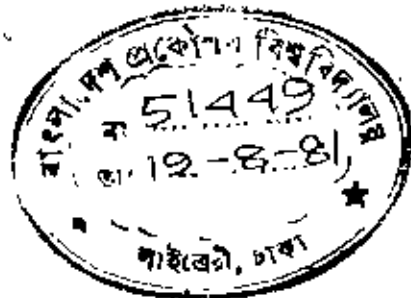


DUET-SHEFFIELD JOINT MASTER'S DEGREE PROGRAMME

AN APPROACH TO PHYSICAL UPGRADING OF A LOW
INCOME COMMUNITY - Dacca BANGLADESH

ED. TASLEEM SHAKUR



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MDT





AN APPROACH TO
PHYSICAL UPGRADING OF A
LOW INCOME COMMUNITY, DACCA

MD. TASLEEM SHAKI

THESIS ACCEPTANCE FORM

DEPARTMENT OF URBAN AND REGIONAL PLANNING
BANGLADESH UNIVERSITY OF ENGINEERING & TECHNOLOGY, DACCA.

On this day, the 15 November 1979.
the undersigned hereby recommend to the Academic Council that
the Thesis entitled An Approach to Physical Upgrading
of a Low Income Community Dacca.
.....
submitted by Md. Taslim Shakur
may be accepted in partial fulfillment of the requirements for
the Degree of Master of Urban and Regional Planning.

John R. James
External Examiner

HEM HUSSAIN
Supervisor/~~Coordinator~~

Charles C. Lloyd
Examiner

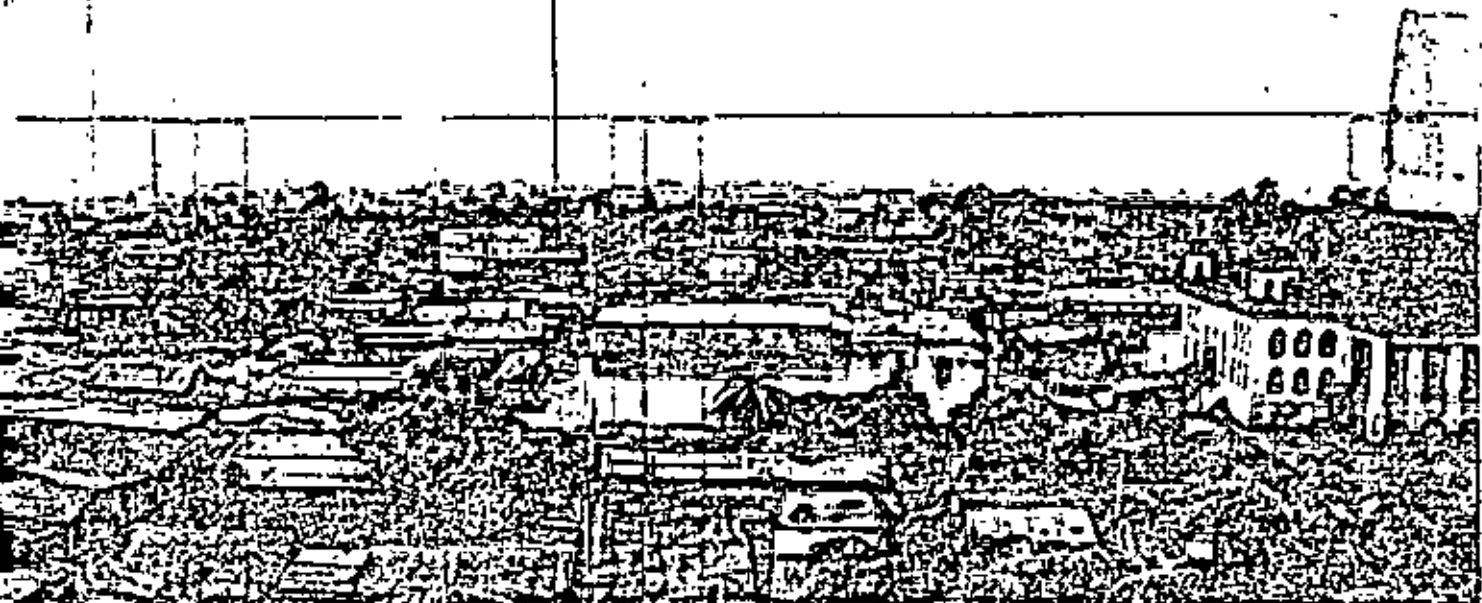
Mamukhatit
Examiner

James M. ...
Examiner

Graham
Head of the Department

Cover showing a conspicuous spot of the locality

A panoramic view of the study area



A C K N O W L E D G E M E N T

- | | | |
|-----|-------------------------------------|--|
| 1. | PROFESSOR J. R. JAMES
C.B.O.B.E. | FORMER PRO VICE CHANCELLOR
AND HEAD OF THE DEPARTMENT
OF TOWN & REGIONAL PLANNING
UNIVERSITY OF SHEFFIELD, U.K. |
| 2. | DR. MONOWAR HOSSAIN | CHAIRMAN (BIDS) |
| 3. | DR. CHARLES L. CHOGUILL | SENIOR LECTURER, DEPTT. OF
TOWN & REGIONAL PLANNING
UNIVERSITY OF SHEFFIELD, U.K. |
| 4. | DR. LOUIS MUENCH | UNDP EXPERT |
| 5. | DR. NAZRUL ISLAM | ASSOCIATE PROFESSOR
DEPTT. OF GEOGRAPHY
UNIVERSITY OF DACCA |
| 6. | DR. HELAYET HOSSAIN | ASSOCIATE PROFESSOR
DEPTT. OF URBAN & REGIONAL
PLANNING, B.U.E.T. |
| 7. | CHIEF ENGINEER | DACCA MUNICIPALITY CORPORATION |
| 8. | EXECUTIVE ENGINEER | DACCA MUNICIPALITY CORPORATION |
| 9. | REVENUE OFFICER | DACCA MUNICIPALITY CORPORATION |
| 10. | MR. RAFIQUL HOSSAIN | EXECUTIVE ENGINEER, WASA
MAINTENANCE/OPERATION |
| 11. | MR. K.A. NOOR | EXECUTIVE ENGINEER, P.H.E.
DRAINAGE DIVISION |
| 12. | MR. MD. FAROQUE ALLENY | LECTURER, GOVT.M.M. ALI COLLEGE
KAGMARI, TANGAIL |
| 13. | MR. REZAUR RAHMAN | COST ACCOUNTANT |
| 14. | MR. NABI NUJAZ | ASSTT. ENGINEER, P.W.D. |
| 15. | MR. MIR ASHRAFUR REZA | ASST. ARCHITECT, P.W.D. |
| 16. | MR. MURSHED | RESEARCH OFFICER (CUS) |
| 17. | MR. MD. ASLAM | RESEARCH OFFICER (CUS) |
| 18. | MR. HABIBUR RAHMAN | RESEARCH OFFICER (CUS) |
| 19. | CIRCLE OFFICER | A.D.C. (REVENUE) |
| 20. | MANAGER | NAJAB ESTATE |
| 21. | SECRETARY | WAQF. ESTATE |
| 22. | HEAD ASSISTANT | A.D.C. (REVENUE) |
| 23. | MR. K.A. HAMID | TYPIST(U.N.D.P.) |

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1.a. INTRODUCTION

The term urban poor refers to the hundreds of thousands of people living in miserable sub-human conditions in the modern cities. In the cities of the under developed and developing countries these people are the by-product of hasty industrialism, ever increasing over-population and continuous migration from the rural areas. They are directly affected by the poverty and the sharply increasing rate of unemployment and under employment. One can mention countries like Brazil, Chile, Peru, Argentina, Egypt, Tunisia, Pakistan, India, Bangladesh, Sri Lanka, Indonesia, Phillipines whose cities contain such urban poor communities. In Bangladesh for their income they have to belong to the lowest groups in the society. In many cases their family members have hardly any income. They live in extremely unhygienic conditions in bustles or ghettos in alleys or in slums under shanties, even under the open sky. They have to settle unauthorized in open spaces or in abandoned dilapidated houses. There are about 4 million slum¹ dwellers. It is estimated that 50 percent of the population of the cities fall under the poverty line.

b. THE PRESENT SITUATION

The slums may be located anywhere in a city. They are characterised by their physical condition and filthy environment. Too many of the urban poor of Bangladesh are found living confined in too small a place. Usually there is no electricity or water or sewerage system. Filth, garbage, disease, crime and violence abound in the area.

1. CUS (Centre for Urban Studies) Report February, 1975.



Hundreds of families might be chasing too few utility services. Because the need would only increase or be not returned in terms of revenue, no organization would extend help to such areas. These people are illiterate, with very little food and very little clothing. Experience and life in such an area can be termed as abnormal. Such an environment cannot breed a healthy child with a motive to believe in upgrading their economic plight. Neither the highly expensive government's five year plans nor such idealistic works as Rostow's² has any impact on their mode of life or thinking or their economic condition. These people of the slums in most cases fall outside the national progress or flow of life. They belong very much to their own world steadily moving further and further from what is known as civilization or civilized way of life. Thus one can find there thousands of under-nourished children being born or thousands of women and men day by day becoming physically weaker getting closer to death or succumbing towards it.

c. SECTORAL CONSIDERATIONS

Generally there are two main types of development plans for such poverty stricken areas in all underdeveloped or developed countries.

They are:

1. Physical Upgrading Programmes

2. Site & Service Programmes

1. Progressive upgrading plans have been launched with success in many countries of Latin America, Uganda, Pakistan, India and Indonesia.

1. Stages of take off - By Walt Rostow

A world journal¹ refers to 10 upgrading projects being undertaken in Senegal, Nicaragua, India, Botswana, Jamaica, Tanzania, Zambia, Indonesia, El Salvador and Korea (Seoul). It also mentions small industries being provided for employing the slum dwellers in Nicaragua, Jamaica and El Salvador. In Botswana land was allocated for industries which would employ the low income people once their area is remodelled into a better environment. All these ten projects¹ referred to here represent a big leap in the field of upgrading the basic dwellers in the developing countries. By not removing the area of squatter settlement but improving on the existing structures one could create a sense of security among the squatters and at the same time help them seek jobs and utility services. This principle was also adopted by projects in Calcutta, Indonesia, Zambia, Jamaica and Tanzania.² In a project at Tondo³ village for upgrading in Manila the World Bank suggested the retention of the existing quarters and a reaccommodation of the dislocated families.

In the case of urban cities of Bangladesh, India and Pakistan these slums are located in vital positions from where it is easy to seek jobs and other essential requirements. There are enough potentials to reform their conditions with better service facilities. Another work which might be mentioned, is the appraisal of the second Calcutta Urban Development Project. Calcutta being a city of innumerable and massive intensive slums, the project refers to thorough plans to upgrade various low-income squatters. (Howrah .

1. Housing May 1975.

2 & 3. World Bank Housing, May 1975.

East Bank, West Bank and Refugee colonies). The components involved for upgrading would be sewerage, water supply, drainage, roads and foot paths, street lighting, unhygienic ponds, garbage and dustbins etc.

2. In what is termed as site and service programme, people of poverty stricken poor environmental areas are reallocated into better conditions (with basic service facilities, sometimes even with basic housing infrastructure). One can refer to organised squatter areas in Lima, Peru. Once the area is levelled then utility services are introduced. Apart from providing utility services like roads, water, sewerage, garbage collection and even fire protection the World Bank plan also suggested Education and Health care centres.

In some cases of Pakistan¹ both upgrading, and site and service schemes are also suggested side by side. Partial reallocation and at the same time physical upgrading of the existing site are also done simultaneously.

So far in Bangladesh there has been no attempt at physical upgrading of dilapidated low income poor environmental communities although the cases are either the same or even worse than places mentioned earlier in this paper. It is particularly similar to the conditions of India (Calcutta) and Pakistan (Karachi). The environmental condition is particularly alarming in poor urban communities of Bangladesh and it has become essential that programmes are undertaken to protect the interest of the great number of urban communities. There are no

1. Pakistan Economist August 1978.

organised service to cater for the various needs of this growing segment of population or to assist them in improving their own conditions.

d. THE NEED FOR THE STUDY

It has also been proved in different other underdeveloped countries that there are important pre-requisites for a successful upgrading planning process of a community which depend greatly on participation of the community itself.

A very recent study of 16 low-income urban communities conducted by the Centre for Urban Studies (CUS) has identified several neighbourhoods with cohesive community potentials. One of them is Nawab Bagicha adjacent to Hossaini Dalan.

i) PROPOSED SCOPE OF THE RESEARCH

As mentioned previously { The area has been studied within the past year by the Centre for Urban Studies as part of its larger research effort on the urban poor in Bangladesh. As a result, a very detailed amount of data on the socio-economic characteristics of the residents is available, although it is yet to be thoroughly analysed specifically for the Nawab Bagicha area. Thus it will not be necessary to conduct intensive social surveys of the area. Attitudinal surveys of the leaders and some of the residents will be necessary, however, in order to determine their priorities for improving the area and their ideas on how this might be achieved. The primary activity of the research will be to try to devise detailed design solutions for the specific problems of the neighbourhood, such as designing improved

drains, reorganizing the layout and improving the efficiency of the use of space. Some major problems, such as the intolerably high density of the area, will require major solutions involving important political and economic decisions. Rather than promoting a single solution in such cases, various alternatives will be developed together with an analysis of their consequences in order that the decision makers will have a range of choices.

i) OBJECTIVES OF THE STUDY

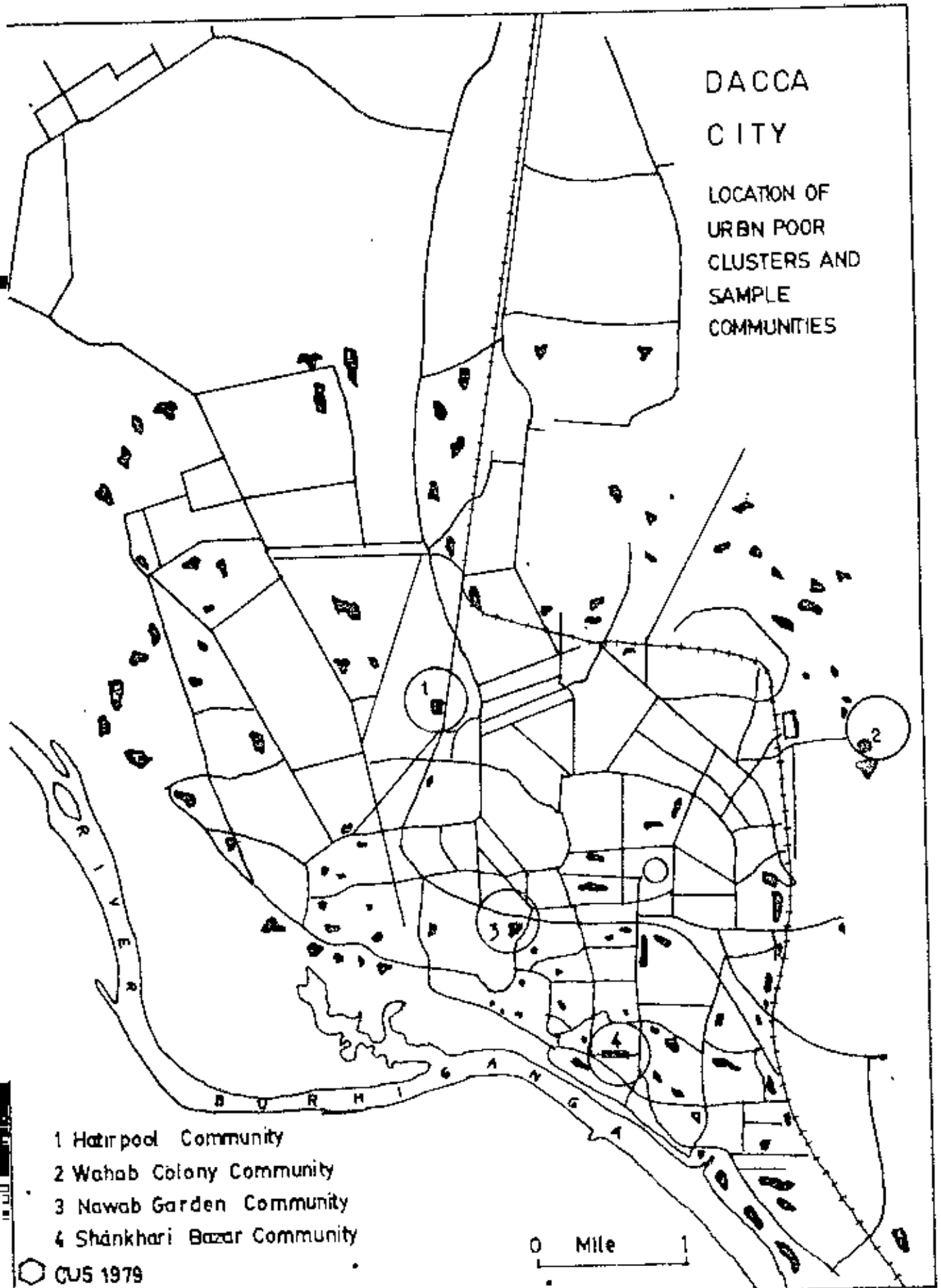
1. To explore various possibilities of efficient physical upgrading with minimum investment
2. To examine the potential for mobilizing community participation in physical upgrading
3. To develop a housing and infrastructure standard which might be applicable to other similar communities
4. To formulate recommendations for environmental, housing and infrastructure designs and the implementation procedure.

ii) METHODOLOGY

1. Evaluation and analysis of urban poor study sponsored by CUS (relating to Nawab Bagicha)
2. Physical survey of Nawab Bagicha including housing, sanitation and other service facilities
3. Examining an upgrading scheme in collaboration with the community and its leaders.
4. Preparing alternative design solutions for housing, sanitation and other community facilities

DACCA
CITY

LOCATION OF
URBN POOR
CLUSTERS AND
SAMPLE
COMMUNITIES



- 1 Hatirpool Community
- 2 Wahab Colony Community
- 3 Nawab Garden Community
- 4 Shánkhari Bazar Community

0 Mile 1

1979

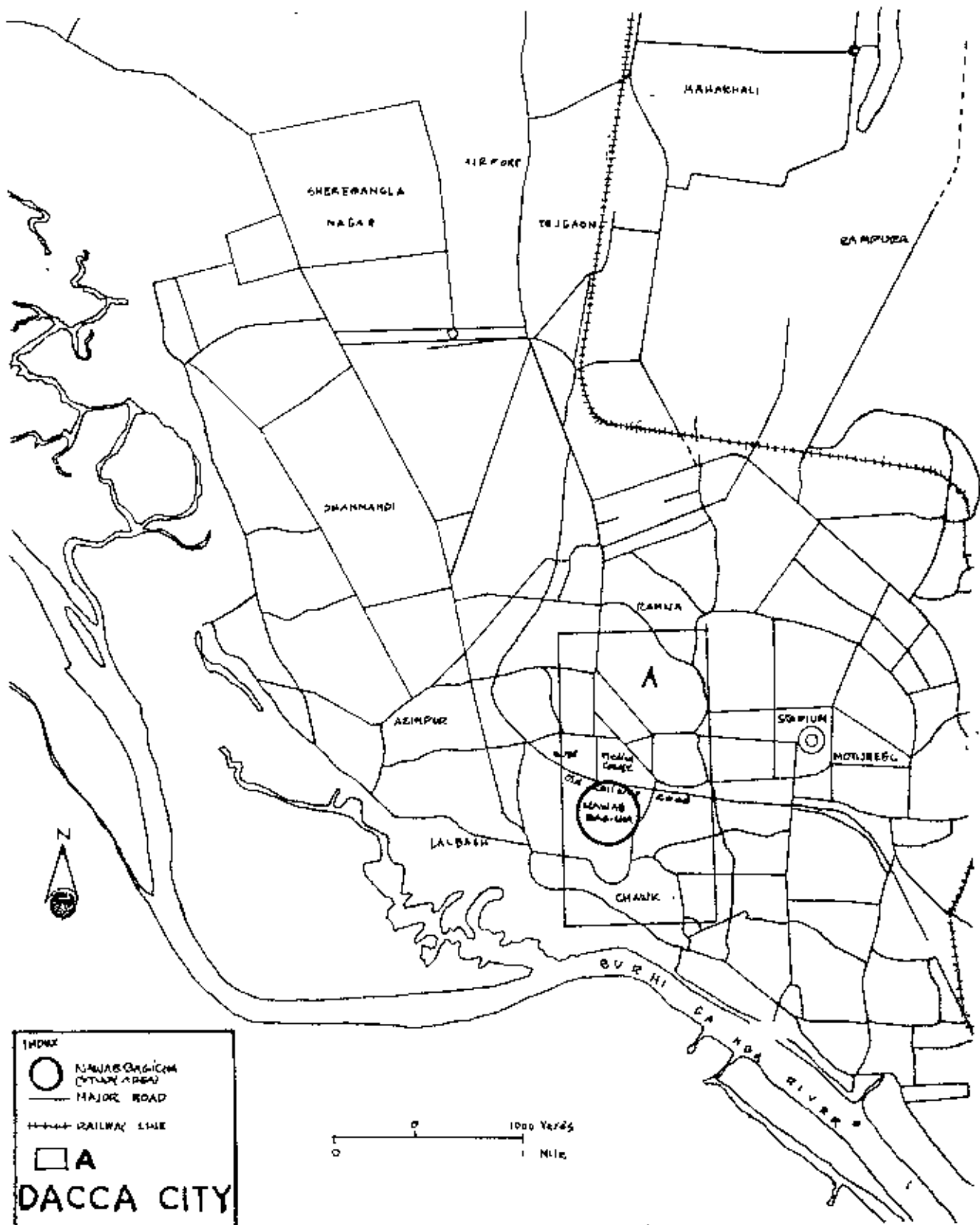
5. Preparing as far as possible a cost estimate, financing plan and implementation programme for such design.

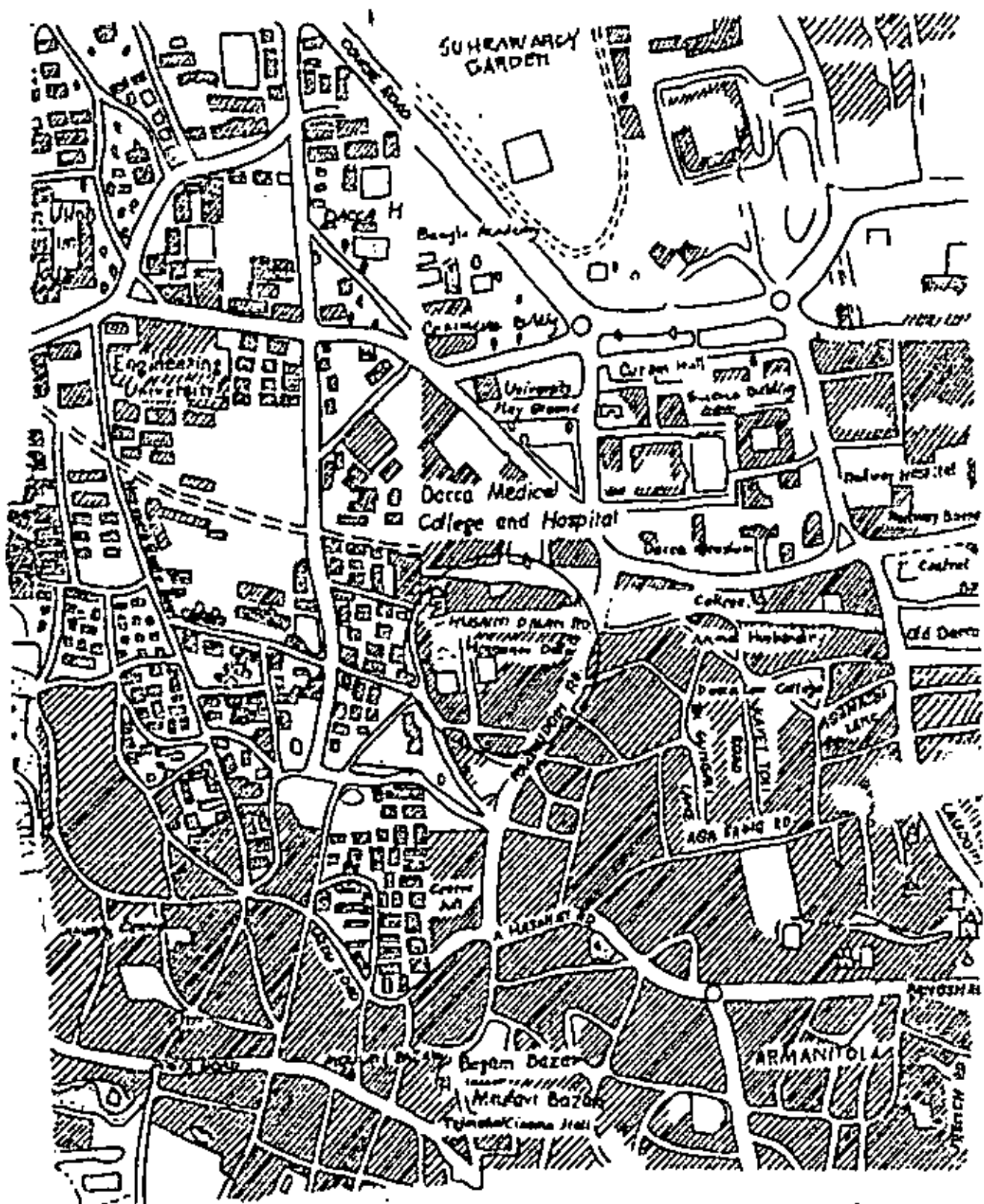
2.a. STUDY AREA

Nawab Bagicha is one of the poorest areas among the 16 low-income urban communities surveyed by the Centre for Urban Studies. It is also one of the most neglected areas providing sufficient scope for upgrading. It is located to the south west of Dacca city centre (Gulistan) in Old Dacca under Ward No.14. It has 2437 people in an area of 1.05 acres comprised predominantly of jhupries and shanties. The area is quite sharply outlined. On the eastern and western sides of the area there are arterial roads connecting the area with the city. The historical Hossaini Dalan¹ faces the area on the west and on the south there is a mixed residential area. The net built up area of Nawab Bagicha is 0.81 acres is divided among 370 housing units. In average this means 457 housing units about 2300 people per acre which is incredibly high. There are three other sample slum areas which are surveyed by CUS. These are Wahab Colony, Shankhari Bazar and Hatirpool (See CUS Urban Poor Communities map) Nawab Bagicha is unique in having mostly unauthorised constructions. This would provide the government with a say on their development. Compared to the other three areas mentioned, Nawab Bagicha has much poorer environmental qualities which permit a planner scope to envisage their upgrading. Most of the houses in the area are built of bamboo. In Shankhari Bazar there are 3 storied houses but there are hardly any in Nawab Bagicha. The area is typical of the low-income communities as most of its dwellers are tea-hawkers, oil hawkers, and cartpullers.

Although some people in the area live in their own houses (they claim) a good number of people rent from illegal owners. The people are illiterate. The area has no organised pattern of living which means a day by day exodus of the city poor people might choose to live here further worsening the situation. A general picture of the service facilities would indicate further the importance of the area calling for intense study. An average of five people live together in a room and cook in the same place and also use the room for other purposes. Sometimes two or more families might live in the same room. The living conditions are stuffy and unhygienic. For twenty four hundred people there are four water taps pouring water irregularly and naturally large number of people queue up for water. Men bathe in the water tank while children and women use the water taps. There are thirty poorly maintained latrines and one latrine may be shared by more than ten families. Human excrements pour into open air drains. Garbage and waste are also deposited in the kutchra drains. During the dry season the stagnant drains pollute the area; during the monsoon the blocked drains overflow leading to flooding. Gastro-intestinal disease are most common in the area.¹ Nawab Bagicha lies on the edge of NCF Dacca rather than in the interior of Old Dacca. It has an easy access to Chawk Bazar, Medical College, New Market, Baitul Mukarram, Gulistan and Motijheel (See guide map). Thus the people of Nawab Bagicha live in a very convenient location since they can approach the above mentioned areas for seeking unskilled jobs for which they are suited. Nawab Bagicha itself is an exclusively residential

1. According to the local doctors.





MID CITY
 BLOW UP OF A
 SCALE : 1:10,000



○ STUDY AREA

area for the low-income people. They are surrounded by the locations of middle class and upper middle class people of Bakshi Bazar, Lalbagh, Nawabpur and Azimpur. Nawab Bagicha lies in the centre of these localities. Thus there is always a tension between these well off communities and Nawab Bagicha inhabitants.

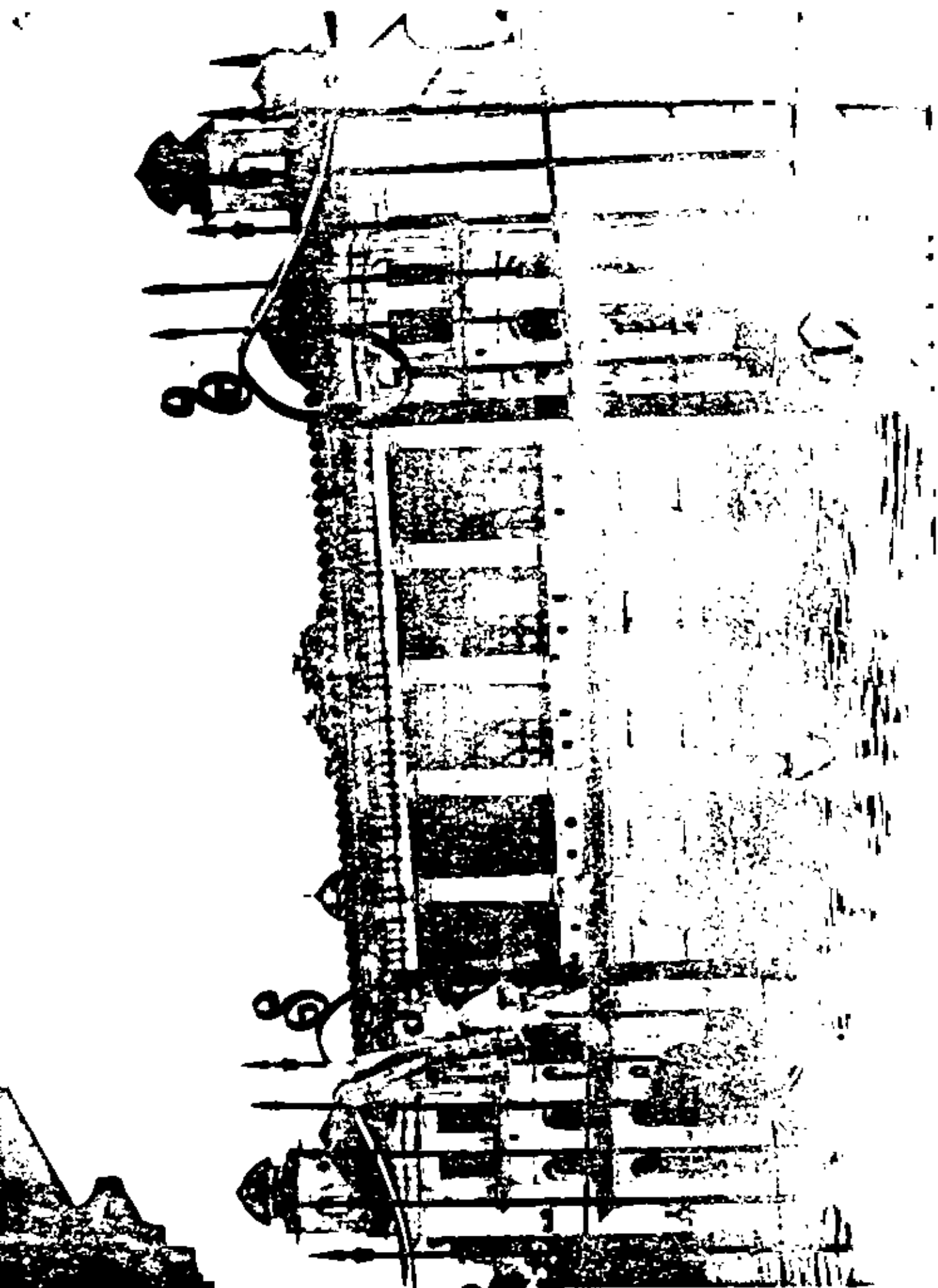
Twenty five percent of the inhabitants of Nawab Bagicha belong to the Shia sect¹ and most of them are also owners of their housing plots. Out of 394 households there are 69 owners (about 50 of them are Shia the rest Sunnis, no Hindus), most of the families are tenants. An average of 17.5% of the households are owners.

b. BACKGROUND

Without the pond on the south west of Hossaini Dalan (and old historical building) the area of Nawab Bagicha is measured at 1.05 acres.

The north half of this area is the privately owned property of the Shias. They acquired this property through inheritance from ancestors. The southern half was the Nawab Estate which is now full of unauthorised occupants whose living quarters have contributed to turn the area into a slum. Hossaini Dalan which means the house of Hazrat Hussain (R), the grandson of Prophet Muhammad (S), was constructed by Admiral Mir Murad in 1642 A.D. Mir Murad was the naval chief of the then government before he was made the Minister for Works. He was a Shia. It is said that at this time he received a

1. Moslem have two major sects Sunni and Shia. Most of Bangladeshis belongs to Sunni Sect.

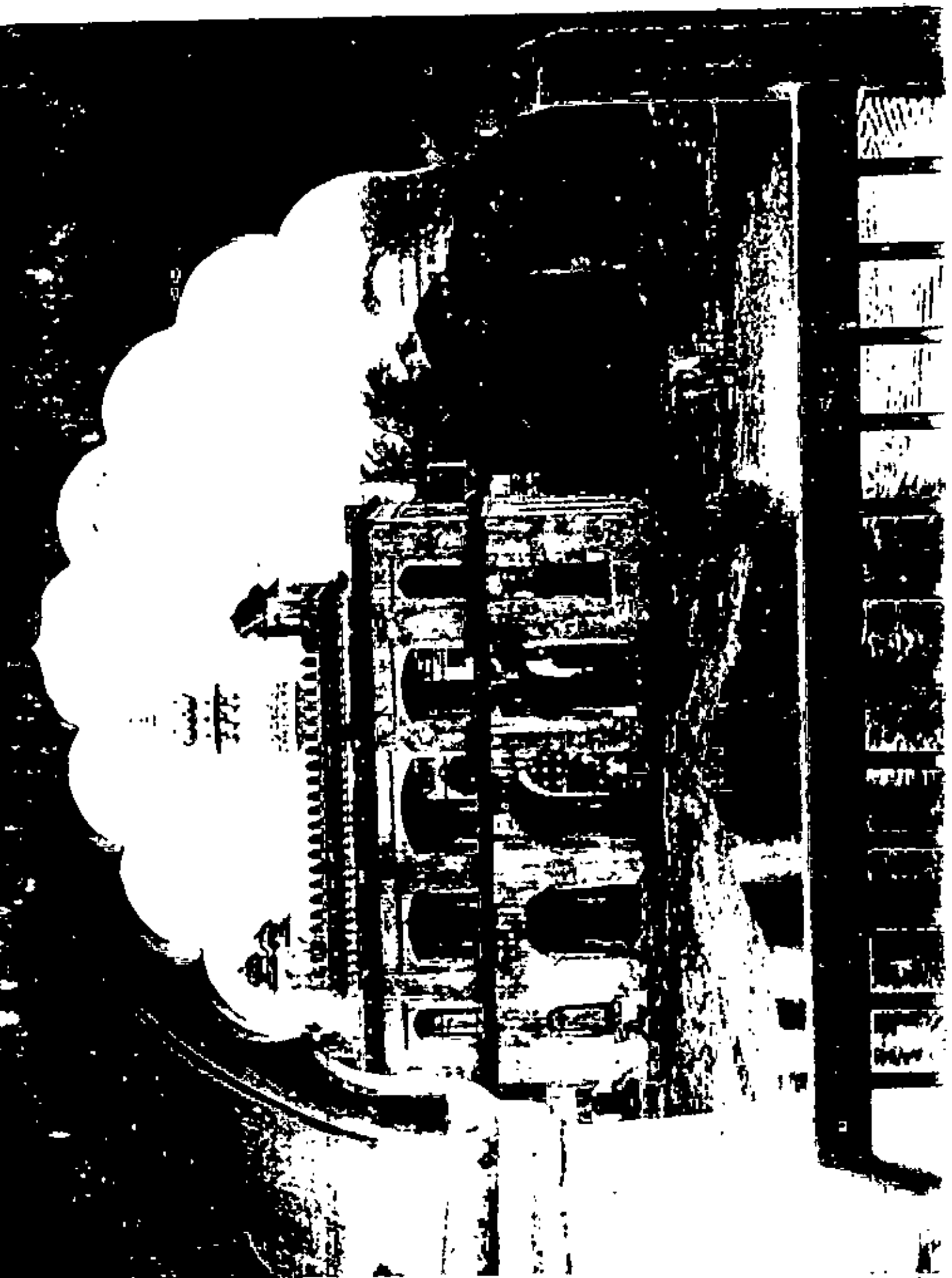


spiritual message to build a Shia holy Shrine and the next day he ordered the construction of Hossaini Dalan. This is also called Imambara meaning place of congregation and ritual for the Shias. There is only one other Shia holy Shrine of this kind which is in Hoogly (West Bengal) in India. Hossaini Dalan covers an area of approximately 2.8 acres. The building was designed entirely by Mir Murad and is witness to his ingenuity as an architect. Since that time there has been a Shia graveyard in front of Hossaini Dalan. Shia women and men come to pray in the Shrine regularly. Prominent Shias remain ornately buried in the graveyard. Even today Shias who live in the Nawab Bagicha area, bury their dead in Hossaini Dalan graveyard by paying a fee to a committee. The Hossaini Dalan area has always been an independent belonging of the Shias since Mir Murad built it in 1642. The Nawabs of Dacca in the nineteenth century (patronised by the British) brought it under their control. Hossaini Dalan was then a rent free property receiving a permanent grant from the Nawabs who also used Hossaini Dalan for occasional recreational purposes. This condition is said to have prevailed till the partition in 1947 after which the government acquired the property. It became a Waqf¹ estate under the 1950 Act of Estate Acquisition.² Later, under the 1962 act ordinance No.1 a Waqf property³ administration was formed with the ADC (Additional Deputy Commissioner) as Chairman. A Waqf commissioner was appointed by the government and the Waqf committee included many Shia and some non Shia members. Government allocated an annual grant of 2000/- Taka for the Waqf committee which

1. Waqf estate is a property dedicated to the name of Almighty and is managed by a trust committee. It is recognised by Muslim Law. Its income is spent for religious purpose.

2. Act of estate Acquisition of Pakistan 1950

3. Same as Waqf Estate.



as Chairman. A Waqf commissioner was appointed by the government and the Waqf committee included many Shia and some non-Shia members. Government allocated an annual grant of 2000/- Taka for the Waqf committee which still continues. The committee also has a meagre earning from the annual cattle market during the Eid-ul-Azha, Gas garden¹ the north-west of Hossaini Dalan building provided a small income when it was leased out for ten years between 1950 to 1960 under a Lease Deed dated 14-4-1948.

The northern half of Nawab Bagicha is privately owned property. Shias have lived here from generation to generation. There are roughly 50 families owning plots in this area. Some of the people claimed that the ancestors of the Shias living here were probably the labourers who built Hossaini Dalan. The residents of this northern half of Nawab Bagicha live a better life than the people of the southern half. Most of the Shia living quarters are semipucca. Shias also rent kutcha sbanties beside their house to outsiders who may be Sunnis. Apart from house owning and petty shopkeeping the Shias have no other occupation. Rent is a major source of income. There are one or two small manufacturing shops. Otherwise, the whole area is full of living quarters and small shops. The Shias of this locale constitute the committee which looks after the Hossaini Dalan. Hossaini Dalan is the cultural centre which harbours the life of the Shia. Many men and women

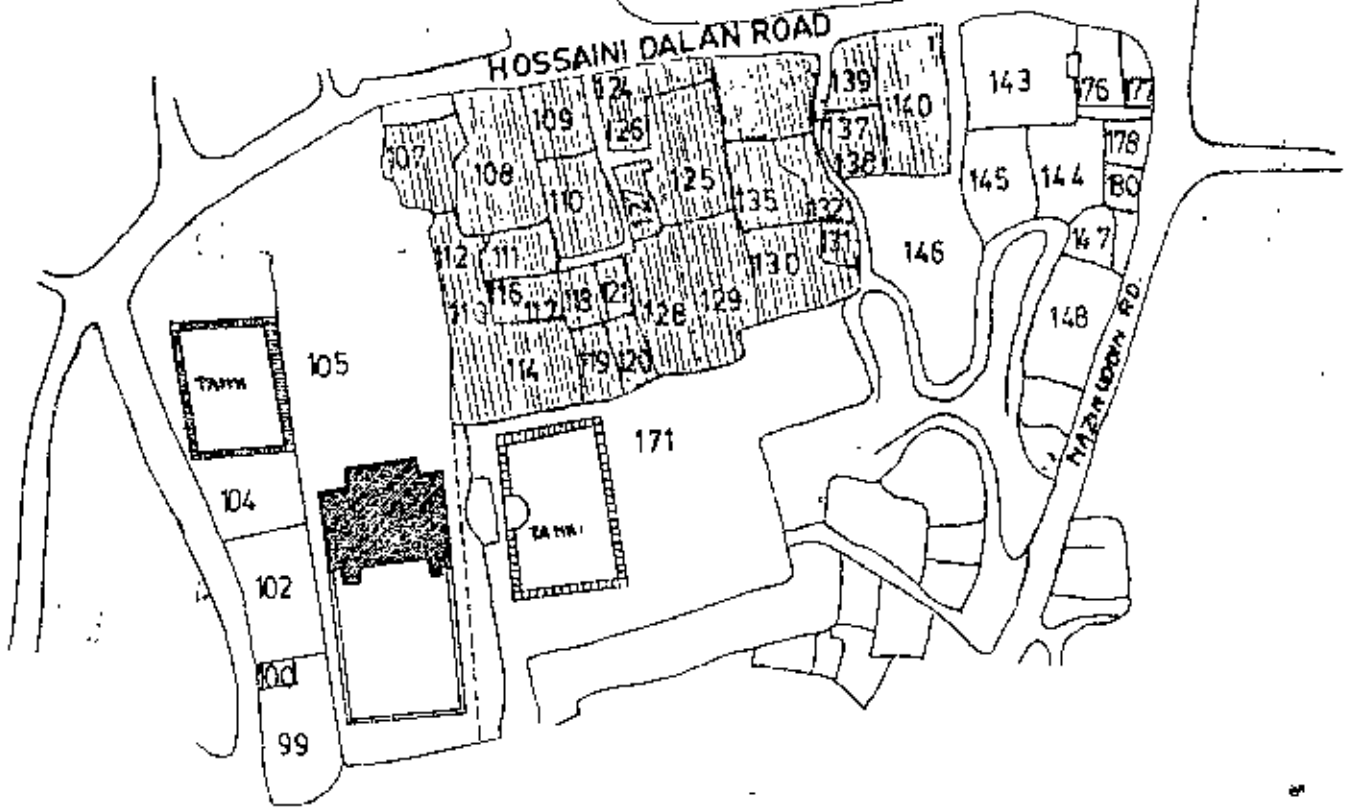
1. It is named as Gas garden because the garden was lighted at night by gas by the then Nawabs.

come to the mosque for worshipping.

The remaining part of Nawab Bagicha which is its southern half is full of illegal occupants. Originally the area belonged to the Nawabs of Dacca (who existed) from the middle of the nineteenth century. The Nawab family owned the place till 1950 when under section 22/3 EBS 4 & T Act of 1950 (Land Acquisition Act), the feudal lands were acquired by the government. The feudal landlords used to receive a certain amount of compensatory allowance until 1952 when it was stopped. In 1954 Nawab Estate as an autonomous body was found under the Ministry of Land Administration and Land Records.

According to the Nawab Estate Register Nawab Bagicha C.S. Map (1912) (See C.S. Map) Plot No. 171 has an area of 1.73 acres. From 1952 to 1954 the feudal lords were allowed to retain a portion of their land. In 1954 the government appointed a manager for the Nawab Estate with a view to distribute and allocate khas land and other moveable properties equitably to the descendants of the Nawab family according to their shares. The Nawab Estate was established in May 1954 to perform this task within six months. However Nawab Estate is still in existence because it could not resolve its problems due to lately developed problems like litigation, trespassers, stay orders, court injunctions, etc. The southern half of Nawab Bagicha is one of the areas under the jurisdiction of the Nawab Estate. Once in 1960, Police and the District Magistrate tried to evict the illegal occupants in Nawab Bagicha, but due to a high court injunction the government effort was neutralised.¹ Some of the slum dwellers in

1. From Nawab Estate Register.



KEY

105 HOSSAIN DALAN
171, NAWAB ESTATE
(NOW UNDER UNTHORISED,
POSESSION)

 NAWAB BAGICHA
CSHIA COMMUNITY

DACCA MUNICIPALITY

NAWAB BAGICHA WARD NO 6
PLOT DIVISION

C.S. MAP NO. 1912

SCALE : 1 2500

According to Nawab Estate its manager represents 175 share holding owners of Nawab Bagicha land. Previously British Civil servants administered the Khas land along with the Nawabs. The British authorities had ample leverage to collect revenue but now the Nawab Estate officials have hardly any control or say on the illegality of the occupants. One can see that part of Nawab Bagicha which is under the Nawab Estate was once a garden along with the tank. The term Nawab Bagicha means the garden of the Nawabs. According to old local people, after the decline of the Nawabs (after partition), one Pir Shahab (Religious leader) received verbal permission from Nawab Habibullah to live in Nawab Garden. But Pir Shahab sold out the land possession illegally to the local beneficiaries and frauds before leaving the settlement in 1958.

They then started building residential structures such as kutcha and jhupries (Shanties) in the private land of the Nawabs and rented them out to the poor immigrants from neighbouring rural areas.

After the departure of Pir Shahab, the total area was occupied by the local touts. Some of these people sold their land possession to the solvent group of the tenants and other local elites. According to CUS most of the present homeowners (60%) of the area came to own their houses by this process. Some influential local people and members of the working class also occupied the land and rented these out to other local people.

This is how it turned into a slum from being an unoccupied open space. There are 175 share holders of the Nawab Estate who legally

own the place. And there are hundreds of people who have migrated from various parts of Bangladesh to claim a place to live here. Thus Nawab Bagicha - South is completely in a chaotic state of possession. It has been gathered that homeless people from the District of Faridpur, after being evicted from their native soil due to natural calamities have come and settled here. These people still continue to bring their relations or their acquaintances to live in the area and intensify the congestion. Nawab Estate has from time to time sought to exert its authority but nothing has happened until now.

2.c. SOCIO-ECONOMIC CONDITION

c.1. POPULATION

In this area of 1.05 area the population has been referred to earlier as 2437. Here in Nawab Bagicha 25% people are Shias, and the rest are Sunnis. In about 394 households the average family member is 6.14.

AGE SEX DISTRIBUTION

Age	Male %	Female %
0-4 years	14	16
5-9 "	15	14
10-14 "	15	15
15-19 "	13	7
20-24 "	7	9
25-29 "	3	8
30-35 "	7	8
35-40 "	4	3
40-44 "	3	3
45-60 "	2	2
60-above"	6	4

From the figure page we can say about 45% of the people belong to an age group between 1 to 14 years. Thus nearly half of the population are young who can not work hard except in the role of child labour at a meagre salary. These people are obviously dependent on their other family for their existence.

The area has a very high density compared to any other urban areas. All the houses being one storied there are 2300 (approx.) people per acre. 30% of the total population (mostly Shias) were born locally. The residents came to the area mostly within the last 15 years. See Table.

LENGTH OF STAY
OF THE OCCUPANTS IN THE LOCALITY

Age	%
5 - 10 years	13.92
More than 10 "	56.96
Since birth	29.11

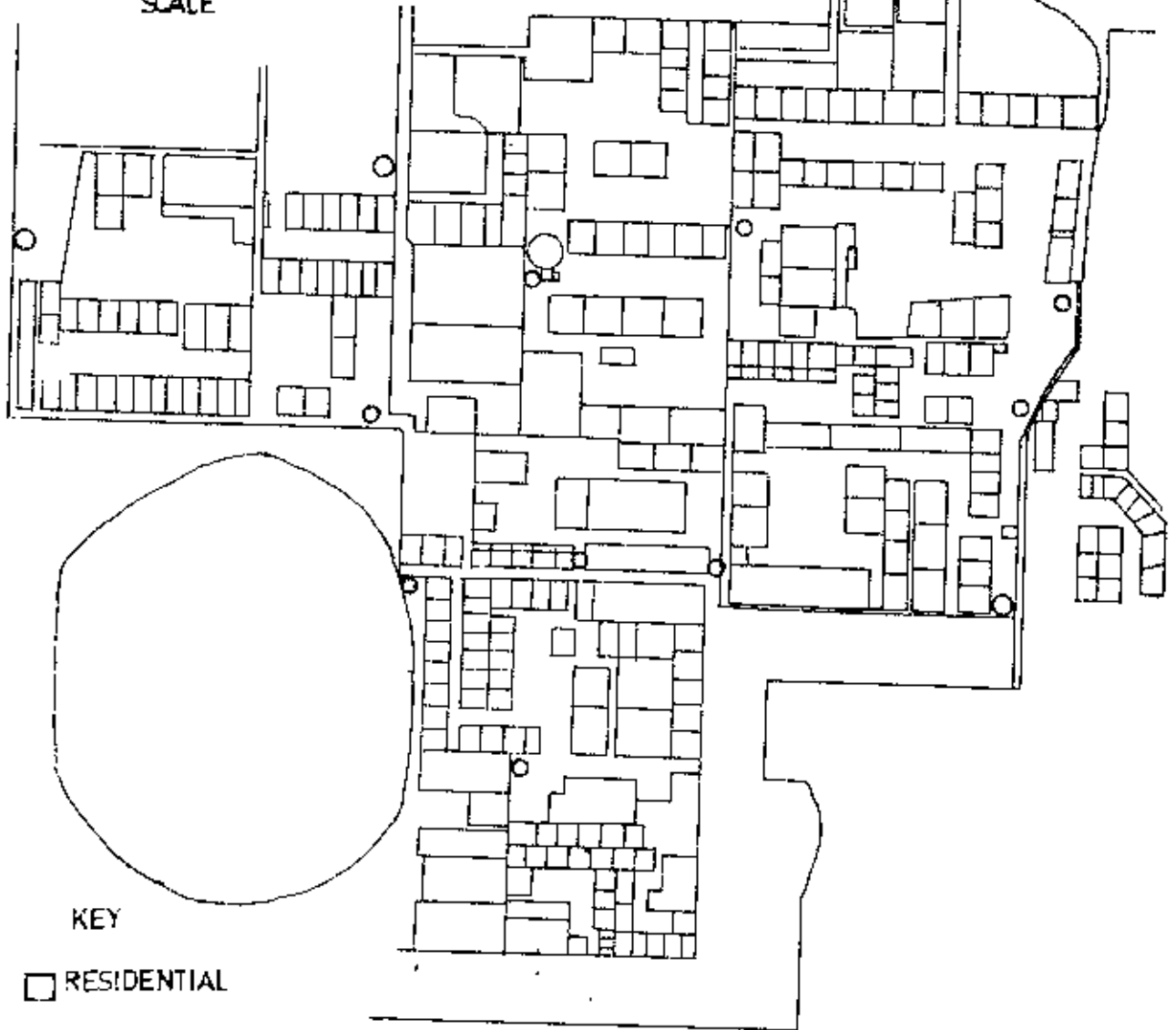
In the north where the Shias live outsiders came as tenants as the condition of the land lords deteriorated and they needed money.

c.2. LAND USE PATTERN

Of the total built up area, 75% are residential quarters. 16% of the land is taken by its communications. (Roads, lanes, by lanes). Manufacturing shops occupy 8% (approximately) of the total built-up area. (See Table).



0 30 FEET
SCALE



KEY

- RESIDENTIAL
- MANUFACTURING
- TRANSPORT (ROAD)
- BUSINESS
- WATER BODIES
- OPEN SPACE
- PROPOSED GARBAGE DISPOSAL

NAWAB BAGICHA.
LAND USE MAP.

Major Land Uses in Nawab Bagicha

Major Land Use	% of the		
	Total dwelling units	Total area	Total built up area
Residential	96.76	62.75	75.43
Water bodies	-	23.60	-
Transportation (roads)	-	9.25	16.65
Manufacturing	2.97	4.31	7.76
Business	.27	.09	.16
	100.00	100.00	100.00

CUS

The surrounding areas of Nawab Bagicha are socially well off zones. Economically the value of this surrounding land is very high. (About 30 lakh or \$ 200,000 per acre). It has its proximity to expensive busy business centres and thus can be the source of very high revenue if put to any other use by the government. (About 28 thousand taka or \$1866 comes from holding tax and land development tax).

One or two cottage size plastic industries are located here. These industries are economic because they are employing cheap available labour and have very minimum establishment costs. These very few industrial units are scattered over the area and do not disturb the harmony of the residential quarters. A micro analysis of the northern half of the area where the Shias live would suggest that 40% open space is still available (in the form of courtyards). In the southern half where congestion is extreme there is less than 10% open space. These open space figures include internal roads and other narrow passages. Although the open space figures would suggest that the Shias have better access to the open spaces than the unauthorised dwellers in the Nawab Estate even then there are hardly any trees. There is no green space, park or playground in the area. The compound in front of Rossaini Dalan is full of graves and water bodies or

bushes. If we include the adjacent pond on the western side of Nawab Bagicha which has been demarcated as outside the 1.05 acre area, then the water body would constitute almost one fourth of the whole area. Land uses as agricultural and large scale manufacturing and commercial are not seen in the area. Of the total 1.05 acres, spaces occupied by roads and internal passages constitute only 9.25 percent. Thus there is a dearth of proper arterial link ups in the area.

c.3. TYPE OF OWNERSHIP: TENANCY

Hossaini Dalan in the west is the Waqf property, the Shia living area is privately owned and the Nawab Estate is unauthorized occupation. In the whole area there are 394 households and for these are 120 housing structures. There are 69 owners of which roughly 50 legitimate owners of the Shia community and the rest are illegitimate owners in the Nawab Estate. It has been observed here that each owner has more than one housing unit. Apart from the Shia houseowners whose main source of income is the rent, the other houseowners are all from the lower middle classes. Unlike the Shia the Sunni illegitimate owners in the Nawab Estate are very shrewd; they earn from their rents and together they do other business like sub-contractorships or small manufactures like plastic. In brief they do not solely depend on renting their houses for livelihood. Land lords are supposed to take care of the houses and repair them when necessary but in actuality it is the tenants of the Nawab Bagicha who bear the burden of repair and other minor alterations when these become immediate. At times a room is shared by more than one family and a lavatory is shared by 8 to fifteen families. There are cases of subletting in the area which needs the landowners permission and the tenant has to pay an extra charge to the former.

The 53 mess dwellers (men who live without family) of the area live in 8 different houses. One dweller pays from taka eight to ten per month to the land lord as rent. There is no formal rental agreement between the tenant and the land lord. There is no payment in advance as ^{the} all/dwellers are poor.

There is no exacting relationship between the land lord and the tenant and when the tenants delay the payments of rents most of the landlords show an understanding of their inability to pay. The average rent of one household ranges mostly from Taka 40/- to Taka 75/- per month. Only 3% pay about 150 taka per month (when the number of rooms are more than one), the lowest being Taka 20/- per month (in the case of mess dwellers)

<u>Monthly rent of the Tenant household</u>	
<u>Rent</u>	<u>%</u>
Tk. 10 or less	0.0
Tk. 11-20	0.0
Tk. 21-30	5.36
Tk. 31-40	10.71
Tk. 41-50	32.15
Tk. 51-75	35.71
Tk. 76-100	10.79
Tk. 101-125	1.79
Tk. 126-150	3.57
Tk. 151+	0.0

CUS

c.4. OCCUPATION, WORKPLACE, INCOME

In this locality the pressure to earn a livelihood is upon the head of the household who may either be a male or a female. The bulk of the people who are also the tenants are underemployed or receive absolutely minimum wages (Tk.300-400). They live from hand to mouth. The few factories are run by the selected few who are also mostly the owners of the houses. These people exploit the cheap labour of the area.

Three fourths of the wage earners are males and one fourth of them are females.

SEX DISTRIBUTION OF EARNING MEMBERS IN THE FAMILY

<u>Male</u>	<u>Female</u>
75.78	24.22

The number of female workers is very high compared to the percentage of female workers among the middle and other classes of the country. The reason is the big size of the family and the number of earning members is less and there is too much of a pressure on the sole earning members. So women are pressed to search for work. Seventy five percent of the families have one earning female member from their entire family. Moreover only 17% of Nawab Bagicha are between 20 to 35 (See previous Table) and this is a small percentage to ^{the} work force of a community. This creates a pressure on the mothers to work. 45% of the

working force are rickshaw pullers, cart pullers, labourers and factory workers 30% of the working force are businessmen including hawkers and vendors who barely manage to live with their small income, and small factory owners, who thrive fairly well. The remaining occupations include clerks, lower class government employees and a few artisans like potters and blacksmiths etc. Most working women are housemaids, working in the houses of the surrounding residential communities of the well to do people around Nawab Bagicha. Some of them work as maid servants in Dacca Medical College Hospital. A few women work as hawkers or vendors (See Table).

PRINCIPAL OCCUPATION OF THE HEAD OF THE HOUSEHOLD

<u>Occupation</u>	<u>Male %</u>	<u>Female %</u>
1. Labour	11.59	0.0
2. 4th Class office servicer	7.25	0.0
3. Clerk	2.9	0.0
4. Professional	8.69	0.0
5. Personal & household	0.0	83.33
6. Transport worker	24.00	0.0
7. Skilled factory worker	10.14	0.0
8. Businessmen	28.99	16.67
9. Other including retired people	5.80	0.0

Source: CUS

75% of the families have one earning member from each of them. Of this percentage 90% had informal training. Informal means skills learnt from relatives or friends, or casually from on the job training. It is worth mentioning that at least one person from each family receiving informal training. This indicates the trend towards vocational training rather than formal education. A boy of five was seen rotating the wheel of a plastic factory at the salary of Taka 12/- paid to the boy's mother (See photograph). This tendency towards vocational training rather than formal education was found common among the children as well as the aged who would prefer to be a skilled labourer rather than an educated person. This is the statement of many mothers of the locality. Total average monthly income of a family ranges from 300 to 500 taka. Half of the families earn less than 500 taka per month and the other half earn more than that. The lowest income per family ranges from 50 to 100 taka per month. These families who own houses and have petty business constitute 5% of the families whose income is above 2,000/- taka per month. Total family income means the income of the leading member as well as other subsidiary earnings made by the mother, sons or other close members of the family (See Table).



2

2. ABOVE:
Youngsters playing at
rental kiosk.



3. ABOVE:
of money.

3



3.
Open air cooking.

MONTHLY TOTAL INCOME OF THE FAMILY

<u>Income</u>	<u>%</u>
Tk. 1- 50	0.0
Tk. 51-100	1.27
Tk. 100-150	1.27
Tk. 151-200	2.53
Tk. 201-300	6.33
Tk. 301-400	17.72
Tk. 401-500	29.11
Tk. 501-600	10.13
Tk. 601-700	5.06
Tk. 701-800	5.06
Tk. 801-900	7.59
Tk. 900-1000	3.80
Tk.1000-2000	8.2
Tk.2000+	5.0

CUS

The average monthly per capita income is 102/- taka which is slightly higher than the similar income of other low income communities of Wahab colony (Tk.101/-) Shankhari Bazar (98/-), Hatir Pool (98/-) Nawab Bagicha 102/-. Job opportunities are highly disappointing. There is excessive underemployment rather than massive unemployment and there are scanty opportunities for minor low paid jobs.

c.5. LOCATIONAL CHARACTERISTICS

An analysis of the CUS data would suggest, that distance between residence and place of work of about half of principal occupation of the Heads of the household are not fixed. That means they constitute a bulk of the street hawkers, labourer, rickshawpullers, cart pullers, vendors etc, and for obvious reasons their destination is also not fixed to one particular place. It varies with the

prospect and nature of their particular type of customers. About one quarter of male workers' destination is confined within half mile periphery of the area, which covers the Medical college, BUET, Central Jail and its adjacent residential and business areas. The extreme distance is about 4 miles. Females are restricted within half mile, with close proximity to the area. As earlier discussed majority of them are maids either at Medical college or at neighbouring middle income households (See CUS table)

Distance between Residence and place of work of
Principal occupation of Head of the Household

	<u>Male %</u>	<u>Female %</u>
Working place at home	1.54	0.0
Less than $\frac{1}{2}$ mile	24.62	50.00
$\frac{1}{2}$ mile - 1 mile	9.23	0.0
1 mile - 2 mile	10.77	16.67
2 mile - 4 mile	4.62	0.0
More than 4 mile	4.62	0.0
Not fixed	44.62	33.33

The mode of transport is essentially by foot only with a few exceptions of ^{the} few better sections of the community. Hence we can say that for the majority the money cost of journey to work place is literally nil. But since a lot of the workers' destination is not fixed the average travelling time is also not uniform. For the remainders the average travel time is 2 hours.

c. 6. MARKETING FACILITIES

The dwellers usually go either to Ananda Bazar¹ or to
1. ANANDA BAZAR: North of Nawab Bagicha, on old railway line.

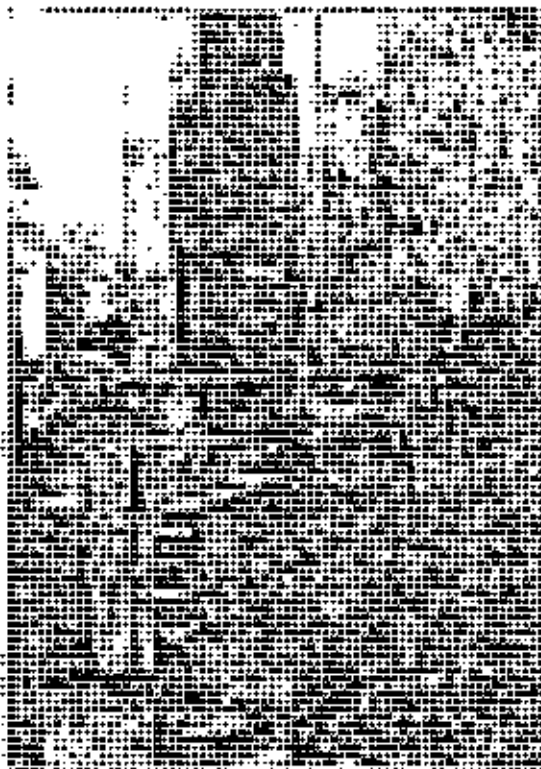
Moulavi Bazar¹ for marketing. Ananda bazar is only 5 minutes walk from the area, whereas Moulvi Bazar at least half an hour's journey. It is observed that the poorer section go to Ananda bazar whereas the affluent section prefers Moulvi Bazar where there are more marketing facilities though prices are a bit higher than at Ananda bazar. It is noticed that Ananda bazar is intended for the poorer community. However marketing facilities are not a problem for the dwellers of Nawab Bagicha.

c.7. HEALTH AND NUTRITION

An observation of the people revealed that they are undernourished in general, old and young, men and women alike. On many days a month only the earning member of the family can afford to eat two meals and the others in the family have one insufficient meal. The result is malnutrition. Nutritious food like meat, milk, fish or eggs lie much beyond their buying power. Children can not get milk for drinking. CUS data reveals very high infant mortality rate (30% of the children die very early). Every year on average 40 people out of 1000 die. It has been observed that all the children look pale and emaciated, have big bellies and thin legs. Because the toilets are crowded and the human waste overflows into the drains, insects and flies carry the diarrhoeal and amoeba germs into the bodies of the inhabitants, they contract serious stomach malfunctions² and other diseases. During the rainy days the lavatory wastes overflow, mix with the flood water.

1. Moulavi Bazar: South of Nawab Bagicha, heart of wholesale market.

2. According to Dr. Shamsur Rahman M.B.B.S. (A local Doctor).

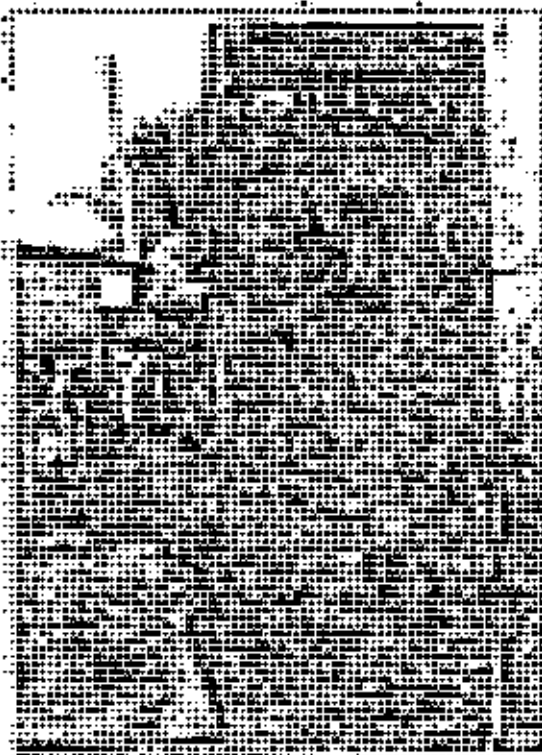


2

1. A Child on waste water drain along an internal lane of Hawabbagicha, by the side of public latrine (which is also linked with the side drain).

2. Service public latrine (used by 8-15 families) with leakage all over.

3. Where sewer and drinking water line meet together.



5

which submerges the whole of Nawab Bagicha. Thus the germs of all kinds of intestinal diseases thrive¹ in the area throughout the year. Because most children usually excrete into the open kutchra drains, hookworms are a common ailment.² The people throw their garbage just outside their quarters, or on the edge of the internal roads. In many houses the cooking might take place just outside the living room in open air and the germs of various diseases flow into their food and in this way they contract disease. There are sporadic cases of skin disease which they contract from bathing in the polluted tank and from their unhygienic food and living.³ There is a particular influenza in the area which occurs frequently during rainy days when people mostly walk knee deep in water. For treatment the people go to spiritualists or ^{to} a few homeopaths who live in the area. They can not afford to go to general practitioners who have expensive visiting fees and who prescribe expensive medicines. Homeopath doctors are very cheap to consult and themselves prepare the medicines for patients at a low cost. The spiritualists are men who claim to have mystical power to cure by shriving over patients or by offering sanctified water or other herbal methods. A general practitioner would cost ten or twenty takas per call. Their prescribed medicines would not cost less than thirty takas or so. In many cases a particular practitioner can not diagnose a disease and the patient has to change doctors at his own cost. So the moneyless Nawab Bagicha dwellers go to spiritualists or homeopaths who charge a maximum of 3 takas as

1.2.3. According to Dr. Shamsur Rahman M.B.B.S. (A local Doctor).

consultancy and medicine fees. In Bangladesh there is no full scale free medical services for citizens. The medical college offers services of a preliminary nature to citizens. Thus the Medical college outdoor clinics are not of much help to the slum dwellers. Of course in cases of accidents or serious ailments, once they register themselves patients can have free treatment in the medical college. A dozen maids in Nawab Bagicha who work in the hospitals help acute cases of ailments in Nawab Bagicha to receive treatment at the hospital. Women have to depend on improvised country techniques rather than seek costly treatment at private maternity clinics.

c.6. BIRTH AND DEATH RATE

According to CUS survey in 1977 the birth rate in the area was approximately (38 male and 40 female per thousand) while the death rate was about (16 male 15 female per thousand). The response to the use of contraceptive was about 18% (CUS). Family Planning is not popular with the immigrant poorer community as their traditional and religious beliefs do not encourage the use¹ of any sort of contraceptives. On the other hand a few affluent members of the local community seem to have adopted family planning measures. Women family planning contraceptive agents from the Ministry of Family Planning pay regular visits to the site. They discuss their problems, after necessary advice and

1. Compiled from the opinions of Ward Commissioner, young residents and Dr. Shamsur Rahman M.B.B.S. and also the opinion of an American voluntary family planning organization which distributed free contraceptives in the area in 1978.

and also distribute contraceptives (both pills and condoms). According to one of the distributors, a great deal of shyness still prevails among poorer community.

c.9. MOTHER CARE

There are no pregnancy care facilities for the expectant mothers of the locality. The poorer mothers can not afford milk during pregnancy. Generally the local Ayas¹ take care of the deliveries of the majority of babies at home. Only a few mothers go either to the maternity at Azimpur or to the Medical college. The local Ayas of the Medical college are quite helpful in arranging admission to the hospitals or during home delivery. In the case of home delivery they charge a fee of about Tk.50/- Tk.100. Unfortunately there is no prenatal or post natal care facilities for the mothers. The entire responsibility lies with Ayas.

c.10. WOMEN AND CHILDREN CONDITION

Almost all families in the locality are dominated by fathers whereas women are loyal and submissive to them. They hardly have any voice regarding family affairs. Women in this area are conservative, traditional and religious and prefer pardah.² In the cases of poorer families like rickshawpullers or vendors, there is evidence of husbands beating their wives but the wives still remain loyal and submissive. Most of the women are engaged in household

1. Aya: Ayas are maid servants at different clinics.

2. Pardah: Islamic custom of women to hide from male.

work(only with the exception of a few who work outside) and so have considerable free time. The community does not have any women vocational or literary programmes.

Children contribute to their families economically. From the very small age of about 5 they do petty jobs like carrying water and food, working in local factories etc. They also get spoiled easily from working at such early age and mixing with all sorts of people. Generally children are characterized by ill health, lack of proper care from parents, street playing and an aversion to attending school.

There are a few prostitutes living within the poor section but they practice their profession elsewhere and not within the site itself.

c.11. RELIGION

The entire community is Islamic by religion divided into two sects (Shia and Sunni). The people of this community are basically religious. This may be because of presence of Shia community (who are more religious than the Sunni). The existence of Hossaini Dalan is an influencing factor to Shia community. The other factors for religiosity are poor rural immigrants who are traditionally religious. The younger Sunni generation are not as particular in offering regular prayers whereas their elders are very regular. There is no evidence of conflict between the two sects. The relationship is the same as of a similar sect.

c.12. LIVING PATTERN

From the authors observation and discussion with the localities the living pattern of the community can be categorised into 3 types.

- (i) The office employees (Govt. or autonomous body)
- (ii) The businessman and land lords.
- (iii) The tenants (mostly vendors, rickshaw pullers etc.)

(i) The office employees: They seem to lead a much more methodical sort of life, always balancing between income and expenditure. There is also an effort for making small savings. They may be classed as lower middle class.

(ii) The businessmen and land lords: They are of a higher class and can be termed as 'middle middle'. Their living pattern is better than the office employees but they are inclined towards more expenditure than savings. To some extent they are more progressive and adaptable.

(iii) The tenants (The working class): The actual low income group constitutes most of the community. They live almost from 'hand to mouth'. Even then they seem to spend more than their income. A majority of this section indulge in gambling, drinking and womanizing (according to young local people). Hence often they are broke which ultimately affects their normal way of life. For this reason they are forced to seek loans. This is a common practice within the locality. In the worst conditions, they often must ^{starve} / with the entire family. It is found usually

that people of these clans indulgeⁱⁿ/law breaking activities like theft, burglary and raping¹ (within the locality).

Family feeling: Values and norms of family (like respecting elders, family tie, fellow feeling etc.) seem to be more with the Shia and with the land lords but the feeling diminishes with the lower income groups.²

c.13. EDUCATION

The trend for general education in this area is very discouraging. According to the CUS survey, the number of persons taking general education is quite low. Although there are 3 primary schools located within the periphery of the locality the number of school going children is very low. According to the Head Master of Bakshi Bazar Free Primary School³ there are hardly any students from Nawab garden and the very few ultimately do not finish the course. Their parents are not interested in schooling. The students are not interested in education. Some children, (according to a young educated respondent⁴) going to these schools can not adjust psychologically with the other overwhelming well of schoolgoers. There are no formal educational facilities for elders and women within the locality.

1.2. According to Ward Commissioner, young people of the community and other neighbouring communities.

3. Bakshi Bazar Free Primary School is situated within the neighbouring middle income community.

4. One graduate factory owner within the Nawab garden who refused to publish his name.

c. 14. LOCAL POWER STRUCTURE/LEADERSHIP/POLITICAL SITUATION :

The Ward Commissioner of the area, who is an elected representative, is supposed to be the head of the locality. At the same time he is also a representative of the Mayor which makes his position more of a political person rather than just a leader. For all these reasons he exercises maximum power and authority within the locality. His interest is therefore, for obvious reasons, influenced more by political factors than humanitarian, sympathetic or impartial. The relationship of the people with the commissioner is close but not intimate. The commissioner depends on his advisory council formed from the local elite (mostly land lords) for major decisions on community problems. The commissioner has two appointed persons who settle the disputes of the dwellers. Failing agreement, the commissioner takes it up. There is also an old Matbar¹ in the community who is the informally elected traditional leader. Since liberation his hold seems to have decreased with the supremacy and increasing authority of the ward commissioners.

c. 15. IMAGE OF THE COMMUNITY :

This community, generally viewed as a slum, is considered a criminal area by the neighbouring middle income communities.² To some extent they are looked down on by the. On the other hand the dwellers, particularly immigrant tenants, feel they are poor and helpless and have no one to speak or do any thing for them.

1. Matbar is a local term for leader

2. According to the neighbouring people who always complain against these people to the ward commissioner. There was an instance when the author was in the ward commissioner office, a couple of neighbouring dwellers came to lodge such a complain.

d. EXISTING ENVIRONMENTAL CONDITION :

d.1. HOUSING :

According to CUS survey there are about 120 housing structures comprising 370 rooms. Observation and survey of the author suggests more or less the same number, though the orientation and location of structures are a bit different from that given by the CUS. In some cases the number of rooms within individual housing structures were found to be greater than what was shown by CUS. In some places housing density was found to be higher than shown in the drawing. Out of these structures only a few¹ are made of brick and cement i.e. full pucca. 20 units were found semi-pucca. The majority of the dwelling units² are kutcha³ (See table)

HOUSING

House type	No. of structure	%	No. of rooms
<u>All Pucca</u>			
Floor = pucca	3	2.50	3
Wall = pucca			
Roof = pucca			
<u>Semi-pucca</u>			
F = pucca	16	13.33	19
W = pucca			
R = pucca (tin or non-tin)			
<u>Kutcha</u>			
F = Mud	86	71.67	313
W = non-tin			
R = tin			
<u>Jhupri</u>			
F = mud	15	12.50	35
W = non-tin			
R = non-tin			
Total	120	100.00	370

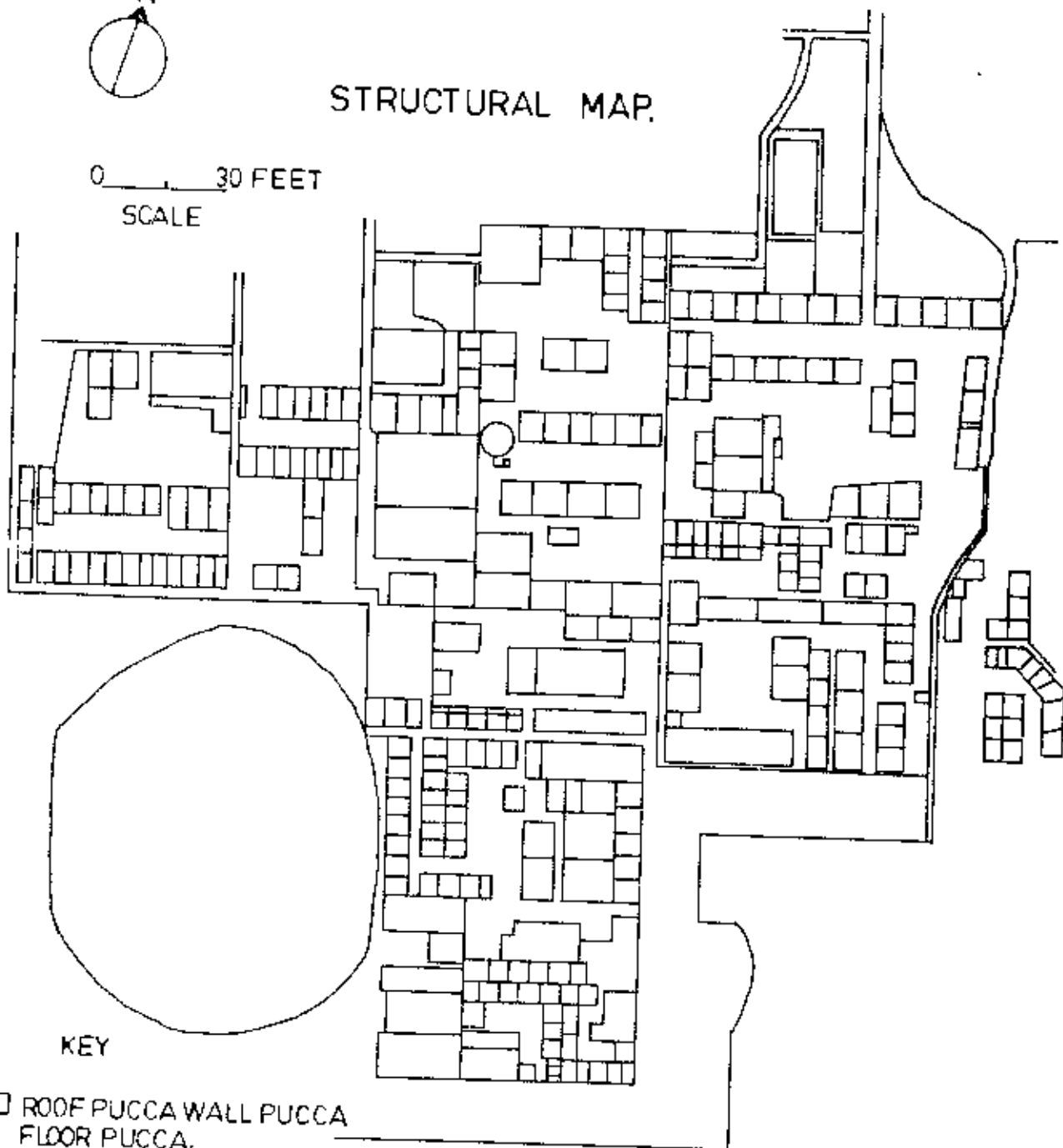
1. According to CUS survey only 3 units but from authors observation there are 6 pucca building in the whole site.
2. According to CUS survey there are only 16 units.





STRUCTURAL MAP.

0 ——— 30 FEET
SCALE



- KEY
- ROOF PUCCA WALL PUCCA
FLOOR PUCCA.
 - ROOF TIN WALL PUCCA FLOOR PUCCA.
 - ROOF TIN WALL OTHER THEN TIN
FLOOR PUCCA.
 - ROOF TIN, WALL TIN, FLOOR PUCCA.
 - ROOF TIN, WALL OTHER THEN TIN,
FLOOR KUTCHA.
 - ROOF OTHER THEN TIN, WALL OTHER
THEN TIN, FLOOR KUTCHA.

They are comprised of a kutchra floor with tin roof and wall materials other than tin (mostly bamboo). Even worst types with kutchra roof constitute about 15% of total dwelling which may be termed as jhupries.

About three fourths of the buildings (kutchra, semi-pucca) are subdivided into one room housing units. (mostly kutchra) (see table)

No. of Living rooms in Dwelling Units

1 room	73%
2 rooms	10%
3 rooms	3%

The largest houses, consisting of 3 rooms, are rare (mostly pucca buildings). Generally each room is used by single family (6 members average). Sometimes such rooms are shared by two or more families. From the attitude and physical survey it was found that the average floor space of such rooms are about 80 sq. ft. (A size of 8' X 10') A size of 6' X 8' was also found to be quite common. (See CUS table)

Floor Space :

	%
Less than 50 sq. ft.	22.78
51 - 100 sq. ft.	43.03
100 - 150 sq. ft.	13.00
150 - 200 sq. ft.	10.00

The worst example was a kutchra unit of about 8' X 10' where a family of 10 members (Husband, wife and eight children) were living together some on the bed some on the floor. In such cases these

single rooms are used for sleeping, cooking and socializing. Two level sleeping berths were also found in instances of small rooms with a large family size (generally more than 6) Municipality public latrines/bath rooms are shared by 8 to 15 families. Children use waste water drains as latrines and a good number of people (including women) have open air bathing at Municipality taps within the locality. Others use the tanks for bathing. The CUS report says about 88% of the community population use latrines jointly with other families and the rest have family latrines. Some nomadic type of people (mostly vendors and hawkers) sleep in the veranda of a local pucca community centre or at Hossaini Dalan and also on the road or in courtyards during the hot summer. There are also instances of sublettees in the area who either sleep on verandhas of kitchens of a semi pucca or pucca building. Some of them even share the room itself. Of course subletting is possible only with the permission of the land lords in which case the tenants have to pay additional rent to the land lord. From the physical survey 10 mess houses were detected. An average of 6-10 people are living together in such messes but they tend to group according to their occupation. CUS reports, out of 53 mess dwellers most of them are occupied by different types of hawkers (like tea hawkers, oil hawkers), others are rickshawpullers, cart pullers etc. They share rent and other living costs in a systematic way. A mess leader (usually the eldest member) collects the rent (8 - 10 Taka per month).

The other type of housing use is small industries. These are kutchas semi pucca or kutchas converted into a semi pucca house used as a small industries for the production of plastic toys, bangles, dyes,

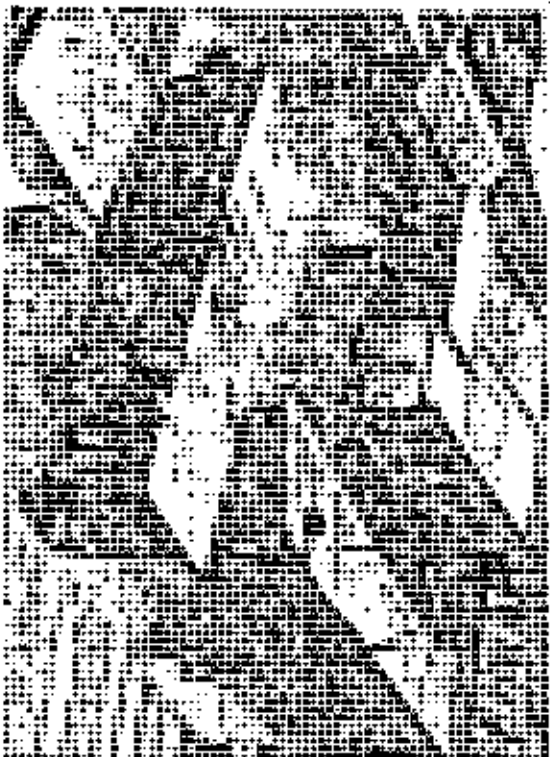
leather, etc. Economically these sorts of houses draw higher rent than residential structures. Usually there are rooms of about 12' X 20' an average of 250 - 300 sqft. Surprisingly the utilisation of the room is very efficient, especially the layout pattern of the machines.

The layout of the housing can be termed as terraced housing around the courtyards. The courtyard system of housing layout is a typical rural settlement pattern in Bangladesh. At the same time it may also be noted that a good number of immigrants in Nawabbaghicha are from the rural areas. This area is not at all a planned area and the existing planning, designs and construction were mainly raised by the local people.

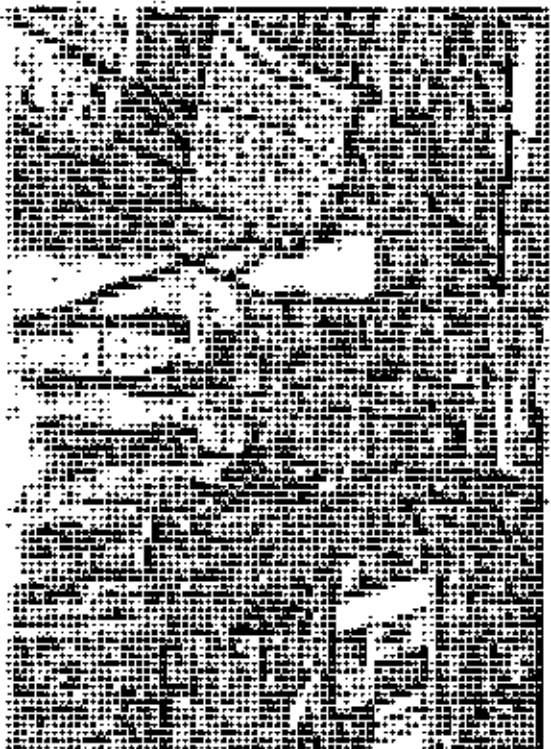
The plinths are found mostly raised about 1' - 1½' from the ground level. Apparently this is a flood protection measure even though during high moonsoon, the water level sometimes exceed the plinth level (see photograph) In the extreme low lying area (approximately 3' lower than the surroundings) some houses are built on bamboo and wooden platforms about 2½' above ground level. But from observation it was found that sometimes the water level even reaches such raised platforms (see photograph) Roof leakage, over flooding of floors and wall leakage is a common complain of most of the kutchha house dwellers. The conditions of both of these kutchha houses and the dwellers are particularly miserable during the rainy season. All these factors account to repair work annually (see CUS table)

<u>Condition of dwelling</u>	<u>%</u>
No need of repairment	25.32
Needs substantial repair	40.51
Immediate repair	5.06

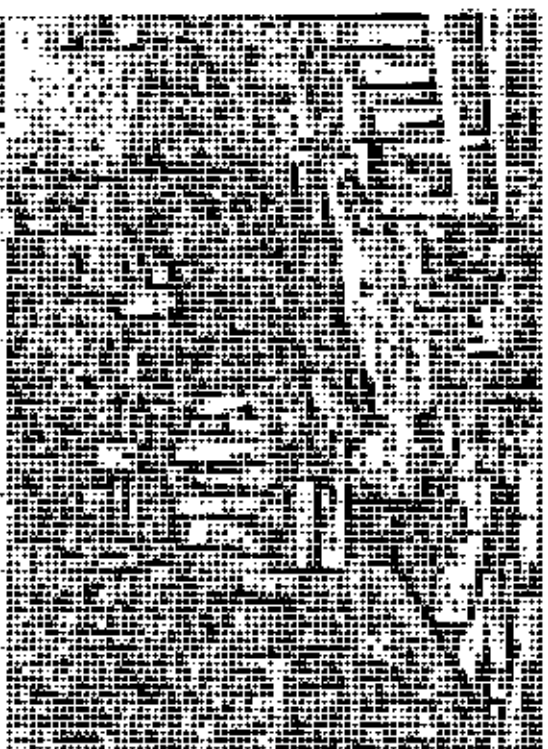
Dwelling unit amidst
water during monsoon.



Krnoo deep water
oil over the area.



Abandoned pucca club on
the left. Newly formed
social welfare club on
the right.



Though the landlords are responsible for the repair and maintenance, many cases exist where the land lords have withdrawn their responsibilities and the tenants have sustained the maintenance cost. The most interesting part is that even with such appalling housing condition tenants continued to live for years. The average length of the stay of the people is between 10 - 15 years which also corresponds with the average age of the existence of the dwellings which is also more than 10 years. (See CUS table)

<u>Length of Stay</u>	%
5 - 10 years	13.92
More than 10	56.96
Since birth	29.11

<u>Age of Dwelling</u>	%
Less than 3 years	7.59
1 - 6 years	3.79
6 - 10 years	8.86
10 - 30 years	53.16
30 - 100 years	25.32

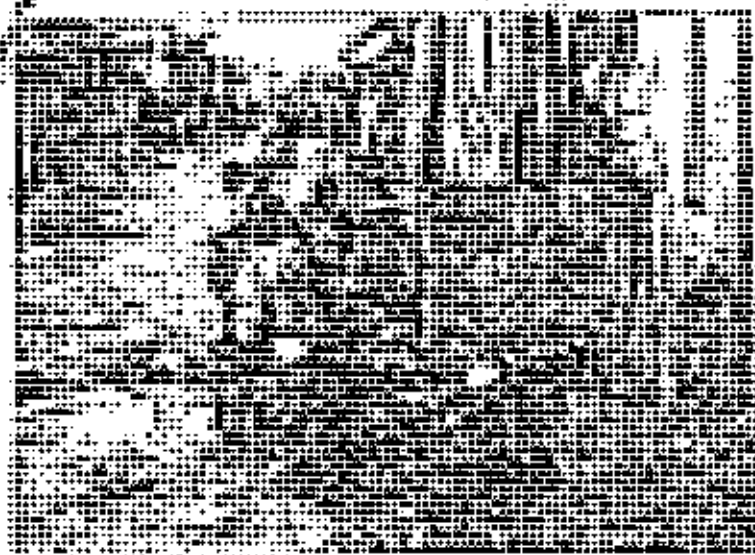
Of course there are instances of tenants within the locality changing houses (mostly changing to better houses) The average rent for these sorts of housing range from Tk.50 - 75/- per month which according to respondents is quite high for them to pay. But even then they continue to stay.

d. 2. BASIC UTILITY SERVICES :

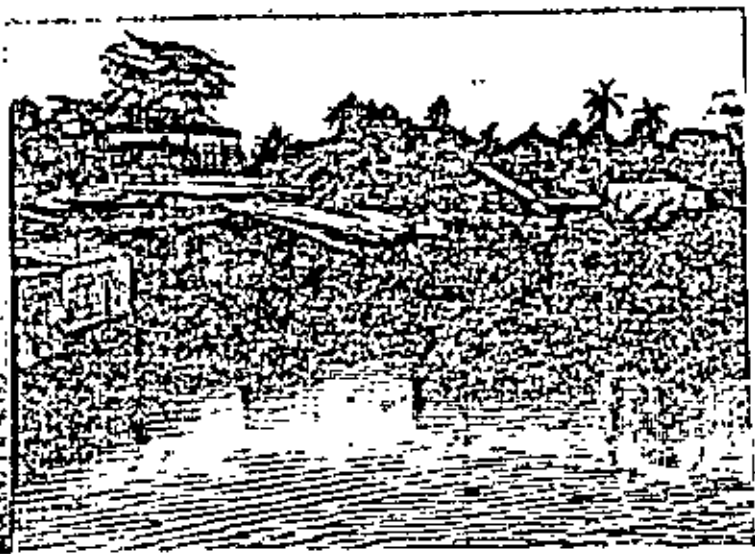
(i) SEWERAGE :

Only eight houses of the study area were found to have latrines with safety tanks. Six or seven houses have sewerage connections and the rest are still using the primitive system of service latrines or latrines without services. Service latrines are supposed to be cleaned by the municipality sweepers by night but actually they are cleaned very irregularly. At times, to avoid the heavy burden of transportation the sweepers link the deposits with the existing side drains (Municipality feeder storm drains within the site). As a result night soil to overflows into the internal roads or into the courtyard of different housing groups (see photograph) Almost 90% of the families are sharing latrines with other families and each public latrine is used by an average of 10 families. CUS data reveals that 23 latrines exist with or without private safety tank and 6 ^{are} kutcha latrines (which according to physical survey by the author is more than ten) without any service system. The conditions of the latter type is deplorable, unhealthy and unhygienic. Most of these kutcha latrines¹ are open to the sky, open pit with only bamboo platform walls either of bamboo or surrounded by gunny bags or jute canvas and no service system available (see photograph) Even the users of these latrines never participate in cleaning these . They are generally built along main open storm water drain which is crossing the area. Hence the disposal is somehow carried (not totally) by this drain or remains within the area getting flooded and encroaching courtyards or houses. The conditions are even worst during rainy season when the water level reaches the platforms of

1. Kutcha latrine : made of bamboo walls, with tin or without roof and bamboo platform floor with absolutely no service system.



RIGHT:
Typical garbage disposal
within the site.



BELOW:
Over flooded kutchas
latrines during
rain.



ABOVE:
The only tank within the locality
filled with all sorts of waste.
supposed to be used for bathing.

these latrines making it impossible for the dwellers to use them with the waste floating all around the site (see photograph) Of all the people, the mess dwellers are worst affected. There is evidence that as many as 40 mess dwellers use single latrine. This, besides the unhealthy condition of the latrines causes a big queue everyday in the morning. The attitude survey in the area says that the highest percentage of dwellers (50%) identified poor sewerage system as their main problem. Comparatively the landlords have slightly better sanitation and less congestion in latrines. Tenants complained about the miserable condition of latrines to the landlords but nothing happened. There is a fear among low income tenants (Tk.300-500 monthly income) that the improvement of the latrines would also increase their rents which would be impossible for them to pay. Hence a majority of them rightly responded to the attitude survey questionnaire that they would rather stay in existing poor environmental conditions than improve them with higher rent (50% of the respondents). Children of the locality usually use open spaces (courtyards), streets or road side drains (see photograph) for urinals and defecation.

In a personal interview with the operation and maintenance engineer¹ WASA² described the main problem of sewerage system in the city specially that of old Dacca is due to the dwellers lack of knowledge about sewerage conditions, an opinion which coincides with the opinion of the Executive Engineer³ Public Health Engineering Deptt.

-
1. Mr. Rafiqul Hossain, Executive Engineer, (Sewer Operation and Maintenance) WASA
 2. WASA : Water Supply Sewerage Authority
 3. Mr. Noor. Executive Engineer (Drainage Division) PHE.

The latter remarked that the dwellers are ignorant about the technicalities and function of a sewerage system. He says most of the people do not at all know that the sewerage systems do not allow the inflow of house waste (like kitchen and toilet waste) into itself. He too complained that due to lack of proper litter system (shortage of dustbins) and also due to a lack of knowledge the sewerage drains are being continually used as dustbins through its manhole openings. He said that sometimes public Health Engineering storm drains are connected with sewers. This he described could be either due to lack of connection or intentional. Even the municipality feeder connections are joined with the sewer, he added.

The Engineers experience of sewer line cleaning is the same as with storm water drain cleaning. They contain all sorts of garbage and solid materials, He figures that of the surface drains are connected to sewers which is causing obstructions in its natural velocity (which is 3 feet per second).

Most of the old Dacca's connections are from 1923 and the branch lines were then made on the basis of a very small population. There was a redesigning scheme in 1964 in collaboration with foreign consultants¹ of which the first phase is almost completed. This includes installation of main lines, feeder lines, Intermediate lift stations and a sewerage treatment plant at Pagla (see Dacca guide maps). The treatment plant has not yet started functioning, although it will be in operation from the end of this year. The lift stations (for suction) are installed at Tejgaon, Bashaboo (Khilgaon) and New Market in New Dacca and near Hazaribagh tannary and Narinda in old Dacca (see Dacca guide map). The old lift station near

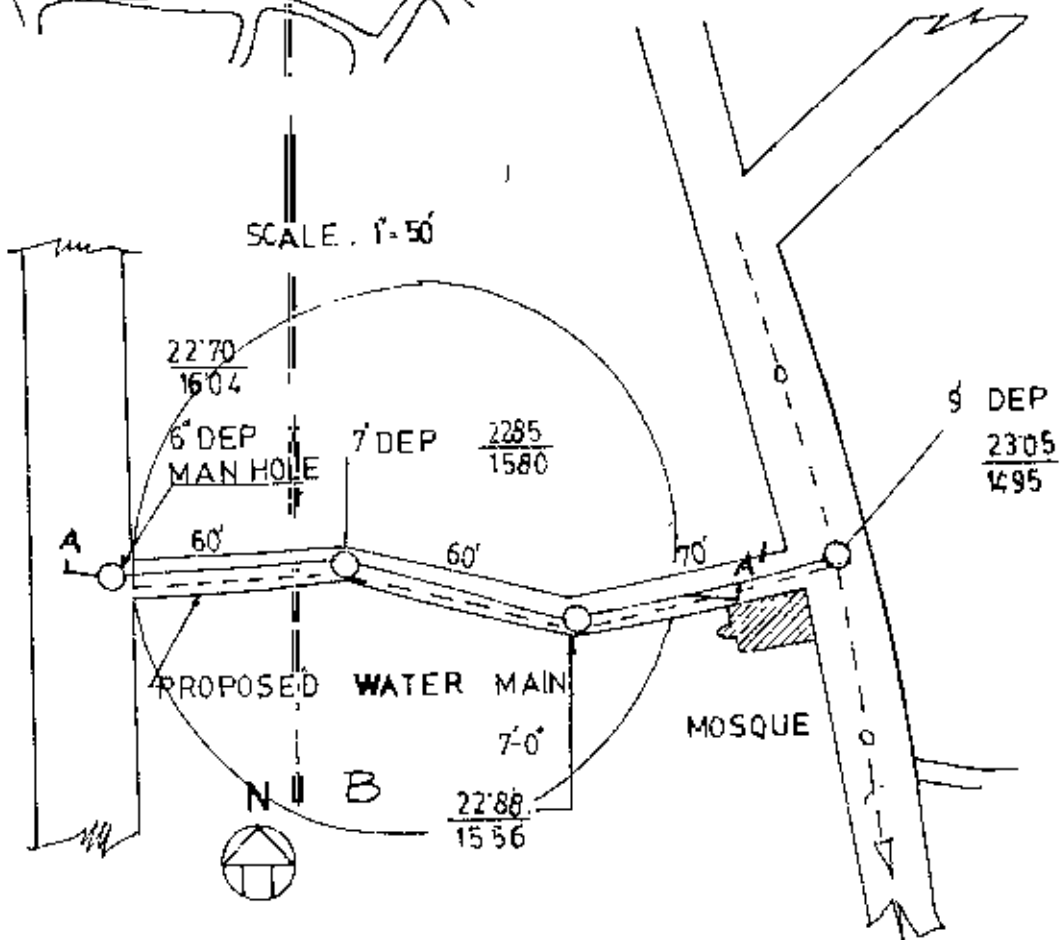
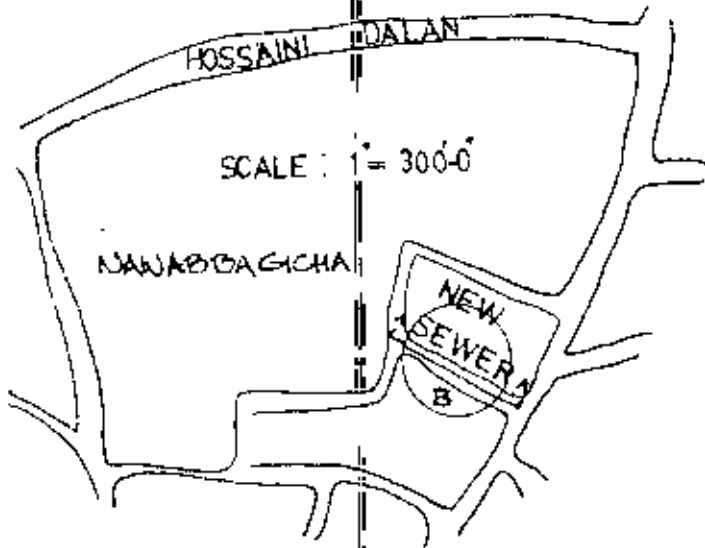
1. American consulting firm named Ralf. M. Parsons.

Dacca Medical College (which is near to the study area) has been revitalised. At present as against total Dacca's demand for sewer lines only 30% have been met.¹

The 2nd phase plan of the WASA programme which has started since 1979 will include certain new work in old Dacca. It might be mentioned that out of 68,000 house connections in Dacca 38,000 are in new Dacca and only 30,000 are in old Dacca. Since last year WASA has taken a programme to convert service latrines into latrines with sewer connections. In the first phase 1100 connections out of 10,000 are to be made. New connections are made on the basis of demand of the people. Revenue collection is based on the assessment or valuation of Dacca Municipality. Charges for a sewer is the same as the charge for drinking water. As there is no meter system for sewer lines the reading is taken from drinking water meter. The charge being Tk.5/- per thousand gallon which is the same for drinking water. Connection are also made on the basis of demand from the people of the locality. Generally clay pipes and PVC pipes are used but for bigger diameter (like 24" - 36") brick arches are used.

The present cleaning team is quite adequate. They have sewer cleaning rods, trucks and also hand cleaning equipment. There are 87 regular employees and another 87 seasonal employee in WASA. Each seasonal employee gets Tk.15/- per day. Cleaning is done every three months. But when the treatment plant will be ready there will be need for more cleaners. At present the debris is dumped near Jatrabari, Narinda (see Dacca guide map) dumping depot for Municipality but the executive Engineer feels a new site is required, as the area is already getting too congested.

1. Data collected from the Sewer Maintenance and Operation Division of WASA.

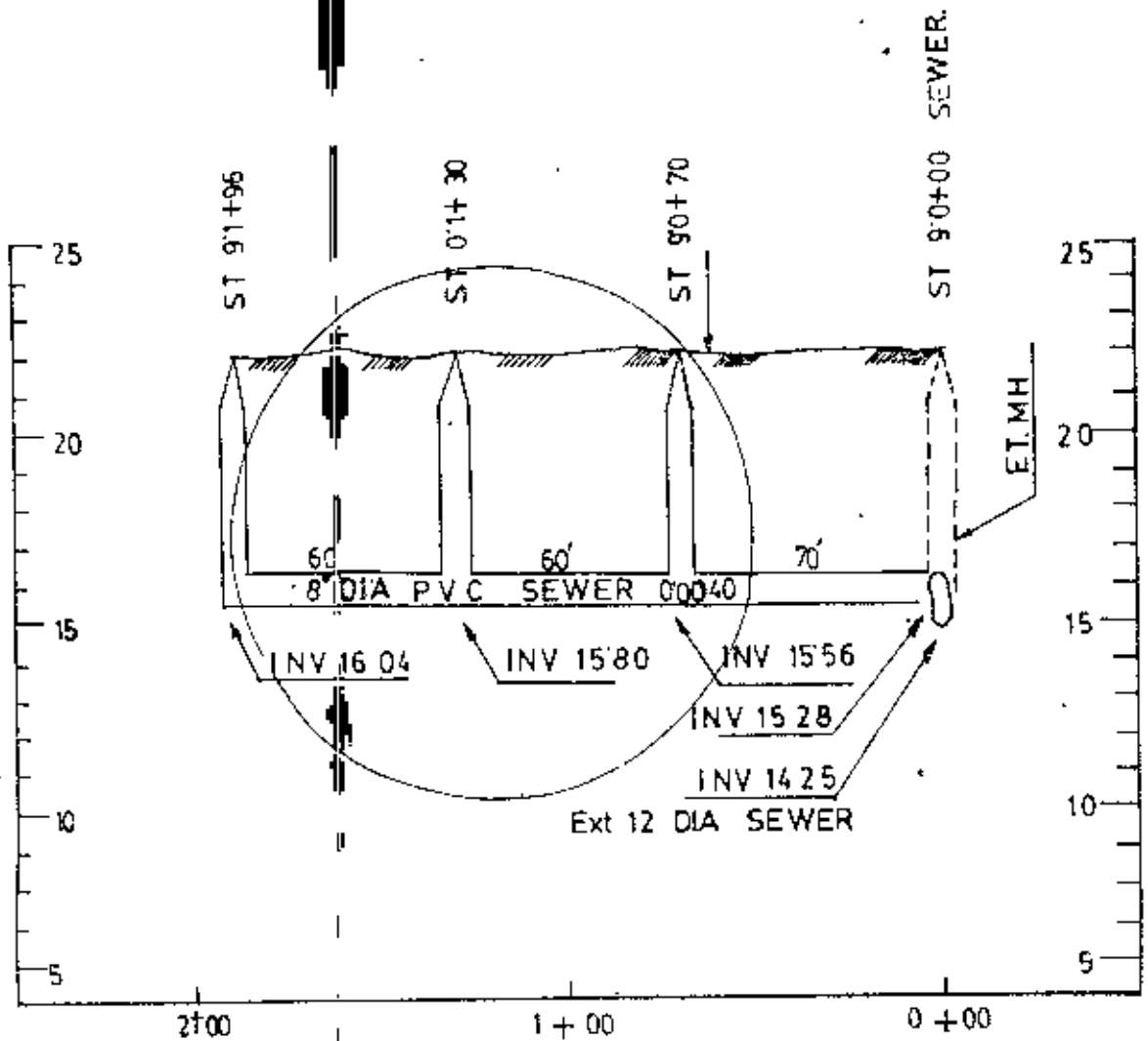


BLOW UP OF B

EXISTING
SEWER DETAIL OF NAWABBAGICHA

DESIGNED BY THE PARSONS INC
CONSULTANT FOR WATER DEVELOPMENT BOARD, BANGLADESH

SEWER DETAIL NAWABBAGICHA



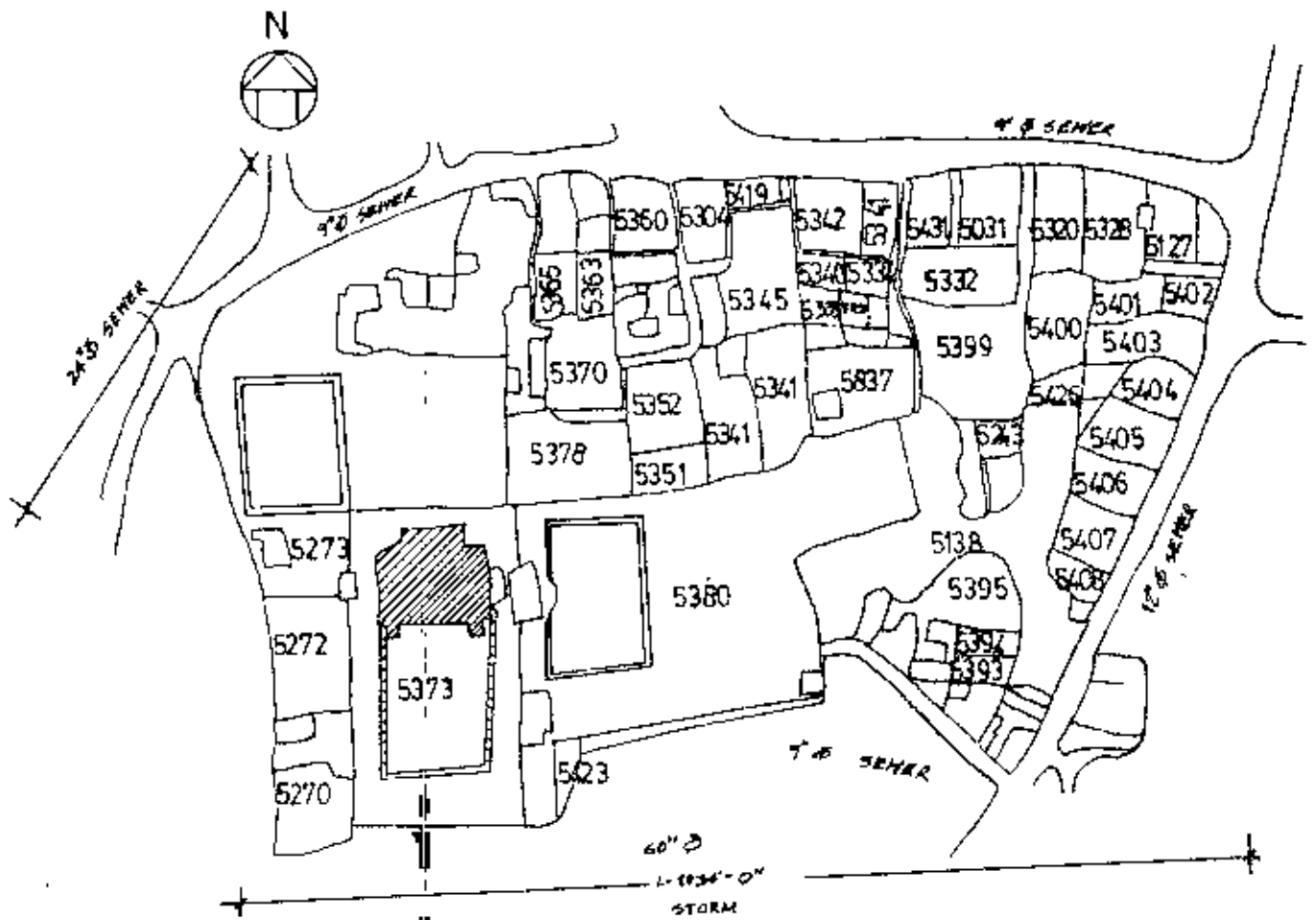
SECTION THROUGH A-A'

The major sewer problem at Nawab Bagicha is that the area is lower than its surroundings. This is because an old railway line was built in the area and excavation was required from this site to raise the line. Thus it remained low even after the line is withdrawn. The problem with low elevation is that it needs a greater length to attain a certain depth to have required velocity of 3 ft. per second.

Then again the internal roads of the area are very narrow (an average of 4 - 5' in width). The sewer line for these sorts of lanes will be high since the cost of protection through MS (Mild steel) sheet piling on both sides of the lane is very expensive.

d. 3. STORM WATER DRAINAGE :

From observation it was found that more than two-thirds of the total study area was flooded during the rainy season. Even during normal non-monsoon period rainfall floods the area to knee depth in most places for a period of 1 to 2 hours. (see photographs). The problem is particularly intense during rainy season when the country experiences incessant rainfall. Then people are found sitting on bamboo platform all night (See photograph). The internal storm water drainage is almost absent. Only four or five houses have a pucca drainage system while a few are kutcha, but then again all these drains (supposed to be storm water drains) are used more as waste water drainage than storm drainage. The road side houses rely on municipality drains (feeder drains for public Health Engineering main storm drains) for drawing out their water which again becomes ineffective and insufficient during heavy showers. Often the



KEY

SEWER LINE
 STORM WATER DRAINAGE

COMPILED FROM WATER DEV. BOARD +
 PUBLIC HEALTH ENG LAYOUT.

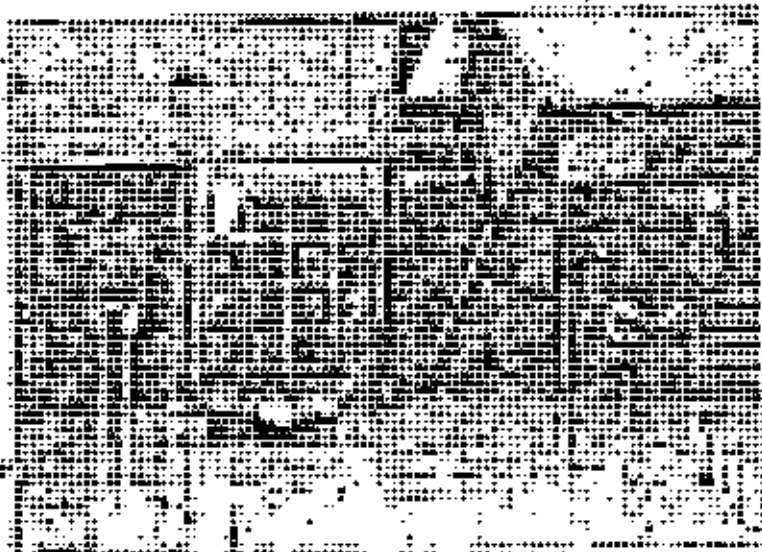
DACCA MUNICIPALITY
 NAWABBAGICHA WARD NO. 2
 PLOT DIVISION
 P.S. MAP 181966

SCALE. 1:2500.

Submerged municipality tap
but the water collection
goes on.



Dwellers quarantined to their
dwellings due to high salt
water all over the site.



An internal road.

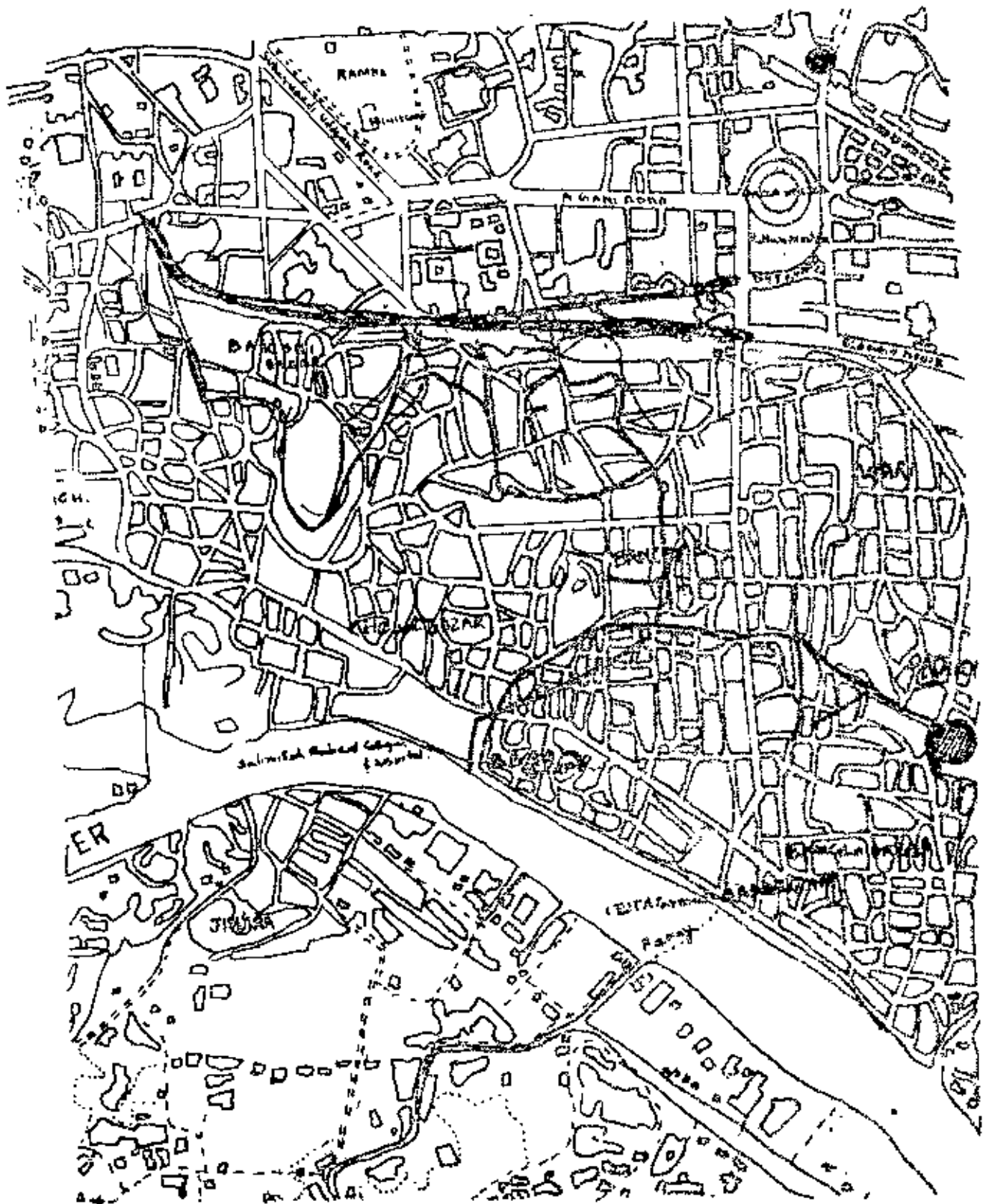


drainage system remains out of order due to lack of proper use of and maintenance. It may be mentioned that so far there is no separate waste water disposal system for Dacca. Kitchen and toilet water are linked with sewer or storm water drainage. Children of the area are found to be using these drains as latrines. Besides all sorts of garbage is also thrown there, which causes further obstruction.

However, the total provision for storm water drainage for this particular locality is adequate. Public Health Engineering drawings for the area show that the arterial drains run along three sides of the site. (see figure). The main 60 inch diameter pipe which is carrying most of old Dacca's storm water of the locality runs under the road on the south along the edge of the site which ultimately leads to the Buriganga river via Narinda Pumping Station. The other one is on the west bordering Hossaini Dalan and has a 24 inch diameter. This links with the first pipe line.

According to old local people, previously (sometime in early fifties) a canal used to run along the present main lines which drew all water off the site to the Buriganga. Gradually since this low land was raised and the canal was filled with pipes embedded underneath the trouble of stagnant water started. Of course even though filling up of this site, it is yet atleast 3' down from the surrounding especially at the north east corner.

The other drainage on the east operates as an open drain from Dacca Medical College Hospital (which is less than a mile north of the area) to the middle of the site after which it goes underneath and joins the main line on the south. This particular drain is always found carrying dirty waste (in the form of slurry) which looks



STORM WATER DRAINAGE
FOR OLD DACCA

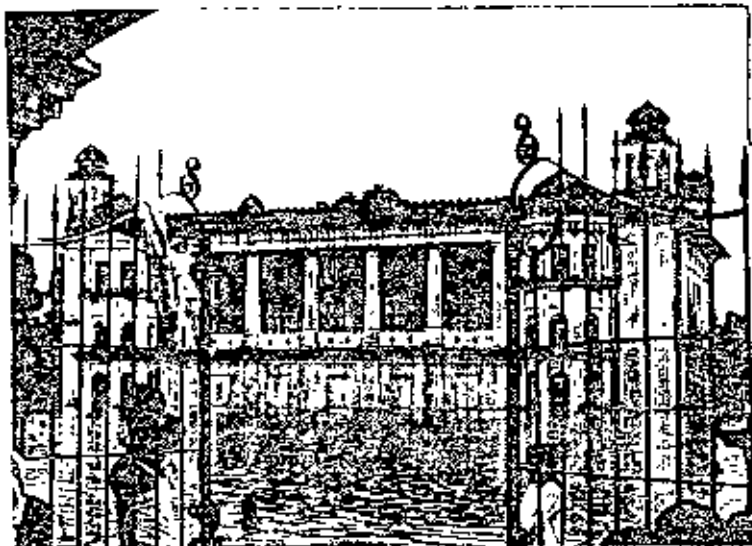
STORM WATER DRAIN
○ PUMPING STATION

like waste disposal of the Medical College Hospital, as the load is huge before entering the site. Though the main drains were basically provided with manholes and catchpits at many occasions these were found absent in the site. At some places it was found to be used as garbage disposal.

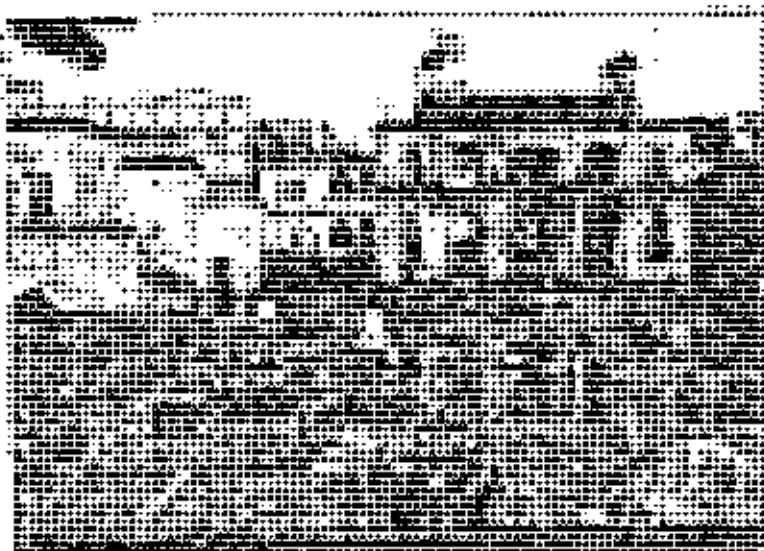
According to the Executive Engineer of Public Health Engineering the bottleneck of previously constructed storm water drainage is due to lack of proper planning in its layout. He says the existing lay out is an ill planned one. He feels that before Independence in 1971 no Government was interested in storm drainage. No one really knows much about existing drainage he added as the sectional drawings are not available, hence angle of slope is also not determinable. His impression about defective disposal system in that particular area and also of the entire Dacca's problem is primarily due to lack of a civic sense by the people. More than 100 manholes in city are uncovered (which are mostly stolen) and all sorts of garbage are thrown in these holes causing obstruction to the normal designed velocity which is about 3 ft. per second. Moreover road waste, tree leaves (specially during spring) are always filled in the drains. He even emphasised that the municipality sweepers put sometimes garbage inside these manholes to avoid too much carrying.

Maintenance of these drains are done once per year by PHE (Public Health Engineering) though there is no maintenance fund in the Department. So it is made up from the development fund. At present the maintenance cost of 52 miles drains of the city is about 20 lacs (only the cost of manual labour) . The number of cleaners are 10

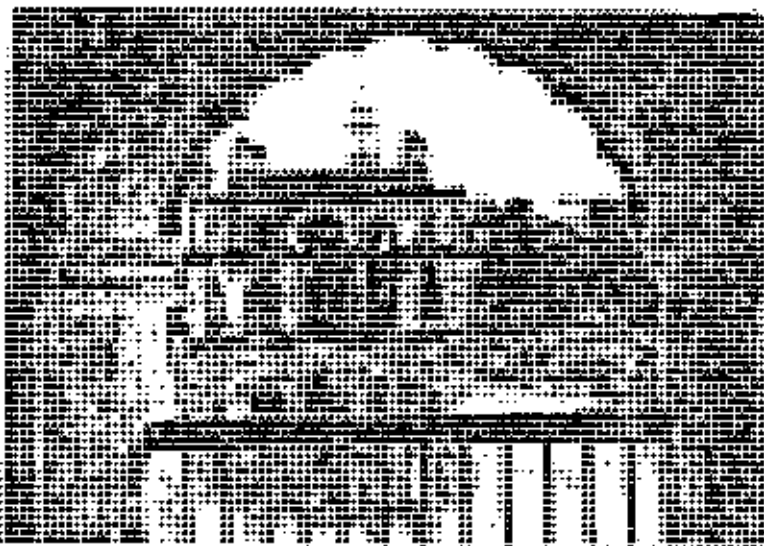
Hussaini Dalan backyard.
Due to poor drainage, filled
with water.



Shias tombs within
Hussaini Dalan compound
remains uncared.



Entrance of Hussaini
Dalan. No approach road
in existence only
of water all over



against the sanctioned posting of 50. There was a Dacca city drainage scheme done by Sir William Halcrow and Parter consultants in 1972 which suggested 472 miles drains at a cost of Tk.13 crore. It was not accepted by the govt. because the figure of expense was impractical.

After that the Asian Development Bank was requested by the Govt. for funding after proper survey and feasibility study. They suggested 500 miles drains to be built in 25 years with an estimated cost of Tk. 350 - Tk. 400 crore. This also included the cost of embankment all along Buriganga river and installation of 4 pumping stations. The programme is yet to be finalized.

The existing Electric pumping station at Narinda, old Dacca has two pumps with a capacity of 2 million and another two pumps a capacity of 3 million gallons per hour which according to PHE is sufficient for old Dacca. The reason for flooding (in the study area and the entire old Dacca) is due to a lack of civic sense of the people and absence of feeder connections, which is the responsibility of the Municipality, although PHE Deptt. feels that they are not doing it as per demand of the locality.

According to PHE standard, 1 cft. volume of drain has to be installed in an acre of land whereas at Nawab Bagicha, although 60" diameter main line passes through the area there are no adequate feeders to connect these with the main line. The other problem the engineer described could be due to improper sloping of the lines. He emphasized that for feeder connections, done by the Municipality is not maintaining the standard slope specially when it is running underground or as surface drain. They are just following the contours

of the road which also causes obstruction.

d. (iii) ROLE OF MUNICIPALITY

Dacca Municipality has certain functions such as collecting Holding tax, providing street light, Conservancy (road sweeping, garbage cleaning, road side storm drainage) Construction and maintenance of internal roads, establishment of community centres, Gynnasium, Club Library, Public latrines, Parks etc. Besides these Dacca Municipality is also responsible for the feeder connection to Public Health Engineering storm Water drainage only within the old city. The revenue collection system is as follows.

Holding tax - 7% of the total annual income from the building
 Conservancy tax - 2% of the total annual income from the building
 Street lighting tax - 3% of the total annual income from the building

According to the Revenue Officer (in a personal interview) the Municipality uses up all its funds for its establishment so that it has to depend largely on government grants for any sort of development work. Additionally, the Govt. grant is also frequently delayed and sometimes ^{is} not sufficient which greatly hampers them in their normal functioning. The Revenue Officer also feels that due to a lack of inter organizational co-ordination with D.I.T. (Dacca Improvement Trust), PHE, WASA & Planning Commission efficient service facilities do not reach the people.

Sweepers serve on a temporary part time basis and as a result of this acute job dissatisfaction they seek employment and work elsewhere. Their only reason for serving the Municipal corporation is that they are allotted to live in congested colonies. Their salary is at 120

Take per month which is another reason for working elsewhere. However efforts are being made to make their job permanent on an eight hours daily basis. In short there is no proper sweeping and heaps of garbage remain unremoved. At present the entire garbage of the city is dumped in Patwardi around which city dwellers are building their houses and many are already living there. Hence another remote and safe location for the disposal of the garbage should be found. Mosquito control and a Malaria eradication Programme exists; moreover there is inconsistent spraying. Land protection etc exists occasionally spray Mosquito killing medicine. They are now out of service. When an epidemic occurs in any area there is a Disinfectant team under the Municipality which sprays bleaching powder and phenyle but limits itself to the houses of the well to do.

Under the Municipality development programme a multistoried shopping complex has been designed and approved to be constructed at Nazimuddin road (adjacent to Nawab Bagicha) but the work has not yet been commissioned due to land dispute. The municipality planning division proposed a 20 year plan for slum clearance and other development works costing 20 crores (in the first 5 years of which 10 crores is to be spent) but as a local engineer observed the mayor did not like to support the idea. The reason given was that the electorates of this area were his "committed" voters, and their removal might affect his popularity. The other development works in the Five Year Plan includes:-

- 1) Conversion of Service Latrines into Sanitary Latrines (with U.N. Aid)
- 11) Construction of Public toilets in different parts of the city
- 111) Construction of Parks and Community Centres.

An analysis of Municipality performance indicates that no feeder storm water drains are being constructed. The Ward Commissioner of Masab Bachecha installed a few incandescent lamps on different light posts (through the Municipality) just to gain popularity of the area. At some instance fat light posts are also installed in narrow lanes which only obstruct natural movement.

An analysis of Municipality performance would easily lead to the conclusion that their development work lacks proper planning and also lack of co-ordination with the other similar organizations. It may be also mentioned that the entire corporation does not have a single planner or architect to perform such planning or design jobs.

d. (iv) PROVISIONS FOR DRINKING WATER :

Municipality tap water is the main source of drinking water to the people of the community. Though the main 6" and 4" diameter WASA pipe running on all sides of the area (see water supply drainage) only a few houses Land lords have brought connections to their houses while the rest of the entire community of not less than 2,000 depend on only 6 municipality taps whose supply is irregular. The total supply is highly inadequate in relation to the need of the dwellers. Both in the morning and in the evening hours a long queue is formed for drinking water. (see photograph) A lot of people always carry water from out side the area.

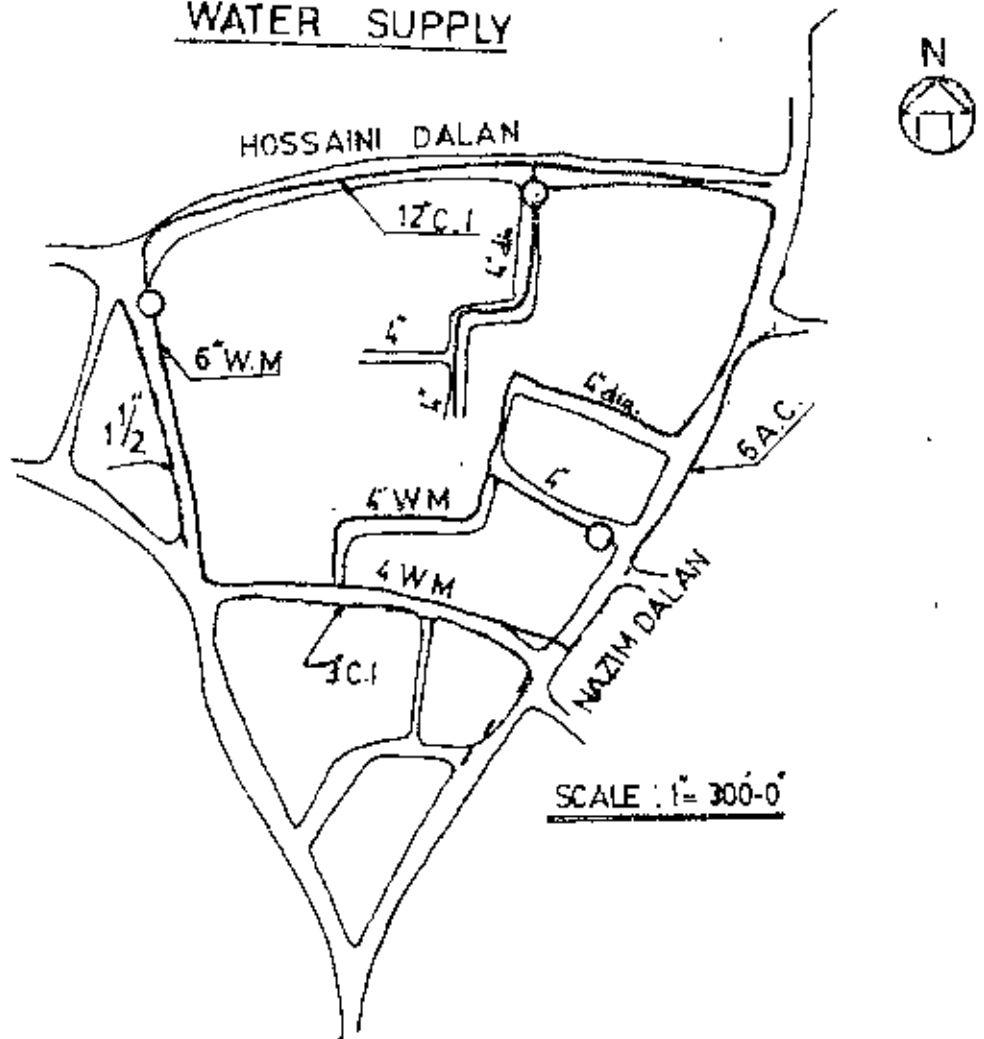
Paniwallis¹ from the locality carry water for most of the dwellers of the community. They get Tk.10 to Tk.12 per month for carrying about $\frac{1}{2}$ a gallon of water. It was found that some children of the community spend one to two hours per day carrying water for their household usage. They even carry water to their land ladies without any remuneration.

Male members, children and a few women take baths in Nawab Bagicha and Hoesaini Dalan tanks, while most of the women a few males and children have baths at municipality taps. People were also found washing clothes, and household utensils in these tanks.

Statistics from an attitude survey regarding tank and water tap bathing indicate that about 80% of the people prefer bathing in the tanks.

1. Paniwalli are female water sellers.

WATER SUPPLY

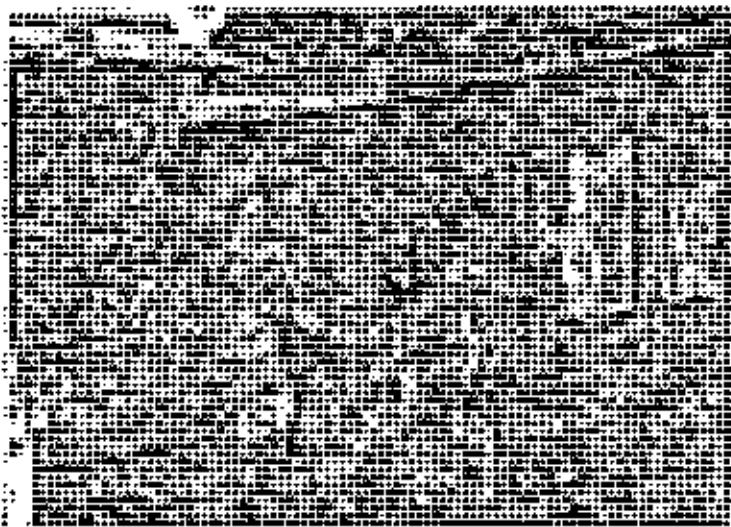


EXISTING WATER DISTRIBUTION SYSTEM FOR NAWABBAGICHA

DESIGNED BY THE PARSONS INC.

CONSULTANT FOR WATER DEVELOPMENT BOARD BANGLADESH

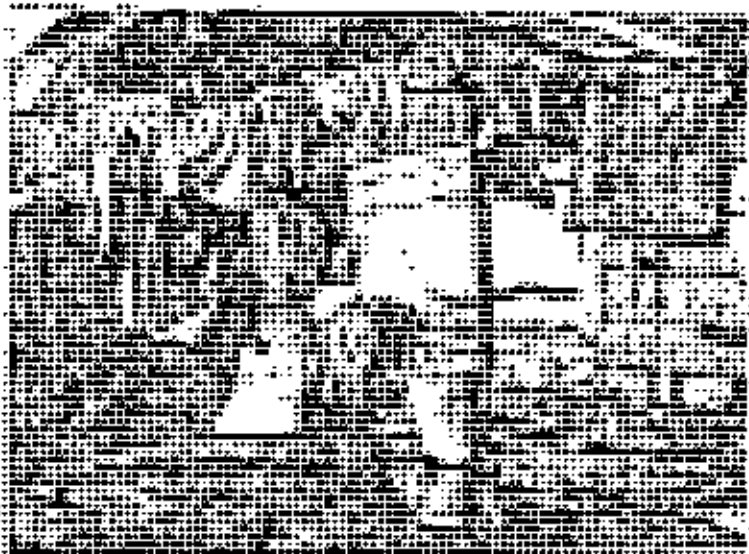
Queue for municipality
tap shower.



Queue for municipality
drinking water.



An old woman taking bath at
a courtyard after collecting
water from a municipality
away from her place.



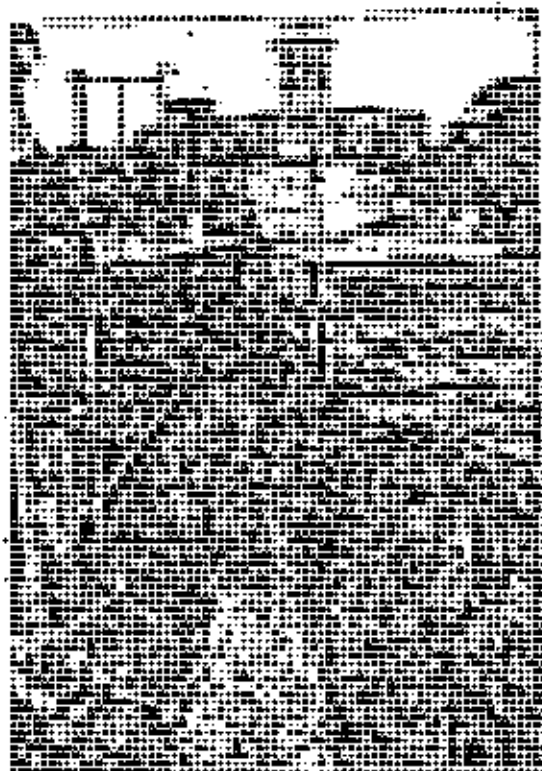
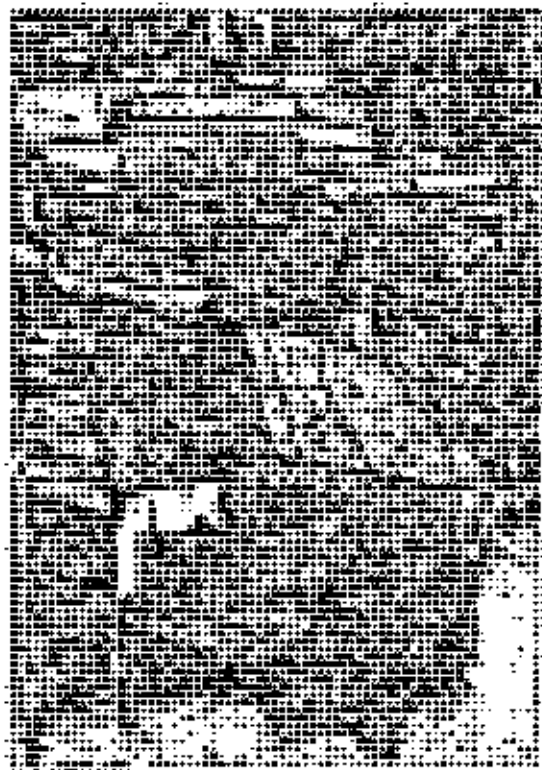
d. (v) ACCESS TO ELECTRICITY :

With the exception of the land lords most of the dwellers do not have electricity though the electric lines are in easy access to the dwellers (see drawing). At present there are about 14 electric poles primarily set for street lighting. At present all of these poles have mercury bulbs which make the internal streets and it is neighbouring area illuminated. The installation of these bulbs was after the election of November 1978. The ward as promised before the election is responsible for such installations. According to some dwellers electric poles obstruct the narrow roads of about 4' - 5' wide. The diameters of these light posts are about 1½'. They even complained that it becomes almost impossible to bring out dead bodies from the locality due to these poles.

d. 3 INTERNAL ROAD SYSTEM :

The main road of the community (lying on the south eastern side of the community) is semi-pucca (made by brick paving) and the internal lanes and passages are all kutchra. The main road and the junctions of the passages and lanes are the gossip centres for the dwellers. According to CUS survey the total length of the narrow passages within the study area is about 150 yards. There are only four outlets from the locality to the surrounding arterial streets, two towards south east the other two towards north. The internal roads are so narrow that only with the exception of few by cycles no other transport can ply these roads.

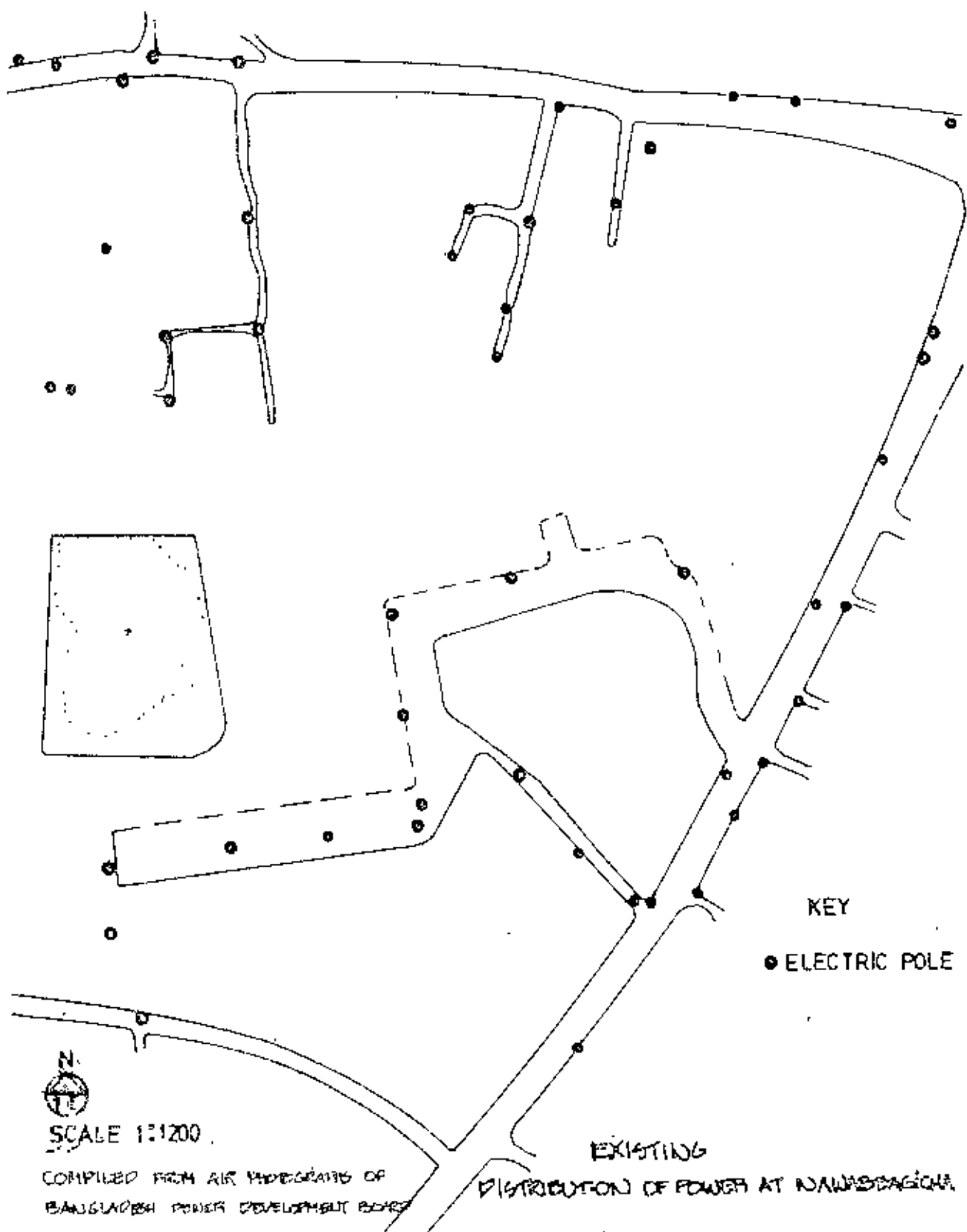
Dam now receded;
Time to work



(5)

✓

A typical
lane of Navabgicha.



KEY

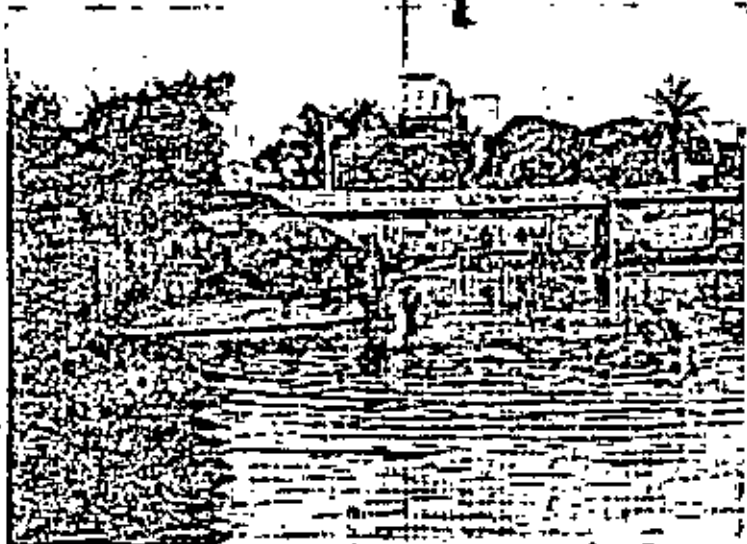
● ELECTRIC POLE



SCALE 1:1200

COMPILED FROM AIR PHOTOGRAPHS OF
BANGLADESH POWER DEVELOPMENT BOARD

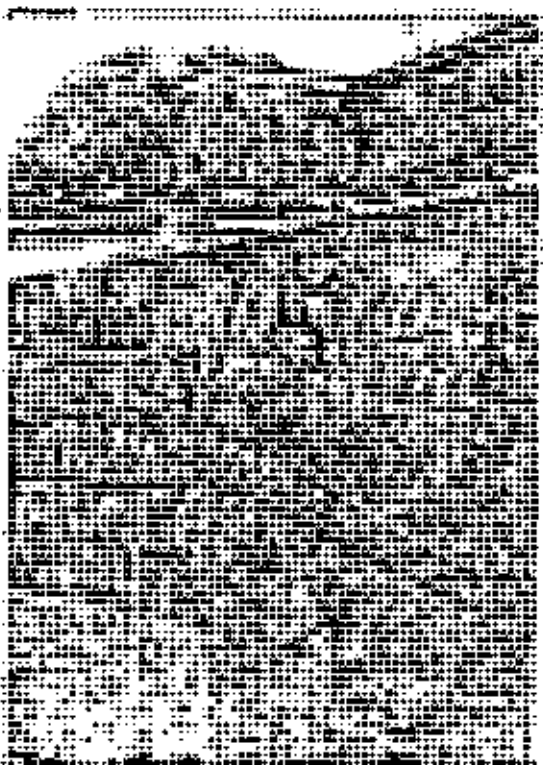
EXISTING
DISTRIBUTION OF POWER AT NAWABPASHA



Tank bathing



BELOW:
Big city blues.



ABOVE:
The only youth club with its
members.

RECREATIONAL AND COMMUNITY FACILITIES :

There is no open space, playgrounds or any sort park or green area for the dwellers. This statement is true for its neighbouring communities also. This is a fundamental inadequacy for the entire area of old Dacca. There is no structure for use as club for either women or youngsters. There are no community or vocational training centres. Before the last election of 1978 a pucca structure was used as a local club but after the election this property was closed by the Ward Commissioner. When contacted the ward commissioner said that he is still considering other uses of the place but cannot decide what to use it for. Children play in the narrow lanes or courtyards or by the side of drains while others play carrom or cards at hired kutchha kiosks (see photograph). The only patch of green open space available is near the tank south of the area which provides sports facilities (Badminton during winter) to comparatively well-to-do residents or local elites of the surrounding communities.

e. ATTITUDE SURVEY RESPONSE

An attitude survey of the people of Nawab Bagicha was carried out to discover what they feel their problems are , which problems are bothering them most, their future plans about staying in that place and also to examine the potential for community participation for any sort of development and their response to site and service programmes the potential for development of Hussaini Dalan, the potential for upgrading service facilities etc. It was also meant to verify certain physical social and economical data like population, number of households, occupation, place of work, rent, size and condition of the housing units. For this reason 50 households were surveyed covering the entire locality. To get an overall impression and also to check the size of the housing structures every sixth house was surveyed. To determine a few purely physical aspects like size of the rooms, orientation of the structures and for comparison with CUS structure map the entire survey was done by 2 architects (including the author) and 3 senior students of architecture. It may be mentioned all the surveyors had previous experience of such types of survey.

There were certain problems faced by the survey like the questions had to be made as much clear as possible to the respondents because most of them are illiterate. Of course even then some of the respondents could not understand some particular questions. They were quite indifferent to answering them. Like arranging the problems regarding the service facilities in order of priorities. Hence only two priorities were tabulated. Response to the question about income

is also not accurate since either they were shy or wanted to hide the exact figure. The other problem was realization of problems. Like question number sixteen (see Questionnaire). No one could properly identify problems of Hossaini Dalan (Not even Shias) and no one could think much about its improvement either.

A structure plan of the community (done by CUS) was given to each surveyor to make necessary corrections and the size of the rooms for each households were suggested to be written on the top of the questionnaire sheet.

It was found that the orientation and the locations of the structures were all right but in some cases new rooms (or housing units) had been added to old ones as shown in the CUS survey . The numbers of members in the household was also asked and also the pattern of living within the room was observed. It was found that the household size was the same as in the CUS survey, i.e. 6.14. The room sizes are about 7' - 0" X 10' - 0". It is surprising how even a family size of 10 are living in such tiny rooms. In such cases they use bunkers for sleeping. Cooking was done either in the open air or within the rooms.

Survey was done on Sunday from 4 to 7 P.M. (considering most heads of households would be available). This assumption was found to be correct only with the exception of 2 or 3 of the respondents.

Reaction to this attitude survey was a sort of indifference amongst respondents. The majority of them were not being enthusiastic about the questions. Some of the respondents even complained that there had been a few other surveys done in this area but until then

nothing has happened. So they were not very optimistic about this survey either.

For a better understanding of the responses to this attitude survey the answers are presented in a tabular form following each question.

RESPONSE TO ATTITUDE SURVEY QUESTIONNAIRE

NAWAB BAGICHA (A LOW - INCOME URBAN POOR COMMUNITY) , DACCA.

Q.1 Identify your problems in the area. Name first and Second problems in order of priorities.

IDENTIFICATION OF PROBLEMS	1ST PREFERENCE		2ND PREFERENCE	
	Person	%	Person	%
Sewer	25	50	16	32
Rain Water Disposal	23	46	15	30
Drinking water	2	4	3	6
Housing			6	12
School			5	10

Q. 2 Arrange your problems in order of priorities from the following list :

- | | |
|-----------------------------|--------------------------|
| a) Drinking water provision | f) Provision for bathing |
| b) Storm water disposal | g) Public latrines |
| c) Waste water disposal | h) Internal road pattern |
| d) Sewerage system | i) Housing condition |
| e) Garbage disposal | |

	1ST PREFERENCE		2ND PREFERENCE		3RD PREFERENCE	
	Person	%	Person	%	Person	%
Sewer	18	36	6	12	11	22
Rain	17	34	13	26	8	16
Housing	6	12	8	16	3	6

Q.3. Do you feel any urgency of the development of the above mentioned provisions of the area ?

	Person	%
1. Yes	49	98
2. No	0	0
3. No remark	1	2

Q.4. How do you think the above mentioned problems can be solved ?

	Person	%
1. Government	25	50
2. Government + people	7	14
3. I don't know	15	30
4. Co-operative	3	6

Q.5. Whom do you consult to solve the communal problem in the area ? (Like in quarrels, fights, theft etc.)

	Person	%
1. Commissioner	30	60
2. Leader	11	22
3. All alone	8	16
4. No one listens	1	2

Q.6. Where is your place of work ? How long you are in this area ?
What is your occupation ?

Place of work	Person	%
1. Not fixed	10	20
2. Gulistan	8	16
3. Within the area	9	18
4. Maulvi Bazar/Chawk Bazar	10	20
5. Others (Gulshan, Shanti-nagar, New Market)	18	36

How long you are here in this place	Person	%
1. Since birth	11	22
2. Less than 1 year	7	14
3. More than 10 years	20	40
4. 1 - 5 years	12	24

Occupation	Person	%
1. Vendors	6	12
2. Businessmen	15	30
3. Worker	9	18
4. Skilled workers (cook, welder, driver, builder)	12	24
5. Govt. servant, joker cart puller, rickshaw puller	8	16

Q.7. What amount of rent are you paying (if he is tenant).
Is the present rate too high for you ?

	Person	%
1. Tk.50/- to Tk.75/-	15	30
2. Tk.75/- to Tk.100/-	5	10
3. Tk.100/- to Tk.150/-	5	10
4. Tk.10/- to Tk.50/-	3	6
5. Own house	15	30
6. Others	7	14

Are you ready to pay more rent if the area is upgraded or you would rather stay in the existing condition at the present rent ?

	Person	%
1. Improvement with Higher Rent	14	28
2. No improvement same rent	25	50
3. No comment (for owner)	11	22

Q.8. What is the total income of your family ? What is your future plan about staying in this area ?

	Person	%
1. 300 - 500	27	54
2. 500 - 1000	18	36
3. 1000 - above	5	10

Future Plan	Person	%
1. To stay here	31	62
2. Want to go out	10	20
3. With slight modification of the existing area	9	18

Q.9. Would you like to leave the area if a plot size 15' x 10', is allotted to you near Hajari Bagh, Postagola, Mirpur at a rent of Tk 100/- p.m. with accessible road, water and sanitation facilities? If yes, which site would you prefer to go? (Reasons) If no, would prefer to move with some sort of job opportunity like labourer in an industry etc.

	Person	%
Yes	15	30
No	35	70

Q.10. What additional amount you may afford to pay for such reallocation?

	Person	%
1. No amount	25	50
2. Tk.1/- to 50/-	10	20
3. Tk.25/- to 50/-	3	6
4. Not applicable (They don't like to go)	17	34

Q.11. Are you willing to spare 2/3 hours a week to work in a community in any sort of development project within the area like sweeping, clearing of garbage, Earth filling, Retaining wall construction, Plantation, Clearing up of certain area, Road repairing etc. ?

	Person	%
Yes (weekly 2 to 3 hours)	31	62
No	16	32
No comment (female)	3	6

Q.12. Do you want some sort of shower facilities or prefer bathing in the tanks ? If prefer Tank bathing (give reasons) If the tank is filled and made for other use like parks, play-ground, club etc. Would you kind shower bathing then ?

	Person	%
Tap	40	80
Tank	10	20

Reasons for tank bathing	Person	%
Tanks 1. Traditional		80
2. Quick (no queue)		20

Q.13. Identification of sect.

	Person	%
1. Shia	6	12
2. Sunni	44	88

Q.14. What is your impression about the other sect? How do you pull up with them? Would you mind in working any sort of community development programme together?

No problem in performing religious rights.

Relation with other sect 100% good

No problem to work together for the der 100%

Q.15. Do you think Hossaini Dalan is taken proper care in its maintenance, rennovation and improvement? If not what do you think are its deficiencies? How do you intend to solve this problems and what development of its total site can be done?

	Person	%
1. Yes	17	34
2. No	27	54
3. No comment	6	12

If not taken care of what can be done	Person	%
1. Maintenance	12	24
2. I don't know	14	28
3. Govt. knows	21	42
4. No improvement	1	2

f. IDENTIFICATION OF PROBLEMS :

Setting up of priorities :

The problems in the study area can be of a varied nature depending upon various considerations and the way it is looked at. The same is true of the establishment of priorities of problems for solution.

From an analysis of CUS data, physical observation and discussions with various types of people (including the ward commissioner) of the locality with the author and also from an analysis of the responses of attitude survey in the same area the problems of the area may be classified under following heads.

i) POOR ECONOMIC CONDITION :

Poor economic conditions is one of the fundamental problems in the area. Though the percentage of employment is 100% and the percentage of under employment is very low the total income of the family is very low. An earlier stated the average per capita income is only about Tk.102/- per month and the average total monthly income of a household is only between Tk.300 - Tk.500 per month. The majority of the families having one earning member (generally head of households) . Moreover even this average income is not steady since the income of vendors, hawkers and non skilled workers (who constitute about 40% of the total occupation) are not fixed. Some of the jobs of even skilled workers are not permanent. The plastic factories for example, run only on seasonal basis where the workers suffer from unemployment for 4 - 5 months per year. Of course they then procure some other sort of jobs which may be termed as under employment.

ii) SOCIAL CONSTRAINTS :

a. Family Size :

Large average family size (6.14) with a low proportion of earning members (75% having one earning member in the family) Thus children are pushed for jobs rather than general education.

There are a higher proportion of children and infants compared to youths. (Approximately 30% of them below the age of 9 and about 50% below 19 years). The percentage of working age people (An age group of 20 - 35 years) is only about 15 - 17%.

b. Lack of Education :

About 80% of the occupants are illiterate and about 30% of the dwellers are taking general elementary education. The number of skilled workers is also less (about 10.14%) and there is no vocational training centre within the area. Most of them are gaining skill through informal institutions. There are no education facilities for elders or women.

iii) PHYSICAL PROBLEMS :

a) Poor Basic service facilities :

a.1. Poor coverage system : More than 90% dwellers using public service latrines of which each of them is used by an average of 8 - 15 families. All of these latrines are in deplorable condition. In some cases these latrines are linked with road side storm drains.

During rainy season these latrines get flooded with waste moving all over the site sometimes approaching even the housing courtyards. Children use road side drains as latrines.

a.2 Poor rain water disposal system : The area gets flooded to knee high due to water even in one hour of rain.

a.3. Insufficient provisions for drinking water :

Only six municipality wells are there to meet the demand for drinking water and bathing of about 2400 people.

a.4. Garbage Disposal : There is no definite provision for litter within the locality. It is found on the internal roads within the site.

a.5. Internal roads : They are too narrow (4 - 5 ft.) to be used by any sort of transport (except bicycle). There are only 4 openings in the entire area. Sometimes fat electricity poles are found blocking the roads.

a.6. Housing : More than 80% of the dwellers live in a small room of kutchha floor, bamboo walls and tin roof average room size being (8' X 10'), with cooking either on an outside varandah or within the living room. Most of these houses have leakages in roof and walls.

Other Environmental problems : The existing tank is very dirty.

It has all sorts of waste deposition from all over the site but people still wash their utensils and take baths in this rotten tank.

There are no play grounds and parks or any sort of green space within the locality or within the neighbouring communities.

iv) HEALTH

There is no maternal or child care facilities available in the area. Most of the families suffer from malnutrition. All of these contribute to general ill health of the family, under nourished children and a very high death rate.

There is no provision for health examination or Immunization. Family Planning, though offered through voluntary services, does not seem to be effective. Only 18% use some method of contraceptive.

5/4/99

3. ALTERNATIVE SOLUTIONS :

Alternative possibilities of upgrading.

Proposal 1

(a) Resettlement of the dwellers in a new area to relieve congestion in the unauthorized part of the Nawab Estate, and providing them with some sort of site and service scheme elsewhere.

(b) Renovation, Conservation and development of Hossaini Dalan (with the inclusion of Nawab Estate)

Creation of an open green park (filling up of the existing tank) for the congested local and neighbouring dwellers within Hossaini Dalan.

(c) Providing improved utility services (Sanitation and Drainage, drinking water, garbage disposal) for the entire area.

Recommendation for environmental upgrading of the proposed area with implementation procedure.

Phase (1)

The 800 people of 130 households from the unauthorized part of Nawab Estate (Plot No.171) could be provided and resettled in a new area with site and service facilities. To facilitate the migration into a new area along with the usable objects from their present dwelling, a grant of Tk.600/- per family would be sanctioned. In the new area they would be provided with a plot (let us say 30' by 15') and site and service arrangements. Lastly they would be given a cash reserve of Tk.6,000/- to erect a dwelling place on the new site. With this amount a dwelling of 300 sq. ft. with bamboo walls and tin roofs and detached bath and lavatory can be constructed. This amount is also

the average monthly income of each family household of Nawab Bagicha. At this rate of payment the total sanction for 130 households comes to 7,80,000. For the Site and Service Scheme which includes land value and the service facilities of the new area the government could spend 23,56,000 Taka. Thus in total the amount that could be spent is Tk.31,36,000. This amount is the calculated sum of the repayable amount of Tk.100/- per household per month with 2.5% interest over a period of 25 years. Thus the amount to be spent be kept fixed at the proposed figure as the people of Nawab Bagicha are capable of paying Tk.100/- per month to the utmost. At the same time the standard of construction and site and service should be limited to the buying capacity of Tk.31,36,000 (Taka value of 1979). After 25 years the true discount on this spent amount will come to Tk.7,63,490.00. Thus the total figure after recovery of monthly instalments will come to Tk.39,00,000 (Approx.). The discount per household will come to Tk.5,873/-. After dividing the total expenditure the loan sanctioned per family household comes to Tk.24,127/-. This amount is the accumulated sum of repayable loan of Tk.100/- per month per household over a period of 25 years.

For the feasibility of such a project we can see the project undertaken by Shankland Cox Partnership. This British firm (S.C.P.) has been asked by the Planning Commission, Government of Bangladesh to formulate a detailed proposal for a Site and Service Scheme for the low income community. The proposed project is to be located at Uttara (East) in an area of 1300 acres. The project would be developed in five phases over a period of 10 years. The project would provide a living area for about 200,000 urban poor who do not have

any permanent place to live. The gross ratio of the squatters under the project area would be 150 persons per acre. On the other hand the net residential density of the area would be 330 persons per acre.

Phase 2

Levelling of vacated land (to be done either by Arboury Culture, (B.P.W.P¹) or by Municipality. This also includes filling up of the tank. An amount of Tk.1,20,000 will be spent for that.

Construction of boundary walls 10" until 5' height, a length of about 1600 running feet, bordering Hossaini Dalan on the North-east with Shia Community, all along the westernborder of Hossaini Dalan.

Phase 3

Redevelopment of Hossaini Dalan and the creation of an open park space within Nawab Estate merging with the Hossaini Dalan. This is essentially a landscaping project which includes planting trees all along the site, (like Thoja Compacts, Cassorina), creating open green areas along with bracks providing for pedestrians. It also includes a conservation programme of Hossaini Dalan, whereby the graveyards in front of the Dalans are protected through separation of pedestrian walkways and planting of hedges along the pathways. An approach road of brick paving has to be constructed along the axis of the building from the entrance. This road to be made rather wide (about 30') to enable enough people (especially during the Shia festival Moharram or when procession is carried from the building), to come to the building. The pedestrian path would run all over the

site creating some sort of plaza with water body development at the backyard with provisions for benches and also the creation of a shrine of the Imam where there is already ruins of Holy members of Shia community. On the eastern side i.e. at Nawab Estate an open space should be created with narrow walkways encircling it at the extreme corner a children play area should be created with see-saws and swings etc. This sort of park development would serve a huge number of old Dacca inhabitants. Also the conservation and renovation of Hossaini Dalan will create an interesting place for every one to visit. The Shias will like it. The southern site of the Nawab Estate along the road should be bordered by a light steel frame for ventilation and also to make it more interesting from outside. The extreme of Hossaini Dalan should be much more elaborate with car parking facilities on both ends. The site should be connected by feeder storm drains to the main line to avoid flooding (which was running ^{through} both the retaining walls and the building itself).

An opening of the existing road should be made to make better accessibility from Nazimuddin Road/^{which} is a main road coming from the city centre. For this a compensation of Taka 1 lakh 15 thousand has to be made by the municipality to the owner. Otherwise the existence of such wide road will not be used much.

Phase 4

Physical upgrading of the northern part of Dalan would include an area of almost half of an acre, a population of 1600 with 250 holdings. The upgrading will include construction and

rehabilitation of sewer lines, conversion of service latrines, construction of feeder water drains, approved garbage disposal and more provisions for drinking water taps.

SEWER FACILITIES :

As soon as the sewer lines are installed in the Shia community these service latrines can be converted. Already the Government has taken up a programme of connecting 1100 service latrines to sewers in all of old Dacca. In the Shia community the branch sewer lines can be extended even further (though the internal roads are very narrow) so the sewer should be laid covering the entire width through sheet piling. If necessary the existing lines should be rehabilitated to achieve proper slope (3 feet per second velocity). In total there could be 3 openings 2 on the north and one on the east which will be sufficient for the area. No lift station has to be installed since there is already a station at Medical College which will be sufficient to pull load from this area. An approximate of 1000 of sewer line has to be installed by WASA. As because the size of the main sewer, being designed to serve a fewer number of population on the north of Hussaini Dalan, is a bit narrow (9" dia) it may be necessary to equip another parallel main line of about 9" dia. Of course that will be only possible if the unauthorized portion of Nawab Estate is evacuated. Otherwise the main line on the north has to be enlarged to 18" dia. Considering a huge population of about 2500 in a small area of an acre. The cost of PVC pipes (imported) for the sewer will cost approximately Tk.350 - 400 per running feet. For sheet piling construction of the

sewer will cost about Tk.500/- per feet. Of course this sheet piling will depend on the condition of soil. If the soil is loose (which is in the case of Nawab Bagicha since it is newly filled) M.S. sheet piling will be necessary in which case the construction cost will be about Tk.500/- per feet. Care should be taken to educate local people about the function of these sewers and storm water drainage so that they don't use it as garbage disposal. This should be done through Ward Commissioner or leaders of the area to educate these people.

PROPOSAL FOR STORM WATER DRAINAGE :

For proposal 1, A slope of 2" per 1000 feet towards south main line will solve the problem of stagnant water. If an access can be attained along the sewer line on the north and east, the feeder line could be provided through 4 openings or lances. Of course total feeder lines will be more than the total length of the main line all along the site. This is because of nature of site and internal roads.

According to M.A. Noor Executive Engineer, P.H.E, Drainage Division the problem could be solved, if the unauthorized portion of Nawab Estate is cleared. To avoid water seep through walls the Engineer suggested to build water tight walls (Mixing of pudlo in the mortar). A minimum of 18" dia pipe will be necessary because kitchen wastes flow through the drain so a bigger dia is required. Another problem is of clearing. If it is too small, no one can get inside to clean where as in 18" pipe sometime small children are put inside to clean. Of course surface drains of minimum 1' width will also solve the problem but it will only minimise usable drains and of course it can be blocked by

1. Waterproofing material

use of garbage and latrines. Alternative covered surface drain may be provided with regular openings. The expense will be about Tk.200 - Tk.300 per feet. But the problem of inconsistent of settlement remains whereas a regional pattern would have saved a huge amount of money.

The Municipality now wants to construct all feeder and main lines of storm water drainage. The reason appears to be being political. All sorts of construction needs the ward commissioner's approval. It is unfortunate that the public health engineering department, having all skilled people, are deprived of these jobs. On the other hand the Municipality, being ignorant of such jobs can not carry out the works properly.

GARBAGE DISPOSAL

This is the responsibility of the Municipality to increase number of sweepers and also to improve transportation. Above all strict supervision is necessary. The number of dustbins has to be increased and they are to be installed somewhere within the locality (see Nawab Bagicha land use map) since installation of dustbins within narrow lanes is impossible.

Once again basic education for these people is necessary for garbage disposal. The same is the case with using of side drains as latrines.

DRINKING WATER PROVISION

Though the main line is running all along the site (see water supply map) only a few have taken personal connection others rely on 4 public taps which is insufficient for the area. The Municipality has to provide at least 4 more such taps, for the locality.

AN APPROXIMATE COST ESTIMATION

- | | |
|--|-----------------|
| 1. Relief grant for 130 households shifting from the present site to new site and service areas (At the rate of Tk.600/- per family) | Tk.78,000 |
| 2. Government loan grant for site and service scheme be recoverable after 25 years | ** Tk.23,56,000 |
| 3. Government loan grant for construction of building for 130 households at the rate of Tk.6,000.00 each | ** Tk.7,80,000 |
| 4. Filling up of the existing tank of about 160,000 cft. at the rate of Tk.700 per 1000 cft. (To be done by Public Works Department) | * Tk.1,12,000 |
| 5. Site levelling/landscaping (To be done by Arboury Culture Department) | * Tk.5,00,000 |
| 6. 10" boundary wall construction of Hossaini Dalan about 6749 cft. (@ Tk.1300 per 100 cft.) | *Tk.88,000 |
| 7. Construction 1040 ft. storm water drainage (@ Tk.300 per running fest) | *Tk.3,00,000 |
- P.H.E.

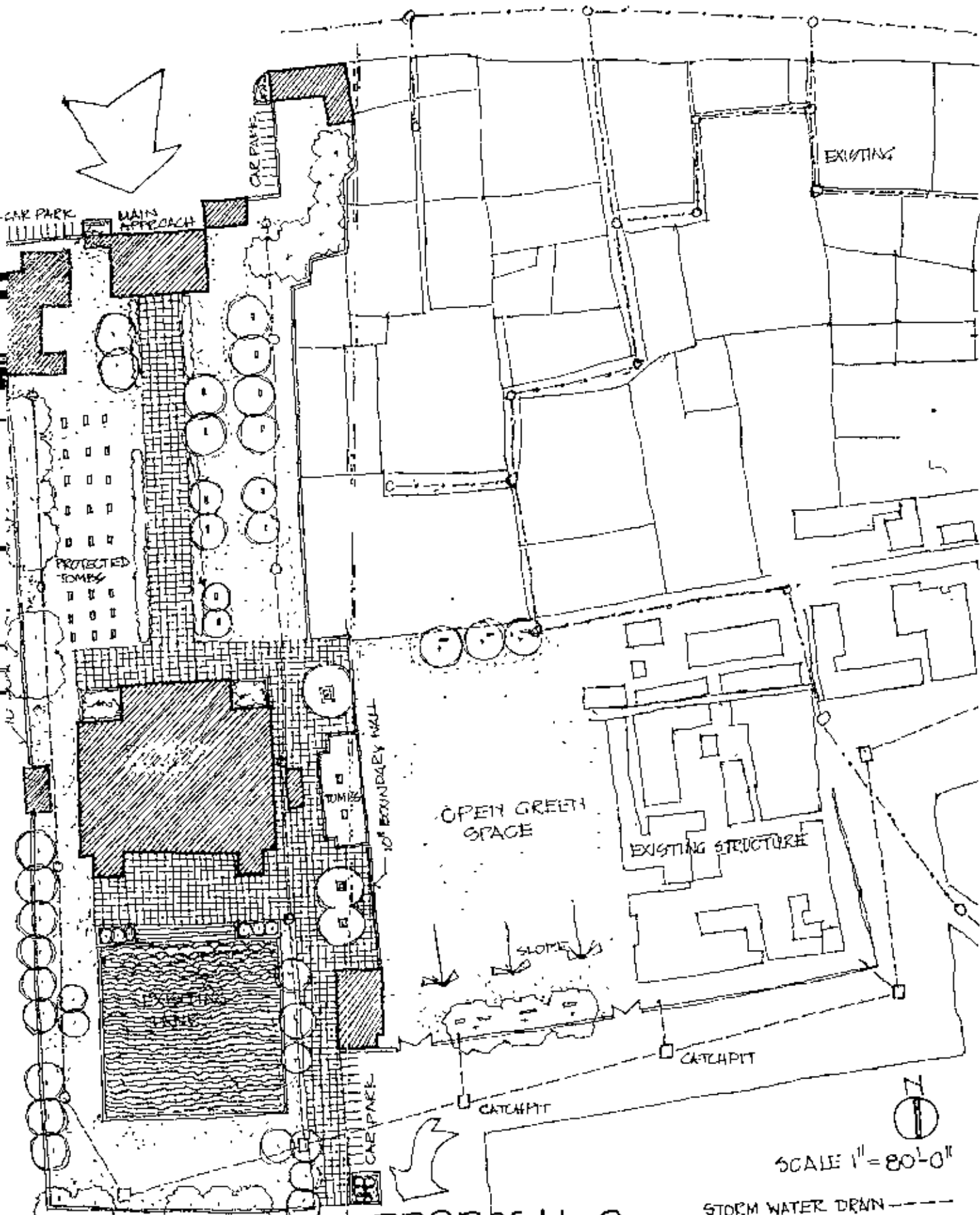
8. Brick paving 25,000 sft. (@ Tk. 650/- per 100 sft.)	*Tk.1,65,000
9. Installation of Children amusement park	*Tk.50,000
10. Compensation for land requisition (70' x 40') @ Tk.18,00,000 per acre)	*Tk.1,15,000
11. Cost of 1040', 9" dia sewer pipe (WASA) at an average cost of Tk.400/- per running feet	*Tk.4,16,000

Total :	Tk.49,60,000
	\$3,30,666

For Nawabgicha development (Non recoverable)	*Tk.17,46,000	\$1,16,400
Relief grant for shifting(Non recoverable)	Tk. 78,000	\$ 5200
Site and Service Schemes(recoverable after 25 years)	**Tk.31,36,000	\$209066
Total :	<u>Tk.49,60,000</u>	<u>\$330,666</u>

PROPOSAL 2

- (a) Renovation, Conservation and development of Hossaini Dalan
- (b) Creation of an open green space by filling up the dirty tank in Nawab Estate.
- (c) Retaining the unauthorized dwellers and forcing them to own land right.
- (d) Providing improved utility service (sanitation, drainage and garbage disposal) for the entire area.



DEVELOPMENT OF HOSAINI ODAN
& SEWER & SANITATION DEVELOPMENT

PROPOSAL 2

STORM WATER DRAIN -----
SEWER LINE -----

Implementation Procedure :

Phase 1

Renovation, conservation and development of Hossaini Dalan. This will be almost the same as that of proposal I only with the exception of Nawab Estate. A storm water drain should be laid. Simultaneously will go on the work of tank filling and development of open green space. This will also act as a play area for children.

Phase 2

Improvement of utility services (sewer, storm water drainage and garbage disposal). This is also will be same as proposal I, only the main sewer on the south will be a bit different because of the existing structures. Rest all remain the same.

Approximate cost Estimation :

- | | |
|--|-------------|
| 1. Filling up of tank 1,60,000 cft. at
the rate of Tk.700/- per 1000 cft.
and laying of grass bed. | Tk.1,20,000 |
| 2. Site development (both of Hossaini
Dalan and Nawab Estate open space)
According to Arboury Culture) | Tk.3,00,000 |
| 3. 10" boundary wall of about 5000 cft.
(@ Tk.1300 per 100 cft.) | Tk.65,000 |
| 4. Brick Soling of about 6600 sft.
(@ Tk.300/- per 100 sft.) | Tk.2,00,000 |
| 5. Storm water, 1040 running feet
(@ Tk.300/- per ft.) | Tk.3,00,000 |

6. Compensation for land acquisition of (70' x 40') at the rate of 18,00,000 per acre	Tk.1,15,000
7. Cost of 9" dia sewer pipe of 1040 at an average of Tk.400/- per running feet.	Tk.4,16,000
Total :	
	Tk.15,16,000
	\$10,1066(approx.)

PROPOSAL 3

- a) Rehabilitation of the dwellers in the unauthorized part of Nawab Estate and providing them some sort of site and service programme elsewhere.
- b) Renovation, conservation and development of Hossaini Dalan
- c) Creation of an open green space by filling up the existing tank in Nawab Estate.
- d) Development of a high density high rise middle class housing in the cleared part.
- e) Providing improved utility service for the entire areas.

Implementation Procedure :

Except for the proposition of high density middle class housing, all others would be the same as proposal 2.

The study area after the proposed evacuation of the old settlers, would be sold and redeveloped with a site and service scheme. The

total cost to the new owners would be Tk.17,90,800 (\$119,386) or Tk.12,500 for each middle income household. For initial investment this falls much within the financial ability of such group in Bangladesh.

After site and service, a proposal to construct 12 six storied structure in the study area consisting of 144 units in total at the cost of Tk.1,08,00,000 is suggested. The construction cost per household would be Tk.75,000. With a simple interest of 2.5% and a repayment period of 25 years, the monthly equal instalment would be Tk.310/- per month, and the true discount would be Tk.18,000 (Approx.). However, if the owners rent their apartment to others they would be able to earn at least Tk.500/- per month, much above the monthly instalment amount. So the project seems financially viable and the government expenditure could be recovered after 25 years.

As in the case of proposal I, Tk.78,000, would be made available to the 130 old households as relief grant for evacuating the present area for a new one. In the new area Tk.31,36,000 would be spent by the government for construction and site and service facilities. As mentioned earlier the money would be recovered over a period of 25 years. Same way as in the case of proposal 1.

This is proposed because of high pressure for lower middle class housing in the city. It is also expected that the profit from plot distribution to middle income community will be given to the evacuees for better site and service programme. This sect of

development would also ensure better drainage and sewer.

Approximate cost estimate for housing programme

- 1. Cost of land * Tk.6,60,000
- 2. Filling up the tank * Tk.1,12,000
- 3. Site development, demolishing,levelling * Tk.5,00,000
etc.
- 4. Access road (brick) (8,400 sft. * Tk.42,000
@ Tk.5.00 per sft.)
- 5. Electricity line (@ Tk.2,00,000.00 * Tk.40,000
per mile all inclusive)
- 6. Drinking water line (840 running * Tk.16,800
feet @ Tk.20.00 per running feet)
- 7. Sewerage and storm water drainage * Tk.4,20,000
700 running feet @ Tk.600.00 per running
feet.
- 8. Relief grant for resettlement for Tk.78,000
130 household (@ Tk.600.00 per
household)
- 9. Site and Service Schemes for 130 household **Tk.23,56,000
Cost of land, service facilities etc.
same as proposed.
- 10. Govt. loan grant for construction of ** Tk.7,80,000
building for 130 household at the rate
of Tk.6,000.00 for each same as proposed

11. Cost of 12 six storied structure Tk.1,08,00,000
of (144 units) of 500 sft. each (at
the rate of Tk.150/- per sft.
Tk.75,000 per household)

Total :	Tk.1,58,04,800.00
* Middle income housing	\$ 10,53,653
** Low income housing	

PROPOSAL 4

- a) Reallocation of the dwellers of the Nawab Estate through a site and service programme within the site itself.
- b) Renovation, conservation and development of Hossaini Dalan
- c) Providing improved utility service for the entire area

Implementation Procedure :

Except for the proposition of reallocation of the dwellers through a site and service scheme within the site itself the other propositions will be the same as proposal 1 & 2 .

In this proposal, of reallocation of the dwellers, of the Nawab Estate a site and service scheme is proposed in the unauthorized portion.

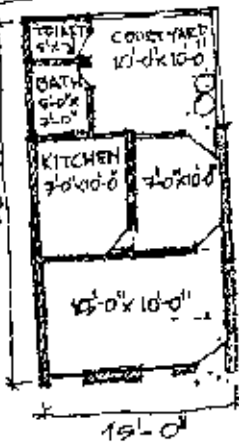


DEVELOPMENT OF HOSSNI DALAN
 & SITE & SERVICE SCHEME

PROPOSAL 4

SCALE: 1" = 30'-0"

STORM WATER DRAIN ———
 SEWER LINE - - - - -



This programme has to be done in phases. In the total programme in total 130 plots (30' x 15') are laid down to accommodate approximately same number of households of the existing area. This is also intended so as to discourage any outsider. Plots are divided (in grid iron pattern) taking care of service facilities of the area itself and its surroundings.

In the first phase the existing tank has to be filled on which the half of the plots are to be laid with service facilities. On completion of which the dwellers of the other side should be shifted to the newly built site while the existing site is levelled for site preparation. After the other half is completed the total population can be evenly accommodated.

The building of the housing units could be either individually or with the partial help from the government (like walls and tin roof). In any case toilets, baths and kitchen have to be provided at the back of each plot since sewer line is drawn through the back of the plots. A typical plan is shown in the figure (see proposal 4). With bamboo walls and tin roof the cost of construction could be within Tk.6,000 per unit.

This programme might influence the people of Shia Community. If they agree, such schemes can also be done in that area. No housing programme is recommended for Shia Community, since they all have legal land rights. Moreover they were also not interested in reshaping the area neither were they interested in reallocation (because of Hossaini Dalan)

The amount of repayment for such site and service should not be more than Tk.100/- per month.

An approximate cost estimate of the scheme

1. Cost of land	Tk.10,00,000
2. Filling up of tank	Tk.1,12,000
3. Site development	Tk.5,00,000
4. Sewer and storm water drainage of 1000 feet	Tk.6,00,000
5. Water supply - 1380 rft. @ Tk.20.00 per rft.	Tk.27,600
6. Access Roads (Bricks 23,400 sft. @ Tk.5/- per sft.)	Tk.1,17,000
7. Housing @ Tk.6,000 per household	Tk.7,80,000
	<hr/>
	Tk.31,36,600
	\$209106(approx.)

As the money is proposed to be a governmental sanction, it is calculated to be Tk.24,127/- for each household as loan. At 2.5% interest with a repayment period of 25 years the monthly equal instalment would be Tk.100/-. The instalment amount is well within the reach of the people, as has been observed. The instalment amount has been obtained by applying the formula given next page.

$$I = \frac{2P (1 + nr)}{r (2 + nr - r)}$$

- P = Amount of loan taken
 I = Equal monthly instalment
 r = Annual rate of interest
 n = Number of equal instalment

After 25 years the true discount on the loan taken for a household would be Tk.5,873 and the total loan principal along with the true discount would be Tk.39,00,000 for the entire project after 25 years. So the project seems financially viable and the govt. expenditure could be recovered after 25 years.

4. A REVIEW OF THE FOUR PROPOSALS :

Proposal I

(a) The proposed resettlement in a new area could be problematic. When shifted to a new area the Nawab Bagicha people would face lack of job opportunities especially of such category such as hawkers, vendors, and rickshaw pullers, which are readily available around the present site. As a result their income would decline. Nextly, the site and service scheme is an unproven method of development in this country. It is more talked about and is yet to witness a successful completion. Variables involved like, high cost of land, infrastructure and service facilities will spur a high rental or cost value for the new dwellers. These people, whose income range from Tk.300/- to 500 would not be able to bear such expensive amounts, rather they would prefer to raise something, of which the monthly instalment is not beyond Tk.100/-, their utmost limit. The failure of site and service scheme is proved by the immensely expensive Mirpur Resettlement Programme. Proposed by Oxfam consultants, located at lowland Mirpur, the project is being built^{by}/Housing Directorate. It had provisions for water pumps for drainage, and aqua privis method of sanitation which made it so expensive so as to go much beyond the repayment ability of the Tk.300 - 500 income group. Moreover the old jobs of all Dacca are unavailable in the suburban low lands and city dwellers would refuse to dwell there. Probably one way to reduce the construction cost per household would be to increase the density of living by the method of planned construction. And to maintain job opportunities

the area of resettlement should be very much within the busy or trade centers of the megalopolis. Along with these pre-requisites there should be a government subsidy in order to make the site and service scheme feasible and economically acceptable to the poor. It might be politically impossible to remove the settlers from the present area. The dwellers of the area are the committed voters of the commissioner of the area who has a close liaison with the Mayor of the city. There seems no reason why the local politicians would approve of the uprooting of these people. As a matter of conjecture the legal method to remove the people could also become ineffective. In the past many attempts by the police and the concerned authority failed as the dwellers managed to have injunction and stay orders from the court barring their removal from the area even if it might have lead to a better living condition.

(b) As a corollary to the above proposition the renovation, conservation and development of Hussaini Dalan, along with the creation of open green park space on the west of Hussaini Dalan, to provide a sense of openness among the local people living in congestion. Besides a better environment, the renovated historic building can become a source of revenue as the numerous visitors could charged with a fee for entrance. The neighbours would be relieved mentally, which the children could play and vigorously refresh themselves. ✓

(c) Provision of improved utility services, the demand for which was strongly voiced in the attitude survey could also be suggested

as a proposed. This step could be taken with the help of Municipality, WASA and PHE, provided Govt. takes an interest in the project. Although it might be slightly expensive, the area is in dire need for such facilities and it would solve a great bulk of the problems of the area.

Proposal 2

In this proposal, the two corollaries to the first proposal, the renovation of Hussaini Dalan and improved services are retained. Instead of removing the unauthorized dwellers would be allowed to dwell in the present area while they would have to acquire the land right by paying for it. For their self interest the dwellers would welcome the proposal to stay in the area but the suggestion for them to acquire land rights might not be acceptable. Nawab Estate tried many ^{times} / in the past with legal battles to claim land rights but the effort was neutralised. Any novel suggestion would go unheeded as the Nawab Estates' proposal for the dwellers to buy lands was responded by only one dweller.

Proposal 3

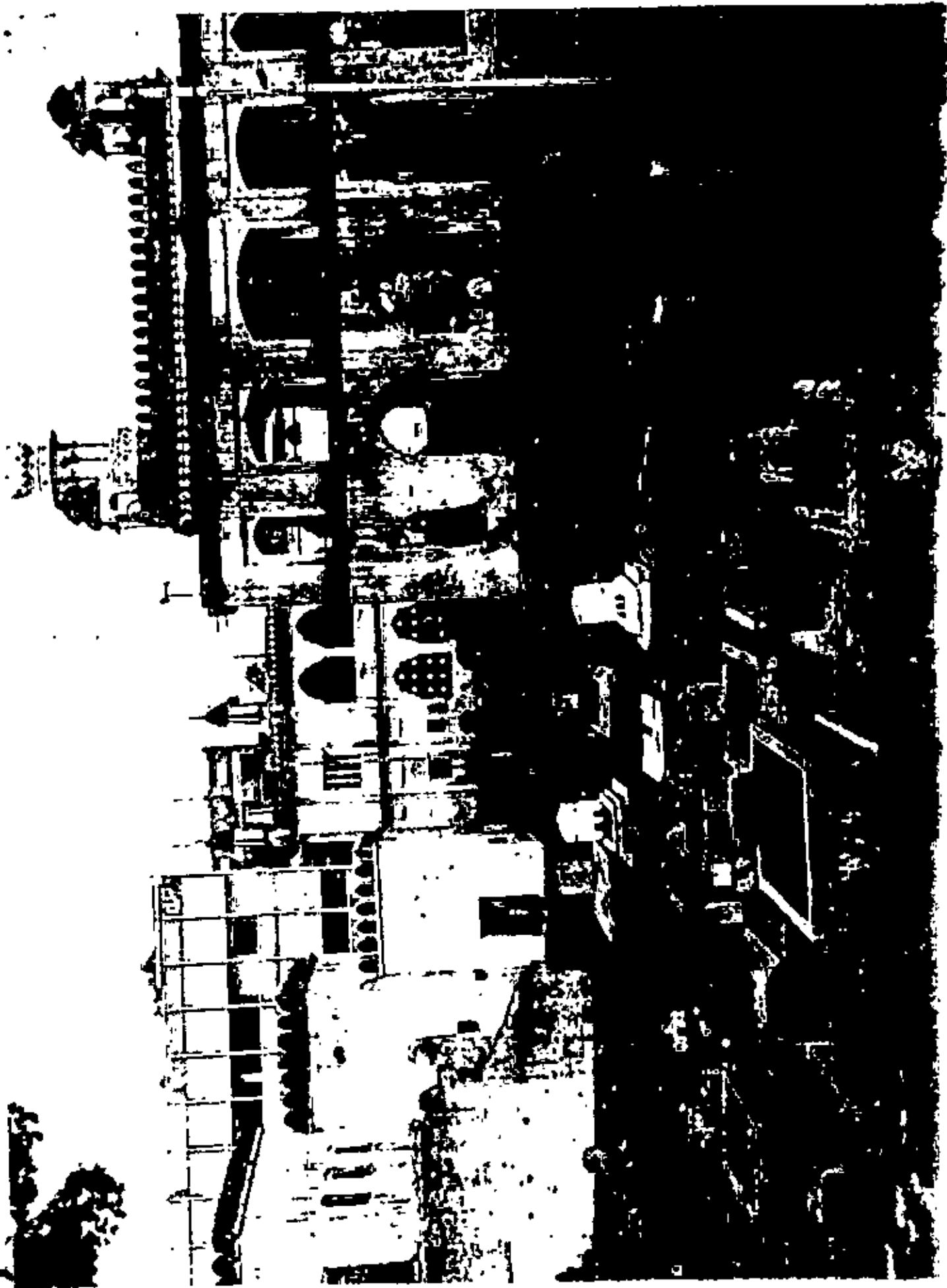
This proposal is a repetition of proposal 2, but it includes a suggestion to replace the unauthorized dwellers with high density middle income housing in the area. The government is at present offering 2% to 10% housing loan for 800 sq. ft. to 1000 sq. ft. houses. The owner has to invest initially only 2% to 10% of the total cost. Thus middle class would be highly enthusiastic

about high density construction in Nawab Bagicha at the cost of the poor who would be replaced. Once middle classes move in the living cost of the area would rise, affecting the authorized dwellers, the result would be, a further uprooting of the poor dwellers. The serious question before everyone is should the poorer community be replaced for the sake of well of middle class.

Proposal 4

The Hussaini Dalan would be renovated and preserved and there would be improved site and service facilities. The unauthorized dwellers would be reallocated in their present area and would be provided with a site and service scheme.

The government would buy the unauthorized land from the legal owners and develop the area to distribute it among the dwellers. The Government would pay the land price, service cost and Tk. 6,000/- for the construction of each unit. The dwellers would reimburse the money at the rate of Tk. 100/- p.m. over a period of 25 years. This is a practical and a humane proposal as all the people have some sort of job opportunity around this locality. The existing dwellers which include the tenants would own a piece of land and living quarter by paying a meagre amount per month. The dwellers who can not pay a big sum would of course take a long time (25 years) to repay the government money. The suggested grid iron pattern of plot division and efficient service facilities would invigorate the poor and enliven the environment.



CONCLUSION :

After exploring various types of solutions two suggestions seem quite viable and dominating all the proposals. These are :

(a) Renovation, construction and development of Hussaini Dalan of a historic monument.

(b) Providing improved utility services in the entire area.

These suggestions may be considered as the basis for any development in the area.

The third and important step would be to choose among the various measures like, re-allocation of the squatters, the retention of the squatters in the present site and then improve their living condition, developing middle income housing, and arranging a site and service scheme within the area.

The planner with his experience with the problem and after this exploration has feeling that site and service scheme with the purpose of retaining the dwellers in the area might be the most pragmatic solution and beneficial for the poor people. This would have improve the existing condition and would inspire them to live there. This would also be very much feasible (As has been hinted, the local power elite would bless such a step).

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