Transformation of Dhanmondi Residential Area—Causes, Effects and Proposal to Rejuvenate

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ABSTRACT

Dhanmondi is one of the high-class residential areas of Dhaka City. The area was planned and developed in the early fifties with large plots, wide roads and good environment. The main objective of the study is to make an investigation into the transformation of the this area with respect to land use, building height, intensity of land utilization (building coverage and FAR values), land-sub division and also the causes of the changes. From the study it is found that the non-residential uses are about 50% of the total; more than one fifth (21%) of the original one or two storey building in Dhanmondi had been rebuilt to six storey apartment structures; the intensity of land utilization, in terms of building coverage increased from 28.3% in 1962 to 50% in the year 2000; and the intensity of land utilization, in terms of FAR value increased from 0.39 in 1962 to 1.68 in the year 2000. Present expansion of Dhaka City, more than six times bigger than the Dhaka of the fifties, created demand for new spaces for new urban activities, and Dhanmondi gained location to the central part of the city. Transformation of the area is towards more intensive use of land; multi-storied apartments and non-residential uses. The non-residential uses have taken place uncontrolled, unregulated and haphazard manner to the detriment of the residential environment. Hence a revised plan of Dhanmondi has been urgent in order to control and regulate undesirable development in Dhanmondi for which a brief proposal is included in the study.

Key words: Transformation, Residential area, Non residential area, Apartment buildings, Land use.

1. INTRODUCTION

Dhanmondi settlement had its origin in a periodic paddy (Dhan) market (Mondi) in the locality in the early 17th century. The presence of numerous ponds, an Eidgah (place for biannual religious congregation), and a number of Mosques dating from the early 17th century are indicators of a flourishing settlement here. The settlement declined with the fall of the Mughal Empire. To meet the housing demand of the rapidly expanding city, after
Dhaka was made headquarters for the provincial government of east Bengal in 1947, a new area of better housing was developed at Dhanmondi in early fifties, on a land measuring 472.64 acres.

1.1 Backdrop of study

Dhanmondi residential area, designated as Ward no. 49, is located at 23.7389° N 90.3847° E in the Dhaka District of Bangladesh. It has 33451 houses and a total area of 9.74 km² (BBS, 2006).

The Construction and Building Department of the government of East Pakistan acquired about 500 acres of agricultural and horticultural lands in 1950, leveled it and divided the land into plots and finally allocated the plots to ministers, government officials, public leaders, professionals, and businessmen. DIT later undertook the task of creating public facilities and roads and other facilities. The area was divided into blocks, which were in turn sub-divided into 1083 individual rectangular plots, measuring approximately a bigha (0.33 acres) each. The plots were laid in a grid iron pattern having roads 150’, 45’, or 30’ wide, organized around an existing water channel, dug out and latter extended to form an irregular shaped lake having 2 storey buildings with front green lawn. The plots were leased out to allottees for 99 years at a payment of Tk 5,000 per bigha.

Initially, DIT (Rajuk from 1987) kept Dhanmondi plots exclusively residential and did not allow use of any plot or house for commercial purposes. But in response to tremendous pressure on city land after 1972, the rule was relaxed to the point of virtual non-application. In 1995 DMDP approved Dhanmondi as a mixed use zone but placed certain strict limits in
the types and account of commerce that would be permitted, that is, only commercial services that were immediately related to meet the residents’ daily and weekly needs. Consequently, now almost 50% or more plots are used for commercial purpose, which include shops and stores, government and semi-government offices, show rooms and warehouses of business firms, NGO offices and clinics, educational institutions and even manufacturing units and maximum of the rest plots already having 6 storey buildings, and accommodating 20 families per bigha rather than recommended 1 family. This increasing number of commercial establishments, coupled with the lack of adequate parking facilities, has given rise to a tremendous amount of traffic congestion, especially during the mornings and afternoons when children are dropped off and picked up from school, and during the evenings when shoppers from all over Dhaka throng the various shopping centers. Socially and economically, Dhanmondi has now become a multi-purpose area (Shafi, 2005).

1.2 Objectives of the study
It has become necessary to understand the existing movement of transformation pattern of Dhanmondi residential area, so that effective measures can be taken to control and protect the area from invasion of further unplanned development. Hence, the paper has been prepared with the following objectives:

a) To study the spatial variation of the existing transformation of the area.
b) To identify the changes in the development pattern of the area.
c) To study the perception of the user regarding the changes.
d) To formulate policy guidelines and a brief proposal for future development of the area.

1.3 Methodology of the study
The Methodology followed for the study is comprehensive and intensive. The steps followed are stated below:

1.3.1 Literature survey
An elaborate literature survey on the topic was carried out for better understanding and representation of the problem.

1.3.2 Collection of data from primary sources
Preliminary Survey:
A preliminary survey was conducted to gain a general impression of the area so that the subsequent operations of land use surveys could be successfully carried out.

Detail Survey on Development Pattern:
A detail survey on existing development pattern was carried out over the whole area of Dhanmondi. 100% of the plots of the area were surveyed. The survey contained the following aspects:

- Types of land uses
- Plot subdivision / land fragmentation
- Height of buildings
- Vehicular load on the existing road

About 5% of the plots were surveyed to study the intensity of land uses in terms of building coverage and total floor spaces within the plot areas.

1.3.3 Collection of data from secondary source
Due to the nature of the topic, part of the study was based on published references, studies and office works of both Government and semi—Government offices for availability of materials. Detail Land Use surveys of three organizations was collected:
1.3.4 Analysis of the collected data

The collected data was edited and tabulated manually using simple statistical process. The descriptive and unstructured materials, observation, surveys, documents and other records were summarized and arranged in a sequential order. The layout map of Dhanmondi Residential Area was used as the base map to show the spatial variation of land uses, height of buildings, and intensity of land use and land sub-divisions. After fact-finding policy guidelines were formulated for effective spatial pattern of development in Dhanmondi Residential Area.

![Map of Dhanmondi Residential Area (Morshed, 2008)](image)

Fig 02: Map of Dhanmondi Residential Area (Morshed, 2008)
1.4 Meaning of transformations
Over the years, transformations in urban areas have taken place in varied forms, including those pertaining to size of form, land use, encroachments, structure heights, floor area coverage in other words illegal constructions etc. This has also occurred in the formal developments of the city very much outside the legal framework. However, the growth may not be in accordance with the planning norms of the city, but its very existence highlights its magnitude. Some of the key transformations occurring in urban areas in general and Dhanmondi in particular are summarize in subsequent paragraphs.

1.4.1 Use affiliation
This is a type of transformation that pertains to extent and enhances non-residential use in residential areas and of other uses in areas meant for open spaces. This phenomenon is very evident along the main transport routes and in the developments with smaller plot sizes/dwelling units. In other words, it can be stated as invasion of stronger land use over weaker in terms of prevailing demand, which is acting as an impetus for growth of a particular land use. For example at several places in Dhanmondi, the residential buildings along the road or streets near a planned market or business areas are converted to commercial spaces, open areas are being encroached upon for houses, shops etc. The prime reason of this type of transformation is pressure exerted by economic forces, where in the importance of economics prevails over that of habitation.

1.4.2 Built form
The transformation is in terms of extent of consolidation, horizontal coverage, encroachments, condition of structures, streetscapes. To fulfill their need of habitable space people tend to increase the covered area of the plot. There are encroachments on the common open spaces or the road to accommodate their needs. The dwelling units are converted to commercial uses for retail shops etc. and the residential activities are accommodated on the additional floor which contributed to the height transformation occurring in the planned developments. This type of informality is seen in formal settlements having very small areas of dwelling units which with passing time becomes difficult to manage with. Social pressure is the main reasons for this type of transformation where an increasing population, needs to be accommodated in the limited planned space.

1.4.3 Time affiliation
This type of transformation pertains to the changes that happen over a period of time. In terms of time relationship, the informal growth may be of temporary nature (which have become permanent over time), permanent nature or appearing before its envisaged time. For example, increasing area use by periodic markets, roadside petty sales, gets converted into permanent markets etc. The permanent nature of informality refers to the developments fully or partly, those covered under land use or ownership related informality. Social and economic issues both are involved in pushing such type of transformations.

2. Study area appraisal

2.1 Planning aspects of the project: Dhanmondi residential area
Dhanmondi Residential Area was planned as sites and services scheme with a regular system of roads to provide residential accommodation. Dhanmondi Thana (dhaka district) with an area of 7.74 sq km, is bounded by Tejgaon and Mohammadpur Thanas on the north, Lalbagh thana on the south, Ramna Thana on the east, Hazaribagh and Mohammadpur Thanas on the west. Administrative Dhanmondi Thana was established in 1976. It consists of three wards, 20 mouzas.

2.1.1 Land acquisition and plotting
By the order Dhaka No.11413 rcqu.-9th December 1952 whereas by order, dated the 25th February 1949/16th September under section 3 of the East Bengal (Emergency) Requisition of property Act. 1948 (E.13.Act XIII of 1948), seven mauza (some fully and some partially) were acquired, which are given in the following table:

Table 2.1: Land Acquisition

<table>
<thead>
<tr>
<th>Mauza</th>
<th>J.L.No.</th>
<th>Acquired C.S.Plot Nos.</th>
<th>Fully</th>
<th>Partially</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dhanmondi</td>
<td>251</td>
<td>166</td>
<td></td>
<td>29</td>
</tr>
<tr>
<td>Taleperbag</td>
<td>253</td>
<td>22</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Idgah</td>
<td>252</td>
<td>84</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Shukrabad</td>
<td>260</td>
<td>180</td>
<td></td>
<td>30</td>
</tr>
<tr>
<td>Shibpur</td>
<td>254</td>
<td>81</td>
<td></td>
<td>25</td>
</tr>
<tr>
<td>Sarai Jafrabad</td>
<td>257</td>
<td>43</td>
<td></td>
<td>14</td>
</tr>
<tr>
<td>Sarai Begumpur</td>
<td>258</td>
<td>X</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

[Source: Alam, et al, 1986]

Total area of the project was divided into 1,000 nos. of plots originally ranging from 15 decimal to 33 decimal (Alam, et al, 1986). But in the layout plan, found in the present Public Works Department the total number of plot is 1083 (PWD, 1958). Allotment price was Tk. 15,000/- per 33 decimal (locally called Bigha) and there was provision of paying the price in four installments with low rate of interest. The annual rent of the land was fixed to tk. 36/- per Bigha per annum and payable from the 5th year of the allotment. (Alam, et al, 1986)

2.1.2 Road pattern

Dhanmondi has a grid pattern of roads and almost all the plots are rectangular and of the same size (14,400 sft). Three types of roads were designed for the area i.e. Major thoroughfare (Mirpur Road and Satmasjid Road) of more than 30 meter width, Secondary roads of 15 meter width and Access roads of 10-15 meter width. In case of secondary and access roads one third of their total width were medaled and have provision of footpath on both the sides.

Fig 3.1: Road Network of Dhanmondi
Fig 3.2: CAD Drawing of Dhanmondi Road Network

[Source: Dhaka City Corporation] [Zerin and Rahman, 2007]
2.1.3 Land use
Of the total area, more than 61.4 % land was proposed for housing purpose, 9.2% for open space, 9.2% for water bodies and more than 18% for internal road circulation. Open space included the water bodies, play ground children’s parks; etc totaled to about 18.4%. Dhanmondi has an edificial lake. Besides these areas, there is 4.7 acres of private land (Sobahan Bagh), which is situated within the Dhanmondi Residential Area. An existing khal (water channel) has been dug and extended to form an irregular shaped lake. This is the only break in the monotonous layout of the Dhanmondi Area. (Islam, 1996, p.24.)

Table 2.1.3.1: Land Use of Dhanmondi Residential Area

<table>
<thead>
<tr>
<th>Land Use</th>
<th>Area (in acre)</th>
<th>Area (in %)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total residential area (plot)</td>
<td>298.3</td>
<td>61.4</td>
</tr>
<tr>
<td>Roads</td>
<td>89.6</td>
<td>18.4</td>
</tr>
<tr>
<td>Water body</td>
<td>44.6</td>
<td>9.2</td>
</tr>
<tr>
<td>Park and play ground</td>
<td>44.7</td>
<td>9.2</td>
</tr>
<tr>
<td>Mosque</td>
<td>4.7</td>
<td>0.9</td>
</tr>
<tr>
<td>School (public and provided in the original plan)</td>
<td>4.4</td>
<td>0.9</td>
</tr>
<tr>
<td>Total area</td>
<td>485.9</td>
<td>100</td>
</tr>
</tbody>
</table>

[Source: Public Works Department, 1958.]

Dhanmondi Residential Area did not have any neighborhood shopping centre, corner store, park, community centre, club, etc. The whole area was divided into plots without keeping in mind the facilities that a community requires (Islam, 1996).

Fig: 4: Bar Chart of Existing Land Use of Dhanmondi [Zerin and Rahman, 2007]

If we take a closer look at changes along the road side development of four major road fronts of Dhanmondi we find the following growth of commercial and institutional buildings in the past three years shown in the table below:
Table 2.1.3.2: Built Structures of Dhanmondi:

<table>
<thead>
<tr>
<th>Sl no.</th>
<th>Establishment</th>
<th>Category</th>
<th>Nos.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Educational Institutions</td>
<td>Schools</td>
<td>44</td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td>Colleges</td>
<td>06</td>
</tr>
<tr>
<td>3.</td>
<td></td>
<td>University</td>
<td>12</td>
</tr>
<tr>
<td>4.</td>
<td></td>
<td>Other Institutions (Coaching, Computer Learning Center, etc.)</td>
<td>12</td>
</tr>
<tr>
<td>5.</td>
<td>Commercial Establishments</td>
<td>Banks</td>
<td>15</td>
</tr>
<tr>
<td>6.</td>
<td></td>
<td>Community Center</td>
<td>08</td>
</tr>
<tr>
<td>7.</td>
<td></td>
<td>Departmental Store &amp; Confectionary</td>
<td>24</td>
</tr>
<tr>
<td>8.</td>
<td></td>
<td>Fast Food &amp; Restaurants</td>
<td>16</td>
</tr>
<tr>
<td>9.</td>
<td></td>
<td>NGO Offices</td>
<td>20</td>
</tr>
<tr>
<td>10.</td>
<td></td>
<td>Miscellaneous Offices</td>
<td>66</td>
</tr>
<tr>
<td>11.</td>
<td></td>
<td>Other (Business Enterprise not including in listed categories)</td>
<td>43</td>
</tr>
<tr>
<td>12.</td>
<td></td>
<td>Shops</td>
<td>–</td>
</tr>
<tr>
<td>13.</td>
<td></td>
<td>Tailor &amp; Boutique &amp; Beauty Parlor</td>
<td>19</td>
</tr>
<tr>
<td>14.</td>
<td>Health Care</td>
<td>Clinic</td>
<td>31</td>
</tr>
<tr>
<td>15.</td>
<td></td>
<td>Hospital</td>
<td>16</td>
</tr>
<tr>
<td>16.</td>
<td></td>
<td>Pathological Lab</td>
<td>14</td>
</tr>
<tr>
<td>17.</td>
<td></td>
<td>Diagnostic Center</td>
<td>12</td>
</tr>
<tr>
<td>18.</td>
<td>Games &amp; Sports</td>
<td>Abahani Club Ltd.</td>
<td>–</td>
</tr>
<tr>
<td>19.</td>
<td></td>
<td>Kalabagan Sporting Club</td>
<td>–</td>
</tr>
<tr>
<td>20.</td>
<td></td>
<td>Women’s Sporting Complex</td>
<td>–</td>
</tr>
<tr>
<td>21.</td>
<td></td>
<td>Dhanmondi Club</td>
<td>–</td>
</tr>
</tbody>
</table>

[Source: SCPL Field Survey: July 2004, Shafi, 2005]

Note: The number of uses is listed in plots.

The buildings listed above stand alongside the major roads on equal frontage and height and look alike despite different functions. The shopping mall/plazas are comparatively more glamorous in their finish and are relatively more beautiful buildings designed to accommodate shops selling expensive products.

3 Transformation of Dhanmondi residential area-causes and effects

A study of the 1974 situation shows that a traditional mahalla, chawk or Neighborhood Square (Mowl, 1997: 251) pattern has began to emerge within this grid layout and subdivision of plots also began to take shape of informal developments. In due course subdivision of plots to a minimum of 8 decimal and construction up to six storied buildings with much reduced setbacks were allowed with in a maximum of ten family units per 33 decimal plot. Relaxation of use has also taken up over time, allowing educational institutions on any plot and non residential use along Satmasjid Road, Road no. 2, Road no. 16 and Mirpur Road (a major artery road) up to a depth of 6m. Spontaneous civic spaces also became apparent with the change of this use in the area, attracting a number of unplanned uses (Mowl, 2003).

3.1 Development control measures for Dhanmondi residential area

The invasion of non-residential uses within Dhanmondi Residential Area in an unplanned, uncontrolled and haphazard manner had affected adversely on the residential sanctity of the area and the area has already lost its status as a high-class residential area of Dhaka City.
The gradual degradation of residential sanctities had created a concern for the public authorities. As such some actions were taken by the Ministry of Housing and Public Works to control and regulate the developments within Dhanmondi Residential Area. The Ministry of Housing and Public Works formed some committees from time to time to investigate into various types of developments within Dhanmondi Residential Area and served circulars on the decisions of the authorities regarding development controls in this area.

Circular of May, 1995, Ministry of Housing and Public Works

The authority imposed the following development control “measures for Dhanmondi Residential Area in May 1995:

Plots, adjacent to Mirpur Road may be used for commercial purpose up to 20 feet depth, with 15% “Conversion Fee”. This rule also will be applicable for Road no. 16 (Old Road no. 27), Road no. 2 and “Satmasjid Road”. No uses except those mentioned below, will be permitted:

a. Books, Papers, Stationary and Medicine shops
b. Goldsmith, Watch and Spectacles shops
c. Antiques and Curio
d. Travel Agencies
e. Bank and Insurance
f. Show Room of Car and Filling Station
g. Office of Commercial Institution (with the permission of the Authority.)
h. Snacks Bar (not Hotel and Restaurant and Posh Restaurant)
i. Photo Studio
j. Show Room: Ceramic (with the permission of the Authority)
k. Electronics equipment.
l. Clinic: up to 10 beds (but not of Infectious disease)
m. Commercial uses for the requirements of the local community and that are socially acceptable may be considered to get permission.

n. Small shops for daily necessities may be considered to get permission with the condition that:
   • Shops will have parking arrangement.
   • The shops will face the road.
   • The shops will maintain distance from footpath according to the rules.
   • The plots allotted for residential use will apply to the authority and the buildings can be made usable for commercial purpose.

Circular of January, 1996, Ministry of Housing and Public Works

The authority legalized all the plots, on both sides of Mirpur road, Satmasjid road, Road-2 and Road-16(old 27) for commercial use with 15% “Conversion Fee”. By the circular the total plot (not partial) was permitted to be used for commercial purpose.

This permission was considered to be effective from December 1995. It is interesting to note that as per original plan no one was supposed to built structures more than three storied (Alam, et al, 1986).

But then the authority withdrew the ceiling of dwelling density of: 10 flats per bigha (33 decimal). According to this circular:

• The maximum permissible number of storey in the buildings will be six but the number of flats may be as much as is possible to be served by the service organizations.
• The building shall have lift facilities and parking arrangement within the plot area.
The size of a subdivided plot shall not be less than 5 katha. This circular was considered to be effective from December 1995.

In order to specify a guideline for use of land, plot subdivision, construction of apartment, transfer of title, height of building for Dhanmondi Residential Area a committee of 16 members was formed in June 1995, known as “The Zahir Uddin Committee” (June, 1995, Ministry of Housing and Public Works).

The committee decided that:

a. Present rule of building height of maximum 6 storeys in Dhanmondi Residential Area would continue.

b. The service giving organizations would assess the problems providing services to increased height of building and will recommend to the ministry whether the heights of the buildings could be increased further. These organizations will assess the problems and their solutions at intervals of 2.5 and 10 years. After receiving the opinions, of the service giving organizations the Ministry would call another meeting to take decision in this regard as soon as possible.

But up till year 2000 there was no new decision to increase building height.

From the above discussions it is evident that the public authorities are keenly interested to retain the residential character and to regulate and control nonresidential development within Dhanmondi Residential Area. The public authorities are also interested to increase the intensity of land utilization by increasing the height of the buildings without bringing any adverse effect on the environmental conditions, especially on the utilities and service facilities.

3.2 Detailed area plan by Rajuk

Following strong regulatory framework should be prepared for DRA. It is desired not to have any more residential development as density has already crossed 300ppa. It is assumed from a reliable source that the area has now more than 1.50 lakh people.

- Removal of offices, hospitals, clinics and schools through formation of legal frameworks from authority is required except the designated commercial Avenues or roads.

- Some roads should be converted into one way road. Using of Dhanmondi roads vehicular traffic from other neighboring areas is discouraged through constructing gates in appropriate places of entry and exit.

- More extensive use of Satmasjid Road has been proposed through opening of BDR Road for public use and linking the Satmasjid Road up to New Market through the road inside BDR.

- New construction as well as re-development of buildings within this area must follow the existing building construction rules. More over, height limitation seems essential to apply up to 6 storeys to keep the density within a reasonable range.

- Through guided land development, Kalabagan triangle may be developed.

- Messages of Environmental Upkeep campaign should be disseminated to the DRA residents explaining the need for maintaining residential serenity and therefore their share of responsibility into this preferably by Dhanmondi Poribesh Unnayan Jote and other civil bodies.
Convert some roads which are mostly in use into one way for traffic. Stop using Dhanmondi Road as for vehicular traffic for other neighboring area. As for rest of the Roads, the entry points from Mirpur Road and from Satmasjid Road should be regulated with gates.

Huge rickshaw traffic from neighboring Lalmatia and Mohammadpur are regular user of DRA roads in order to go to New Market, Nilkhet, Azimpur and University area. Alternative steps should be taken for this traffic, i.e. open up the road within the BDR for public use with separate rickshaw lane along Satmasjid Road. Also recommended widening 80 feet road along Shrai Zafrabad Road, Sher-e-bangla Road through Hazaribagh Road connecting New Market.

DRA seriously lacks civic amenities like clubs for women and elderly people, library for the children and women, cultural museum/Hall, modern Art gallery, drawing and painting school, car and rickshaws parking lot, small parks, post office either in Mirpur Road or at Road no.-27. All the abandoned properties within DRA should be used to provide these facilities. Private land owners may be encouraged but in that case land need to identified. The park at road no. 4 should clearly be earmarked for women, children and elderly people; the present use of road no. 4 Park as cricket ground should immediately be stopped.

The entire DRA should be divided into small neighborhood and neighborhood association should be created and made mandatory to preserve their area’s environment security and other interest.

Presently, DRA lake is a center for drug abusers/peddlers, hooligans, hijackers and for anti social activities. So, for DRA lake development, all the lake centered business and commercial activities, loitering of teenagers, selling cooked foods, should be stopped and only garden should be created with enough plantation and bird nests be created and accumulated in the Dhanmondi R. A. There should be a fixed time when general people will use lake premises. For further expansion and development of lake for future will require a careful study and planning, for example, redevelopment of Begunbari khal and its renovation into a park of amusement/recreational centre is highly recommended, so pressure on Dhanmondi lake get reduced.

The entire Lake area should be filled with gardens, plants, shrubs.

All the pavements and roadside plantation should be encouraged to bring back the greenery effects of the area (Ministry of Housing and Public Works, 2008).

3.3 Causes of non-residential use at Dhanmondi
Dhaka city has a current growth rate of 6.5 percent and contains almost 30 percent of the total urban population of the country. By 2015, it is predicted that Dhaka’s population will be 23 million and it will be the world’s fourth largest city. This rapid change in land use and the use of buildings etc. without reference to any planning or assigned function are destroying the characteristics of planned areas in the city. The reason for this is not only lack of planning and control but also investments of accrued wealth in the construction of new buildings for all types of uses i.e. residential, commercial, institutional etc. A recent study on tall buildings on Dhaka city reveals that there are more than 550 tall buildings in Dhaka city, which have been constructed in the last 20 years bringing about changes in the
land use and general environment of the city. Also an invasion by commercial type of building seems to be taken over most of the planned residential areas. Initially, in Dhanmondi, the need for community facilities was totally ignored. There was only one school and one mosque within Dhanmondi. Gradual invasion of non-residential uses has drastically affected the quality and changed the character of Dhanmondi. At present there are about 89 schools, colleges and universities, 88 medical centers and hospitals and about 108 offices within Dhanmondi. There are also a large number of community centers, beauty parlors, food outlets, clubs, museums, etc. All these facilities serve not only Dhanmondi but also the whole city of Dhaka. One can hardly find a lane in the city where there is no office, said urban planners. They said that the Master Plan of the city of 1959 had provisions for exclusive commercial zones of Motijheel and Dilkhusa and the Tejgaon industrial area. They also mentioned though the plan was to be completed by the late 70s, no new Master Plan could be formulated until 1995. In absence of a Master Plan the commercial zones expanded in all sides due to increased demand for commercial space. Karwan Bazaar also has become a commercial zone hosting important offices and bank branches. Recently, Agargaon is turning into another commercial zone. Some of the residential areas are hosting private sector educational institutions and the offices of telecommunication as well as multinational companies. Kindergarten schools, colleges and universities proliferate Dhanmondi Residential Area (Shafi, 2005).

3.4 Effects
The evolutionary trend of DRA from 1952 to 1996 suggests that this once exclusive area for better residence is gradually being transformed to a traditional mixed use zone or in panning terms ‘an out lying business district’ (Mowla, 2003).

3.4.1 Plot sub-division
Most of the present plot owners of Dhanmondi area the second or third generation of original owners. In most cases number of successors are more than one. About one-fifth of the total plots are now physically subdivided. The present law of plot subdivision does not allow physically subdivided plots to be smaller than five kathas. In this situation the successors having title of land smaller than five kathas have common ownership over the plot. They cannot sell or mortgage individually, every action have to be made through group approach. This creates sonic operational problems while selling or redeveloping the plot. On the other hand, owners of the flat housing (apartments) are free to have their title on the plot individually. Ownership of their subdivision would he undivided and not demarcated over the land. But they may sell or mortgage their title over the land individually. They would not have to take group initiative. This law of land subdivisions induces apartment housing to be a solution to get rid from the complicated situation of tenancy in common. Moreover the present owners (successors of the original owner), who are economically obsolete finds agreement with the developers to be an easy solution for redevelopment.

All the above mentioned situations result and would result one common type of developments in Dhanmondi, i.e. Multi-storied apartment. About one fifth of the original plots are now physically subdivided. These subdivisions are due to transfer by selling of land or due to multiple numbers of successors. Increase in the number of subdivisions
increases the intensity of built structure. In the original layout collected from the Public Works Department, there were 1083 residential plots. Some of the plots were subdivided by the owners themselves later on in 1984 it was 1131 (Alam et al, 1986). The present study found the existing number of plots to he 1382 (Field survey, 2000).

3.4.2 Intensity of vehicular movements

Three types of streets (30meter, 15 meter and 10-15 meter), having sidewalks, are provided in Dhanmondi. Traffic system of Dhanmondi, though a planned area, collapsed due to the presence of too many educational institutions, medical clinics and hospitals. A number of roads in Dhanmondi are also being made one-way from 7:00am to 8:00am to reduce traffic.

3.5 Impacts of transformation

Good access and favorable size of plots in Dhanmondi proposed the conversion of plots and even individual apartments to commercial services for all of Dhaka city’s population. The result is that residents of Dhanmondi area have to suffer from huge influx of from outside resulting in severe traffic congestion, air and noise pollution and solid waste management problem (Shafi, 2005).

The over-concentration of schools, medical facilities and business establishments has extremely negative social consequences. Every work day of the week, these commercial operations draw in thousands of parents, drivers, and rickshaw pullers and inevitably, the vendors that caters to them. The result is further loss of environmental quality and deepening social chaos.

3.6 Proposal

Dhanmondi residential area must be protected from invasion of unplanned development. This ward can be planned as a small self dependent township. Local area planning and improvement of governance will prevent a lot of irregular land use and building construction, reduce traffic congestion and allow for planned development. It is expected that if and when involved in planning of the area, people of all neighborhoods will not allow access of shopping plazas, hospitals and clinics within their locality. On the contrary, they are likely to insist on meeting mainly on population requirements of that area. Control of residential density is also a factor that needs to be carefully considered when planning for a residential area like Dhanmondi. Whenever residential densification in any area is allowed it should be done in a manner so that there is adequate open space on the ground in ratio to the increase of families per plot. This can be achieved by allowing apartment buildings in residential areas to build as a complex of buildings and not single buildings. To fulfill the need for land for civic amenities/ institutional/ commercial purposes in any area of increased a local/ detail area plan will find such spaces through application of land development techniques such as land sharing, land readjustments, etc. For example if Dhanmondi area requires further land for ancillary uses such as school, colleges, health, markets and definitely open space, investors and developers can be provided land through land sharing techniques and also urban redevelopment processes. These are complex procedures and need professional input as well as peoples’ participation.
3.6.1 Existing map of Dhanmondi

Fig. 4.1: Dhaka Guide Map (Northern Part) [Source: DMDP]

Fig 4.2: Google Image of Existing Situation of Dhanmondi Residential Area [Source: Google Earth]

3.6.2 Considerations taken into account for preparation of the proposal

- A green square and sometimes a memorable street for a transition stop would be located in the area.
- There should be a variety of dwelling types so that younger and older people, families and singles, the poor and the wealthy besides other cross section of people may find places to live.
- There should be shops and offices at the edge of the neighborhoods, of sufficiently varied types to supply the weekly needs of a household and make the area lively around the clock.
- Elementary school should be close so that most children can walk from their home.
- There should be small playgrounds near every dwelling, not more than a tenth of a mile away.
- Streets within the neighborhood should be a connected network, which disperses traffic by providing a variety of pedestrian and vehicular routes to any destination.
- Parking lots and garage doors should rarely front the street.
- Buildings in the neighborhood centre are closed to the street creating a well defined outdoor or urban lobby.
3.6.3 Proposal plan of Dhanmondi

![Diagram of Dhanmondi plan]

- Mixed-Hospital
- Education al zone
- Play field
- Mixed-use
- Hospital
- Mosque
- Nursery
- Mosque
- School
- Play field
- Lake
- School
- Play field
- Mosque
- School
- Nursery
- University
- Mixed-use
- 25 storied
- 12/15 storied
- 12/15 storied bldg.
- 12/15 storied bldg.
- 12/15 storied
- 6 storied
- Open green space
- Paved area
4 Discussion and Conclusion

The study reveals two important trends of transformation in Dhanmondi - growth of non-residential use and the construction of six-storied apartment buildings. From the study it is also evident that the public authorities are very keenly interested to retain the residential status of Dhanmondi, and from that end, planning authorities imposed some regulatory measures and control on the non-residential uses in Dhanmondi. The recent trend of construction of six storied apartment buildings from 1990 onward is the result of relaxation on the height restrictions of the buildings. Previously the buildings in Dhanmondi were not allowed to be constructed more than four storeys. The decision to impose height restriction up to six storeys is the outcome from the consideration of two important utility services i.e. the water supply and electricity. Every planning decision is required to be based on certain facts regarding projection of population in the future, ultimate population growth, calculation of requirements of utility services and community facilities, traffic generation and transportation network, assessment of provision standards, etc. For imposition of height restrictions in Dhanmondi all these facts have not been assessed properly.

For example, with the construction of six storied buildings in Dhanmondi, what will be the intensity of development in terms of FAR value, what will be the occupancy rate and population density, what will be the ultimate population load in the area, what will be the standards and requirements of utility services and community facilities like schools, playgrounds, markets, shopping centers.

In any event, the whole process of planning and replanting an existing area is to give it a character of its own and to guard against possible deterioration. It is to be remembered that planning should be done for the people, not for the planner, and is the creation of physical pattern so designed that personal, family, social, and economic life can flourish within it. To bring about a satisfactory solution of the problems it requires a new collective conscience within the planning profession and a comprehensive view of urban society and its social, spatial and environmental relationships. Community based organizations and local community participation can play a great role in safeguarding and protecting the environmental qualities of residential areas. Hence, there should be scope for effective community participation and local community based organization should be encouraged to conic forward to participate in the planning, development and management of their local areas. Increasing community participation in collaboration with the planners will help to evolve new concept, new techniques and new theories on the subject.

Reference

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