

Guide to Good Practice
in
Core Area Development
DFID Research Project R 6860

Delhi

Field Studies and Workshop
DRAFT FINAL REPORT

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The many staff of the Delhi Development Authority and Municipal Corporation of Delhi.

The participants at a one-day Workshop held on September 24th 1998 at the India Habitat Centre, New Delhi on the issues raised by the Delhi Field Studies (see Appendix D for details).

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1. Introduction

This working paper forms part of a larger urban core area research project funded by the UK Department for International Development (DFID R6860). The research will provide both guidelines for urban design and frameworks for urban management and finance to facilitate the integrated and balanced development of commercial core areas of rapidly growing cities in the developing world.

Economic pressures on the central areas of such cities are giving rise to large-scale commercial developments that displace or fail to accommodate low-income families. Such households gain their livelihood largely from work in central service employment and are an essential element of the urban economy. Core area commercial redevelopment has too often caused an exodus of residents to the outlying areas of the city, which in turn increases commuting time for many of these residents. The increase in travel time and cost for the urban poor also has an impact on the environment through increasing energy use and air pollution.

The project, which focuses on selected sites in Delhi, Jakarta, and Recife looks at ways in which sustainable low-income housing and small business provision can be integrated with new commercial developments in a range of developing world contexts. The key issues that the research addresses are:

Urban design guidelines for mixed use development incorporating low-income activities alongside commercial office, retail and other high value uses. Urban management and development frameworks for achieving cross-subsidisation of such provision.

A range of regulatory and co-operative mechanisms have been explored involving the use of planning gain; trade-offs in planning standards and requirements; and a variety of public-private partnership approaches. The aim is to provide a range of options to suit the local institutional and development context.

A good practice guide will include examples of existing good practice in high, middle and low-income countries, a methodology for preparing development briefs for integrated core area development and a 'manual' of good practice guidelines.

The aim is to produce a set of urban design and development tools - methods, principles, examples of good practice - which will enable low-income communities to live close to the source of their livelihood within the commercial centres of these cities.

In Delhi two sites were studied - Motia Khan in the centre of the city and Peera Garhi on the Outer Ring Road. Both sites were designated for commercial development in the Master Plan but were currently occupied by large informal settlements - each occupied by 10-15,000 people. Household interview and physical surveys were conducted and alternative development plans drawn up, costed and evaluated. This process is described in detail in Chapters 6-9 below.

Study Site Conclusions

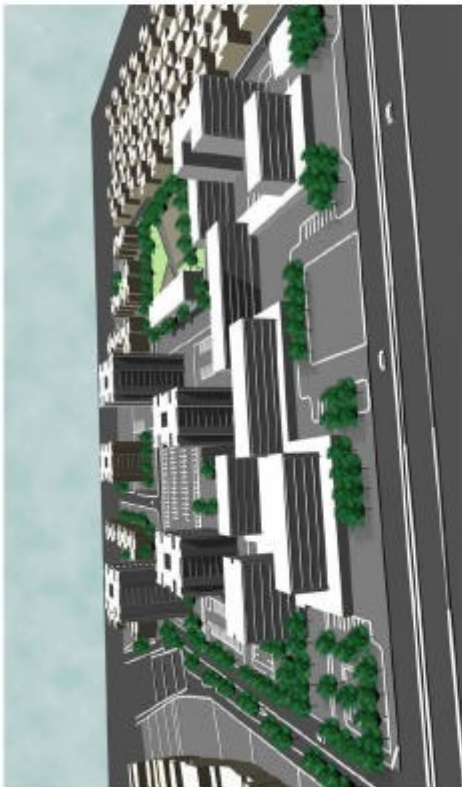
- These valuations show that it is possible to develop the sites with a high LIG provision in an economically viable way.
- The essential cost element missing from these calculations in order to give a true cost/benefit picture is the charge that must be borne by the developing authority through compensation or provision of alternative accommodation to those existing on site but not re-accommodated on site.
- A further missing element is the long-term economic cost to the urban area of the increase in travel implicit in re-locating and re-settling people in the city outskirts.
- In Motia Khan Option C, with a LIG provision equivalent to 43% of the existing population resident on site, gives a return that is over 90% of that given by the DDA commercial scheme with limited MIG and HIG housing and no LIG provision.
- Strong views were expressed at the Workshop that LIG provision should not be 'given' but that there should be a charge element to the allottees. The 'partial return' calculations given in the tables would seem to be a reasonable starting point.
- Further inquiry needs to be conducted into the extent and value of the external city wide costs mentioned above; ways and means of applying equitable charges to allottees; and the level at which the 'partial return' option becomes unacceptable economically and socially.
- An estimation should be made of the returns from a DDA maximum profit development to see what is left to benefit other low-income groups, after all the costs and compensations to all the Motia Khan residents had been deducted. (i.e. exactly how much would a maximum return on commercial development actually return to the revolving fund for city wide cross subsidy?)

The following four pages (10-13) give computer generated perspectives for the Motia Khan central area Study Site and show the Delhi Development Authority (DDA) plans and Max Lock Centre (MLC) Option A redevelopment, which is indicative only and not an architectural proposal. The DDA proposal makes the maximum valuation return (residual value) on the site with hotel, shops, offices, high and middle income housing. Little low income or small business accommodation is provided and all residents currently living on the site would need to be re-located.

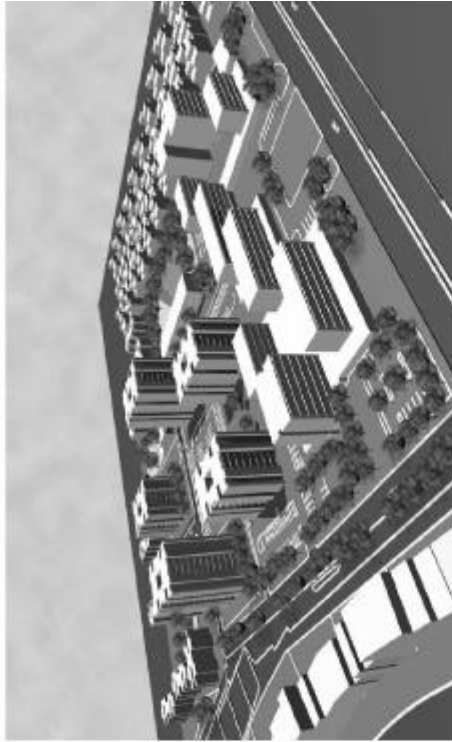
The MLC Option A has been chosen for illustrative purposes as the one that gives the minimum return of the four options studied. Even so this option would re-accommodate 37% of the existing residents (some 40% of whom expressed a desire to stay in the area). The MLC options gave a valuation return of between 88% and 64% of that of the DDA proposal depending on the option chosen.

Chapters 5 and 9 and Appendices A and B give the details.

Delhi Development Authority (DDA) Redevelopment proposal



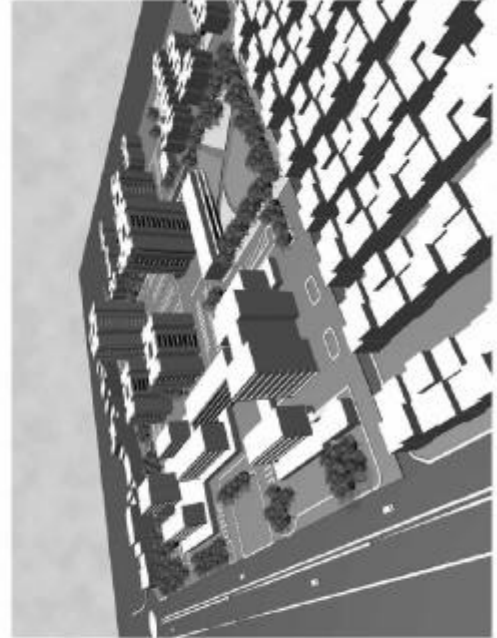
South View



South-West View



North View



East View

Max Lock Centre (MLC) Redevelopment proposal



South View



South-West View



North View



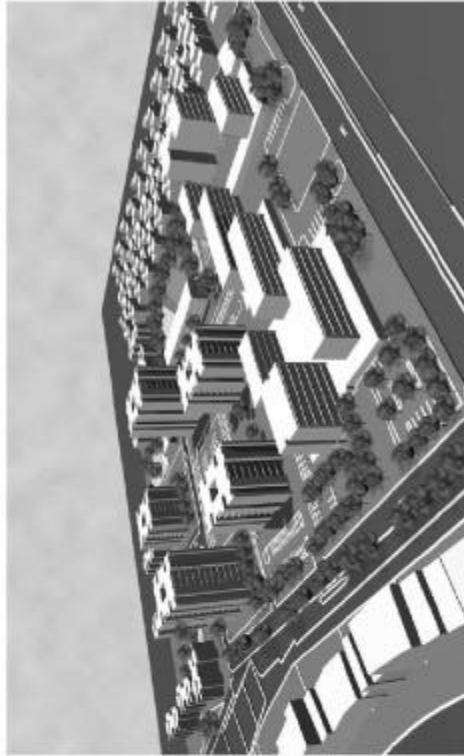
East View

Comparison of DDA and MLC Redevelopment proposals

DDA



South View



South-West View

MLC



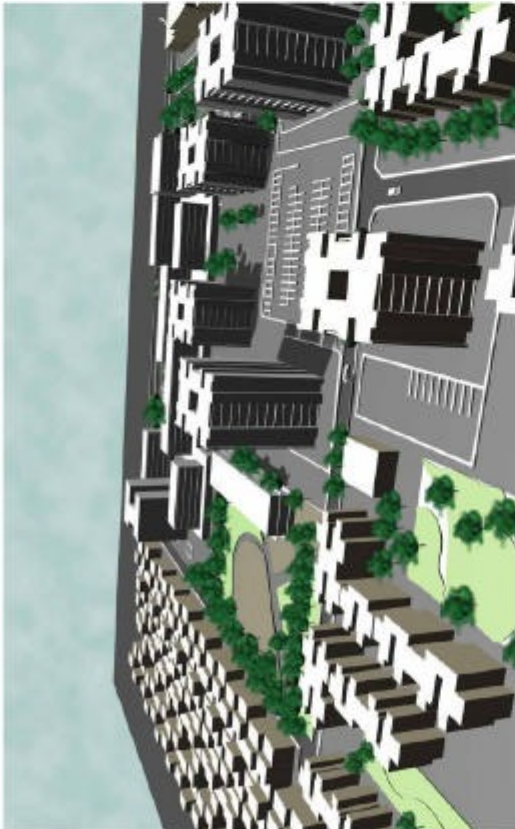
South View



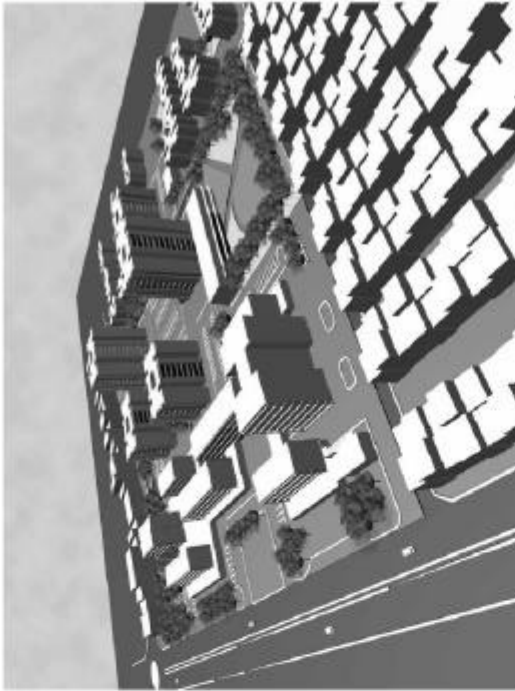
South-West View

Comparison of DDA and MLC Redevelopment proposals

DDA



North View



East View

MLC



North View



East View

Study Methodology

A desktop study of potential field study sites was carried out at the Max Lock Centre in the latter half of 1997. An initial selection of twelve sites was discussed with planners at the Delhi Development Authority (DDA) and all sites were visited in January 1998. In this process a number of other sites were examined. A final selection of two sites was decided upon – one at Motia Khan close to the Old City and Connaught Place and the other at Peera Garhi, a critical transport node in West Delhi. We are indebted to the advice and help of Dr K.Srirangan (Assistant Director Planning DDA) in this process.

A socio-economic and physical survey of the two sites was carried out in early 1998 in order to build up an accurate profile of each settlement. Both surveys illustrated that the resident populations had strong economic, employment and social ties to the sites. Almost three-fifths of the households in Peera Garhi as opposed to less than two-fifths in Motia Kahn wished to stay on the site. The difference can be accounted for by the considerably worse off housing and environmental and social conditions that prevail in Motia Kahn. On both sites over three-fifths of households had been living in the area for more than 10 years. The number of households that had moved into each area within the last five years was relatively insignificant.

Based on the evidence gathered in both surveys, the research team felt there was a strong case for partial re-accommodation of the existing residential population in any commercial development scheme. A computer model was subsequently designed to identify a number of possible mixed-use development scenarios that could be introduced in Motia Khan and Peera Garhi.

Accordingly, three mixed-use development options were drawn up for each site that could be costed, valued and compared in equal terms with the existing DDA commercial plans for the two areas. This showed that from a valuation point of view all options were commercially viable but naturally the DDA plans being totally commercial with only middle and higher income group housing showed the greatest commercial return per square metre site area. The existing developments in both Motia Khan and Peera Garhi are illustrated in Appendix (A) together with sampling methods. Copies of field survey forms, options and valuations are provided in Appendix (B) for Motia Kahn and Appendix (C) for Peera Garhi.

The Main findings of the study were presented to a number of senior DDA officials, independent professionals and academics working in Delhi's urban environment at a workshop on the 24th of September 1998. A brief outline of the main issues that were discussed at the workshop can be found in Appendix (D).

On the basis of the first survey and having identified from the workshop that Motia Khan residents were likely to be relocated sooner than residents in Peera Garhi, a more in-depth survey on Motia Khan residents was deemed necessary. The survey, which gathers the opinions of a number of Motia Khan residents and the DDA focuses on their livelihoods and highlights some of the main issues facing residents as they relocate.

3. Delhi a Contextual Overview

Delhi is India's third Mega City after Calcutta and Mumbai (Map 1). The built up area of Delhi is approximately 50kms square lying on both the east and west banks of the river Yamuna. The Old City and New Delhi are on the west bank with newer suburban extensions and industrial areas on the east bank. By the year 2001 the City is expected to have a total urban population of 12.9 million (based on draft recommendations of the expert committee on population). However, it should also be acknowledged that the total population rises to 16.6 million if population figures for the Metropolitan Towns of Ghaziabad (including Loni), NOIDA, Fariadabad, Gurgaon, Bahadurgarh and Kundli that surround Delhi are also taken into consideration. They are an integral and (Map 2) indistinguishable part of the urban fabric of the City

3.1 Delhi, Uttar Pradesh and Haryana States

The National Capital Territory of Delhi (i.e. Delhi State), a title it was given in 1990 (previously known as Delhi Union Territory), covers most of the built-up area. It also includes some open land for city extension to the west and south that is already earmarked by the Delhi Development Authority (DDA) for future, post 2001, development.

Outside and around the Delhi State boundary are the States of Uttar Pradesh and Haryana on the east and west banks of the River Yamuna respectively. Considerable areas of Delhi's urban expansion have taken place within the boundaries of these two States and are under the separate control of their respective Urban Development Authorities.

The main areas of cross boundary development are the contiguous eastern extension of Shahdara and to its south the industrial area of NOIDA with associated housing both west of the Hindan River. Just east of the Hindan River (25 kms from the city centre) is Ghaziabad on N.H.24 at a junction of three major trunk roads (Meerut, Lucknow and Allahabad). All these rapidly growing developments are in Uttar Pradesh State. The satellite developments of Faridabad astride the N.H.3 to the south and Gurgaon on the N.H.8 to the south-west are in Haryana State. Ghaziabad, Faridabad and Gurgaon also have stations on main railway lines some 20 to 30 kms from Delhi Main Station.

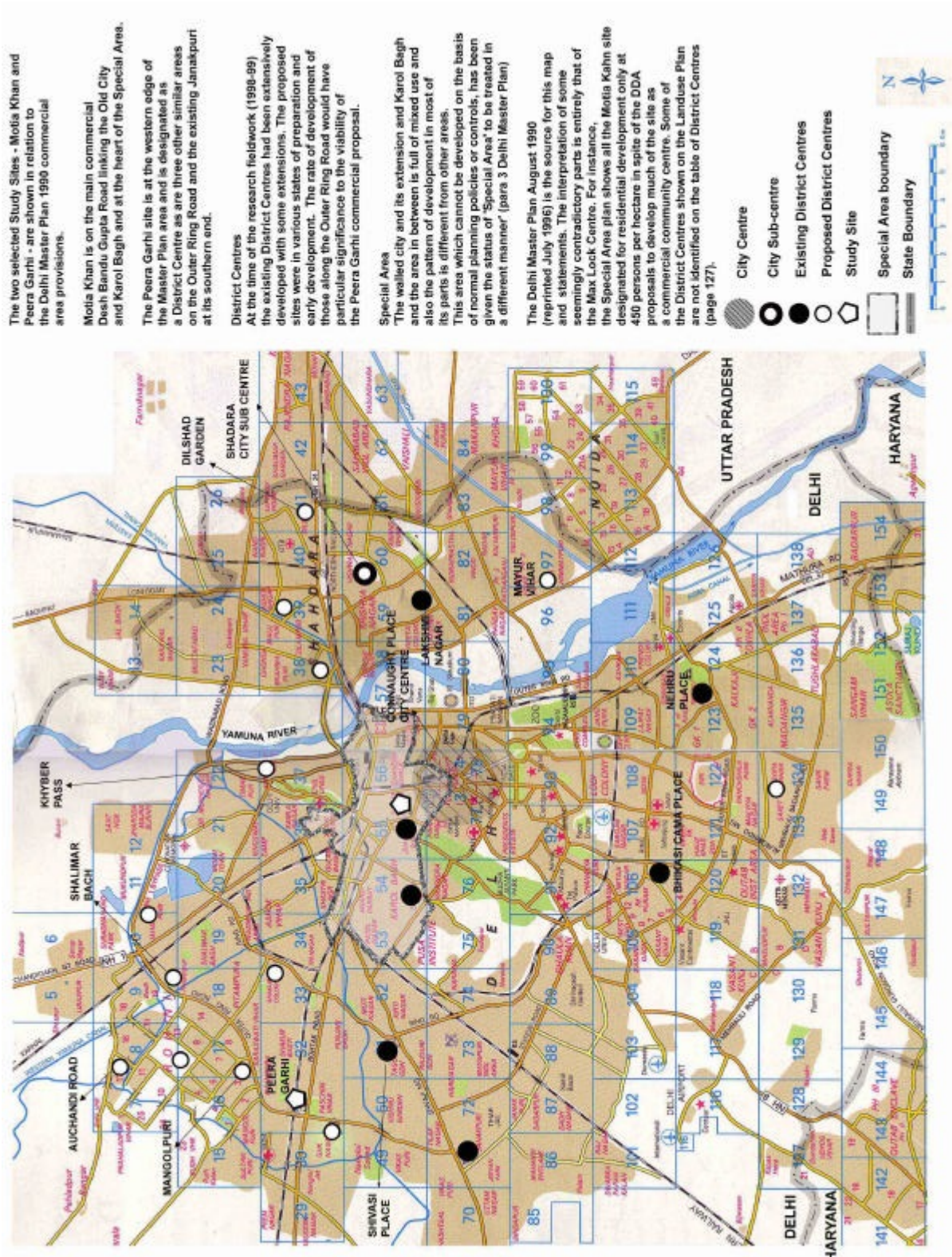
These settlements are an integral part of the Delhi urban sprawl with much economic inter-relationship and commuter movement in both directions between them and the long established central commercial and employment areas of the city.

The primary motivation for these developments just outside the Delhi administrative area has been the restrictive regulations in Delhi State, in particular, a ten year residency qualification for land allocation and the rigid land use definitions of the statutory Land-use Master Plan. The monopoly position of the public sector in development in Delhi State has forced the private sector to meet unfulfilled demands for property in all fields across the Capital Territory boundary where property development is relatively unregulated.

Commercial Centres and Special Area

Map 1

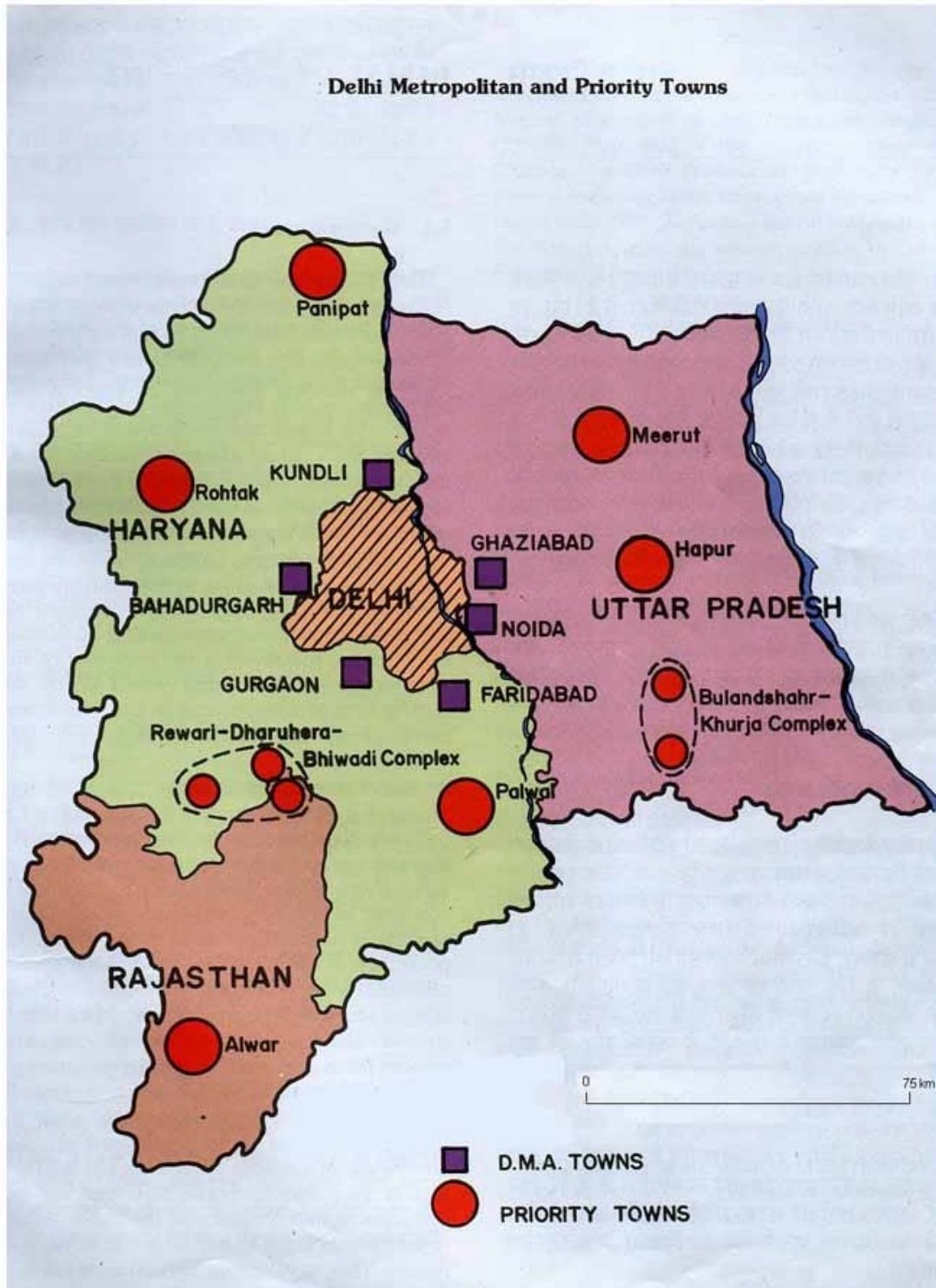
(Source: Eicher City Map 1996; Master Plan for Delhi August 1990 reprinted July 1996)



National Capital Region

Map 2

(Source Regional Plan 2001, National Capital Region Planning Board, December 1988)



3.2 The National Capital Region

There is a government awareness of these contradictions and conflicts to the carrying out of properly harmonised city planning within the city region. In 1985 a National Capital Region was declared with a National Capital Region Planning Board. The Region covers an area of approximately 30,000 sq.kms altogether including the whole of Delhi State, large areas of Uttar Pradesh and Haryana States to the east and west and the northern tip of Rajasthan State to the south west (Map 2).

A Regional Plan has been drawn up and approved by the Board (1988) which assumes a decelerated and restricted growth of Delhi within the Capital Territory boundary and the moderated growth of new town/satellite developments defined as being in the Delhi Metropolitan Area. However, these settlements are to be served by an improved inter-urban road and rail network that would seem to be counter active to moderated growth. The Region Planning Board has difficulty trying to get the four entrenched State Urban Development Authorities to co-operate both with the Board and among themselves in controlling and developing integrated and harmonious strategic planning policies.

The Plan proposes to formalise the Delhi Metropolitan Area as a Policy Zone comprising the controlled areas of the contiguous towns outside the present Delhi boundary.

3.3 Policy and Planning Background

Until the partition of India in 1947, Delhi's urban population remained steady and manageable. However, as large numbers of migrants and refugees began moving to the City it became apparent that an organised urban plan would have to be introduced. In 1955 the first steps to introduce such a plan were taken with the promulgation of an ordinance (based on British standards) designed to control building operations. This was closely followed by the launch of the Delhi Development Authority (DDA) who was tasked with implementing the new piece of legislation. In 1962, seven years later, Delhi promulgated its First Master Plan that continues to form the blue print for planning policy in Delhi today.

3.4 1962 - Delhi Master Plan

Delhi's first Master Plan (approved in 1962) was designed to promote organised urban growth in all land areas within the State with two exceptions. The first, was a 'special area' comprising of Delhi Old City and its early western area of expansion (Karol Bagh) which has its own land-use Master Plan and its own defined categories. The second, was all farm and vacant land in the State beyond the boundary of the Master Plan. The city was segregated into zones that kept home and working areas apart. Public transport networks and land use patterns were designed to compliment the plan. Alongside the process of identifying land for zoning the Master Plan also prescribed appropriate norms, standards, subdivision regulations, and development controls for different uses of land and devised specific building regulations and bye-laws that could control the standards of construction

activity (Srirangan, 1997). For the system to work effectively the DDA was given the entire responsibility of planning, large-scale advanced land acquisition, development and disposal in order to keep the supply of land and its development ahead of demand.

To facilitate this process it invoked compulsory land acquisition laws which it used to expropriate or acquire land in advance on 'off market' rates. Once an area has been through this planning and developing process it is handed over by the DDA to the appropriate Municipal Authority¹ which is responsible for administration, estate management and the issuing of any building or planning permission in accordance with the Master Plan. The DDA retains control over all other areas in the State² but some private development³ does take place in Delhi.

Under this system, land was allocated at pre-determined (reduced) rates to land owners whose land was acquired; industrialists who were being asked to remove their factories from their present locations; co-operative housing societies of low and middle income groups; and other categories approved by the government. Once acquired, land is either placed in a land bank for future development or auctioned for commercial, industrial and high-income residential uses. Profits from auctions are placed in a revolving fund and either used to cross subsidise low-income housing programmes, finance city development projects or acquire more land for the land bank.

3.5 DDA Residential land developments

The DDA's initial low-income housing policy focussed on providing registered individuals with developed and serviced land. By 1965, it began building houses and flats that it sold at subsidised rates either on a hire purchase or

¹ There are four Authorities in Delhi State:

- The **Delhi Development Authority (DDA)** has the two principle functions of planning and development over the whole of Delhi State. Development is controlled within the State boundary by the Land-use Master Plan prepared by the DDA.
- The **Municipal Council of Delhi (MCD)** administers, in accordance with the Master Plan, all built-up areas in Delhi State with the exception of two areas historically inherited from the days before Independence.
- The **Cantonment**, a loosely defined military area with unpublished boundaries in the south west of the City, is covered by the Master Plan after approval by the Cantonment Board who then administers and controls its provisions for the Cantonment.
- The **New Delhi Municipal Committee (NDMC)** functions in a similar manner to the Cantonment Board but within a published boundary in the south central area of the city defining the original development of the Government Centre and Civil Lines for senior government officers.

² i.e. undeveloped land outside of the Master Plan coverage

³ Private development may occur on;

- freehold land not in DDA possession but in accordance with the Master Plan
- land within the Master Plan area without clear land-use definition
- land outside the Master Plan area by rural landowners carrying out development through ignorance of or avoidance of the implied non- development of such land during the current plan period
- squatters settling on and developing on seemingly empty land not in their possession

an instalment sale basis. However, as demand for land continued to increase it returned to supplying serviced plots and resettling and regularising squatter settlements. Unfortunately, many plots either remained vacant because allottees could not secure finance to purchase construction materials or were resold by them in 'benami' (power of attorney) name before they returned to squat where they had lived previously or in other areas throughout the City closer to areas of employment.

Later in the early 1970's the DDA introduced co-operative group housing societies which were encouraged to build their own flats on serviced land provided by the DDA. However, studies carried out by Ribeiro (1992) suggest the scheme was largely unsuccessful, indicating that in 1995 of the 29,412 plots allotted to various societies, roughly 11,995 plots (40%) lay vacant. By and large though, the DDA has continued to rely on the provision of serviced plots as its primary strategy to house Delhi's increasing low-income population.

In 1981, DDA launched the development of its sub-city township programme. The concept is designed to relocate, re-house and provide employment opportunities to large numbers of low-income households occupying land illegally in and around the Delhi's inner city. At present Delhi sub-cities exist in Dwaraka to the south west, Narela to the west and Rohini 15km to the north west of Delhi city centre. Rohini, the largest sub-city, plans to accommodate one million people, 97% of whom will be from economically weaker sections of the community.

3.6 Land Development Policy - Conclusions

Although the DDA's residential land development policy aimed to house the cities low-income population through the supply and development of large areas of subsidised housing, a significant amount of the poor continue to live in temporary shelter on squatter settlements throughout the city.

Whilst the policy has been relatively successful, the following factors have reduced its effectiveness. Firstly, the implementation of restrictive land laws that excluded private sector involvement in land supply has meant legal land supply is heavily reliant on the DDA. Furthermore, insistence on lengthy and expensive land development procedures in the DDA has reduced its ability to deliver low-income housing. This in turn has encouraged the development of unauthorised land development and squatter settlements. In its favour however, the benefits of controlled urban development mean that legal residential developments have to be built to DDA standards in designated areas which has allowed for controlled urban development of a least a section of the housing market.

Secondly, the introduction of regulatory allocation policies with restrictive selection criteria have disabled large numbers of low-income households from registering with the DDA and benefiting from subsidised housing. as the restrictions include the compulsory period of 10 years residency in Delhi; the necessity of filling in application forms; and the possession of, and having to provide, supporting documents.

However, even those people fortunate enough to be allocated housing have often sold their properties on to higher income households for substantial gain. Indeed studies carried out in Rohini have indicated that residents who were provided subsidised plots at a cost to them of Rs100-200 per square metre in 1982 have been able to resell them on in 1992 for R1538-14,844 per square metre(Srirangan, 1997).

For other people, the lack of employment opportunities in many of these subsidised housing areas, and high transport costs associated with travelling to the city centre or other places of employment, has encouraged a large number of resettled low-income households to move out of their subsidised suburban housing areas back to the city centre. A third major and uncontrollable factor which has perhaps contributed most to Delhi's land supply problem has been the presence of a constant stream of migrants to the city which has significantly increased demand for land.

4. Delhi Good Practice in Core Area Development

4.1 Study Context

The core central business district area of Delhi (in and around Connaught Place and Old Delhi) had already been built-up before the DDA started its operation in 1961. Hence the DDA's focus on fresh acquisition and development of green field areas outside the already built-up area. However, some land within the built-up area was either transferred to the DDA or bought by the DDA from former Ministries who ceased land development after the creation of the DDA.

Private developments and/or redevelopments continued to take place in the core CBD area and the Old Delhi area as well as green field areas outside the main built-up area but still within the Capital Territory boundary. Although these areas were legally under the control of the Master Plan and related policies, in practice, however, most privately owned freehold land attracted developments which were often contrary to Master Plan provisions.

Pressure from sustained demand for residential and non-residential uses was way above the DDA's capacity to satisfy as the sole legal provider. This frustrated demand was met to a certain extent by some formally approved private developments but more frequently by informal private developments in the form of unauthorised land developments and squatting (see Map 3). The first of these met the legal requirements of the Master Plan but the others did not and are illegal.

Historically, the major commercial employment centres were Connaught Place in the New Delhi CBD area, Chandni Chowk in the Old Delhi area and in Karol Bagh, the old western extension to the Old City. The Master Plan for Delhi 2001 envisages a hierarchy of commercial (retail and office) centres including a sub-CBD at Shahdara area in East Delhi. It is intended that the current and future development of commercial activities and employment generation should focus around these centres spread throughout the city (see Map 1).

Mixed residential/commercial development generally has not been permitted in new commercial development but a concept of mixed land use (reflecting what exists) is proposed in the Master Plan 2001 for the Special Area comprising the Old City and Karol Bagh (see Map 1).

The DDA directly developed many of the lands designated in the Master Plan as commercial centres. However, a limited amount of commercially designated land was auctioned to private developers. The following private developers/builders were involved in this process: SCOPE at Laxmi Nagar District Centre, M/S Skipper Construction Company at Jhandewalan and M/S Ansals at Nehru Place.

The three Municipal Authorities in Delhi have also been involved in commercial development within the jurisdiction of their administration - both directly and through their nominated formal developers. The Slum Wing of the DDA has developed district centres with a cross-subsidy element to low-

income residential: notably at Jahangirpuri, Raghbir Nagar and Shivaji Enclave (see Map 1 ref: sq 10/51 respectively).

The Master Plan 2001 has also proposed a number of new transport interchanges of various designations. These are to be built towards the periphery and are intended to be linked by fast transport routes and provide easy accessibility to neighbouring commercial centres and residential zones. These will be centres of attraction for many people and could generate commercial values near to them.

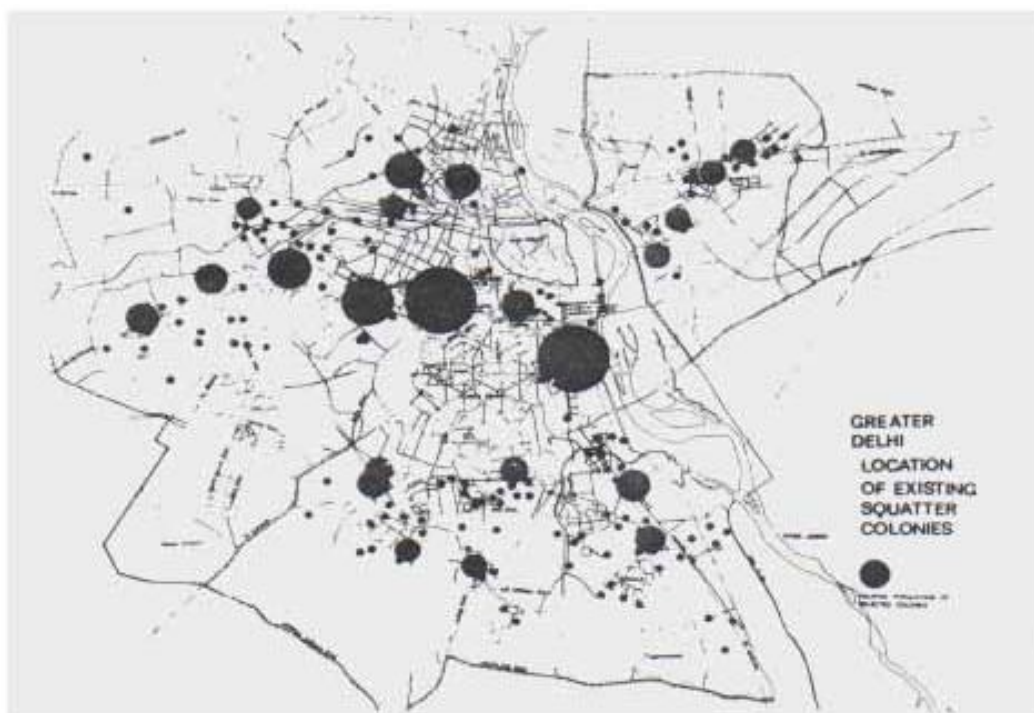
The Master Plan 2001 proposes as part of the urban extension plan a new land development policy. This policy enables public-private partnerships in both residential and commercial developments. These developments are of a suburban nature and time will be needed to forecast the effect of this policy. However, they can be compared with private developments taking place outside the National Capital Territory boundary at Gurgaon, Faridabad, Ghaziabad and NOIDA where there are fewer planning restrictions (see Map 1 ref sq [155-158], [161-174], [66-68] and [97-100] respectively). Some private developers (e.g. Ansals, DLF) are undertaking mixed commercial/residential developments in these satellite developments.

The changing policy towards the increasing privatisation of development through the sale of land 'freehold' offers considerable opportunities for growing investment in and delivery of serviced land. However, the danger is that the benefits of both cross-subsidisation and estate management for the public good possible through leasehold control may be lost. It is noted that the term 'freehold' is used loosely in Delhi and often seems to be more of a long-term 99 years leasehold. If 'freehold' is in fact a long-term leasehold then obviously the long-term benefits of estate management will not be lost although shorter term estate management will be put in jeopardy.

Location of Squatter Colonies Greater Delhi 1968

Map 3

(Source R D Gohav)



The distribution of squatter settlements and population in Delhi, 1968.

The small circles represent the location of settlements, whereas large circles represent populations of selected sites.

Although this source is considerably out of date it gives a reasonable impression of the extent and spread of squatter settlements in Delhi. Judging by more recently prepared (1994) print-outs that consist of named sites with number of 'Juggies' (without the population living in them) but not located on a map, the extent is considerably greater. It was beyond the resources of this study to examine and analyse these lists in more detail other than the following overall totals.

Total number of 'Clusters' (ie settlements) 1,077

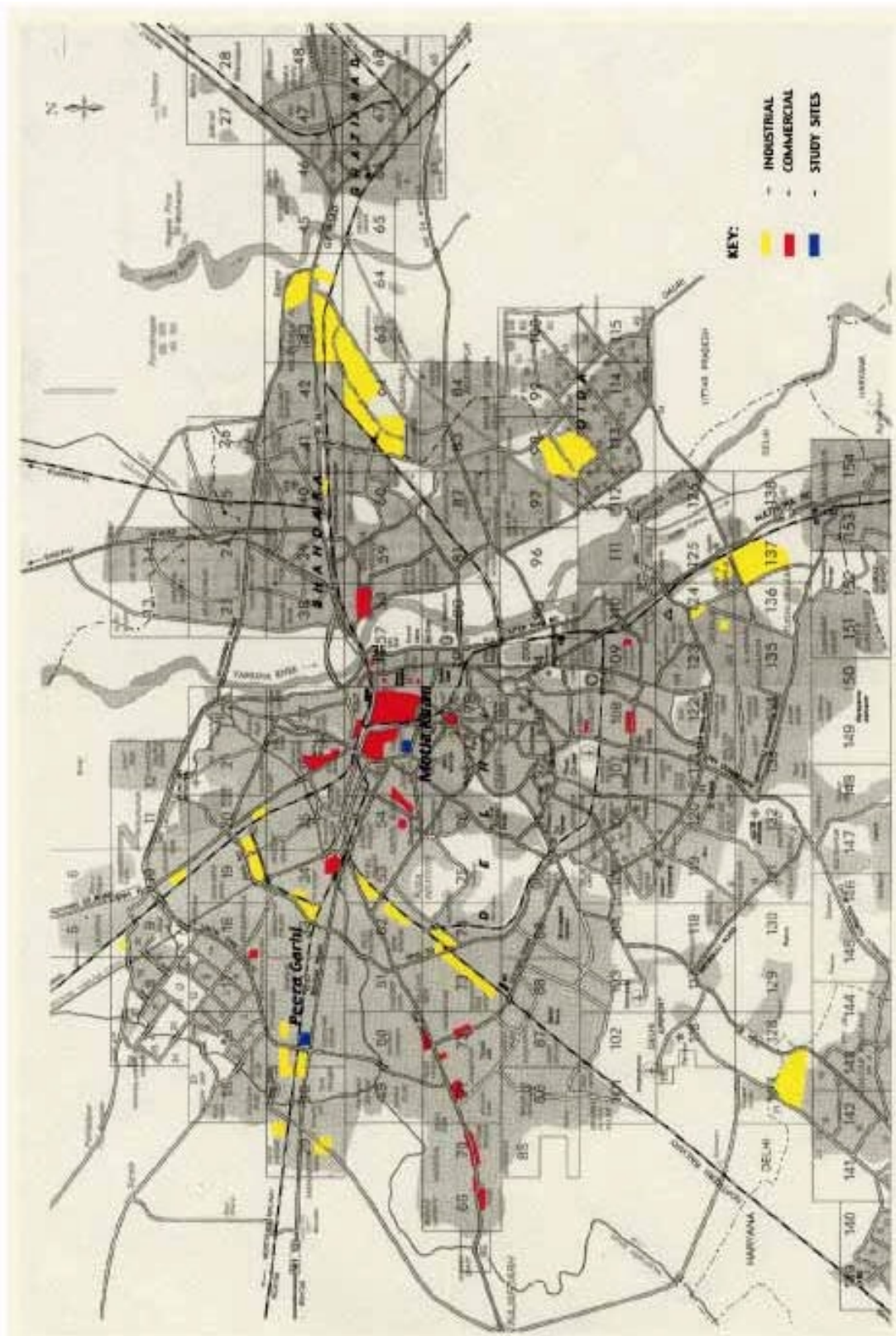
Total number of 'Jhuggies' in those 'Clusters' 478,175

Assuming average size of household = 4.70 persons
i.e. the average from the Motia Khan and Peera Garhi
sample surveys and one household per 'Jhuggie' then the
Total Population is likely to be around 2,247,500

There was a wide variation in the size of the individual 'Clusters' recorded, the largest being over 6000 'Jhuggies' and the smallest less than ten

Delhi Primary Land Uses
(based on Eicher Map of Delhi 1996)

Map 4



5. Identification of suitable sites in Delhi

5.1 Site selection Criteria

In the first instance, the sites had to be in or adjacent to core areas and subject to commercial development pressures (Map 4). Secondly, the minimum size of each site (roughly 4 hectares) had to allow for the consideration of a full range of building and street types, access and layout arrangements. Thirdly, the site or part of it had to be occupied by unauthorised settlers and be subject to commercial pressure for redevelopment. The study was also concerned about conserving existing mixes of use and small business services which are vital to the functioning of core areas but which tend to be driven out by commercial property development and accompanying price increases.

Based on these criteria 12 sites¹ were examined in East/Central and Western parts of Delhi (Map 5). Following discussions with the Delhi Development Authority, it was decided that most of the sites identified would not be suitable for the study.

Planning policy decisions had been made on Shahdara sub-CBD and a number of district centres. To put forward alternative proposals for these sites at this stage, even if they were academic and theoretical, might prejudice any current delicate negotiations for their development.

The transport interchange sites would be dominated by decisions made unilaterally by the various autonomous statutory public transport and freight authorities - both road and rail. These sites would not be good typical examples and were also ruled out since the major development decisions were likely to be taken largely outside of direct planning control.

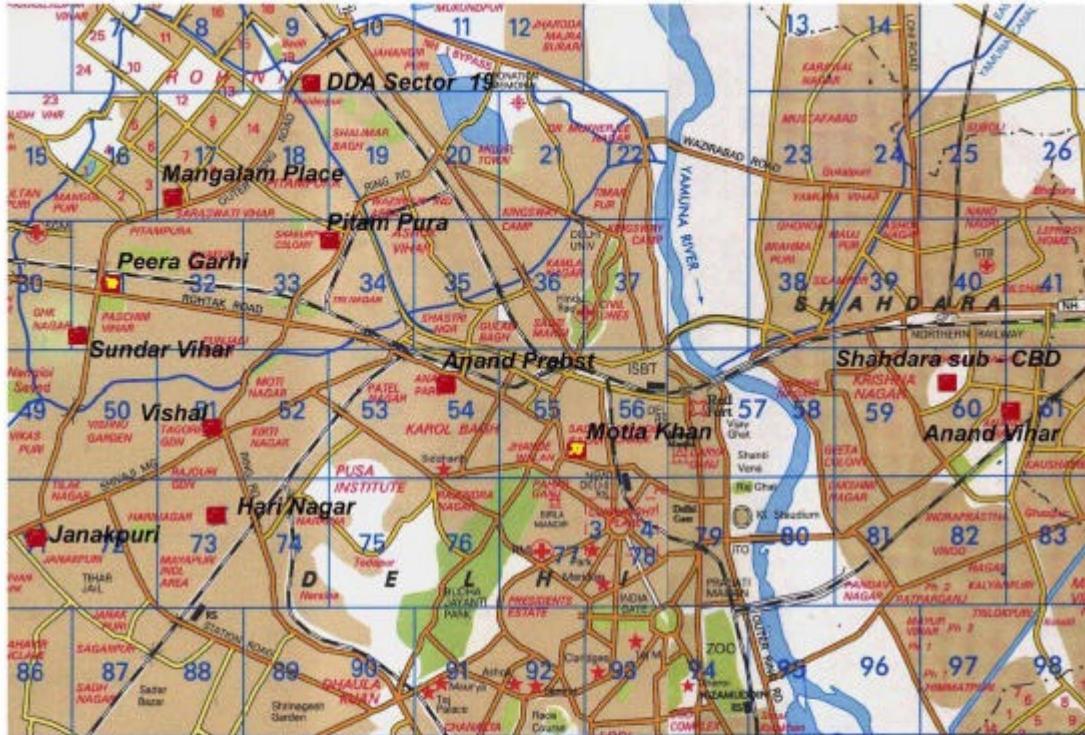
The area of the Old City with its status of Special Area in the Master Plan was also considered to be too fraught with land ownership, tenancy and conservation issues to be suitable for the kind of appraisal and time scale under consideration.

After deliberation two sites were finally selected - one at Motia Khan 2km west of Chandni Chauk and Connaught Place and the other at Peera Garhi located at the North East corner of the junction of Rohtak Road and the outer ring road in West Delhi. Both sites were designated commercial centres in the Master Plan, were owned by the DDA and had considerable residential populations (2750 and 3200 families respectively) whose presence had hindered the development of the sites.

¹ See Appendix F for an individual description of each of the 12 sites visited.

Prospectival Study Site Locations in Delhi (based on Eicher Map 1996)

Map 5



In West Delhi, DDA Sector 19, Mangalam Place and Pitam Puri were visited at the same time as Peera Garhi. They are similar areas being designated commercial centres in the Master Plan or under potential pressure for commercial development. Peera Garhi was the only site of these with a substantial residential population and for that reason as well as its key transportation location was chosen for the study. Mangalam Place, Sunder Vihar, Hari Nagar Janakpuri and Vishal were then initially examined as potentially economic and commercial developments that could be competitive to the successful development of Peera Garhi

6. Selected Sites

6.1 *Motia Khan*

Motia Khan lies near Delhi's central area with good transport connections, commercial potential and a large squatter settlement already on site. It is located on the north side of Desh Bandhu Gupta Road that is the main road west out of Old Delhi to Karol Bagh. The road from New Delhi station to the site consists of an intensively commercial wholesale centre for building boards, timber, glass and furniture fittings and mainly consisting of converted 3 to 4 storey buildings on both sides of the road. The block south-west of the Desh Bandhu Gupta Road and Rani Jhansi Road junction is now fully developed as the Jhandewalan District Centre.

The frontage of the site to Desh Bandhu Gupta Road offers a potential for commercial development that would form a direct and natural link between the established commercial developments to the east and west of the site.

The site's location within 2kms of Chandni Chauk and Connaught Place as well as its close proximity to large commercial/market centres north and south of the site offers a wide choice of employment opportunities.

There are about 2750 families (over 12,000 population) living in the squatter settlement that occupies about 3.4 ha. (3500 persons/ha.) out of a total site area of 5.3 ha. which includes cleared land, an unoccupied new eight storey block of higher income flats and Sant Nirankari secondary school¹ (Map 6). The Master Plan zoned the area for a Community Centre (the smaller size of the defined commercial centres), a hotel and a residential zone at 450 persons per hectare i.e. a capacity of approximately 2000 persons.(see Insert 1)

6.2 *Peera Garhi District Centre*

The site, defined in the 1990 Master Plan Report as a District Centre comprises of 28 hectares, lies some 13-14 kms from Connaught Place. It is located at the north east corner of the junction of Rohtak Road (NH10 main road to west) and the Outer Ring road. It is bounded to the west by the Outer Ring Road, the north alongside the Northern Railway main line, the east by New Multan Nagar and Sahdev Park and to the south by Rohtak Road. Mangalpuri railway station lies just to the west of the Outer Ring Road on the main Northern Railway line.

There are major employment opportunities in the vicinity. Along the western boundary of the site directly on the other side of the Outer Ring Road is the Udyog Nagar industrial area and on the other side of the railway is the Mangalpuri industrial area. Immediately north of the site between it and Pitampura are further industrial sites. There are large areas of middle income

¹ Motia Khan site dimensions: Total site including school 5.33ha, site excluding school 4.71ha, cleared sites 0.94ha, 8 storey flats 0.37ha, squatter occupancy 3.42ha.

housing to the south that can offer domestic work although that is not culturally acceptable to the majority of female residents on the site.

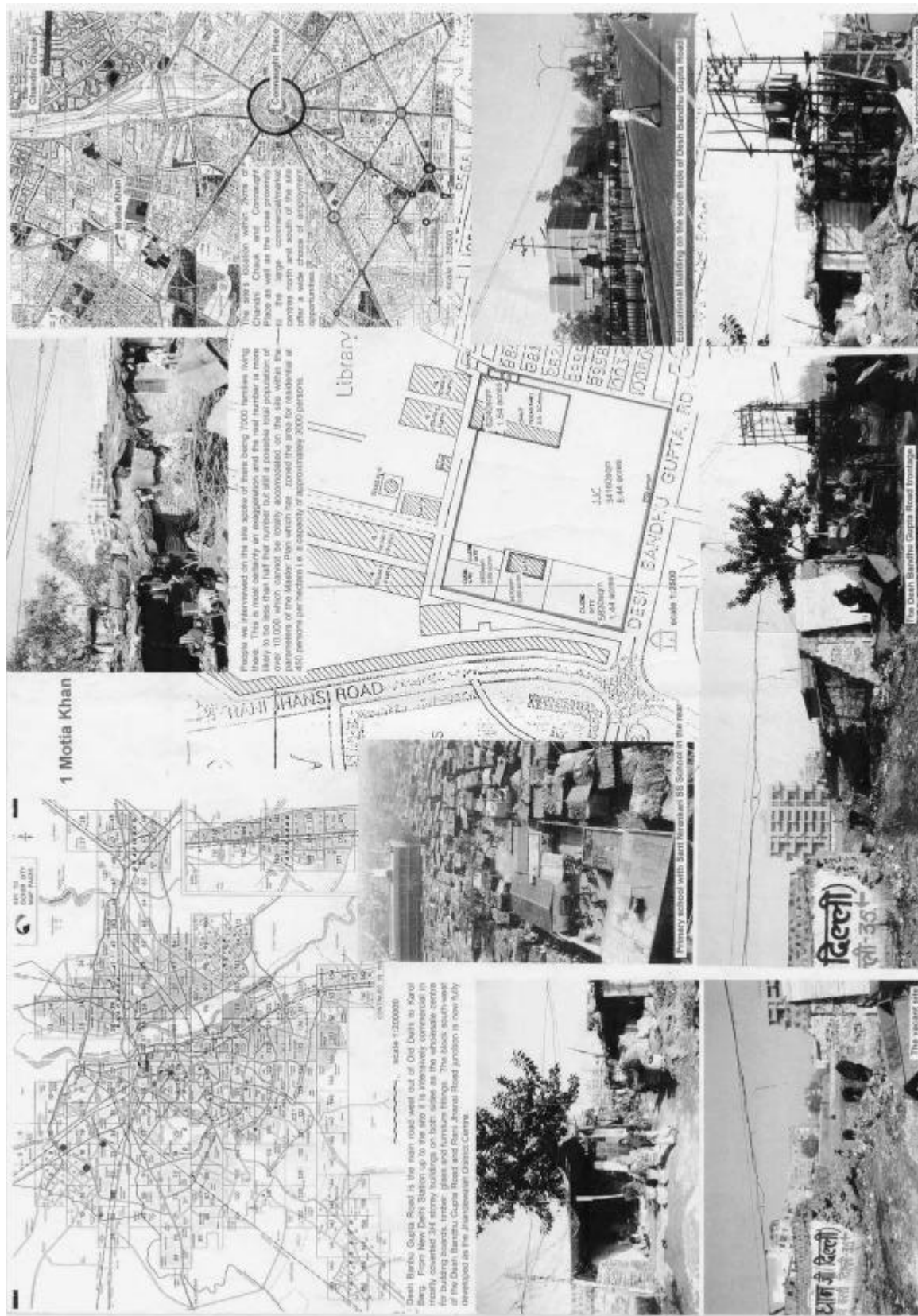
The prospects for commercial development of the site are enhanced by its excellent relationship to the major road and rail routes of western Delhi. The fact that there is little informal commercial development in the immediate area is also to its advantage. The Master Plan proposes five district centres on sites within a five kilometre radius of the Peera Garhi site. Two could be in direct competition with Peera Garhi since they are relatively close by and have the common means of access from the Outer Ring Road. The nearest, Sundar Vihar, is about one kilometre south along the Outer Ring Road and the other, Mangalam Place, about two kilometres north along the Outer Ring Road. Both these sites have been subject to draft studies and development proposals but are as yet without any development.

Two other undeveloped sites, Vishal and Hari Nagar, are in more self-contained catchment areas with no direct transport links to Peera Garhi and would not offer the same kind of direct competition as Sundar Nagar and Mangalam Place. The fifth site, Janakpuri, is developed but has remained largely unlet. A reason put forward for this state of affairs is that the long lead in time to develop Janakpuri encouraged major informal commercial development to meet the existing local demand. By the time the district centre was ready for letting the need for commercial space had already been met informally. (Map 5)

There are about 3200 families (over 15,000 population) living in the settlement that consists of both a Rehabilitation Camp in army style barrack blocks and tents and squatters in informal accommodation (Map 7). This occupies about two thirds of the site (about 18 ha.). The other third along the western boundary fronting the Outer Ring Road is vacant except for a tented secondary school on the southern frontage to Rohtak Road. The Master Plan has zoned the whole area for a District Centre. (insert 2)

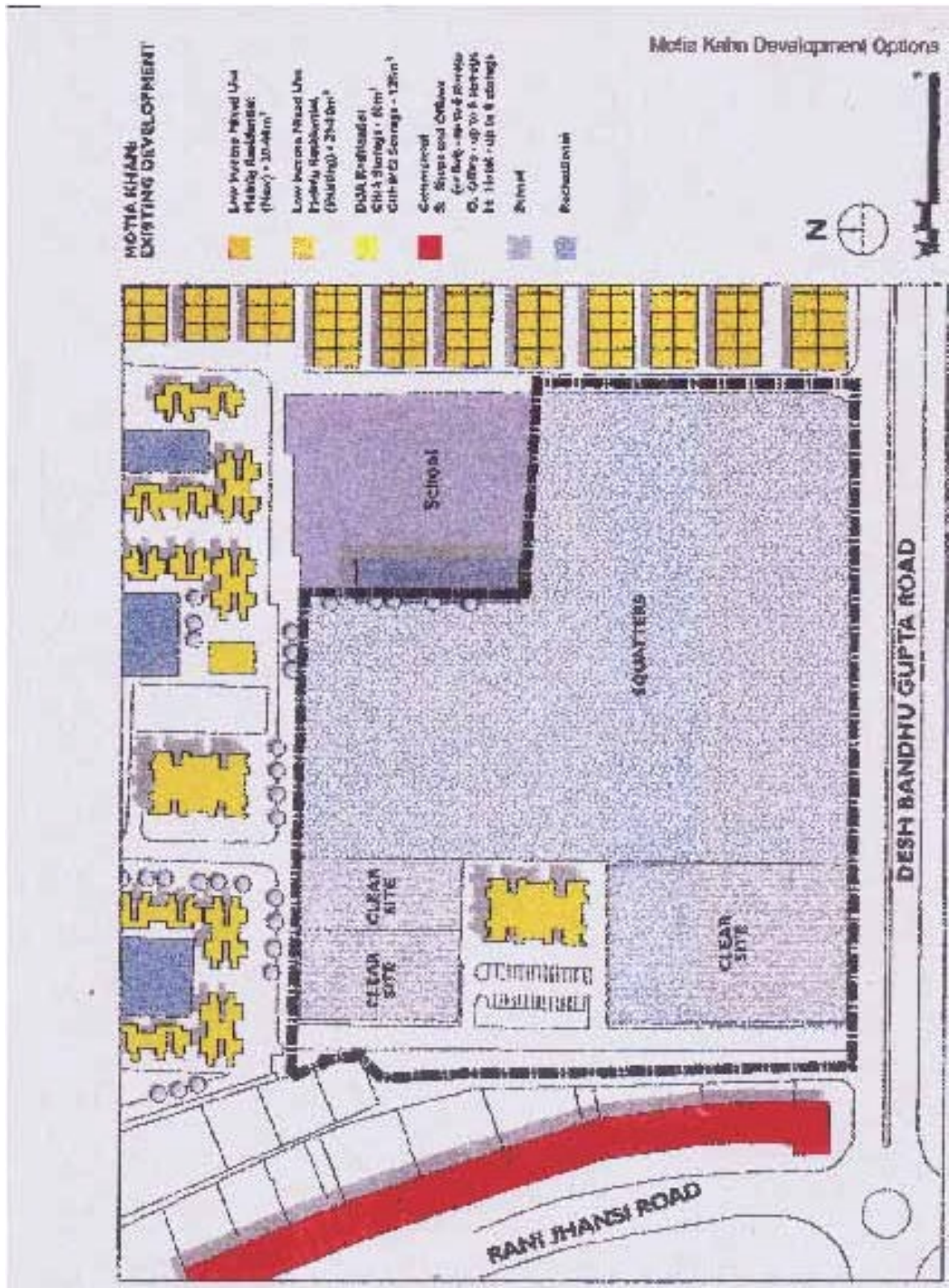
Map and Photograph Location of Motia Khan
 (Maps – Eicher City Map 1996)

Insert 1



Motia Khan Existing Development
 (source: Field Survey)

Map 6



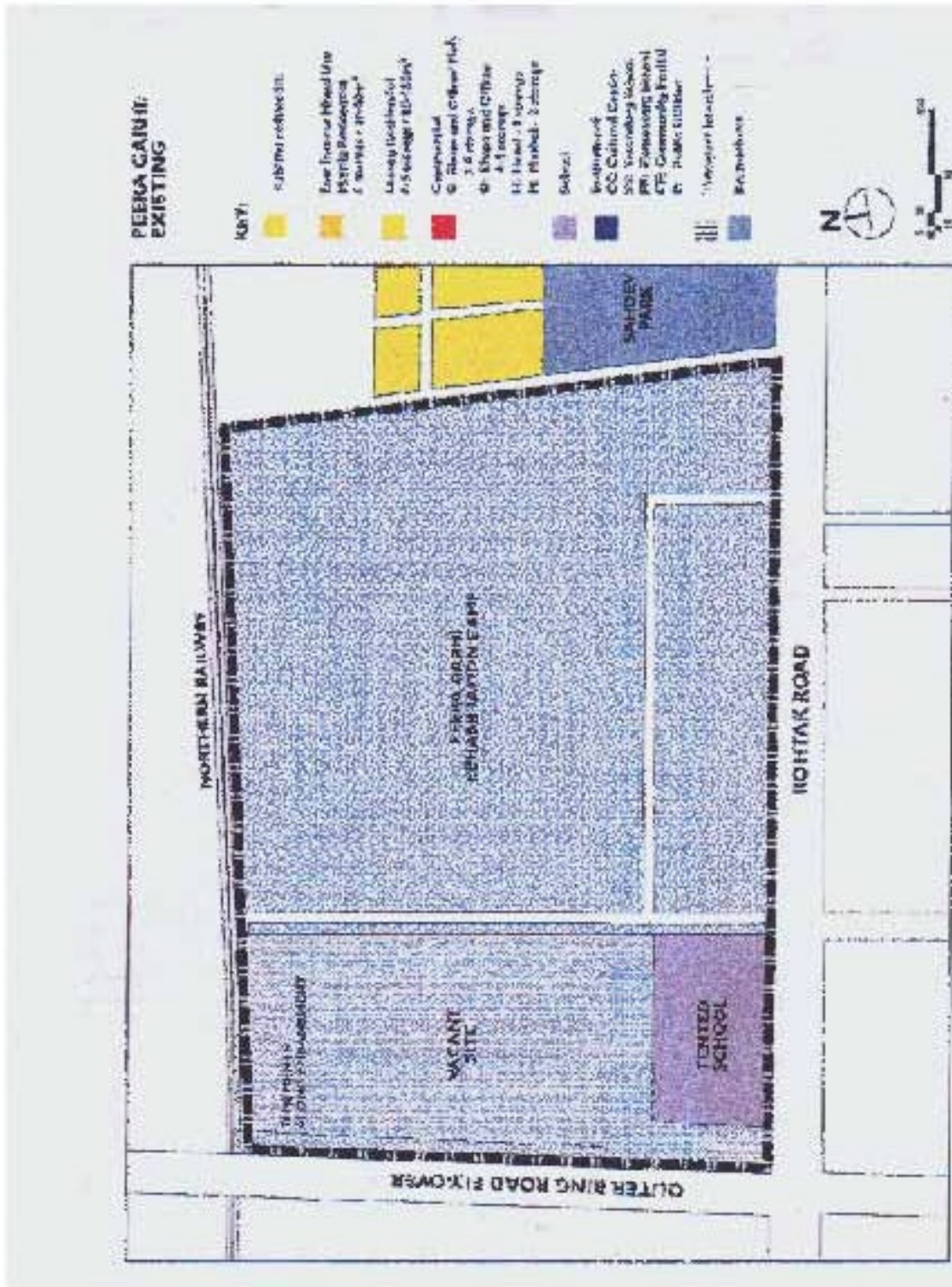
Map and Photograph Location of Peera Garhi (Maps – Eicher City Map 1996)

Insert 2



Peera Garhi Existing Development
 (Source: Field Survey)

Map 7



7. Socio-economic Survey of Motia Khan JJC and Peera Garhi Rehabilitation Camp

The major objective of the socio-economic survey was to collect information to guide the policy for mixed land-use and development options for the low-income groups in and adjacent to core areas of Delhi which are subject to commercial development pressures. The survey consisted predominantly of a sample household interview of two sites - Motia Khan JJC and Peera Garhi Rehabilitation Camp. The interviewed residents of Motia Khan and Peera Garhi were considered as a representative sample of those poorer low-income groups for whom various options of resettlement are being carried out through this research¹.

7.1 Motia Khan JJC

7.1.1 Site Background and General Characteristics

Motia Khan was an Iron & Steel market until 1975 when it was moved to West Delhi in Naraina. According to the sources from the DDA, the front portion of this site was proposed for the development of a Community Centre to rehabilitate a commercial market which was burnt down in a fire in Chandni Chowk about 10-12 years ago. The land was auctioned to a private developer for development, but squatters moved onto the site before the developer could begin building.

From the evidence of Motia Khan slum dwellers, people started squatting in 1980. Ever since the site has been under dispute and no further decision has been taken. The block of clear site on Desh Bandhu Gupta Road has been earmarked for a Hotel development by the DDA who hope to auction it to another private developer. The rest of the site at the rear is defined as a residential area with a proposal for high and middle income multi-storey flats to be developed by DDA.

Approximately 3.4 ha of the site consists of temporary huts (*jhuggis*). The approximate area of each *jhuggi* is 7-9 sq.m. At present there are around 2750 families living on the site giving a site occupancy rate of about 70%.

There are no proper educational or medical facilities for slum dwellers apart from a few private doctors within the camp, there is no government dispensary. Most children who go to school attend the only government school in the area at Pahar Ganj on the opposite side of Desh Bandhu Gupta Road.

There is no official provision of water, electricity and sanitation facilities on the site and therefore shortages are an everyday occurrence. One communal toilet block has been provided within the camp but this is hardly used because

¹ The research looks at ways in which sustainable low-income housing and small businesses can be integrated with new commercial developments.

water supply is often insufficient. Desh Bandhu Gupta Road is a major bus route offering an efficient bus service to the city centre and other parts of Delhi.

7.2 Peera Garhi Rehabilitation Camp

7.2.1 Site Background and General Characteristics

This camp was set up with the help of the central government to rehabilitate families migrating from different areas of the Punjab. The main cause of migration stemmed from terrorist activities in the Punjab that began in 1980. The situation steadily grew worse in late 1984 after the assassination of Indira Gandhi, Prime Minister of India. Consequently, people started moving to Delhi in 1986 and the migration continued until 1988. Rajiv Gandhi who became Prime Minister after Indira Gandhi's death, extended support to Punjabi refugees providing them with tented accommodation in Peera Garhi. Each family also received Rs 1000 in compensation each month for the inconvenience. However, since the change in government last year, residents have not received any money.

According to the president of the residents association, Baldev Raj Sharma, who is also a political representative, Manjit Singh, Additional Commissioner Slum Wing and Sahib Singh Verma, Delhi Chief Minister, have been trying to persuade the residents to vacate the area and return to the Punjab or to allocated flats in Narela or Rohini in north Delhi.

The camp currently consists of three types of accommodation - government quarters, government tents and private tents. At present, there are around 3200 families staying in the camp, 1500 of these are in government quarters, 1000 in government tents and around 700 in private tents. The government quarters and tents were only provided to families who could produce evidence, in the form of ration cards, of their permanent residence in Punjab. People who could not produce evidence, currently live in the private tents. Each government quarter provided consists of a single room with corrugated asbestos sheet roofing with a 18 sq. m. floor area.

Older camp residents can only speak Punjabi but younger residents now communicate in Hindi and sometimes English. Initially, a combined primary and high school was set up by Municipal Corporation of Delhi in tents, but last year a new primary school building was built and the primary school students were moved there. There are no plans to have a proper building for the high school yet. Both the schools are administered by the Municipal Corporation of Delhi (MCD). Medical facilities are provided through the use of a 5 bed health centre in the area which is also administered by the MCD.

Social infrastructure has been provided on a communal basis. No separate toilets and baths for individual houses have been provided. There is also an acute shortage of water and electricity. The area has an efficient bus service to the city centre and other parts of Delhi.

7.3 Sampling Method

7.3.1 Motia Khan

There are around 2750 families on the site. The conducted survey represents the views of 5% of the total population (i.e. 138 families or households). Since there was no plan or list of occupiers available, the interviews were conducted within the boundaries of the shaded areas shown in the plan (Map 8). The basic idea was to cover a sample from each of the three access ways providing entrances into the site from Desh Bandu Gupta Road.

7.3.2 Peera Garhi

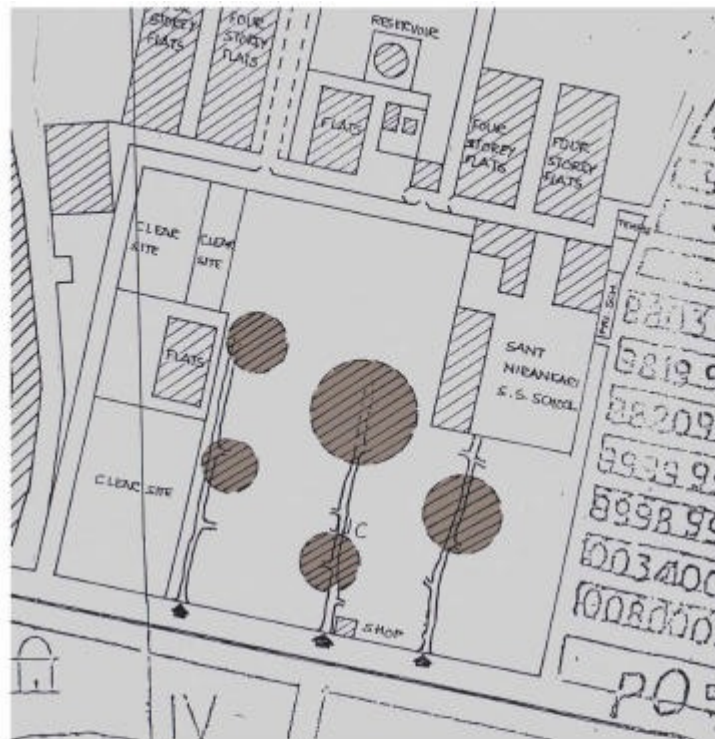
The household survey in Peera Garhi was conducted in a similar fashion with the views of 150 (5% of the total population) families/ households. A site plan was prepared marking all the government quarters individually and bigger blocks showing the areas occupied by government and private tents. A grid consisting of 150 intersection points was laid arbitrarily on the plan (Map 9). The idea was to interview each household falling under the intersection point, but it was not followed strictly at certain places where residents' wanted their households interviewed.

A summary of the main findings of this survey is outlined below. However, for a more detailed comparison of field household surveys conducted in Motia Khan and Peera Garhi and a summary description of specific questions asked refer to Appendix (G).

Sampling Methodology – Motia Khan

Map 8

(Source: Fieldwork)

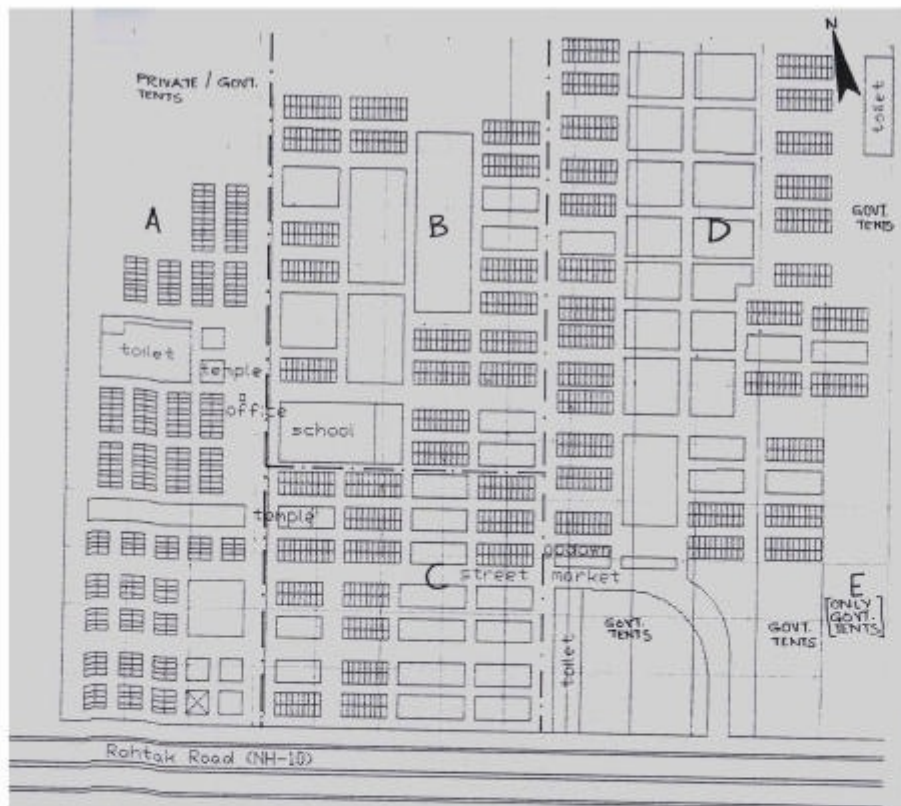


There are around 2750 families on the site. The conducted survey represents the views of 5% of the total population (i.e. 138 families or households). Since there was no plan or list of occupiers available, the interviews were conducted within the boundaries of the shaded areas shown above. The basic idea was to cover a sample from each of the three streets providing entrances to the site.

Sampling Methodology – Peera Garhi

(Source: Fieldwork)

Map 9



The household survey in Peera Garhi was conducted in a similar fashion with the views of 150 (5% of the total population) families /households used in the survey. A site plan was prepared marking all the government quarters individually and bigger blocks showing the areas occupied by government and private tents. A grid consisting of 150 intersection points was laid arbitrarily on the plan above. The idea was to interview each household falling under the intersection point, but it was not followed strictly at certain places where residents' wanted their households interviewed.

7.4 Motia Khan/Peera Garhi: Survey comparison Main Findings

After the survey questionnaires were completed the following comparisons and similarities were noted.

7.4.1 The Household

- Motia Khan has a lower proportion of its total age group in the active working group (19-50 years old) than Peera Garhi.
- A fifth of household heads are female in both Peera Garhi and Motia Khan.
- Only just half of all households in each area comprise of a standard nuclear family².
- No households had other people living with them other than their families.
- Man and wife on their own represent only about 5% of households in each area.
- The number of single person households in both Peera Garhi and Motia Khan is insignificant.
- 1 in 7 households in Motia Khan comprise of single parent households, almost twice that of Peera Garhi.
- Average size of a dwelling in Peera Garhi is 18sqm more than twice that of Motia Khan.
- Crime was a major problem in Motia Khan when compared to Peera Garhi.

7.4.2 Working Location

- More than two thirds of workers in Motia Khan walk to work as opposed to only one third in Peera Garhi.
- 18% of workers in Peera Garhi took a bicycle to work as opposed to only 2% in Motia Khan.
- Four fifths of workers in Motia Khan spent no money travelling to work as against less than two thirds in Peera Garhi.
- The proportion of workers taking 1/2 - 1hr travelling was almost twice as much in Motia Khan (47%) than Peera Garhi (26%)
- 17% of workers in Peera Garhi spend 1hr or more travelling to work whereas only 1% do so in Motia Khan.

7.4.3 Employment

- A higher proportion of people over the age of four was working in Motia Khan (35%) than Peera Garhi (28%).

² A nuclear family consists of a husband, wife and their children only.

- Peera Garhi has a higher proportion of its population in education (29%) than Motia Khan (17%).
- The quality of employment (higher proportion of full time as opposed part time workers) is higher in Peera Garhi than Motia Khan.
- Majority of women in Peera Garhi are not working.
- There is a higher degree of self-employment in Peera Garhi.

7.5 General Impressions of the Survey

7.5.1 Motia Khan

There was a mixed reaction from respondents when questioned about their future accommodation. Two out of five households wished to stay on site. Although the majority said they would prefer to live elsewhere none wanted to live outside Delhi. A number of the community felt that there was a lot of crime in the area. The site itself was in very poor condition and unhygienic. There were people who were in favour of in-situ up-grading whilst one group were interested in moving to Papankalan which is an area still under development lying on Delhi's outskirts and very near to Indira Gandhi International Airport (see Map 1 ref sq101).

It seems that residents migrated to Delhi in search of employment and settled wherever they found empty land, they therefore realised that there was a strong possibility that they could be forced to relocate.

Looking at the present density of the site, it did not seem feasible that all families could be resettled on the site. Although the DDA had a density standard of 250 tenement/ hectares for insitu up-grading, present densities in Motia Khan are over ten times that size. The DDA also has a proposal for a Community Centre on this site which cannot be ruled out.

One possible solution to the problem could be to relocate the willing residents in order to allow for the in-situ up-grading of the remainder of the site. Families who wished to stay on site could be provided accommodation as well as small business opportunities along with the commercial centre and the rest could be accommodated in Papankalan or some other area.

DDA's planned solution was to relocate residents to purpose built six storey flats with commercial provision on the ground floor at Rohini (extension 4). However, although construction work was supposed to have been completed in late 2000, site visits in mid 1999 indicated that the flats are unlikely to be finished by this date.

Based on the findings of both surveys and confirmation that residents would be relocating to housing at Rohini a more in-depth livelihood survey³ was felt

³ Livelihoods and Development in Core Areas. A Working Paper. Max Lock Centre 2000

necessary to establish how the livelihoods of Motia Khan residents might be effected once they had moved.⁴

7.5.2 Peera Garhi

The majority of people were reluctant to move out of the site because of employment opportunities and access to other facilities. Many wanted to settle there in single or multi-storey housing with better services. A number of residents in the camp felt insecure and uncertain of their future on a new site. This might have been because many were refugees, unlike Motia Khan slum dwellers, and were provided this accommodation by the government.

The majority of Peera Garhi residents are thus part of a socially cohesive group with a common background as re-accommodated refugees to Delhi from the Punjab. They are now considered by Government to be no longer eligible for that status and are being requested to leave the site. At the same time, an increasing number of other people have been moving onto spare and unoccupied parts of the site as squatters, building their own accommodation. Both groups have strong local employment related interests in not leaving the area.

Although the whole site is designated in the Master Plan as a District Centre, it must be questioned whether the whole site of 28ha. (i.e. one tenth the size of the whole of the City of London) could be economically developed with high return commercial development. Since DDA policy is currently to make the highest return possible on District Centre designated sites, high and middle-income flats would be an option from their point of view⁵.

Physically, camp residents and others as representative of low-income groups can be easily accommodated on the site along with a District Centre. This would mean that high financial return areas on the site would have to be reduced proportionately in order to accommodate the low-income housing. The cost of this should be balanced against the cost of relocation and re-accommodation of the existing residents elsewhere.

The DDA would appear to have partly recognised this situation and prepared a modest plan for a District Centre on the western vacant part of the site adjoining the key Rohtak/Outer Ring Roads junction.

⁴ Further research work is recommended to measure the success of DDA's relocation programme in Rohini.

⁵ The DDA Master Plan for Delhi (DDA August 1990) specifies in a Table on page 128 the areas that should be built in the proposed Peera Garhi District Centre (Rohtak Road) as follows (sq.m. '000): wholesale – 60; retail – 45; office – 80; service centre – 10; hotel – 30; cultural centre – 20; facility – 35; and residential – 35 giving a total of 315,000 sq.m.

8. Motia Khan – Livelihoods Survey

8.1 Introduction

The livelihoods survey, which is accompanied by a video taken in Motia Khan, is intended to provide anecdotal evidence to substantiate the main findings drawn from Motia Khan residents in the first survey. This survey was conducted in 1998 and based on a sample study of 5% of the total number of families in both Peera Garhi and Motia Khan

The livelihoods survey consisted of 9 random household interviews and examines the following issues in order to provide a more detailed background of residents in Motia Khan.

- History of migration and occupation
- History of education and skill development
- History of family and their migration, occupation and education
- Experience of adaptation in the city

Having identified some of the main characteristics associated with Motia Khan residents, the survey then goes on to gather the views of workers, residents and the Delhi Development Authority on the imminent relocation. Lastly, the report outlines some of the possible implications that relocation might have on the livelihoods of current Motia Khan residents.

Detailed individual interviews suggest that the assumptions about availability of work, markets and raw materials in the relocation area are overly optimistic.

8.2. A Summary of the Main Findings

8.2.1 History of migration and occupation

From all the interviews and discussions carried out with the residents of Motia Khan JJC, the main kind of migrant can be categorised as follows:

A large proportion of migrants is comprised of individuals who come to the city with the hope of earning money. The majority of them have a friend or relative already living in the city who help them gain employment and accommodation. After a few years their families join them or they marry locally. Everyone interviewed (in this category) in Motia Khan had a contact in Delhi before moving.

Many who migrate to the city possess inherited skills that they use to earn a living. There are two such groups/communities - madaris and singers in Motia Khan. Both belonging to different states - madaris from Uttar Pradesh and singers (belonging to 'Rana Samaj' community) from Rajasthan. The majority of these migrants did not know anyone in the city before migrating. Many of them migrated in groups moving from one location to another before arriving in Motia Khan.



Boys making and selling catapults



A performer (Madari) with trained monkeys



Metal bowl makers



Ice-lolly vendor



Shopkeeper



Balloon vendor

The third group in Motia Khan were born in Delhi and have moved to settlements like Motia Khan because they could not afford to pay the increased rents in places where they were living previously.

The majority were farmers or rural tenants who migrated to the city during periods when there is little work to be done on the farms. They come from many different states and many keep regular contact with their home communities.

8.2.2 History of education and skill development

The literacy rate in Motia Khan is very low. Not surprisingly, a large proportion of those interviewed had never been to school and none had finished high school. Only a small fraction of them continued educating their children after migrating to the city.

None of those interviewed, with the exception of Madaris and singers had any particular skill to help them earn an income.

8.2.3 History of family and their migration, occupation and education

In the majority of cases the survey found that the household head (usually a man) migrated to the city first and, once employed and settled, called for the rest of the family to join him/her.

A large number of women in Motia Khan work as housemaids in middle-income households close by. However, the survey found that if the man in the household brought back a reasonable wage, women usually stayed at home to look after their families.

The 1998 survey indicated that only 41.9% of the school-age children actually went to school. A small proportion of them worked and the rest of them spent their time playing and or falling into bad company. Many families were happier with their children working and earning money to supplement the family income than sending their children to school.

8.2.4 Experience of adaptation in the city

Those who had friends or relatives already in the city usually rent a room off them and later find other sources of rented accommodation or move to an informal settlement. A large proportion of this group find employment through friends or relatives. An average wage for someone with a full time job in Motia Khan is between R1000 –R1500 per month. With large families to support this is barely enough to live on let alone save.

8.2.5 The workers' perspective

The survey reveals that the majority of the people, either opting to stay on site or moving out, are satisfied with the kind of economic activities in which they are involved. This owes a great deal to the importance of Motia Khan's location within the city for the following reasons:



Brush vendor



Wood splitter



Musical group



Rickshaw pedaller



Sewing and repairing leather



Shop Keeper

The various specialised markets around Motia Khan and Old Delhi provide Motia Khan residents with significant employment opportunities.

- People who specialise in particular skills can easily access source raw materials from markets in Old Delhi.

Motia Khan is very well connected with public transport routes to other parts of Delhi. Although most of those who work in Motia Khan walk to work those commuting into Delhi city centre for various reasons have low travel costs.

- Many women in Motia Khan work as housemaids in middle-income households in the neighbouring area.

In spite of all these benefits three fifths of those interviewed in Motia Khan want to move out for the following reasons:

- Motia Khan has little if any infrastructure and that creates an unhygienic living environment.
- People feel insecure for the following reasons;
 1. There are a number of criminal gangs in the area.
 2. The Motia Khan site is enclosed on three sides. The frontage on Desh Bandhu Gupta Road provides the only way in or out of the site. The internal streets can often be narrow (i.e. less than one metre wide) and the incidence of past and present fires in Chandni Chauk (1999) and Motia Khan (1990) respectively raises peoples fear of being trapped in further outbreaks of fire.
- The government has not provided any community facilities to residents. (schools, dispensaries)

People who want to move out are well aware of the fact that it will affect their businesses, especially those who depend on Old Delhi market. It will increase their travel cost and time to a great extent and thereby reduce their income.

8.2.6 The Delhi Development Authority's perspective

The Authority officials believe that people will find work when they are relocated as raw materials that people use in Motia Khan are available in nearby villages like Rohini. Our enquiries in that locality suggest this is not so and particularly so for natural materials such as bamboo that are not indigenous to the area. However, the large mixed building materials market and DIY merchants along Budha Vihar Marg about two and a half kilometres from the centre of the re-location site could provide employment opportunities for unskilled male labour. DDA have also provided shops in the new scheme for people who run commercial establishments in Motia Khan. However, these assumptions have not been tested and their validity and effect can only be established after re-location has taken place.

8.2.7 Residents' opinion on the relocation site

Om Prakash Yadav, a resident from Motia Khan, along with a few other people from the JJC has been to the Rohini Rehabilitation site to see the flats, which would be allotted to them. Although happy with the size of shop space



Sugarcane juice vendor



Man with performing monkeys, travels



Leather strap maker



Vegetable vendor

that has been provided, the flats he says were disappointing. He commented that in slums, people have larger families and there isn't enough space for every one to sleep in the same room especially in summers. Half the people in all the families sleep on the roof of their houses. Winter, in Delhi, lasts only for 2-3 months so people sleep outside for most of the year. Although the flats are similar to the space he already lives in they have not provided any outside space to accommodate the sleeping patterns of families during summer. According to Om Prakash it would have been better if families had been provided with plots rather than having to live in a six storey flat.

8.2.8 Implications

In the process of migration, city centres tend to become over-crowded because they offer more employment opportunities. In Delhi's case, Motia Khan is in close proximity to a number of significant commercial areas such as Desh Bandhu Gupta Road, Connaught Place, Chandni Chowk, Karol Bagh, Pehar Ganj (Main Bazar Road) and Badar Bazar.

The survey reveals that a large part of the population in Motia Khan JJC is dependent on Old Delhi Market for its economic needs. People are involved in various kinds of activity such as making bamboo baskets, blacksmiths/ironmongers and making catapults. They buy the raw material from various markets in Old Delhi - Lal Kuan, Sadar Bazar, and Khari Baoli and sell their finished products back to wholesale markets in the vicinity. Furthermore, migrants with few skills find it easier to find unskilled labouring work in Motia Khan and its surrounding market areas than poorer placed sites.

However, the DDA is adamant on moving Motia Khan residents to the constructed flats in Rohini. The Authority's view that people will find all the necessary raw material they need to earn an income from the nearby villages is a myth, a number of commonly used materials such as bamboo are not indigenous. Furthermore, villages like Rohini cannot hope to provide the number of employment opportunities which areas like the old market (which is the oldest and biggest wholesale market) in Delhi currently provide.

The DDA though insists that significant commercial developments along both sides of the dual carriageway running from Mangolpur Khurd to Rithala Road and south westwards to Budha Vihar Marg - where building supplies shops predominate - should provide employment opportunities for a significant number of relocated Motia Khan residents. The existing predominance of lower-income housing in the area will already have taken up many of the unskilled job opportunities. For many women who currently live in Motia Khan and work as domestic workers in middle-income areas surrounding their homes, employment opportunities as domestic workers in Rohini will be difficult to find as most housing there is for low-income groups. However, with 'gentrification' taking place circumstances for domestic workers may well improve.

9. A Summary of the Preliminary Valuation of the Delhi Study Areas at Motia Khan and Peera Garhi

9.1 Introduction

Plans, both existing and proposed, were measured to obtain gross floor areas. Current building costs and rental values for the various types of development were obtained locally. These have been tabulated under various sets of assumptions to reach a residual site valuation that can be used to compare the economic viability of the various schemes on an equal footing.

9.2 Method

A basic development plan was drawn for each site by the research team on the basis that it should be a relatively high-density mixed-use development with a strong commercial element and substantial housing provision.

In the case of Motia Khan the current Delhi Development Authority development plan for the whole site was assessed in a similar manner to establish its residual site value.

The DDA plan for Peera Garhi shows a commercial development only on the extreme western end of the whole site. No development plan for the rest of the site was then available. No comparison could then be made in this case.

The plan options for each site are set out below. Each option has been subject to a residual site valuation on the following assumptions.

- Maximum market return on the housing element – no housing subsidy
- Partial market return on the housing element – some housing subsidy
- No market return on the housing element – full housing subsidy

9.3 Assumptions Behind Plan Options

9.3.1 Motia Khan¹

- A Four-storey commercial frontage with Lower Income Group (LIG) housing mixed-use provision behind and MIG 12 storey housing block
- B As A above but with reduced LIG provision
- C² Four-storey commercial frontage with hotel and maximum LIG housing mixed-use provision
- C1 Increased five-storey commercial frontage with maximum LIG housing mixed-use provision
- DDA Commercial podium, eight-storey hotel, six-storey office block, underground car-parking and eight and twelve storey MIG and HIG housing blocks

The Master Plan Floor Area Ratio (FAR) and site coverage ratios of 100 and 25% respectively have been exceeded in the Option schemes. It was considered that the current standards are too suburban and unreasonable for a central site such as Motia Khan.

Note: the standard commercial provision in the options A-C1 above is approximately 75-85% less than in the DDA plan but there is considerable informal commercial opportunity in the LIG building type design used in the options.

¹ See Appendix B for Motia Khan Development options.

² Options C & C1 aimed to provide enough LIG accommodation to satisfy approximately 40% of the existing population who stated in the sample household survey that they wished to 'remain on site' or 'live nearby'.

Comparative Analysis of Options: Motia Khan

Table 1

Options	Residual site value per sq.m. Rs	Floor Area Ratio FAR	Site coverage %	Persons housed in scheme & as a (%) of existing total on site
Option A		138	31	4470 (37%)
full return	9206			
partial return	2945			
no return	1102			
Option B		118	29	3760 (31%)
full return	8458			
partial return	2897			
no return	1368			
Option C		141	34	5160 (43%)
Full return	9484			
partial return	2824			
no return	909			
Option C1		135	na	4840 (40%)
Full return	9899			
Partial return	3729			
No return	1912			
DDA Plan		110	23	864 (7%)
full return	10439			
partial return	4539			
no return	na ³			

³ na = not applicable/available

9.3.2 Peera Garhi

- A Medium commercial element and maximum LIG mixed-use housing provision
- B Maximum commercial element and MIG and HIG housing with minimum LIG mixed-use housing provision
- C As B above but with reduced commercial element.

Comparative Analysis of Options: Peera Garhi

Table 2

Options	Residual site value per sq.m. Rs	Floor Area Ratio FAR	Site coverage %	Persons housed in scheme & as a (%) of existing total on site
Option A		105	19	12063 (78%)
full return	6770			
partial return	3496			
no return	2473			
Option B		126	23	8881 (57%)
full return	7186			
partial return	5800			
no return	5393			
Option C		103	26	8282 (53%)
full return	5644			
partial return	4258			
no return	3851			

9.4 Conclusions

- These valuations show that it is possible to develop the sites with a high LIG provision in an economically viable way.
- The essential cost element missing from these calculations in order to give a true cost/benefit picture is the charge that must be borne by the developing authority through compensation or provision of alternative accommodation to those existing on site but not re-accommodated on site.
- A further missing element is the long-term economic cost to the urban area of the increase in travel implicit in re-locating and re-settling people in the city outskirts.
- In Motia Khan Option C, with a LIG provision equivalent to 43% of the existing population resident on site, gives a return that is over 90% of that given by the DDA commercial scheme with limited MIG and HIG housing and no LIG provision.
- Strong views were expressed at the Workshop that LIG provision should not be 'given' but that there should be a charge element to the allottees. The 'partial return' calculations given in the tables would seem to be a reasonable starting point.
- Further inquiry needs to be conducted into the extent and value of the external city wide costs mentioned above; ways and means of applying equitable charges to allottees; and the level at which the 'partial return' option becomes unacceptable economically and socially.
- An estimation should be made of the returns from a DDA maximum profit development to see what is left to benefit other low-income groups, after all the costs and compensations to all the Motia Khan residents had been deducted.(i.e. exactly how much would a maximum return on commercial development actually return to the revolving fund for city wide cross subsidy?)

