obviate bottlenecks. A selection of project

public sector agency in this case). Unlike the situation in the Keshopura-VII (Kota) scheme the development status and the financial progress are equally important issues to be looked at. Even before land has been fully developed and the last instalment drawn by the Urban Improvement Trust (UIT), the financier is recovering costs without delay or time lag. The financier's role should also be to ensure that land is being developed, the loan fully disbursed and basic amenities such as water are provided before plots are allotted.

The budgeting and accounting system of the development agency is

poorly managed in both cities. Staff in the agency comes on deputation from the State accounts departments in both cases. Such personnel do not necessarily have adequate exposure and knowledge of housing project finance. Consequently enforcement of housing finance mechanisms such as cost-recovery, cross-subsidisation, affordability, cash flow analysis and so forth becomes difficult to realise. It is also imperative for the department staff to be trained and exposed to the dynamics of housing finance to ensure efficiency. It may even be better to have a separate cadre for housing finance as in the case of engineers, architects and planners and such others. In furtherance of this the accounts system should also be improved by introducing performance budgeting.

ORGANISATIONAL STRUCTURE AND INTERAGENCY COORDINATION

The institutional framework in Ghaziabad and Kota within which the S/S projects exist vary considerably in the two cities. Most of the participating agencies (those mainly responsible for the

Post allotment development involves several agencies belonging to different State level departments, such as medical and health, education, finance home and so on. It is not proper to suggest any change in their frame work. But it is recommended that a system should be evolved to integrate them at the city/district level so that their advice and expertise is available at every stage. Executing agencies should consult these agencies right from the preparatory stage so that the proper development at the post allotment

development at the pre-allotment stage. It stands to reason, therefore, that there is need to rationalise the institutional framework at State, city and project levels to ensure optimum coordination among agencies concerned with land

The Ghaziabad Development Authority, has a full time administrative head belonging to the Indian Administrative Services cadre. In Kota the District Collector (DC) is also ex-officio head of U.P. A DC is the busiest bureaucrat in a district and it is unwise to expect any wide ranging intervention from him in such matters.

delays in providing the water supply network at Keshopura S/S-VII. urban development, which holds such agencies under its purview in other States. This separation has lead to problems of interagency coordination and communication, that have resulted in extraordinary Health and Engineering Department (PHED) and not to the department of installing and laying the water supply network belongs to the Public department at the State level. In Kota, the agency responsible for development of primary infrastructure) at Ghaziabad belong to the same

level is ensured. At this point in time, this area sadly lacks proper initiatives, as is obvious in both the cases.

Relationship with the city government the mother institution, acquires utmost importance as whatever inputs are to be provided will ultimately be handled by it in particular with regard to utility infrastructure. Being a body representing a cross-section of the people, it is also supposed to generate public awareness and participation in all urban development activities. At both the places as also in other cities in the two states, the elected city governments have long since been superseded. This position delinks the city government from the community resulting in constraints of identification of real life needs. This is what has happened at Kota and to some extent at Ghaziabad. There is thus a need to strengthen the development agencies' relationship with the city government and ensure that the elected body of the city government functions consistently.

SELECTION OF ALLOTTEES

The procedure for selecting allottees appears to have been diagnostic in Ghaziabad while being conventional in Kota. The manner in which the eligibility criteria are fixed in Kota leaves a lot of loopholes for the entry of higher income groups into the eligible categories often by merely submitting false affidavits. The registration fee was as high as Rs.100 in 1981 even for the lowest income groups.

Despite the attractive allotment function held at Kota on 15 May 1982, internal and trunk infrastructure, before allotments are made. should be ensured that land has been developed, both in terms of Allotment ought not to be merely a matter of publicity. It

shelters.

water a number of willing allottees have not come forward to build made the entire investment meaningless, because in the absence of except the water supply network has been provided. This alone has (Keshopura-VII), for instance, the whole package of land development Land development must be consistent at all levels. In Kota

LAND DEVELOPMENT AND ALLOTMENT

S/S schemes.

in order to accommodate and facilitate the intended target group under conventional method of selection of allottees on the Ghaziabad pattern this, it is essential in these circumstances to modify the plots for speculation through conventional selection. To eliminate As it happened in Kota, several individuals managed to get S/S

Rs.50 in 1984.

Registration fees charged in such areas were quite reasonable, being environmental improvement of existing shanty settlements. a way that house clusters or lanes can be cleared for the settlements, mostly on public land. Allotments have been made in such registrations and verification of households in slums and squatter Selection procedures in Ghaziabad are based upon on-the-spot

attended by State level dignitaries, projects realised here could not meet the objectives and targets. The basic lacunae remained in the allotment itself in the sense that the plots were allotted on land yet to be developed. Even water, which is a most essential requisite for human habitation had not been provided. Therefore it is essential to correlate land development - internal and external - to the allotment of plots.

FOLLOW-UP AND MONITORING

Many bottlenecks and problems, as mentioned earlier, resulted from a lack of proper monitoring and follow up. In Kota, land development constraints, bottlenecks of selection procedures, post-allotment development problems and user consultation and participation and so on, were the issues that would have been solved if an effective monitoring and follow-up had been done. In Ghaziabad, the constraints of developing secondary infrastructure also relate to the problems of follow-up. Though monitoring was better, a monitoring committee per se did not exist. It remained for the individual to initiate the best follow-up as could be done. As it happened in the case presently under review, the GDA, with better institutional framework, as well as the attention given to it by the financier (HUDCO), the State and Central Governments, and others, has been able to make a successful demonstration case for IYSH 1987.

An effective way of solving issues would be by forming a monitoring committee with adequately assigned administrative powers. This committee should be headed by the District Collector. Members

Another important point here is the promotion of self - and mutual help. No initiatives have been taken in this regard in Kota. However, in Ghaziabad the lenient approach of GDA in regard to the

lose ownership of the house. Long term implication: If the user cannot repay the loan, he will terms and conditions, for building shelter. This situation may have allottees have borrowed the money from moneylenders on very heavy to avoid situations as in Ghaziabad, where 66 per cent of the sample credit, either in cash or in kind, should be made available to users spare the amount needed for this purpose. Some sort of institutional construction loans. The lowest income groups, on their own can not In both the cases there is no support provided in terms of

SHELTER CONSOLIDATION PROCESS

exceptional delay in their execution. implementation and to suitably modify any of the targets in case of an committee should be given the task of periodical review, to speed functional, already preoccupied with his own assignments. This level, rather than delegating this responsibility to some other to appoint a full time administrative head at the development agency should be ex-officio secretary of the committee. Care should be taken participation. The administrative head of the development agency to this committee in order to obtain user consultation and representatives from the intended user groups should also be nominated including HUDCO and the engineers in charge of the projects. A few should include the representatives of all the participating agencies,

enforcement of building bye-laws has allowed allottees to put up shelters in a manner that they could afford.

Thus, it is necessary to introduce construction loans in cash and in kind with all S/S projects together with flexible enforcement of building bye-laws.

DEVELOPMENT OF SECONDARY INFRASTRUCTURE

Even in the case of the Ghaziabad project, which is a successful one, development of secondary infrastructure has not been on time. The reason attributed to this is the involvement of several institutions, namely those of public health, education, medical, community development, among others. As suggested, at the monitoring stage, proper inter agency coordination and communication will obviate this constraint.

The commercial outlook of development agencies is another problem. As normally happens, the GDA delays the development of the shopping and commercial complex in order to get the maximum auction prices. But this delay causes a lot of inconvenience to the allottees who have put up shelters.

There is thus a case to strengthen the development of secondary infrastructure, by looking into and redefining the roles and responsibilities of various participating agencies. At the same time, the development of commercial and shopping components should be done within the stipulated time.

Table - 1
Evaluation of Project Designing

Designing component	Evaluation			Comments
	Kota Ghaziabad	Kota (Keshopura S/S VI & VII)	Ghaziabad (Vijai Nagar S/S)	
Scope of the S/S project	1.	2.	3.	<p>Almost one third of the city's population does not have a reasonable access to social, community and utility infrastructure as also the shelter structure and tenurial status.</p> <p>Ghaziabad has a tremendous demand for low income/low cost housing. Not only the 15% slum population of the city but also a lot of people from core-city areas and Delhi's housing backlog require reasonable housing facilities.</p>
			4.	
			5.	
Scale	Poor	Poor		<p>Here too the options offered are placed in a mismatch with effective demand in negative terms.</p>
Location	Poor	Good		<p>A majority of allottees either belong to the slum previously located on the same site or nearby areas; the city centre is located at a walking distance, this site has a strong potential as a low income neighbourhood as it is surrounded by settlements comprising the poorer and weaker sections of society.</p>
User consultation	Poor	Mixed		<p>Despite having no demand survey, the projects have a strong element of formation of homogeneous user group through on-the-spot registrations and verification of people living in slums and squatters. This has resulted in a powerful pressure group to deal effectively with common causes.</p>

1. 2. 3.

Plot options Poor Good

Options vary from 38 sq.m. to 60 sq.m. size. Taking into account the heavy pressure on land, the higher income groups may reduce their demand and switch over to so-called S/S option as has happened in most of our Cities.

Options vary from 23 sq.m. to 39 sq.m. size. Unlike Kota these standards are substantially reduced and are well able to keep the attraction of better off groups away from this site.

4.

5.

On-plot provision Good Mixed

On-plot provisions proposed are subject to affordability and to being within the HUDCO guidelines and limits. The provisions to be made are two water taps, foundation up to plinth, one W.C. and 1 metre high enclosure of walls over W.C.

Provisions proposed here do not include 1 metre high enclosure of walls over W.C. This is because of the high construction and land development cost and the binding to be within HUDCO limits. Kota project was taken up earlier in 1981 as compared to the Ghaziabad one in 1983-84.

Land use distribution Poor Good

Land use proportions are quite high for residential and circulation thus inviting the attention of higher income groups to capture these options through private housing market.

Proportionately less land use for residential purposes accommodates a density significantly higher than in Kota. Although the proportion earmarked for infrastructure is at a higher level, the standards for it are reasonably low and favourable for low income and low cost housing.

Water supply Mixed Mixed

It would have been better to have user consultation at predesigning stage in order to know appropriate priority as per affordability in wider context, e.g. include installation charges in the plot-price.

Here also user consultation was needed as in Kota.

Circulation Poor Good

Standards adopted for circulation are quite high and do not remain positive for the formation of low cost/low income incremental housing. This also keeps the project cost at a higher level.

Standards adopted here are reasonably low and positive for low income neighbourhood. This also provides economy for the sponsors (GDA) and subsequently the users.

	1.	2.	3.	4.	5.
Waste disposal	Mixed	Mixed			
Electricity & street lighting	Good	Good			
Education	Mixed	Good			
Health/Medical	Poor	Good			
Commercial	Mixed	Good			
Community centres	Poor	Good			
Open spaces & greenery	Mixed	Good			

	<p>The system proposed is good. But it would have been better to consult the city government right from the pre-designing stage. Ultimately the city government is supposed to maintain and absorb the system.</p>	<p>Here too, despite a good system, consultation with city government was lacking. As usually happens it may lead to a set of operational problems before and after handing over the system to city government.</p>
	<p>The system and standards proposed here are quite good provided the problems related to irregular electric supply are tackled.</p>	<p>Here too the only problem remaining is the irregular supply.</p>
	<p>Provision for primary education is made but secondary schooling is neglected.</p>	<p>Provisions are made for both primary and secondary education.</p>
	<p>There is no provision for any Health Clinic or Primary Health Centre.</p>	<p>There is a provision for one Health Clinic and one Medical Dispensary.</p>
	<p>Only two shopping centres comprising 28 shops are proposed.</p>	<p>Six shopping centres comprising 42 shops, 20 kiosks, two dairy shops and one bank are proposed.</p>
	<p>No community centre is proposed for a settlement expected to have around 6000 population.</p>	<p>Two community centres are proposed.</p>
	<p>Provision for a playground and green verge is lacking. However 11 parks are proposed.</p>	<p>In addition to 29 parks, a playground and green verge from all the four sides have been proposed.</p>

Table - 2
Evaluation of Project Organisation

Organisation Component	Evaluation	COMMENTS
	1. 2. 3.	
Preparation & Initiation	Poor Good	Neither a demand survey nor an evaluation of a similar case was conducted in order to identify actual priorities and precaution while framing the proposals.
	4. 5.	
Planning and designing strategies	Poor Good	Merely translating the HUDCO formats into a project does not really strengthen the low income housing support. Excessively high standards thus adopted in project attract higher income groups. This group successfully managed to get into the project as a genuine applicant. Rigid enforcement mechanism together with loose management led to a failure of projects undertaken.
Financing standards.	Poor Mixed	Financer (HUDCO) should not be concerned merely with the disbursement and recovery of loan as per the prescribed Correlation between the funds released, spent and physical progress vis-a-vis the plot allotment should be critically re-viewed at different stages of funding. A purely technical approach as happened in Keshopura - VII may lead to wastage of public investment. A system should be
		In case of composite housing schemes, the overall costing and loaning should not be offered. The proportionate share of funding as earmarked for various income group categories should also have a balanced approach. Care should be taken to make additions to the existing housing stock at a maximum possible level. These additions should be mostly in favour of low income

Contd.....

1. 2. 3.

4.

5.

evolved to bear the land cost for the project properly which is at present not included in S/S funding.

options followed by middle and high income groups.

Principal executing agency: internal organisation

Poor Mixed

Financial management, liaison with other participating agencies and monitoring and follow-up areas are the fields utterly lacking in terms of internal organisation at UTT-Kota. There is a need for proper exposure of accounts personnel to housing project finance mechanisms so that performance evaluation can be done in real terms. Overall documentation of project information also needs to be done in an orderly way. Communication between planning, engineering, architectural and fiscal wings of UTT needs to be strengthened further.

At GDA also the accounting system needs a fresh look in order to introduce performance budgeting so that a proper assessment and evaluation can be made available in due course. Project information consisting of different stages is not properly documented.

Institutional framework and Inter-agency coordination

Poor Good

Institutional framework within which these projects are placed seems to be complex. Follow-up and monitoring responsibilities are not properly fixed and maintained. It has resulted in a long delay even in the land development component (Keshopura VII). Total lack of interaction with city government may have further long term implications. A proper intervention from State Government who is also guarantor can hopefully set things right in this regard.

Institutional framework is very well conceived. Monitoring and follow-up stages are promptly covered due to the inclusion of the participating agencies in the same State Government department. Further the GDA head also looks after the city government's work.

User interaction

Poor Good

User interaction at both the pre-allotment and post-allotment stages is almost nil. Zero level of post-allotment development also accounts for the lack of user-interaction among other things.

User interaction at both the stages is quite strong physical occupation mostly by genuine allottees does not need any other evidence.

Table - 3
Comparison of project objectives/targets and achievements

Objective/ component	Kota		Ghaziabad		Vijai Nagar S/S					
	Keshopura S/S - VI		Keshopura S/S - VII							
	Targets	Achievements as on	Targets	Achievements as on	Targets	Achievements as on				
	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
Land development (Ha)	4.73	Done	PC	13.139	Half done (Water supply work not yet executed)	Half done (Water supply work not yet executed)	19.0275	Half done	Done:OK.	
Plots to be developed	380	380	380	1010	1010	1010	1359	651	1359	
Allotment of plots	380	380	380	1010	1010	1010	1359	651	1255	
Shelter consolidation	380 (by May '84)	-	Only 2	1010 (By May '84)	Nil	Nil (By Dec. 87)	1359	-	1250	
Water supply network	May 1982	Done	PC	May 82	Done	PC	July-Dec. 1985	Half done	Done:OK	
Circulation network	May 1982	Done	PC	May 82	Done	PC	July-Dec. 1985	Half done	Done:OK	
Street lighting	May 1982	Done	PC	May 1982	Done	PC	July-Dec. 1985	Half done	Done:OK	

Contd.....

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
Plantation and green provision	May 1982	Done	PC	May 1982	Done	PC	July-Dec. 1985	Half done	Done:OK	
Primary school	1	NA	NA	1	NA	NA	2	UP(2)	UP(1)	
Secondary education	NP	-	-	NP	-	-	1	UP	UP	
Medical clinic/ dispensary	NP	-	-	NP	-	-	2	UP	UP	
Shopping centre	1	NA	NA	1	NA	NA	6	UC	UC	
Kiosks	NP	-	-	NP	-	-	20	UC	UC	
Community centre	NP	-	-	NP	-	-	2	UP	UP	
Bank	NP	-	-	NP	-	-	1	UC	Done:OK	
Development of parks	4	NA	NA	7	NA	NA	29	(21)UP	(29)UP	
Development of playground	NP	-	-	NP	-	-	1	UP	UP	
Green verge	NP	-	-	NP	-	-	From 3 sides + 4th side military farm land	UC	UC	

NA - No Appointments NP - No Provision - as per project objectives
 OK - All right in the context of operational viability at postinstallation stage.
 PC - Poor condition due to maintenance and operational problems. UP - Under Process - matters are not yet physically initial
 UC - Under construction - execution work has been taken up
 * - Month includes the date of completion of project
 ** - Month includes the dates of visit to the project by NIUA's evaluation mission.

Table - 4
Efficiency of the Project Implementation

Implementation component	Evaluation	Comments
	Kota Ghaziabad	Kota (Keshopura S/S VI & VII)
1.	2.	4.
Land acquisition	Mixed	Good
		Since it was public land there was no problem with regard to its acquisition but UFR did not take into account the locational suitability.
		5.
		Despite a portion of land being encroached upon by illegal squatters the acquisition has been very smooth. Original dwellers have been absorbed on the same site among others.
Selection of allottees	Poor	Good
		22% sample allottees belong to middle and high income groups. 97% have the work-place away by >3 km. from the allotted site as compared to only 15% for the original living place. Registration charges are quite high, Rs.100 in 1981; Eligibility criteria are loose.
		Only 7% sample allottees belong to M/HIG category. Only 6% have the workplace away by >3 km. Registration charges are significantly low : Rs.50 in 1984. Eligibility through on-the-spot organisation of slums and squatters with proper verification.
Allotment	Poor	Good
		Plots are allotted even without laying down of water supply network (Keshopura-VII) and fully developed liquid waste system at both adjoining sites.
		Plots are allotted gradually as soon as land is developed and plot provisions are made. Delay in allotment thus caused does not lead to negative achievement.
Shelter consolidation	Poor	Good
		Out of 1390 allottees only two have been able to put up a shelter. Rigid enforcement of building bye-laws etc., wrong selection of beneficiaries; land development constraints;lack of construction loan; negative work-place relationship etc. are among the reasons why allottees have not put up a shelter. Due to a lack of
		Almost all the allottees have put up a shelter. Sponsors adopted a very lenient view with regard to enforcement of typical building bye-laws. Allottees have put up a shelter - whatever they could afford including thatched roof and scrap material Location, selection of beneficiaries and adequate land development are the other

1. 2. 3.

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appropriate selection no users' pressure group was formed.

reasons that attracted the allottees to consolidate the shelter at the earliest. Allottees formed a powerful pressure group as they mostly belonged to actual EMS group.

Monitoring and followup Poor Good

Neither sponsor (UITP), guarantor (State Government), nor financier (HUDCO) bothered to see how and why the land has not been fully developed and sites are not physically occupied by allottees (May'82 to July'86). Even after cancellation of 197 allotments the UITP did not make any alternative arrangement.

Sponsors (GDA) have their own site office. Interagency coordination and communication are properly maintained.

Cost recovery Poor Good

The recovery of funds for financier (HUDCO) is hundred per cent. But the same from allottees is extremely poor. The first one has been possible due to unforeseen diversion of funds from the revolving kitty generated through a set of activities. This diversion will have long-term implications. It has been difficult to monitor the recovery properly as the allottees are scattered all over the city.

Daily collection of dues has practically become weekly based. The bank in which dues are to be deposited is situated right in the settlement. Monitoring in this regard is very effective as the allottees are living at one particular site.

Development of on-plot provisions Mixed Good

On-plot provisions are not properly linked with infrastructure.

On-plot provisions provided are properly linked with infrastructure.

Water supply Poor Good

Due to varied reasons the water supply work was yet to be executed at Keshopura VII.

Water supply work was completed on time.

Liquid waste disposal Mixed Good

City government is not properly consulted. Although the work was executed almost in time, the system is getting blocked due to lack of any operation and maintenance.

System is not only developed in time but also remains under operation due to constant use.

1.	2.	3.	4.	5.
Circulation	Mixed	Good	Standards adopted are quite high. Existing condition is very poor due to a total absence of maintenance.	Standards adopted are reasonably low. Pavement is done with bricks which is more economical. So far the maintenance has been adequate.
Street lighting	Poor	Good	Only electricity poles stand as witnesses to the installation. There have been a number of thefts of wiring and bulbs.	Electric system exists and is under satisfactory operation. Irregular supply is a common problem that is faced here also.
Plantation and green provisions	Poor	Good	Although the money spent in this regard is more than the proposals, not even a single tree is visible. This has happened due to a total lack of maintenance.	Site is not only well developed through internal plantation but also a green verge is coming up from three sides leaving the fourth side for an already existing military farm.
Primary schools	Poor	Mixed	There is no evidence that the sponsors (UIT) have made any efforts to initiate even the preliminary inspection and estimates through the respective implementing agency. Lack of a user group contributed to it further.	Out of two schools proposed one has already come up. The provision for the other is under process. This has been possible due to a prompt communication maintained by sponsors (GDA) with other participant agents. Existing community has further provided the scope.
Secondary education	No proposal	Mixed	Any provision for secondary education was not designed.	Matters are still under process in this regard and the land earmarked for this purpose is lying vacant.
Medical and health support	No proposal	Mixed	As per the project designing, the sites selected totally lack any such provisions.	Although two dispensaries/clinics are proposed - the physical presence of the support is yet to be made. However, the preliminary initiatives in this regard have already been taken.

1.	2.	3.	4.	5.
Business and commercial support	Poor	Mixed	There is no evidence of efforts with regard to the development of the proposed shopping centres.	Construction of shopping places is yet to begin. However, the bank is already there. The delay in this regard is attributed to the commercial outlook of most of the development agencies who try to earn as much as possible through late auctions.
Community centre	No proposals	Mixed	Project designing does not include this.	There are two centres proposed but the physical development is still being awaited. Initial liaison is maintained by GDA with responsible agent.
Parks and playgrounds	Poor	Mixed	Parks proposed can only be seen as vacant land. Lack of any pressure from users has further encouraged the inaction present in this area.	Parks and playgrounds are not adequately developed. Perhaps the agency is waiting for the handing over to the city government who will ultimately handle it.

Table - 5

Indicators of the Project Impact

Impact type component	Degree of impact		INDICATORS	
	Kota Ghaziabad	Kota (Keshopura S/S VI & VII)	Ghaziabad (Vijai Nagar S/S)	
	1.	2.	3.	4.
				5.
<u>I. Impact of Users</u>				
i. Utility infrastructure	Neutral	Positive	<p>Since the physical occupation is almost nil this question does not arise. Presently only 57% respondent allottees have access to protected water and in-house latrines at their original living places. Public drainage system is available to only 61% sample</p>	<p>Most of the allottees did not have access to protected water and public drainage system at their original dwelling place. At allotted site not only water and drainage system but also septic tanks have been introduced.</p>
ii. Social infrastructure	Neutral	Positive	<p>51% sample allottees did not have reasonable access to social infrastructure at their original dwelling place.</p>	<p>At the original dwelling place nobody used to have a reasonable and affordable access to social infrastructure. Allotted site is going to provide a package access to various infrastructure types. (Refer to Table 3).</p>
iii. Tenurial status	Positive	Positive	<p>Only 40% respondent allottees had access to (legal or illegal) owner-occupied housing. (Although on paper they denied owning a house in order to become eligible applicants). This project provides tenurial rights to all the allottees on lease-hold basis.</p>	<p>Only 20% respondent allottees had access to ownership housing. All the allottees now have a legal shelter tenure.</p>
iv. Shelter structure	Neutral	Positive	<p>At the original dwelling place 51% sample allottees have got katcha houses.</p>	<p>69% sample allottees have now got access to pucca, or semi pucca house as against 35% at original dwelling place.</p>

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v. Access to Neutral Positive
rooms

At the original dwelling place 78% sample allottees have access to two or more rooms.

80% sample allottees have access to two or more rooms at allotted site as compared to only 10% at original dwelling place.

vi. Fiscal Negative Positive
equilibrium tive

Only 29% respondent allottees are repaying loans regularly to UFR. 197 allotments have been cancelled in case of allottees who have not paid any instalment. Drop-outs through private land market are very few because of lack of speculation of plot price 92% respondent allottees wish to put up a shelter with financial help from credit institutions but do not know how to obtain access to it.

80% sample allottees are repaying loans regularly to GDA. Only a few dropout cases can be observed because settlements that have emerged have constituted very strong low income neighbourhood thus keeping the attraction away from higher income group users. Only 14% sample allottees have access to institutional finances for house construction as against 66% to moneylenders and 20% from their own savings or from friends and relatives. Even then it seems that the overall cost benefit aspects for the users are not very negative as the as the recovery ratio and drop-outs are quite reasonable.

II Impact on City

i. Housing Negative Positive
stock ive

There has been no addition to city's housing stock.

Shelters have come up on the developed sites. More important is the level of access to the implicit target group.

ii. Environmental Negative Positive
improvement ive

This project is not linked with the improvement of existing shanty structures or slums/squatters settlements.

Since the allottees belong to the squatters and slums located on public land, care has been taken that the land/houses vacated by them are not encroached again by others and are used for the provision of public services and amenities as originally earmarked.

Contd.....

1. 2. 3. 4. 5.

iii. Social impact Neutral Positive

The social status of the low income population in general and the allottees in particular remained almost constant. They still lack access to protected services and affordable infrastructure.

Not only have the allottees got a better social status as a result of improved living standards, the other low income population is likely to have a better infrastructure provided on the land vacated by the allottees.

III Impact on Policy Relevance

i. Project formation Negative Positive

S/S projects are formulated here in isolation by overall low income housing suppliers (UIR and Rajasthan Housing Board) who did not correlate and coordinate their efforts. Since after commencement of this project Rajasthan Housing Board flooded the supply for MIG/HIG users as a result these users did not come up to this site. Thus, plots retained were for speculation.

On-the-spot registration and verification of allottees living as squatters and in slums located on public land provided a way for the city government to have access to land vacated by allottees. City government tends to use this land for upgradation of respective areas.

ii. Standards Negative Positive

Standards adopted here are by and large quite high and attract the entrance of higher income groups through private land market.

Standards adopted here are reasonably low and do form a strong case for the development of low-income neighbourhood.

iii. Project financing Neutral Neutral

Both the projects are based upon sites and services concept. 100% financing does not include the land cost resulting in locational disadvantage for the formation of low income/low cost housing settlement.

These schemes heavily support the High Income Group Housing to the extent of 33% to 45% proportionate funding/costing comprising merely 5% house units. More Middle Income Group Housing can be provided in this.

iv. Selection of users Negative Positive

Eligibility criteria are generally misused by fake affidavits, many got plots for speculation purposes. (40% allottees reside in posh localities.) Registration fee (Rs. 50 in 1984)

Selection through on the spot registrations and verification keeps genuine people in the list. Registration fee (Rs.50 in 1984) is also fairly low.

1. 2. 3.

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100 in 1981) is fairly high for low income group. No demand survey was made in order to know actual priorities .

v. Cost recovery Negative Positive

Financers (HUDCO) of the project did not look into the level and status of physical development and their correlation with financial progress. Merely the release of instalment on the basis of expenditure incurred as against proposed does not cover real life achievements. Keshopura-VIII is not yet fully developed but repayments are made in time. Recovery from allottees is extremely poor. Proper monitoring is not introduced.

Repayment to financer is well in time. Cost recovery from allottees is also noticed at a very reasonable ratio.

vi. Project implementation: pre-allotment stage Negative Positive

Coordination among participating agencies is very poor. Monitoring is again slack.

Unlike Kota most of the participating agencies for primary development belong to same State Government department. Coordination and communication at local level are very smooth.

vii. Shelter consolidation Negative Neutral

No institutional credit is available for the users. No building material support. Rigid building bye-laws. No efforts by sponsors to see how and why the shelter is not coming up. Even after cancellation of 197 allotments no efforts were made to choose alternative allottees.

No institutional credit. But flexible enforcement of building bye-laws supported consolidation efforts strongly.

viii. Post-allotment development Negative Neutral

Since shelter consolidation is zero, the development of secondary infrastructure is very likely to get delayed. But in the meantime the sponsors (UIP) did not attempt liaison with responsible agents to initiate preliminary designing.

Although the site is almost fully occupied secondary development is by and large incomplete. But most of the components are under process and likely to be provided in due course.

'Sites and services' projects are based upon the concept of shifting the focus from providing finished housing to serviced lots. The attempt is to develop a policy instrument to cater to the needs of families at the lower end of the income spectrum, and to harness the energies of the occupants themselves in providing low income housing stock. On the one hand, it improves the quality of housing conditions of the low income population, and on the other, enables them to improve housing facilities, service and infrastructure standards as and when they can afford them. This makes the process of house

housing policies.

dwellers. These are, at present, the main ingredients of basic development are derived from the actual practice of squatters and slum action, gradual housing consolidation, core housing and progressive themselves. The idea of mutual aid, self-help construction, community ability of the urban poor to provide shelter and services for Literature on low income housing clearly indicates the desire and

upgrading', and other basic housing programmes are based.

intellectual moorings on which 'sites and services', 'community Turner, Margin, Peattie, Nelson and others have provided the moral and housing options. The pioneering studies of Abrams, Koenigsberger, principles and approaches borrowed from the literature on low income The concept of serviced sites for the urban poor contains

BACKGROUND

APPROACH TO THE STUDY

CHAPTER I

To begin with, from Arumbakkam (World Bank-aided), the sites and services projects in India have been replicated in all types of towns. These projects either form parts of composite housing schemes or form separate schemes/projects by themselves. Most of these projects are financed by Housing and Urban Development Corporation (HUDCO). During the Sixth Plan (1980-85) the total number of plots in the schemes financed by HUDCO was 1.73 lakhs, in 669 cities. Of these plots, 80 per cent belonged to the low income plotted development and the sites and services components, specifically geared for low income groups, including the Economically Weaker Sections (EWS), that is, the poorest of the poor, according to the Indian terminology.

Right from the mid 1980s, the sites and services projects have been replicated on a large scale in third world countries. The International Bank for Reconstruction and Development (IBRD) is the initial promoter of these projects. In a 1974 World Bank paper - 'Sites and Services Projects', it was argued that "Sites and Services Projects and Slum Improvement Programmes are complementary strategies that hold out considerable hope of overcoming pressing needs in low income urban housing".

consolidation easy and smooth for the urban poor and spreads the demand for scarce building material over a number of years. In contrast, the massive conventional low income housing programmes generate high levels of competition for procuring scarce material in the market, leading to high prices, scarcities and speculation.

SCOPE AND OBJECTIVES

The Government of India is making tremendous efforts to upgrade housing and urban development conditions in small and intermediate cities, in addition to metropolitan areas. These cities have a solid potential for low income housing development as the rate of growth in these towns varies from 2.5 per cent to 10 per cent per year during 1971-81 (as per 1981 census). A few cities have even recorded a growth rate of over twenty per cent per year. Most of this growth is attributed to the low income migrants from the rural hinterland and small towns. HUDCO alone has funded S/S housing in 657 small and medium sized cities during 6th Plan period.

The pace of implementation of S/S projects in small and medium cities however, has been considerably slow due to a variety of reasons. Unlike in metropolitan cities, development agencies responsible for executing S/S housing in these towns do not have adequate expertise and resources for implementation. They involve quite a few participating agencies, often facing coordination problems and communication gaps. Lack of technical expertise also leads to hurdles in approval procedures. Many of the projects thus initiated are found ill conceived and lack affordability, accessibility and popular participation.

With this in view the present study has evaluated the sites and services projects in selected intermediate cities according to the following objectives:

1. To compare the initiation, preparation, planning and designing of projects in the wider context of actual priorities for low income housing;

The cities selected in this study are Kota (Rajasthan) and Ghaziabad (UP). Both the cities are medium sized with a population of around 300,000 in each. These are multifunctional cities with a predominantly industrial character. Care has been taken to select one successful and one average case including a project executed within stipulated time so as to compare the evaluations. To all appearances the Ghaziabad project has been a success in contrast to the Kota projects where physical occupation of sites and shelter construction has been almost nil. Two adjacent projects have been selected in Kota, while in Ghaziabad the project selected is a pilot project of the Ghaziabad Development Authority (GDA), undertaken at the instance of Housing and Urban Development Corporation (HUDCO) and Government of India for the International Year of Shelter for the Homeless - 1987

METHODOLOGY

Useful conclusions and lessons may be drawn for revising policy guidelines, financing, planning and designing strategies and finally in replicating S/S projects in small and intermediate cities.

- v. to suggest precautionary measures and lessons for the replicability of S/S projects in similar contexts.
- iv. to assess the programme impact on the quality of life of the target population and access to various civic services available in the project areas; and
- iii. to evaluate the effectiveness of the house consolidation process including the elements of self-help and mutual help;
- ii. to examine the 'project implementation stage' including inter-agency coordination, financing, allotment procedures, infrastructure standards and post-allotment services with a view to analyse the levels of achievement as compared to the targets and the reasons thereof;

Preliminary discussions were held with the functionaries of various implementing agencies before selecting the projects and finalising 'information sheets' and questionnaires.

A detailed survey of allottees with a ten per cent sample, was conducted in both the cases. In Kota, the allottees were contacted at addresses shown in their application forms because out of the 1390 allottees, only two had built shelters and were living in them.

In the absence of any single document giving systematic information of project operations in both the cases, an exhaustive information sheet was prepared and filled in after consulting various departments and sections in relevant agencies.

Kota is one of the fastest growing cities in the country. Though the city has been growing since 1931, a significant increase in population was noticed only during the 1951-61 census period when the Rajasthan Government announced several concessions to enable the setting up of industrial units in Kota. Consequently, a number of large and medium scale industries came up in the Kota district as a whole and the urban centre in particular, creating a demand for people in both the formal and informal sectors. As a result, a large number of people from nearby areas migrated to Kota for better employment opportunities.

Not surprisingly, population figures jumped from 0.65 lakh in 1951 to 1.20 lakhs in 1961. Since then, the high rate of growth has been sustained by the city's enlarging shape in every sphere of urban activity. Table 2.1 gives the picture of urban growth for the three decades between 1951 and 1981.

Kota

CITY CONTEXT

THE PROJECT SETTING

CHAPTER II

As seen in Table 2.1 during the 1961-81 census period, the city experienced a growth rate of nearly 10 per cent per annum, adding more than 11,000 persons every year to the city's urban population. It has been estimated that by the year 1990, Kota's population will rise to 5.79 lakhs.

Census year	Population	Kota	
		Rajasthan (Urban)	
		Decadal growth rate (%)	
1961	120,345	84.8	11.0
1971	212,991	76.9	38.4
1981	358,241	68.2	58.6

Urban Growth 1961-1981

Table - 2.1

However, as mentioned earlier the provision of planned housing and serviced plots has not kept pace with the needs of the growing population and a deficit in housing supply has manifested itself in the formation of slums and squatter settlements. According to official data, in 1981 nearly 110,000 thousand persons were living in informal settlements like slums and squatters which constitutes more than 30 per cent of the city's total population. It has been estimated that by 1990 the city's slum population will further rise by 63 per cent and will probably become over 173 thousand inhabitants. This will be an alarming situation for the local authorities to handle. Considering the magnitude of the problem, the Urban Improvement Trust (UIT) at Kota has taken the initiative with the commencement of 'Sites and Services' projects in May 1981.

Ghaziabad

located on the outskirts of Delhi, Ghaziabad is one of the most prominent industrial and commercial centres of western Uttar Pradesh. It had a population of about 2.75 lakhs in 1981. The annual population growth rate during the 1971-81 census period was 11.5 per cent, being almost double that of the state average of 6.0 per cent. A growth rate of 115.2 per cent during 1971-81 represented an absolute increase of over 1.4 lakh persons during a short span of ten years. It has been estimated that by 1990, the city's population will further rise to 6.45 lakhs.

Table - 2.2

Urban Growth : 1961-1981

Census year	Population	Decadal growth (%)	Ghaziabad	UP (Urban)
1961	63190	65.3	9.9	
1971	128169	102.8	30.6	
1981	275815	115.2	60.6	

Provision of planned housing and serviced plots, however, has not kept pace with their need. This deficit in housing supply has manifested itself in the formation of slums and unauthorised settlements. Official statistics reveal that in 1981 about 39,000 persons lived in slums and the growth of the slum population was faster than the growth of the overall population.

KOTA REVISED SITE & SERVICE SCHEME AT KESHOPURA PHASE VII

TOTAL SCHEME AREA 4.73 HECTOR

LAND USE ANALYSIS

USES	AREA (ha)	PERCENTAGE
1 RESERVED RESIDENTIAL	0.60 ha	12.69%
2 PLOTS SIZE 55x110m	1.60	33.55%
3 PLOTS	1.60	33.55%
4 OPEN	0.64	13.53%
5 EDUCATIONAL	0.15	3.17%
6 SHOPS	0.03	0.63%
TOTAL	4.73	100%

SNo.	SIZE	USE	No. of PLOTS
1	55x110m	RESIDENTIAL	300
2	11.5x21.0m	RESERVED RESIDENTIAL	22
TOTAL			402

MAP-1



SCALE: 1:0cm = 50meters

NATIONAL INSTITUTE OF URBAN AFFAIRS
NEW DELHI

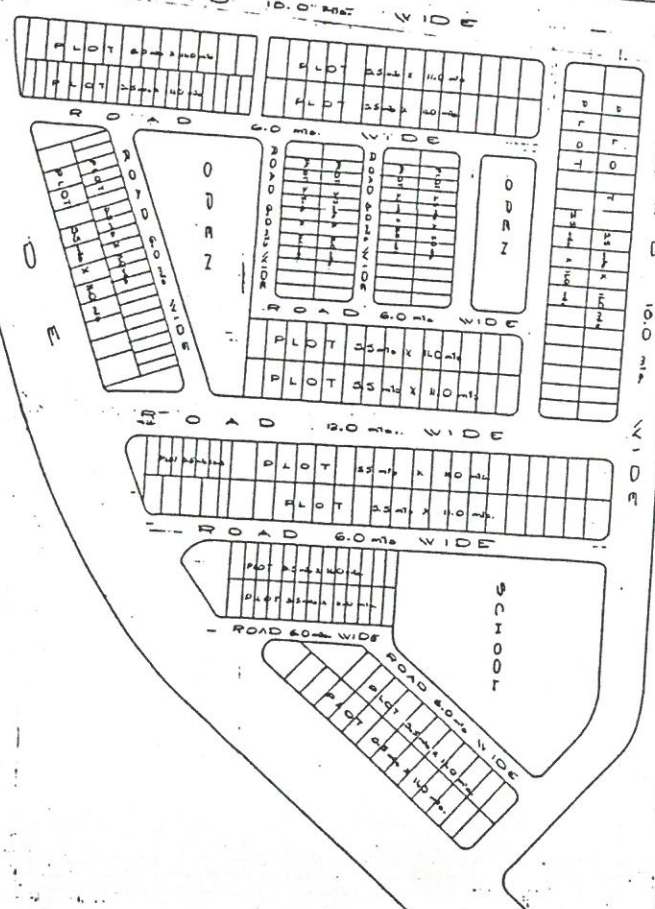
R O A D

30.00 mts

7 - I D E



8-B



SCHEDULE OF AREA
 TOTAL SCORES AREA
 LAND USE ANALYSIS:-

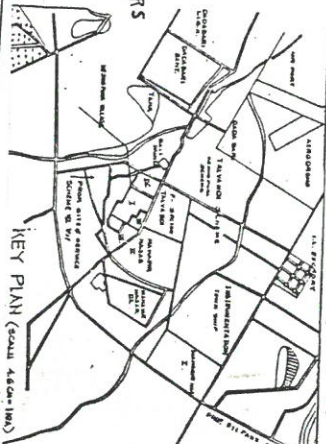
LAND USE	Area (sq. mts)	Percentage
1 RESIDENTIAL	5,306	44.75
2 COMMERCIAL	0,439	3.12
3 ROAD	2,509	17.69
4 OPEN SPACE	0,100	0.83
5 OPEN SPACE (PARKS)	0,100	0.83
TOTAL	12,112	100

SCHEMATIC OF PLOTS:-

LAND USE	Area (sq. mts)	No. of PLOTS
1 RESIDENTIAL	5,306	117
2 COMMERCIAL	0,439	10
TOTAL	5,745	127

SCALE :- 1 CM = 5 METERS

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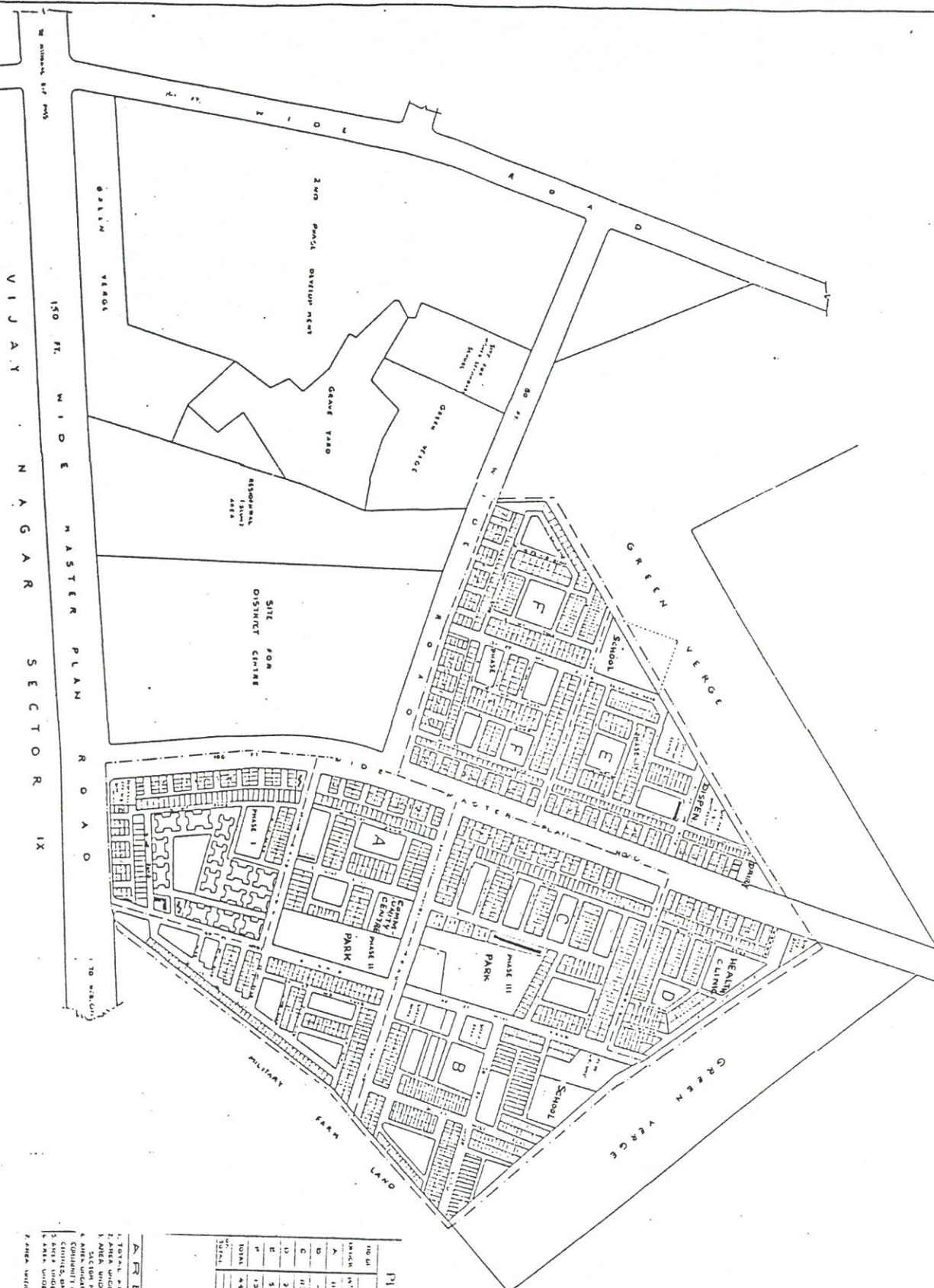


SCHEDULE AT KESHIO PURA (RAJ)
PHASE-VIII

KOTA

MAP-2

SITES & SERVICES
PROJECT VIJAY NAGAR
GHAZIABAD, UP



VIJAY NAGAR MASTER PLAN ROAD

130 FT. WIDE

PILOT INDEX

NO. OF	PL. TO 1 ST	DATE	TOTAL	TOTAL
SECTION	NO.		NO. OF	NO. OF
			PLOTS	PLOTS
A	117	12/2/52	127	127
B	118	12/2/52	127	127
C	119	12/2/52	127	127
D	120	12/2/52	127	127
E	121	12/2/52	127	127
F	122	12/2/52	127	127
TOTAL	448	4/7/52	843	1410

AREA INDEX

NO. OF	PL. TO 1 ST	DATE	TOTAL	TOTAL
SECTION	NO.		NO. OF	NO. OF
			PLOTS	PLOTS
A	117	12/2/52	127	127
B	118	12/2/52	127	127
C	119	12/2/52	127	127
D	120	12/2/52	127	127
E	121	12/2/52	127	127
F	122	12/2/52	127	127
TOTAL	448	4/7/52	843	1410

SCALE: 1" = 100'

S-7-N

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In the context of a rapidly deteriorating low-income housing situation the Ghaziabad Development Authority (GDA) has undertaken a 'Sites and Services' scheme with the objective of improving the shelter conditions of the urban poor.

IDENTIFICATION OF PROJECTS SELECTED

Projects selected in Kota and Ghaziabad are financed by HUDCO and implemented by development agencies : Urban Improvement Trust (UIT) and Ghaziabad Development Authority (GDA) respectively. The salient features relating to the shape and nature of these projects are shown in Table 2.3.

Table - 2.3

Identification of Projects Selected

City/Project/Scheme	Specification	Commencement	Completion	Period	Plot options (sq.m.)	No. of plots
Kota (Keshopura S/S)	VI	May 1981	One	Year	38.50	380
	VII	May 1981	One	Year	60.50	917
Ghaziabad (Vijai Nagar S/S)	VI	Oct. 1983	One	Year	36.42	75
	SN.	Oct. 1983	One	Year	36.42	125
	SN.	Jan. 1984	Six	Months	23.41	556
	SN.	July 1984	Six	Months	25.64	306
	SN.	Oct. 1984	Six	Months	36.42	297

In Kota, the selected schemes were Keshopura - VI and VII, while in Ghaziabad the selected projects' site includes the sites and services components from five different residential housing schemes.

These schemes offered 1390 plots in Kota and 1359 plots in Ghaziabad.

(Table - 2.3).

Keshopura - VI in Kota has been taken up under the Royal Technical Assistance - United Kingdom (RTA) scheme in collaboration with Overseas Development Agency (UK) and HUDCO. S/S components from different schemes in Ghaziabad have been taken up as part of a demonstration project for IVHS (1987) especially on one project site, namely, Vijai Nagar S/S (Map 3). These schemes included a variety of options whose specifications have been given in Table 2.4.

Table 2.4

Ghaziabad Project : Specifications of Options Offered

Phase No./*	Block	Plot Option	Total Plots	Scheme No.
I (2752)	A	47	28	-
II (2753)		69	56	-
III (2751)	B+C	113	118	325
IV (2767)	D+E	80	102	-
V (2750)	F	159	138	-
Grand Total	-	468	442	325
			34	90 1359

* Scheme numbers given within brackets indicate the sanction of project approved by HUDCO.

The Ghaziabad project basically includes the concepts of sites and services, resettlement and slum reconstruction. This is a project intended to resettle squatters and reconstruct one of the existing shanty settlements. More than forty per cent of the allottees on this

site belong to the squatter settlement located on the same public land earmarked for this project

Evaluation

Each of the projects selected in Kota has a separate official and physical identity, while in Ghaziabad the sites and services components from five different schemes have been clubbed together. This clubbing together provided a mixed identity to the S/S components of different housing schemes in practical and physical terms. This identity has a long term effect on the accessibility to the target group as, unlike the composite housing scheme, it minimises the attraction for higher income groups, and provides a positive environment for the establishment of a low income neighbourhood.

LOCATION

Both projects selected in Kota are adjacent to each other and are located in the south-western periphery of the town nearly three kilometres away from the industrial area. This site was proposed on agricultural land which was subsequently acquired by U.P. From the point of view of security this site does not appear ideal because it is surrounded either by open fields or by land being developed for Rajasthan Housing Board (RHB) colonies.

The Ghaziabad S/S project is located in the south-central periphery of the town. This site adjoins the core-city area and is within walking distance of it. The site falls in sectors XI and XII of the Ghaziabad Metropolitan Plan, and was proposed on public land that was partly encroached upon by unauthorised squatters. All the

original squatters have been accommodated at the same site, either in S/S plots or EWS finished housing.

Evaluation

Kota project seems to have a negative relationship between work place and residence. More often low income groups do not have regular sources of employment. It is therefore imperative for them to line themselves as close as possible to the centre of economic activity, so as to ensure at least minimum daily wages. In Kota, these pools of economic activity, as in other cities, are located in the core-city areas. Commuting to the core-city areas and the industrial belt is very difficult for the lowest income participants of the project. This is that strata of society where not only males but females and children also contribute their efforts to ensure socio-economic survival.

The work place-residence relationship in Ghaziabad seems to be positive. The settlement was developed on public land that earlier housed a squatter colony. About 80 per cent of the participants in the project belong either to it or to the nearby low income areas, thus, confirming the unaffected accessibility to the work place for a vast majority of allottees.

As mentioned earlier some doubts were expressed about security at the Kota site. In Ghaziabad, however, there was a strong security support because a majority of the allottees immediately started living in the colony.

CHAPTER III

EFFICIENCY OF PROJECT OPERATIONS - PLANNING AND DESIGNING ASPECTS

INITIATION AND PREPARATION

Sites and Services projects selected in both the cities have been initiated by the local development agencies, UIT, Kota and GDA, Ghaziabad. All these projects have been financed by HUDCO. In Kota, the S/S projects under review in this study are the initial projects with HUDCO funding, while in Ghaziabad the projects came up after fifteen different housing projects had already been undertaken by GDA with HUDCO funding.

UIT (Kota) and GDA (Ghaziabad) are the principal implementing agencies of the projects selected under this study. These agencies in fact translated HUDCO guidelines and preparatory formats/checklists into an action plan that was subsequently approved by HUDCO prior to sanctioning the loan. In the case of the EMS, HUDCO funding is 100 per cent, while in other cases it varies from 60-85 per cent. HUDCO funds are released on a guarantee from the respective State Governments about surety of repayment by the client. State Governments are supposed to get guarantee charges from the development agency concerned at the rate of 25 per cent of loan amount per annum. The institutional framework for project realisation in both the cities has been indicated in Table 3.1.

Table 3.1

Institutional Framework : Roles and Responsibilities

Role	Responsible agency

i. Principal implementing agency	UIT, Kota GDA, Ghaziabad
ii. Preparation and initiation	- do -
iii. Planning and designing	- do -
iv. Financing	HUDCO, UIT HUDCO, GDA
v. Implementation	
a. Water on/off site	PHEI, Rajasthan (UP Govt.) Jal Nigam
b. Sewer/septic tank/drainage	UIT GDA
c. Roads	UIT GDA
d. Electricity/street lighting	RSEB UPSEB (UP Govt.) Rajasthan (Government)
e. Core construction for on-plot provisions	UIT GDA
vi. Monitoring	UIT GDA
vii. Selection of participants	UIT GDA
viii. Distribution/allotment of plots	UIT GDA
ix. Cost recovery from allottees	UIT GDA

Evaluation

No proper demand survey was carried out in any of the cities to identify effective demand and actual priorities through proper user consultation. In Ghaziabad, however, the S/S project included a slum reconstruction component. In addition, on-the-spot registrations and

verification through official visits to the low-income settlements made it possible to identify the effective demand in terms of location, neighbourhood, income and employment variables.

In both cases the implementation of S/S projects in similar contexts had not been properly evaluated. Had this been done at the preparatory stage the operational difficulties that hampered the realisation of these projects would not have surfaced, and precautions could have been taken sufficiently in advance to ensure the success of the ventures.

The institutional framework as conceived in both cases is quite complex. There is no evidence of any consultation with participating agencies about resource availability and capability. Pre-conceived roles and responsibilities were assumed in both the cities that led to cost and time overruns in the projects.

PLANNING AND DESIGNING STANDARDS

Distribution of Land Use

All the projects under study have a balanced land use pattern. The share of land used for residential housing varies from 40 per cent to 51 per cent of the total project area. In Ghaziabad there is a substantially higher proportion of land that is open. This is attributed to additional provisions for green verges, farmland and graveyard. The higher proportion of land for community/social facilities in Ghaziabad is because of the provision of a District Centre which will cater not only to current needs of the present sites but also other sites proposed for development in the near future in surrounding areas.

The break-up of land subdivision with specific land use in the selected projects is provided in Table 3.2.

Table 3.2

Proposed Land Use Pattern in Selected Projects

Type of use	VI Kota (Keshopura S/S scheme)	VII Ghaziabad (Vijai Nagar S/S scheme)
-------------	--------------------------------------	--

a. Total area (ha)	4.73	13.139	19.0275
b. Residential S/S plots (% of a)	35.53	44.95	24.02
c. Circulation (% of a.)	34.46	31.80	26.50
d. Open spaces (% of a.)	13.53	18.09	24.54
e. Community/social facilities (% of a.)	3.80	4.16	10.49
f. Flatted development: residential (% of a.)	-	-	14.45
g. *Others (specify) (% of a.)	12.68	-	-

* Reserved residential land to be auctioned for MIG and IIG.

Evaluation

Land use distribution seems to be aiming at high standards. The scale of provisions for circulation, open spaces, community and social facilities is likely to attract the higher income groups and in the process throw the target groups out from the area as soon as these facilities are provided. As a result of accelerated urbanisation and consequent pressure on land, rents and land prices in these areas may

increase rapidly, thus making the project financially nonviable for low income housing.

Density Estimates

Density in terms of dwelling units per hectare (DU/Ha) and persons per hectare (PP/Ha) in the respective projects and project sites area as a whole including the selected S/S projects which are adjacent to each other can be seen in Table 3.3.

Table 3.3

Density Pattern as Proposed in Selected Projects

Density	Kota (Keshopura		Ghaziabad (Vijai Nagar S/S*							
	VI	VII	Combined		I	II	III	IV	V	ed
	2750	2751	2752	2753	2767	Com-	bin-			
Dwelling unit per hectare DU/Ha	80	77	78	161	161	161	161	161	161	138
Persons per hectare PP/Ha**	400	385	390	805	805	805	805	805	805	690

* Including S/S and EWS flat development - (finished housing).

** On the assumption of a household size of 5 persons.

*** This includes the actual site consisting of circulation, open spaces, utility infrastructure and facilities.

As stated earlier the Ghaziabad project includes the EWS and S/S

components from five different composite/mixed housing schemes.

Density in Ghaziabad is therefore much higher than in Kota.

Evaluation

Despite a larger proportion earmarked for open spaces and facilities at the Ghaziabad sites, the density in terms of DU/Ha and PP/Ha is much higher than at the Kota sites.

Infrastructural Standards

Utility Infrastructure

Circulation Network Standards

Circulation standards seem to be higher at Kota as compared to Ghaziabad. Table 3.4 indicates the various waywidths of the circulation pattern in selected projects.

Table 3.4

Circulation Pattern in Reviewed Projects

Type of road	Kota (Keshopura S/S)	Ghaziabad (Vijai Nagar S/S)	Composite site
Major	31	30 & 25	45* : 30 & 24
Secondary/Sector	18	18	18 : 12 & 9
Tertiary/Internal	6	12 & 6	8 : 6 : 5 & 4

* Master Plan road touching the periphery of site. Both the sites in Kota offer excessively high standards for circulation network (also refer to map 1 & 2).

As is evident from the proportion of land used for circulation (refer to Table 3.2), the Ghaziabad site has substantially less share of road networks. This site also offers a variety of width options.

Such options vary subject to the plot sizes provided in a systematic way. (Refer to Map 3).

Evaluation

Low standards for circulation in Ghaziabad in contrast to Kota have made it possible for economy in land use for residential housing. This is an indication of the fairly low standards adopted in the Ghaziabad Projects which will constitute a positive factor towards the development of a low-income neighbourhood.

Water Supply

The options offered for water supply are almost similar in both the cities as evident in the break up given in Table 3.5.

Table 3.5

Water Supply Options

Type of system	VI	VII
Kota (Keshopuras/S)	IC	IC
Ghaziabad (Vijai Nagar S/S)	CM	CM
Source	IC	IC
Type	IC	IC
Individual Connection	IC	IC
City Mains (off site)	CM	CM

City	Project	Sewerage	System	User access	Drainage system
Kota	i. Keshopura VI	Septic tanks	Individual households	Open	
	ii. Keshopura VII	-do-	-do-	-do-	
Ghazabad	Vijai Nagar S/S	-do-	-do-	-do-	

Liquid Waste Disposal System

Table 3.6

Table 3.6.

Liquid waste disposal as conceived in selected projects is based on the septic tank system according to the specifications given in

1. Liquid Waste

Waste Disposal

Little attention was given in either of the cities to look into the possibility of a low cost option for water supply through proper user consultation. The provision of public standposts/handpumps with suitable cost recovery mechanisms to ensure maintenance would have ensured economy not only to the sponsors but also the users.

Evaluation

ii. Solid Waste

Solid waste collection as proposed on the selected sites is shown

in Table 3.7.

Table - 3.7

Proposed Solid Waste Collection

City	Project	Solid waste collection
		Household level
		Neighbourhood level
Kota	Keshopura VI	Private collection
	Keshopura VII	Public collection
Ghaziabad	Vijai Nagar S/S	do-
		do-

Collection at the household level is traditionally done by a particular group in the society. Public collection is proposed on a daily basis.

Evaluation

The waste collection systems proposed seem to be workable provided the operational deficiency, particularly in regard to public collection are tackled. Due to administrative procedures, as a rule developed sites are handed over to the city government, much too late for maintenance to be really effective. It is suggested that the city government be involved from the initial stage rather than when the site is fully developed.

There was a good deal of variation in the provision of social infrastructure at the selected sites as can be seen in Table 3.8.

Social Infrastructure

The proposed electricity and street lighting provisions seem to be well in order. The hurdle in this regard is the inadequate supply of power which is available on an average for about 12 hours a day in both the cities.

Evaluation

Street lighting was also proposed at all the sites with a spacing ranging from 30 to 50 metres. The allottees.

The designs of the S/S projects selected in both cities provide an electricity network, and also individual household connections for

Electricity/Street Lighting

the existing ones. There were no consultations with the city government, in either case to identify how to maintain and absorb the proposed systems into

Social Infrastructure Proposals

Table 3.8

Item	Kota		Project area (ha)	No. of S/S plots	Proportionate land use	Primary school	Secondary education	Medical clinics	Shopping centre/shops*	Kiosks	Community centre	Dairy	Bank
	Keshopura VI	Keshopura VII											
			4.73	380	3.80	1	-	-	1(8)	-	-	-	-
			13.139	1010	4.16	1	-	-	1(20)	-	-	-	-
Ghazabad			19.0275	1359	10.49	2	1	2	6(42)	5(20)	2	2	1
Vijai Nagar S/S													

* Figures in the brackets indicate the number of shops.

At the Kota site there is provision for only one primary school and one shopping centre. In comparison the Ghazabad projects offer better levels of amenities and facilities.

Evaluation

The social infrastructure, particularly in regard to the provision of schooling (secondary education), medical/health facilities and community centres is not adequate in the plan of operation in Kota. As has been argued, the S/S projects should not be seen in isolation to the adjoining areas vis-a-vis the provision of social amenities and facilities. However the most important

Ghaziabad one can expect low-income occupancy to become a reality. With such a level and variety of social infrastructure as in

another important feature in Ghaziabad. The proposal for a dairy, bank and community centre was number of users as possible. Kiosks at five different places were also scattered all over the site, to make them accessible to as large a centres. Unlike Kota, the shopping centres proposed in Ghaziabad are include among others schooling, medical/health, shopping & community of amenities and facilities. The social infrastructure proposed here As compared to Kota, the Ghaziabad project offers better levels centre.

and so forth. The Kota sites also lack provision of a community Government Schools, a Primary Health Centre, a Government Dispensary affordable option at the Kota sites, as for example, the provision of It would perhaps have been better to introduce some low cost

attract the allottees to the sites. by the sponsors. This will be one negative factor in trying to may not always be affordable to the implied target group as envisaged medical and health care have been proposed in these localities, they namely, the Keshopura village. Although facilities for schooling, income group localities, excepting one low income housing option (Map No.2) the S/S project site is located quite close to middle/high ingredient is affordability for the users. As shown in the key map

Open Spaces and Greenery

Open spaces as proposed by the respective S/S projects include a variety of components given in the break-up in Table 3.9.

Table - 3.9

Provision of Open Spaces and Greenery

Component	Kota S/S		Ghaziabad (Vijai Nagar S/S Project)	
	Keshopura VI	Keshopura VII		
a. Total Area (ha)	4.73	13.139	19.0275	
b. Proportionate area under open spaces	13.50	12.72	24.54	
c. Open space per thousand persons (ha) *	.32	.31	0.34	
d. No. of parks	4	7	29	
e. Playground	-	-	1	
f. Green verge	-	-	3 sides + 1 side	farmland military

* This is calculated on the basis of a household size drawn as per the field survey. In the case of Ghaziabad the density thus worked out includes the flatted development meant for EWS housing.

Evaluation

Although the proportion of open spaces as per land use distribution in Ghaziabad was much higher than in Kota, the available land for open spaces per thousand persons is almost the same. This situation confirms earlier findings that the standards adopted in the Kota projects were fairly high as compared to those in Ghaziabad.

Component	Kota S/S	Keshopura VI Keshopura VII	Vijay Nagar S/S Ghaziabad
Foundation up to plinth	Yes	Yes	Yes
One W.C.	Yes	Yes	Yes
One metre high enclosure of walls for W.C. over plinth	Yes	Yes	No
Water taps (one each)	Yes	Yes	Yes
a. W.C.	Yes	Yes	Yes
b. Kitchen	Yes	Yes	Yes

Compositions of On-Plot Provisions

Table 3.10

selected projects are indicated in Table 3.10. do not vary much. The type of provisions proposed on the plot in the projects with HUDCO financing and guidelines, the on-plot provisions over a period of time. Since both the cities offer the selected components that help allottees to improve their shelter conditions On-plot provisions made in S/S projects, are most important

On-Plot Provisions

already exist on the fourth side. proposed green verges on three sides with the military farmlands that relating to social forestry and greenery. The Ghaziabad project The kota projects have not taken care of the environmental issues the site within walking distance of users' residences. better designed framework. The proposed parks are scattered all over Unlike in Kota, Ghaziabad offers a variety of options with a much

The foundation up to the plinth was proposed in all types of plots offered by the projects. The type of design in both cities provides for a growing house with a capacity for the development of one/two (depending upon the plot size) full rooms, a bath and W.C., cooking space and a courtyard.

Evaluation

On-plot provisions proposed by these projects are by and large similar. The kota project even proposes an enclosure of walls over the plinth for W.C. In contrast the Ghaziabad projects could not offer this because of the general inflation that had taken place during the four years since the commencement of the kota project although the HUDCO limits for costing the plots remained static.

Design - Structure

Plot Subdivision

Care has been taken at all the sites selected to make the plot subdivision economic, not only for sponsors but also for users, as may be seen from the break-up of the Plot Area Ratio (PAR) shown in Table 3.11.

Table 3.11

Plot Area Ratio - As Proposed

Plot Area Ratio - As Proposed	Kota S/S	Ghaziabad	Vijai Nagar S/S
1:3.14	1:3.14	1:2.5	1:2
1:3.14	1:2	1:1.75	1:2.08
1:3.14	1:2.5	1:2.33	

S/S projects under review are utterly lacking in design for user participation. As discussed earlier the various stages keep user

USER CONSULTATION AND PARTICIPATION

Plot-subdivision patterns seem to be well in order at all the sites selected. But the infrastructural standards as noticed in Kota, lead the projects away from the effective formation of intercluster relationship congenial to low cost housing.

Evaluation

As mentioned earlier, the Kota lay-outs provided for an inter-cluster relationship that was not convenient for the implied target groups.

Layout plans (Map 1, 2 & 3) as proposed by the respective projects intended to provide effective cluster formations. Layout plan for the Ghaziabad site seemed better because it integrates the inter-cluster relationship, thus forming a positive structure for a low income neighbourhood. Social-infrastructure and open spaces as proposed here introduce a strong and effective cluster formation.

Lay - Out

As is evident from the plot subdivision, the physical pattern aims at cost efficiency in terms of infrastructural network and circulation. However, the standards for the various infrastructural components are higher in Kota and more reasonable in Ghaziabad, for the low income neighbourhood.

GROUPING

consultation isolated from the 'project designing operations'. The position in regard to the provision of some key components of user participation is seen in Table 3.12.

Table 3.12

Designing for User-Interaction

City project/ component	Kota Keshopura S/S VI & VII	Ghaziabad Vijai Nagar S/S
1. User-consultation (Pre-designing stage)	No	No
2. Technical assistance	No	No
3. Incentives for self-help mutual-help	No	No
4. House building loan a. Cash loan b. Material loan	No	No
5. Enforcement of regulations and norms	Rigid	Flexible

Evaluation

None of the implementing agencies take care of user-consultation aspects essential for identifying actual priorities. This attitude on the part of the implementing agencies kept them uninformed about real life needs eventually leading them to providing supports not affordable by the target group. In the absence of catering to actual needs, projects become unaffordable for the target groups.

None of the projects designed incorporates proposals for any type of technical assistance, encouragement of self/mutual help, for

- i. There is a ready demand for the plots.
- ii. The application must be accompanied by a bank draft of Rs.5000. (In case the applying agency withdraws from the scheme after paying this amount, it will be forfeited.)
- iii. The scheme forms an integral part of approved city development/Master Plan.
- iv. In the case of the EWS component, the financing will be 100 per cent.
- v. The S/S unit must contain a sanitary core.

As mentioned earlier, the S/S projects selected in both the cities are financed by HUDCO, in accordance with standard financing criteria. The respective State Governments undertook to stand guarantee for borrowing agencies. Some important criteria enforced by HUDCO in this regard are listed below:

Application and Approval Procedure

Application, Approval and Allotment Procedures

The Kota project rigidly enforces building regulations and norms. The Ghaziabad project on the other hand, was fairly flexible in its approach to the allottees, who were allowed to put up any type of shelter, irrespective of building bye-laws and regulations.

The Kota project rigidly enforces building regulations and norms. The Ghaziabad project on the other hand, was fairly flexible in its approach to the allottees, who were allowed to put up any type of shelter, irrespective of building bye-laws and regulations.

There is no provision for any type of house building loan either in cash or in kind. This is urgently needed for the low-income allottees who are not financially well-equipped to take care of even their daily needs.

example, through information regarding availability of building/construction material, formation of cooperatives and other matters.

vi. The loan will be provided for a period of 20 years at 4.25 and 7.25 per cent interest rates for FWS and LIG components respectively.

vii. If there is prompt repayment, the borrowing agency will get a rebate at 4.25 per cent per annum on the interest to be paid. Thus the effective rate of interest works out to 4 per cent and 7 per cent for respective components.

Evaluation

No proper demand surveys were conducted by either of the two borrowing agencies. At this stage it would have been better if the financier (HUDCO) had enquired about how priorities were to be identified and fixed so that the project could have been designed better. However, in Ghaziabad, the GDA had registered all the dwellers residing in squatter settlements located on public land. Allotments were made only to such persons. Procedures for approval require the State Government to guarantee repayment of the loan. But, the State Governments are in no way involved in the follow up of the approval. It is very essential however to involve the State Government from the start to ensure interagency cooperation and communication.

SELECTION/ALLOTMENT PROCEDURES

Selection and allotment procedures adopted by the sponsors in both cities vary significantly. Key ingredients are given in

Table 3.13.

Table 3.13

Selection & Application Procedures

Component	Type/Nature
Announcement	Advertisements, posters and local community leaders
Application period	One month
Deposit needed	Rs.100/-
Eligibility criteria	Income: EMS Rs.300/- p.m. IIG Rs.600/-p.m.
Registration	Application on prescribed proforma
Verification	Personal visits, ration card and voter list
Selection through	Lottery
Tenure	Leasehold
	Lease hold

Evaluation

The registration of applicants through official visits to low income settlements, by the GDA has made it possible for a fair selection of the implied target group.

Income criteria alone do not ensure fair selection. Quite often applicants submit fake affidavits in regard to their income and possession of real estate. At this stage on-the-spot registration leaves little doubt about the fulfillment of the prescribed criteria.

The amount of deposit needed in Ghaziabad seems fairly reasonable. Low income households may not always be able to spare Rs.100 to pay for a deposit, as required in Kota. This therefore means that fewer applicants from the target group will come forward for this project.

CHAPTER IV

EFFICIENCY OF PROJECT OPERATIONS -
ACHIEVEMENT OF OBJECTIVES AND TARGETS

ACHIEVEMENT OF PHYSICAL OBJECTIVES

Land Development & Infrastructure Provision

The levels of land development and infrastructure provisions at different stages in selected projects are given in Table 4.1.

Table 4.1

Development of Land and Proposed Infrastructure

Action stage component

Keshopura VI Keshopura VII
Vijai Nagar S/S

As in * As in * As in * As in * As in * As in *
My'82 J1'86 * My'82 J1'86 * Ja'85 Oct'86 *

I Land acquisition C C C C C C

II Land development a. Water internal C C NA NA C C

b. Liquid waste disposal trunk C C NA NA C C

Internal (Sewage/Drainage) IC IC IC IC IC IC

Trunk IC IC IC IC IC IC

c. Circulation C C C C C C

d. Street lighting IC IC IC IC IC IC

e. Green provisions NA NA NA NA NA NA

f. Social infrastructure NA NA NA NA NA NA

1. Health NA NA NA NA NA NA

2. Education NA NA NA NA NA NA

3. Community facilities NA NA NA NA NA NA

Note: * This month includes the date of completion of the project. ** This month includes the dates of latest visit to respective projects by NIUA's evaluation mission.

C=Completed; NA=No Appointments; IC=Incomplete; UP=Under Process.

(IC: 50% of the total quantum yet to be completed.)

Water supply work at one of the Kota sites is incomplete. Plantation work is also not visible at any of the Kota sites, though the funds allocated for green verges have been spent already.

Evaluation

The Ghaziabad project seems better conceived than those in Kota. Even after five years the Kota project does not give the appearance of human habitation.

Water supply work has still not been undertaken at one of the Kota sites, although land development has been largely completed. The main hurdle was the coordination and communication gap between the principal executing agency (UIT, Kota) and the responsible agency for water supply network (PHED, Rajasthan Government). Despite several reminders from the UIT, the PHED failed to put up even the estimates for works, before the completion period expired. These hurdles were mainly attributed to the following reasons:

- i. UIT and PHED belong to two different State Government departments namely, the Urban Development and the Public Health & Engineering Departments respectively.
- ii. UIT headquarters are located in Kota while PHED is in Jaipur.
- iii. There is a lack of sufficient monitoring powers with the principle implementing agency i.e., UIT Kota.
- iv. The administrative head of UIT is the District Collector, Kota who also looks after UIT activities.

Unlike in Kota, the institutional framework in Ghaziabad is completely different as may be noticed below:

i. GDA and Jal Nigam (responsible agency for water network) belong to the same State Government department.

ii. GDA has a full-time administrative head belonging to the Indian Administrative Services.

Several other components at the Kota sites such as liquid waste disposal, street lighting, green verge provision and social infrastructure were not even touched or were only partly touched by the respective implementation processes. This was because of a lack of pressure from the community which was meant to occupy the sites. Since there were almost no effective users there was nobody who took up the users' cause.

Not surprisingly, the Ghaziabad project has achieved development status with the components either completed or presently under process of completion. Achievement of this status is attributed to well conceived planning and designing strategies, together with a more effective institutional framework.

Development of On-Plot Provisions

Level of achievement in regard to on-plot provisions likely to be made during project implementation can be seen in Table 4.2.

Table 4.2

Development of on-plot Provisions		On-plot provisions	
Development status		Development status	
Kota		Ghaziabad	
Keshopura VI		Vijai Nagar S/S	
Keshopura VII		Vijai Nagar S/S	
As in * My'82	As in * Jl'86*	As in * Ja'85	As in * Oct'86*
C	C/PC	C	C
1. Foundation up to plinth		2. One W.C.	
C	C/PC	C	C
3. One metre high enclosure of walls for W.C. over plinth		3. One metre high enclosure of walls for W.C. over plinth	
C	C/PC	C	C/PC
4. Water taps (one each for W.C. and kitchen)		4. Water taps (one each for W.C. and kitchen)	
C	C/PC	C	C
5. Land filling (wherever required).		5. Land filling (wherever required).	
IC	IC	IC	IC

Note: * This month includes the date of completion of the project. ** This month includes the dates of latest visit respective sites by NIUA's evaluation mission.

C=Completed; NP=Not proposed; IC=Incomplete; PC=Poor condition.

Evaluation

By and large on-plot provisions have been made as proposed by all the selected projects. But the provisions offered in Kota are presently in a very poor condition. This is in fact due to the delay in constructing shelters on the allotted plots. One of the consequences has been that circumstances did not favour the formation of a pressure group to interact with the implementing agencies for such provisions.

All project sites, (roughly five per cent of plot options), required land filling and levelling. This aspect was completely neglected by the respective sponsors. It was left to the users to make the necessary investment for filling and levelling land, which is absolutely essential for shelter consolidation. The quantum of investment required for this operation is not high. But for the low income group even such an amount is extremely difficult to spare.

SELECTION OF ALLOTTEES

The selection of allottees, for selected S/S projects, is done according to norms prescribed by HUDCO. Table 4.3 gives the break-up of applications received, as also the eligible applications.

Table 4.3

Selection of Allottees		City/Item
		Kota* (Keshopura VI & VII)
		Ghazabad** (Vijai Nagar S/S)
I	Applications received	2420
II	Applications rejected	71
a.	Incomplete	148
b.	Ineligible	NIL
III	Total eligible applications	2500
IV	Allotment targeted	1359
V	Distributed at the time - of allotment - Evaluation	1390
		1255

Note: * Number indicated here includes applications received for all projects selected under present study.

** This is the number of low income households registered for the purpose of allotment of S/S plots through on-the-spot visit.

Evaluation

Allotment of plots at the targeted time of project completion seems to have taken place at Kota. By the time the evaluation mission made its last visit in July 1986, the Kota sponsors had already cancelled the allotments of the 197 allottees who had not paid even one single instalment in the four-year period. Thus the effective number of allottees at the time of evaluation was 1193.

On the other hand, the development of the Ghaziabad project was gradual. Despite time overruns, the GDA had allotted 1255 plots out of a targeted 1354 at the time of evaluation in October 1986.

The most important feature noticed in Ghaziabad was the 100 per cent physical occupancy of the plots allotted. In Kota, however, only two out of 1390 plots were under physical occupation.

The effective occupation of plots (by those who put up shelters) in the Ghaziabad project can be attributed to the 'specific allotment procedure' that involved registration through proper inspection and verification. This ensured the proper determination of effective demand.

Unlike Ghaziabad, the Kota projects could not identify effective demand nor could they identify the allottees. There were many cases where applicants had submitted false documents in order to become eligible. The example may be cited of an allottee who happened to be the son of a former chairman of the city municipality and a sitting member of the state legislature. There are several instances of this kind where allottees were found to be the residents of posh colonies

in nearby areas who had somehow managed to acquire allotments in this low income project.

PROJECT FINANCING, PRICING AND COST RECOVERY

Financing

As mentioned earlier, the selected projects are financed by HUDCO as per its terms and conditions approved by the Government of India. The total project cost and the proportion of the loan component is shown in Table 4.4.

Table 4.4

Composition of Project Financing

(Rs. in lakhs)

Financing Type	Kota (S/S)		Ghaziabad (S/S)*				
	VI	Keshopura	VII	Keshopura	VI	VII	VIII
Total cost	10.21	41.65	13.92	21.84	3.48	5.79	13.39
Loan amount	9.83	33.90	13.63	21.42	3.41	5.66	13.13
Self**	0.38	7.75	0.29	0.42	0.07	0.13	0.26
Financing	(3.73)	(18.61)	(2.09)	(1.93)	(2.02)	(2.25)	(1.95)

Note: * Figures given here belong to S/S component of respective schemes.

** Self-financing stands for the financing arranged by the sponsors through their own resources.

() Figures within brackets indicate the proportionate share of financing type to the total cost.

HUDCO provides 100 per cent financing to the S/S projects, excluding land cost. The loan proportion is significantly less in the case of Keshopura VII (Kota) as compared to other projects, because this project includes 917 (91%) LIG plots and 93 EWS plots. The HUDCO

funding for IIG is 85 per cent of the total cost, while in the case of HIG, this goes up to 60 per cent. Unlike Kota, the Ghaziabad S/S projects form part of five different composite housing schemes.

Options offered under S/S schemes are two fold for EWS plots and IIG plots. The EWS plots have a total area of not more than 40 sq.m. as against 60 sq.m. for IIG. The Kota project includes both options, while the Ghaziabad project offers only EWS S/S plots. Table 4.5 indicates the financing of all the housing options offered by the selected projects in both the cities.

Table 4.5

Composition of Project Financing as per Respective Options

(Rs. in lakh)

Option Type	Kota					Ghaziabad					
	Keshopura VI		Keshopura VII		2750	2751		2752		2753	2767
EWS (Plots) A	10.21	2.49	13.92	21.84		3.46	5.79	13.39			
	(100)	(6)	(15)	(25)	(7)	(17)	(16)				
S/S B	380	93	297	556	75	125	306				
	(100)	(9)	(43)	(69)	(21)	(48)	(47)				
EWS (finished housing) A	-	-	43.15	25.90	31.66	14.39	37.41				
	-	-	(47)	(30)	(60)	(42)	(45)				
B	-	-	360	216	264	120	312				
	-	-	(52)	(26)	(74)	(46)	(48)				
IIG (Plots) A	-	39.16	-	-	-	-	-				
	-	(94)	-	-	-	-	-				
B	-	916	-	-	-	-	-				
	-	(91)	-	-	-	-	-				
HIG A	-	-	34.61	40.03	17.64	14.08	32.78				
	-	-	(38)	(45)	(33)	(41)	(39)				
B	-	-	38	44	20	16	36				
	-	-	(5)	(5)	(5)	(6)	(5)				
Total A	10.21	41.65	91.68	87.77	52.75	34.26	33.58				
	(100)										
B	380	1010	695	816	359	261	654				
	(100)										

Note: A = Financing B = Number of units () Figures within brackets indicate the percentage to total.

It is further interesting to note the break-up of proportionate loans for different schemes in Ghaziabad, as unlike Kota, these are for composite housing schemes, including a mixture of options. The break-up of financing by HUDCO in the Ghaziabad schemes is shown in Table 4.6.

Table 4.6

Composition of Option-wise Loans at Ghaziabad
(Rs. in lakh)

Scheme No.	S/S Plots	EWS Finished housing	HIG	Total
2750	A 13.63 B 297 (20) (50)	34.18 360 (52)	21.10 38 (30)	68.91
2751	A 21.42 B 556 (32) (69)	20.51 216 (31) (26)	24.41 44 (37) (5)	66.34
2752	A 3.41 B 75 (4) (21)	25.07 264 (63) (74)	10.70 20 (27) (5)	39.78
2753	A 5.66 B 125 (22) (48)	11.38 120 (44) (46)	8.64 16 (34) (6)	25.68
2767	A 13.13 B 306 (21) (47)	29.62 312 (47) (48)	19.99 36 (32) (5)	62.74
				654

Note: A = Loans
B = No. of units
() Figures within brackets indicate percentage to total.

Installments released by HUDCO for S/S projects selected vis-a-vis

targeted schedules are detailed in Table 4.7.

Table 4.7

Scheduling and Timing of Loan Disbursement

Instalment	Kota		Ghaziabad (Vijai Nagar S/S)			
	Keshopura	Keshopura	VII	VI	V	IV
No.	2750	2751	2752	2753	2767	
I	J1'81	J1'81	Ja'84	Ja'84	Ja'84	Ja'84
	T	T	Ja'84	Ja'84	Ja'84	Ja'84
II	Ja'81	Ja'81	Ja'84	Ja'84	Ja'84	Ja'84
	T	T	Ja'84	Ja'84	Ja'84	Ja'84
III	Ja'82	Ja'82	Ja'84	Ja'84	Ja'84	Ja'84
	T	T	Ja'84	Ja'84	Ja'84	Ja'84
IV	Ap'82	Ap'82	Ap'84	Ap'84	Ap'84	Ap'84
	T	T	Ap'84	Ap'84	Ap'84	Ap'84
	D	D	"	"	"	"
Total no. of instalments	4	4	2	2	4	2
	T	T	2	2	4	2
	D	D	2	2	4	2

Months mentioned above include the date of targeted disbursement and actual release of loan.

NYR = Not Yet Released
T = Targeted
D = Distributed

As is evident from the table the disbursement of loans for various projects has been largely as scheduled except in Keshopura (VII) Kota. According to the terms and conditions stipulated by HUDCO, repayment instalments will be reimbursed only after receiving a proper statement of accounts showing expenditure incurred against approved proposals. Technically speaking the amount incurred for various expenditures seemed in order in all cases except in Keshopura VII (Kota).

The Kota projects are based upon plot options solely intended for low income housing. Unlike in Kota, the Ghaziabad site includes the S/S components from five different composite housing schemes. In terms of number of units provided by these schemes, the S/S components form almost 50 per cent of the total options offered, with a much less proportionate share of overall costs. On the other hand the HIG component, forming a mere five per cent of the options offered, includes a substantial share of funding, which was 33 to 45 percent of the total project cost (table 4.5 & 4.6). Such large scale costing for very few options does not seem proper. Sponsors could have offered much wider options at the same costs if the HIG components had

Recently HUDCO's financing pattern was revised (effective from Dec'85), and a separate scheme was started to facilitate land acquisition financing for various agencies. In this regard the rate of interest to be charged on disbursed loans, and the repayment period are too high to be affordable for low income housing. It is, thus, suggested that the land acquisition component of low income housing should be included in S/S financing, together with a cost recovery mechanism comprising heavy cross-subsidisation.

Self-financing by the sponsors is negligible; the amounts covered only land cost in all the cases (Table 4.4). Such a situation leaves the selection of sites to the discretion of the sponsors. As has happened in Kota most of the implementing agencies acquire land at the cheapest rates possible. The selected land, therefore, has some inherent disadvantages such as location, surfacing and levelling.

Evaluation

been reduced to accommodate more MIG and LIG options. This would have not only added more to the existing housing stock but also reduced pressure and the attraction of higher income groups to options meant for low income housing.

Almost one third of HUDCO loans, in all cases of composite housing schemes (Ghaziabad) go in favour of HIG housing. In numerical terms HIG housing covers only five per cent of total options offered. As discussed earlier it would have been better to reduce the HIG options and include more for MIG. HUDCO financing, thus, should not stress merely on proportionate share of numerical options. The share of funding for various income groups should have a balanced approach in terms of total addition to the housing stock and access of low income groups to it.

HUDCO financing does not include a proper correlation to the follow-up of the scheme, both financially and physically. In the case of Keshopura-VII in Kota, the final and last instalment which was due on 1 April 1982, has not yet been released. On the request of UIT, HUDCO refused to release it vide their letter dated 13 October 1982, saying that "the total expenditure incurred so far (Rs.31.06 lakhs) is less than the amount earmarked in the approved proposal (Rs.32.42 lakhs)". The reasons for lower expenditure were however not looked at. The basic reason discussed earlier was the delay in an operational water supply network.

It is important for the financier to see how allotment is made on projects where all the instalments have not been released and a detailed completion statement has not been received.

Pricing

Pricing of options offered by selected S/S projects strictly follows the HUDCO criteria. Outright sale price of the plots, together with a broad break-up is shown in Table 4.8.

Table 4.8

Composition of Pricing of S/S Plots

City/Plot Size*	Kota					Ghaziabad				
	38.5	60.5	23.41	25.64	27.87	36.42	39.02			

Pricing Component (Per Unit)

	I	II	III
Land cost & land develop-ment charges	1286	2051	1496
(% to III)	(48)	(48)	(42)
Construction cost**	1392	2219	1980
(% to III)	(52)	(52)	(58)
Outright sale price***	2678	4270	3476
(% to III)	(52)	(58)	(57)
Land develop-ment charges	1784	2332	2498
(% to III)	(51)	(52)	(52)
Construction cost**	2307	2218	2307
(% to III)	(49)	(48)	(48)
Outright sale price***	4550	4805	4805

Note: * Plot size as offered by respective schemes may be seen from table...

** This includes the administrative and supplementary charges and the interest charged during construction.

*** In case of hire-purchase as happened in all the cases the interest at respective rates will be further added.

Evaluation

Outright sale price charged by sponsors is below the HUDCO ceiling of Rs.5000 per unit. It is basically a game of manipulation, as in Kota (Keshopura VII). The UIT, Kota, priced land not on the basis of expenditure incurred, but on the basis of estimated pricing, as indicated in the project approval. There is, thus, a need to fix

prices on the basis of actual expenditure within prescribed affordable limits.

The cost of construction has a negative relationship with plot sizes in Ghaziabad. This was attributed to the similarity of the scale of construction in all cases irrespective of plot size.

Cost Recovery and Cross-Subsidization

Table 4.9

Cost-recovery and Repayment Mechanism for Loan Finance

Component	Rate of*	Interest (%)	Repayment	Grace Period
I	EWS S/S	4.25	20 years	One year
II	LIG S/S**	7.25	15 years	One year
III	EWS-finished Housing ***	7.25	15 years	One year
IV	HIG***	12.75	10 years	One year

Note: * In case of prompt payment a rebate will be given @ 0.25% p.a.

** Only in case of Kota (Keshopura VII) this component is included.

*** This is included in Ghaziabad composite housing scheme only.

In regard to repayment of loans, the executing agencies have repaid the entire amount in all the cases, on time. In Kota (Keshopura VII) repayments were made in time, although the site was not developed fully and the last instalment which was due on 1 April 1982, was not yet released.

In accordance with the terms and conditions presented by HUDCO, the plots are distributed, in both the places at the terms given in

Table 4.10.

Table 4.10

Mechanism of Cost Recovery from Allottees

City	Kota (Keshopura VI & VII)	Vijai Nagar S/S (S/S part of all the five schemes)
	EWS	LIG
Loaning system	Hire purchase	Hire purchase
Loan period	20 years	15 years
Grace period	1 year	1 year
Rate of interest	4 1/4%	7 1/4%
Mode of repayment	Quarterly	Quarterly
Loan amount (Rs.)	2678	4270
Amount per (Rs.) instalment	48	113
		3000-5000
		Daily
		1 year
		4 1/4%
		20 years

The loan recovery position has been very poor in Kota as compared to Ghaziabad. 197 allotments were cancelled because allottees had not paid any instalments even after four years of allotment.

It was very difficult to collect exact cost recovery levels from allottees, because the respective agencies do not maintain the project accounts under separate heads. It was observed from an allottees' survey that only 29 per cent allottees in Kota made repayments regularly, as compared to 80 per cent in Ghaziabad.

Evaluation

Cross-subsidisation in the case of recovery from sponsors and users was done indirectly, being based upon variations in the rate of interest, repayment period and intervals.

Recovery from the executing agencies has been quite satisfactory. On the other hand, recovery from allottees was not satisfactory, particularly in Kota.

Timely repayment in both the places indicated that the agencies (UITP, Kota, and GDA Ghaziabad) had been diverting funds from other heads towards repayment. This kind of diversion may have short-term and long-term implications on the quality and coverage of responsibilities likely to be borne by the agencies.

Recovery is not the only issue that the financier is concerned about. There are other important issues such as, the release of the last instalment (Keshopura VII, Kota); the status of land development; and the sources from which the agencies were repaying the loans. This would have ensured optimum and efficient utilisation of such huge sums of public investment (roughly Rs.5 million).

A suggestion can also be made regarding the introduction of an effective accounting and budgeting system in the development agencies to ensure proper assessment and performance evaluation of projects.

Accounts personnel at the development agency level are frequently on deputation from the State accounts departments. Such personnel do not have expertise in different housing finance mechanisms, such as cash flow analysis, cost recovery tools, cross-subsidisation, the criteria of affordability and so on. Merely translating the schemes into funding agencies' proformas does not serve the real purpose. Accounts personnel should also be conversant with application procedures thoroughly and with the enforcement/application of the different tools and techniques of the components of housing project finance.

MONITORING AND FOLLOW-UP

Expenditure incurred on various development components has been largely as per budget allocations, except in the case of Keshopura-VII (Kota). The correlation between expenditure incurred and the physical progress plays a vital role in assessing follow up and coordination levels during project operations. The relationship between the money spent and status of development as achieved, can be seen in Table 4.11.

Table 4.11

Expenditure and Physical Progress

Development Component	Kota S/S		Keshopura		Keshopura VII		Ghazabad: Vijanagar S/S (cumulative)
	My'82	Jl'86	My'82	Jl'86	Jl'86	Ja-Jl'85	
i. Water	*	1	NIL	1	NIL	NIL	7
ii. Circulation	*	1	1	1	1	1	.8
iii. Waste disposal	**	.8	1	1	.9	1	.9
iv. Electricity	**	1	1	1	1	1	1
v. Green provisions	*	1.8	1.8	1	1	1	1
vi. Plinth construction	*	1	1	1	1	1	.6
vii. Core construction	**	1	1	1	1	1	.6

Note: * Expenditure level (I=100%)
 ** Development status (I=100%)

The Ghazabad site is almost fully occupied. Most occupants are original allottees. Such a high rate of occupation by the implied

target group is attributed to the well-designed planning, strategies and the subsequent implementation.

Post allotment development at the Kota has been extremely poor. Only two original allottees have built shelters. According to the allotment letter the shelters should have been put up within two years of allotment to avoid cancellation. UIT, however, appears to have adopted a very lenient attitude: no cancellations have been made so far on this account. Even the cancellation of 197 allotments referred to earlier was delayed considerably: on 6.8.85 (47 allottees) in Keshopura-VI and on 17.8.85 (150 allottees) in Keshopura VII.

The development of health, education, commercial and recreational facilities at both the places can be seen in Table 4.12.

Table 4.12

Development of Secondary Infrastructure

Development components	Kota S/S	Keshopura	Keshopura VII	Ghaziabad S/S (Vijai Nagar S/S)
Primary school	NA (1)	NA (1)	NA (1)	NO (2)
Secondary education	NP	NP	NP	UP (1)
Medical clinics	NP	NP	NP	UP (2)
Shopping centre	NA (1)	NA (1)	NA (1)	UP (6)
Kiosks	NP	NP	NP	UC (20)
Community centre	NP	NP	NP	UP (2)
Bank	NP	NP	NP	UP (1)
Parks	NA (4)	NA (7)	NA (7)	UP (29)
Playgrounds	NP	NP	NP	UP (1)
Green Verge	NP	NP	NP	UC (3 sides)

Note: NA = No Appointments

NP = No Provision as per design

UC = Under Construction

UP = Under Process (pre-execution stage)

NO = Under Operation

() Figures within brackets indicate the number of respective components.

Monitoring in Ghaziabad has been much better than in Kota. Coordination and communication among various participating agencies depend on how responsibilities are fixed. No agency was charged with

- i. Shortage of building materials such as cement, steel and bricks;
- ii. late finalisation of tenders; and
- iii. shortage of skilled construction labour.

The main reason for time overruns at Ghaziabad were: projects, though initially lagging behind, picked up very fast. The Ghaziabad Time overruns are however visible, (Table 4.12).

are not reflected in the existing account system. unless cost overrun amounts are substantial (as in Kota S/S VII), they laid down. A slight diversion of funds can be easily adjusted, and accounting exercise becomes a game of manipulation within the limits projects because in the absence of performance budgeting, the whole It has been difficult to assess the cost overruns in selected

Evaluation

development agencies. delay in this area was because of a lack of initiative on the part of recreational services, the sponsors themselves are responsible. A and maintenance of these services. However for commercial and Government departments and agencies are responsible for the provision problems related to interagency coordination. Different State playgrounds, the delay in both the cities is attributed to the With regard to health, education, community centres and

the responsibility of checking the reasons why land had not been fully developed before being allotted (Keshopura VII). Neither the sponsors' (UITP), the financiers' (HUDCO) nor the guarantors' (State Government) concerned themselves with this vital question.

Even after about 200 allotments were cancelled, the authorities in Kota took no step to create a conducive living environment for the target groups. This they could have achieved by re-allotting the plots to industrial units for lower grade employee housing either on rental or ownership basis.

The institutional framework as discussed earlier matters a great deal in the success of a S/S scheme. GDA has a much better institutional set-up than UITP. The Chairman, GDA also acts as the administrative head of the city municipality. Besides almost all participating agencies are under the jurisdiction of the same State Government. This situation is totally reversed in Kota, leading to problems of coordination and communication resulting in delays in execution and time and cost overruns.

Interaction between various agencies and selected participants was much better in Ghaziabad. Self-help efforts were encouraged. GDA allowed the allottees to build shelters in any manner they could, using new, used or scrap or any other type of material. On the other hand, UITP tried to introduce a rigid set of building regulations and standards. This enforcement together with a wrong selection of participants negated the objectives of the scheme and the basic post-allotment requisite of generation of living environment.

Interagency coordination in regard to the involvement of other public sector institutions for secondary development as in health, education and community services is utterly lacking in both the cases. Merely designing inputs likely to be provided does not serve the purpose. It is suggested that sponsors take the whole responsibility for organising these inputs from the respective participating agencies in time.

The delay in regard to the development of commercial provisions such as putting up shops, kiosks and so forth is dependent on the commercial outlook of the development agencies, which hold auctions as late as possible to maximise sale prices, while the community for whom the complex is meant bears the brunt of these manipulations.

CHAPTER V

USER INTERACTION AND THE PROJECT IMPACT

This chapter considers the two case studies of the sites and services projects in terms of their socio - economic and physical development. The situation presented here pertains to September-October, 1986 when the field surveys were conducted.

The survey will be particularly useful in bringing out similarities and differences between the two case studies as a base to understand the impact of the sites and services scheme on the allottees.

The chapter is divided into three sections viz :

- i. Users' profile;
- ii. project affordability; and
- iii. project impact.

Users' Profile

Demographic Characteristics of Allottees

Out of total of 280 allottees interviewed, 140 belonged to the Kota S/S project and 110 to the Ghaziabad S/S project. Of these nearly 32 per cent represent the scheduled castes and scheduled tribes. The percentage, however, is higher in Kota than in Ghaziabad. This shows that while allotting the sites, the authorities gave significant weightage to backward classes according to the prescribed government regulations.

No. of persons/ households	Household number		Kota & to total	Ghaziabad & to total	100.0
	Less than 3	3 - 5			
47	34	34	33.6	110	100.0
69	48	48	49.3	110	100.0
24	28	28	17.1	110	100.0
140			100.0	110	100.0

Distribution of Households by Family Size

Table - 5.2

The average household size among allottees in Kota and Ghaziabad is about 5.0 persons per household which is quite close to the city average of 5.2 in both the cases. However, more than 25 per cent of the households in Ghaziabad and 17 per cent in Kota have an average family size of five and more persons per households. Most households are composed of married men with their families living with them. The incidence of single men without families is insignificant in both the cases under review.

S/S Projects	Total selected households	SC & ST	Others
1. Kota	140 (100.0)	48 (34.3)	92 (65.7)
2. Ghaziabad	110 (100.0)	31 (28.2)	79 (71.8)
All	250 (100.0)	79 (31.6)	171 (68.4)

Distribution of Households by Caste

Table - 5.1

As expected, 80 per cent of the households in Kota and 71 per cent in Ghaziabad are migrant and only 20 to 30 per cent of them were headed by persons who were native to the place.

Table - 5.3

S/S projects	Migrant Status	
	No. of households	% Migrants to total
Kota	Total	80.0
	Migrant Non-migrant	
Ghaziabad	Total	70.9
	Migrant Non-migrant	

Further, more than 60 per cent of the migrant households had come more than 10 years earlier while the remaining 40 per cent had migrated to the city limits during the last decade.

Educational Levels

The incidence of illiteracy is comparatively higher in Ghaziabad, where more than 65 per cent of the respondents could not read and write. Both the study areas differed obviously in their educational levels. These differences were related to their regional backgrounds, ethnic composition and the type of economic activities dominant in both the places.

Table - 5.4

Education Levels of the Respondents

S/S Project	Illiterate	Literate	Total
Ghaziabad	72 (65.5)	38 (34.5)	110 (100.0)
Kota	80 (57.1)	60 (42.9)	140 (100.0)
Both	152 (60.8)	98 (39.2)	250 (100.0)

Occupational Structure of the Allottees

A perusal of data on the occupation of the allottees reveals that more than 40 per cent of them are unskilled daily wage earners, mainly occupied as general labour and rickshaw pullers. Another nine per cent are skilled workers, generally working as mechanics in the industrial sector.

Table - 5.5

Occupation Structure of the Allottees (House holds)

Service sector	Number of allottees		Both
	Kota & Ghaziabad	% to total	
Unskilled dailywagers	69	49.3	46
Skilled dailywagers	16	11.4	6
Government service	16	10.7	6
Private service	12	8.6	20
Petty business	22	15.7	27
Household industry	6	4.3	5
ALL	140	100.0	110
			100.0
			250
			100.0
			11
			4.4
			19.6
			32
			12.8
			21
			8.4
			22
			8.8
			115
			46.0
			41.8
			5.4
			5.4
			10.7
			18.2
			14.6
			4.6
			11
			4.4

Thus nearly 60 per cent of the allottees in Kota and 47 per cent in Ghaziabad are simply daily wage earners.

Of the allottees 19.6 per cent are occupied in small retailing and hawking many of them vegetables, and fruits, perhaps and such other eatables. However, the proportionate share of petty businessmen is higher in Ghaziabad (24.6%).

In both cases Kota and Ghaziabad, a majority of the responding households belong to the economically weaker sections of society. (In the recent past, the EMS income norms were raised from Rs.300 p.m. to Rs.700 p.m.). It can be seen from the table that more than 40 per cent of the households fall in the income category of Rs.100 to Rs.300 p.m. and nearly 28 per cent under the category of Rs.300 to Rs.700 p.m. This shows that roughly 70 per cent of the allottees have an average monthly income between Rs.100 and Rs.700. However, the proportionate share of low income groups of respondents is significantly higher in the case of Ghaziabad in comparison with Kota. In Ghaziabad more than 77 per cent of the households fell under this income category, while in Kota only 64.3 per cent of the responding households belonged to the economically weaker sections.

Income Patterns

Thus allottees are predominantly in informal tertiary occupations. Only a few of them are in primary and secondary activities. Government service personnel, primarily postmen, peons, chowkidars, drivers, sweepers and others account for 8.4 per cent. Another 12.8 per cent are in private service, working in industrial, business or transport establishments. Barely 4.4 per cent of the allottees are in household industries.

Table - 5.6

Average Household Income of the Respondents (Allottees)

(Rs. p.m.)

Income range	Kota		Ghaziabad		Both	
	H.Hs. % to total	H.Hs. % to total	H.Hs. % to total	H.Hs. % to total	H.Hs. % to total	H.Hs. % to total
100 - 300	56	40.0	50	45.4	106	42.4
301 - 700	34	24.3	35	31.8	69	27.6
701 - 1500	20	14.3	17	15.5	37	14.8
1501 and above	30	21.4	8	7.3	38	15.2
All	140	100.0	110	100.0	250	100.0

Table 5.6 reveals that nearly 15 per cent of households fell in the income range of Rs.701 to Rs.1500 while more than 15 per cent of the allottees have an average monthly income of Rs.1501 and above. However, the proportionate share of these better-off allottees is fairly high in Kota in comparison with Ghaziabad S/S. To conclude, though the monthly household income structure in both the S/S projects consists of a predominantly low income population earning less than or just Rs.700, these projects contain a sizeable percentage of middle income and higher income households also.

Project Affordability

Project affordability for beneficiaries in both the S/S projects in Kota and Ghaziabad can be examined from two angles, namely,

- i. Repayment clauses; and
- ii. Shelter construction and consolidation.

While the first one is related to the financial affordability of the users the other is largely based on the physical development of shelter at the allotted site.

Repayment

Before the allotment of plots under the S/S project, allottees have to enter into several financial arrangements in order to buy the plots. The modalities of repayment are not the same in both the S/S projects under study. While in Ghaziabad, the allottees pay Re.1/- per day to the Ghaziabad Development Authority towards the cost of the plot and services rendered, in the case of Kota, a system of quarterly instalments of Rs.48 for EWS and Rs.192 for LIG plots is levied by the implementing agency (UITP). However, the number of instalments depends on the cost of plots in both cases. As reported, the repayment of plot costs is very sound and systematic in the Ghaziabad S/S projects as compared to Kota. In Ghaziabad 80 per cent of the respondents deposit their instalments promptly in the Vijaya Bank assigned for this task. The remaining 20 per cent are said to be having some problems because of a lack of regular income and consequent indebtedness.

Table - 5.7

Repayment Situation

S/S Projects	Regular payment of instalments	Irregular payment of instalments	Total Respondents
Kota	40	100	140
	(28.6)	(71.4)	(100.0)
Ghaziabad	88	22	110
	(80.0)	(20.0)	(100.0)

Table 5.7 reveals that the situation is alarming in Kota, where more than 70 per cent of the allottees have not deposited their quarterly instalments.

While asking questions on reasons for delay in instalment repayment, unaffordability within the limits of the present income emerged as the prime cause for more than 60 per cent of the respondents. The lack of regular income and indebtedness are other reasons expressed by 52 per cent and 46 per cent of the respondents respectively.

Table - 5.8

Reasons for Irregular Payment of Instalments

S/S Projects	Defaulters	Reasons (cumulative)			
		Unaffordability - Lack of regular income	Indebtedness	No response	
Kota	100	60	40	30	10
	(100.0)	(60.0)	(40.0)	(30.0)	(10.0)
Ghaziabad	22	18	12	16	4
	(100.0)	(81.8)	(54.4)	(72.7)	(18.2)
Both	122	78	52	46	14
	(100.0)	(63.9)	(42.6)	(37.7)	(11.5)

However, cumulative percentage of indebtedness is quite high in the case of Ghaziabad when compared to Kota, where it counts as the second major cause for irregular repayment in the case of 16 out of 22 defaulters. Ten respondents in Kota and four in Ghaziabad could not offer reasons for delay in repayment.

In short, the cost recovery mechanism applied in GDA-designed projects seems to be quite effective, unlike the kota experiment.

Shelter Construction and Consolidation

Shelter have been built on all allotted sites either partially or fully in the Ghaziabad S/S Project. At kota, however, the situation is just the reverse. Barring two, none have moved to the sites.

One of the reasons why allottees of the kota S/S project did not want to put up shelters was the location. They felt that their place of work was too far away from the allotted sites and more than 97 per cent would have to commute over 2 km. every day, if they lived at the allotted site (Table 5.9). Nearly 75 per cent of the allottees

Table - 5.9

Distance of Work Place from the Allotted Site in Kota

Distance (Kms.)	Number of respondents	% to total
Up to 1	-	-
1 - 2	4	2.9
2 - 3	15	10.7
3 and above	121	86.4
All	140	100.0

complained that the site did not have basic services and roughly 56 per cent were of the opinion that building material was too expensive for building shelters (Table 5.10).

Reasons for not Putting up the Shelter on the Allotted Site in Kota S/S Projects

Ranking	Number of Respondents (cumulative)	% to total selected respondents	Reasons
3	79	56.4	Lack of money
1	135	96.4	Distance from the work place
2	106	75.7	Lack of basic services
3	79	56.4	High price of building material
4	43	30.7	Other reasons

In Kota, while almost all allottees listed reasons for not building on their plots, as many as 63 respondents said that they did intend to do so in the future. The time frame mentioned by them, however, varied, as seen in Table 5.11.

Table - 5.11

Shelter Planning at Kota

Time period (in months)	Number of respondents	% to total
Less than 6	18	28.6
6 - 12	20	31.7
12 and above	25	39.7
ALL	63	100.0

Planning alone will not serve any purpose without proper institutional arrangements for finances. It was the opinion of most of the respondents that they would like to construct the shelter but could not do so because of their poor financial status. Of 63 respondents, only five could arrange for money to construct a house with either their own money or borrowed from relations, while the remaining 58 were totally dependent on public or private credit institutions such as banks and moneylenders.

Table - 5.12

Sources of Funding for House Construction

Sources	No. of respondents	% to total
Own sources + Friends & relatives	5	7.9
Credit institutions (Bank, money lenders)	58	92.1
Total	63	100.0

Thus institutional backup is an important tool to support low income housing activities and implementing authorities should study this issue while formulating housing projects, specially for the low income groups.

Since in the Kota S/S project, none of the allottees built shelters on the allotted sites, the question of housing activities did not arise. An attempt is made here to analyse this phenomenon in the Ghaziabad project where shelter construction and consolidation work is in progress. Table 5.13 gives the picture relating to shelter structure.

Table - 5.13

Shelter Structure

Shelter status	Original living place	% to total respondents	Allotted place	% to total respondents
Kutchha	72	65.4	34	30.9
Semi-pucca	18	16.4	30	27.3
Pucca	20	18.2	46	41.8
All	110	100.0	110	100.0

The table reveals that more than 65 per cent of the respondents had kutchha houses at their original house sites while in the case of the allotted place more than 70 per cent of the selected respondents have either semi-pucca or pucca houses.

However, most of the respondents (90%) have only a single room dwelling unit at the allotted place while at the original living sites nearly one third of them had two rooms or more.

The structures were kutchha in most of the cases. In this sense room occupancy rate increased substantially in S/S projects. Since most of the respondents prefer semi-pucca or pucca structures, they increased the occupancy rate while reducing the cost of construction keeping it within affordable limits.

In fact, in the Ghaziabad project, GDA has not fixed any standards or norms and beneficiaries are free to construct whatever they want within their affordable limits. This has had a great impact on the shelter consolidation process in Ghaziabad. By and large, respondents use scrap and local building material for construction because of nonavailability of building material at controlled prices on the one hand and the high cost factor on the other.

Housing activity	No. of respondents constructed	% to total
Separate kitchen (permanent)	84	76.4
Separate kitchen (temporary)	26	23.6

Housing Activity

Table - 5.15

(Table 5.15)

Despite a poor financial status a significant portion of respondents constructed separate kitchens with living rooms, which showed their positive response to housing consolidation activities

Use of space	Allotted place		Original living place
	HHS.	% to total	
One room	99	90.0	74
Two rooms	1	0.9	15
More than two rooms	10	9.0	21
			19.1

Use of Space

Table - 5.14

However, nearly 41 per cent of the respondents are not satisfied with the present level of accommodation because of large family sizes.

Table - 5.16

Respondents' Satisfaction with the Present Accommodation

Reasons	Satisfied		Not satisfied		Number of respondents	% to total
	Former accommodation size	Large family size	Former accommodation size	Large family size		
	10	35	45	35	65	59.1
	22.2	77.8	40.9	77.8		40.9

In their opinion though plot sizes are sufficient to built two rooms of a reasonable standard, finance was the major hurdle. However, in the near future, most of the respondents would like to have two rooms, one kitchen and one bathroom, apart from the flush type latrine already provided under the project. For this they required atleast Rs.5000 each, by their own estimates.

Table - 5.17

Future Plans

Housing activity	No. of respondents	% to total
Two rooms	74	67.3
Kitchen	84	76.4

Expenditure Incurred on House Construction

More than 30 per cent of the respondents had incurred less than Rs.3000 on house construction, while only 10 per cent exceeded Rs.5000.

Table - 5.18

Money Spent on House Construction

Range (Rs.)	No. of allottees	% to total
Less than 3000	34	31.0
3000 - 5000	65	59.0
Above 5000	11	10.0

However, the majority of them (59%) had spent between Rs.3000 and Rs.5000 on this account. It is interesting to note that those who spent more than Rs.5000 belonged to the group of people who constructed homes with their own savings, assisted by financial support from friends and relatives. Moreover, their average family income though not substantial was higher than that of the other respondents.

According to housing experts, the sum of at least Rs.10,000 is required for the construction of a plain house with a semi-pucca structure, consisting of one room of a reasonable size, one bathroom and one kitchen. Compared to this the cost of housing in the Ghaziabad S/S project, as projected in the household survey was quite low. Table 5.19 gives the picture for three types of houses constructed by plot holders.

Only 20 per cent of the allottees constructed their houses with own savings and/or with the financial support of friends and relatives. The remaining 80 per cent allottees took loans from private money-lenders and banks.

Sources of Money for House Construction

Thus there is a case to replicate the housing projects based on the self-building mechanism as a realistic way to increase the formal housing stock within the means of EMS. However, realising that self-help efforts are not possible unless they are supported by technical assistance and materials loan, both in cash and kind, the promotion of mutual help is further necessary to facilitate low-cost housing in the true sense.

Research studies in Latin America and other countries have pointed out that self help building is always cheaper than any other form of housing. The self-builder is always guided by the idea of 'resourcefulness', that is, making the most economic use of the available resources, often through unofficial networks using secondhand (scrap) building materials and family labour, whereas a big building organisation will aim at the highest possible productivity, resulting in higher prices per unit.

Type of house construction	Mean value (Rs.)
Kutchha	3000
Semi-pucca	5000
Pucca (partly cemented)	10000
Pucca (plastered)	20000

Reported Cost of Construction Per Plot Option

Table - 5.19

Of these 80 per cent, 66 per cent borrowed money from money-lenders paying rates of interest ranging from 20 per cent - 40 per cent per annum. Nearly 14 per cent of the allottees had access to public financial institutions.

Table - 5.20

Money Arrangements

Sources of money	No. of Allottees	% to total
Own savings + Friends & relatives	22	20.0
Moneylenders	73	66.0
Public financial institutions.	15	

Hence, taking into account the financial incapability of a large number of low income group of people for house construction activity, Government should provide soft loans to these people through public financial institutions to intensify housing consolidation work at greater levels in low-income housing projects such as Sites and Services.

V.3. Project Impact

This section discusses the impact of S/S projects on the living conditions of beneficiaries. The impact has been measured through sample surveys covering two points in time that is, before and after the implementation of S/S projects. The following indicators were selected to measure the impact :

The table reveals that a significant number of respondents reside in rented houses in posh and semi-posh areas such as Talwandi Keshopura. Rented housing includes public and private dwelling units. In the case of private housing the affordability of target

Type of Area	No. of respondents	% to total
Squatter settlements	30	21.4
Inner city slums	42	30.0
Public/Private Housing	68	48.6

Original & Existing Living Places of Respondents in Kota

Table - 5.21

As seen in Table 5.21 more than 50 per cent of the respondents belong to slums and squatter settlements. These settlements are largely concentrated in inner city areas.

Unlike in Ghaziabad, in Kota allottees have not built shelters on the allotted sites under the S/S project owing to several reasons. Thus the project under reference had not made any physical impact on the living conditions of the respondents. However, data pertaining to their existing conditions (original dwelling place), within the context of the indicators, was collected during the field survey, for analysis.

Kota Experience

- i. Shelter tenurial status;
- ii. locational analysis (workplace - residence relationship); and
- iii. infrastructural support.

groups is questionable indicating that in Kota, allotment of plots under S/S schemes was not done strictly based on the economic background of the people.

Shelter Tenurial Status

Of the 140 respondents, cases in Kota, only 27 per cent dwellings are owner occupied while the remaining 73 per cent are live either in rented accommodation or in illegal shelters. However the percent share of renters is quite high with more than 40 per cent living in public houses. Therefore, a fairly large number of respondents in Kota do not have access to owner occupied housing, and belong to the group that forms the housing backlog irrespective of their income categories.

Table - 5.22

Shelter Tenurial Status of Respondents

Tenurial Status	HHS.	% to total
Owner occupied	38	27.1
Rented	84	60.0
Unauthorized possession	18	12.9
All	140	100.0

Insofar as shelter structures are concerned, 51 per cent of the respondents in Kota live in pucca houses, 27 per cent in semi-pucca and the remaining 22 per cent in kutcha housing units.

Table - 5.23

Shelter Structure	
Type of structure	No. of respondents & to total
Kutchha	72
Semi-pucca	38
Pucca	30
All	140
	100.0

In more than 60 per cent of the cases respondents have two-room accommodations and only in 22 per cent cases do they have single-room dwelling units. It is surprising that nearly 11 per cent of the allottees have accommodation of three rooms or more, indicating their better economic status than that of the target group and strengthen the earlier statement that in Kota the selection of beneficiaries was not done strictly on economic classifications and a considerable proportion of the middle and higher income groups were allotted plots under S/S projecty (Table 5.24).

Table - 5.24

No. of Rooms per Dwelling Unit	
No. of rooms/ dwelling unit	No. of Respondents & to total
One room	31
Two rooms	94
Three rooms & above	15
All	140
	100.0

Locational Analysis

From the locational point of view, a significant proportion of respondents have a positive relationship between their work-place and residence as is evident from Table 5.25.

Table - 5.25

Distance of Work Place from Original and Existing Living Place in Kota

Distance (in kms.)	No. of respondents	% to total
Upto 1	56	40.0
1 - 2	28	20.0
2 - 3	35	25.0
3 and above	21	15.0
All	140	100.0

It can be seen from the table that 40 per cent of the respondents have their work place within a radius of 1 km. and only 15 per cent of them have to commute 3 km. and above daily for work. More than 49 per cent of the respondents fall under the category of unskilled workers, and they reside in the core city areas enabling them to earn their livelihood through general labour and rickshaw pulling. Therefore, the location is one of the prime factors which influences allottees from not moving on to the allotted sites.

Infrastructural Support

i. Water Supply: Approximately 29 per cent of the respondents in Kota are served by domestic connections and another 28.6 per cent by the public standposts, making a total of 57.2 per cent served by piped water supply. The remaining 42.8 per cent are dependent on other means such as wells, handpumps and so on. Table 5.26 gives the picture.

Table - 5.26

Sources of Water Supply

Sources	No. of respondents	% to total
A. Piped water supply	40	28.6
i. Domestic connections	40	28.6
ii. Public standposts	40	28.6
B. Other sources	60	42.8
Wells, handpump etc.		

Respondents using other means of water supply, such as handpumps and wells generally belong to low income settlements.

ii. Night Soil Disposal System: More than 57 per cent of the respondents have inhouse latrines in their existing dwelling units and 14.3% depend on community latrines. A significant proportion (28.6%) of the respondents do not have access to any type of night soil disposal system either in their houses or community latrines, and use the open fields for this purpose. These people largely belong to slums and squatter settlements.

Night Soil Disposal System

Table - 5.27

Type of System	No. of respondents	% to total
i. Inhouse latrines	80	57.1
ii. Community latrines	20	14.3
iii. Open fields	40	28.6

iii. Waste Water Disposal System: Almost 60 per cent are served by the public drainage system that is connected with the city network. Only in marginal cases do they use private pits inside their dwelling units for waste water disposal. However, a considerable number of respondents (28.6%) residing in slums and squatter settlements are largely dependent on private pits outside their houses (within the settlement) for waste water disposal. Table 5.28 gives the picture regarding the waste water disposal system.

Waste Water Disposal System

Table - 5.28

Type of System	No. of respondents	% to total
i. Public drainage system	85	60.7
ii. Inhouse pit	15	10.7
iii. Private/natural pit out-side the unit	40	28.6

Former Living settlements		
	No. of respondents	% to total
i. Squatter settlements	67	60.9
ii. Inner city slums	35	31.8
iii. Others	8	7.3

Former Places of Living

Table - 5.29

The sites and services projects in Ghaziabad mainly attract households used to living in either squatter settlements or inner city slums. Thus the implementation is regarded as a positive contribution to the housing problem and the living environment of low income groups.

Ghaziabad Experience

In short, most of the allottees residing in slums and squatter settlements are not equipped even with basic infrastructural services at their original place of dwelling. But the allottees who belong to comparatively better income groups and reside in rental accommodation have much better access to core urban services.

iv. Electricity: Insofar as electricity is concerned, 57 per cent of the respondents have in-house electricity connections. The remaining 43 per cent either use street light during the night or traditional sources of energy.

Shelter Tenurial Status

Out of 110 respondents, only 20 per cent had a status of owner occupied houses in their original places of residence. Table 5.30 will illustrate their situation.

Table - 5.30

Shelter Tenurial Status of Respondents

Status	Original living place		Allotted place	
	Number	% to total	Number	% to total
i. Owner occupied	22	20.0	110	100.0
ii. Rented	55	50.0	0	0.0
iii. Unauthorised	33	30.0	0	0.0

Contrary to this, at the allotted sites all the respondents, irrespective of their former shelter tenurial status, have the status of owner-occupied dwelling units. Thus the house ownership in the formal sector helps allottees to become "respected citizens". On the economic front, it may increase the owners' income, in various ways, for example, by subletting or enabling them to open a shop or involve themselves in any other form of household industry.

From a social point of view, cross-subsidy is very important. In a country with large variations between income levels, where the poor do not have the financial means to provide for basic needs it is appropriate that housing is used as a tool for shifting money from the haves to the have-nots.

Locational Analysis

As stated earlier, a considerable position of allottees (60.9%) got plots under the S/S project at the same location where they originally resided at squatter or slum settlements. Therefore, the projects did not influence their earlier living conditions from the locational point of view. However, respondents who previously resided in the inner city slums and had not changed their economic activities, were affected by the new location of their residential units allotted under the S/S project. Table 5.31 depicts the situation.

Table - 5.31

Work Place and Living place relationship

		Location				Distance (km.)					
		Up to 1	1-2	2-3	3 & above	Up to 1	1-2	2-3	3 & above	ALL	
A. Respondents originally belong to slums and squatters of Vijai Nagar project area	i. Original place	10	30	20	7	67	(9.2)	(27.2)	(18.2)	(6.4)	(60.9)
	i. Allotted place	10	30	20	7	67	(9.2)	(27.2)	(18.2)	(6.4)	(60.9)
	B. Respondents belongs to inner city slums	25	10	-	-	35	(22.7)	(9.1)	-	-	(31.8)
	ii. Original place	25	10	-	-	35	(22.7)	(9.1)	-	-	(31.8)
ii. Allotted place	-	25	-	-	(31.8)	-	-	-	-	(31.8)	
iii. Others											
a. Original place											
b. Allotted place											

While tap water supply is available to all the responding households at the allotted places, it was only in a few cases (7%) that they had access to piped water supply on individual levels at their original residences. However, roughly 40 per cent of them had the opportunity of using public standposts. The remaining 53% were dependent on traditional sources of water supply such as handpumps, wells, and tubewells. The following table gives the picture.

Water Supply

The survey of the status of various core services such as water supply, Night Soil Disposal System, waste water disposal system and electricity reveals that these are now available to all respondents, while before the implementation of the S/S project the availability of these services was much worse.

Intrastructural Support

While at the original place of residence, the work place of more than 70 per cent of the respondents was in the inner city slums, within a range of 1 km., from the allotted places they had to commute more than 1 km. to work. However, in most of the cases, they either owned their rickshaws or bicycles thus spending 10 to 15 minutes commuting to the workplace. In fact even respondents who did not possess any mode of transport spent not more than 30 minutes walking to their workplaces.

Table - 5.32
Sources of Water Supply

Sources	Original living place	No. of resp. % to total	Alloted place	No. of resp. % to total
A. Piped water supply				
i. Individual connections	8	7.3	110	100.0
ii. Public standposts	44	40.0	-	-
B. Other sources (wells, handpumps, etc.)	58	52.7	-	-

Night Soil Disposal System :

It can be seen from Table 5.33 that all the respondents have access to flush type latrines inside their dwelling units in the new residential area of Vijai Nagar (Alloted Site). But at their original residences more than 50 of them had to go out in the open areas for defecation. Only in 15 per cent of the cases, respondents had facilities inside their houses while the remaining depended on community latrines.

Table - 5.33

Night Soil Disposal System

Type of System	Original place	No. of resp. % to total	Alloted place	No. of resp. % to total
i. In house latrines	16	14.5	110	100.00
ii. Community latrines	35	31.8		
iii. Open fields	59	53.7		

At all points the waste water disposal system at the allotted place is through open, pucca drains connected to the city network. While at original residences only 20 per cent of the respondents had the use of the public drainage system for waste water disposal the remaining 80 per cent used improvised means of waste water disposal, like small pits inside housing units, natural/private pits outside housing units.

Waste Water Disposal System :

Waste Water Disposal System

Table - 5.34

Type of System	Original Place	Allotted place	No. of resp. % to total	No. of resp. % to total
i. Public drainage system	22	110	20.0	100.0
ii. Inhouse pit	32		29.1	
iii. Private/Natural pit outside housing unit	56		50.9	

Electricity

As in the case of other services inhouse electric connections have been provided to all respondents at their new residences in Vijai Nagar. Adequate street lighting is also provided. However, it was reported that the power supply was not adequate and there were frequent power failures and voltage fluctuations.

advantages of self-building and ownership more manifest. project more within the means of the urban poor. This makes the priorities. Therefore an increase in flexibility will bring the material; this resulted in slow response to felt needs and household flexibility in service packages, financial arrangements and building employment and in integrated housing. There was specially a lack of However, the project has been less successful in providing

living conditions and promoting self-help and self-ownership. quite successful in providing shelter, social facilities, improving In short, the sites and services project in Ghaziabad has been

Type	Original place		Alloted place	
	No. of resp.	% to total	No. of resp.	% to total
i. In-house connections	16	14.6	110	100.0
ii. Street lights	22	20.0	110	100.0
iii. No electricity; using other means	72	65.4		

Electricity
Table - 5.35

it. In their original places of residence, only 15 per cent of the respondents had in-house electric connections, specially those living in inner city areas. Street lighting was also very poor in their former residential areas and only 20 per cent of them had access to

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