

Trends of Development in Dhanmondi

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Introduction

Dhanmondi was planned and developed by the Public Works Department (PWD) according to the order Dhaka No. 11413 requ.-9th December 1952. Using section 3 of the East Bengal (Emergency) Requisition of Property Act 1948 (E.B. Act XIII of 1949), seven mauzas (some fully and some partially) were acquired: *Dhanmondi, Taleperbag, Idgah, Shukrabad, Shibpur, Sarai Jafrabad and Sarai Begumpur*. According to a study of Housing and Building Research Institute (HBRI), in 1984 about 28 percent of the houses in this area were used for non-residential purpose although the area was planned as a residential area. This paper summarizes the trends of development in Dhanmondi Residential Area.

Methodology

Detailed survey on existing development pattern was carried out over the whole of Dhanmondi (Hashem, 2001), covering types of land use, land fragmentation and building height. About five percent of the plots were surveyed to study the intensity of land uses in terms of building coverage and total floor space within the lot. Previous data about land use was collected from the survey of Housing and Building Research Institute in 1984, Public Works Department in 1999 and a study by Islam (1962). Researchers conducted interviews with the tenants, plot owners and planning professionals for better understanding of the ongoing change in this area. Spatial and attribute data were organised in ARC/Info to analyze the trends.

The Ongoing Trends

Invasion of Non-Residential Uses

After liberation in 1971 the characteristics of the residential area were being changed and the area was gradually being invaded by non-residential uses like commercial and professional offices, private clinics, community centres, educational institutions (private schools, colleges and universities) etc. From the study it was found that non-residential uses in Dhanmondi were 28 percent in 1984, 35 percent in 1993 and about 50 percent in the year 2000.

According to the present study three non-residential uses viz *medical facilities, educational institutions and offices* constituted more than two-thirds of the total non-residential use in Dhanmondi. There was a sharp rise of the number of educational

institutions in Dhanmondi from 1984 to the year 2000. The number of educational institutions was 30 in 1984, which rose to 124 in 2000.

At present the number of private clinics and hospitals is 103, and the number of offices of different private organisations is 161 in Dhanmondi. Besides, there are some foreign missions, cultural centres, NGO offices, and party centres. Most of the users of these non-residential uses come from outside Dhanmondi. The hinterland of these uses and functions extends throughout the city; the hinterland of some of the functions extends regionally, even beyond the city.

Land Fragmentation

Most of the present lot owners of Dhanmondi are second or third generation descendants of the original owners. In most cases the number of successors is more than one. About one-fifth of the total lots are now physically fragmented. Some of the fragmentations are due to transfer by selling to outsiders. From the study it was found that the original layout plan proposed by Public Works Department for Dhanmondi residential area contained 1,083 residential lots. Some of the lots were fragmented by the owners themselves later on. The share of physically fragmented lot is 21.47 percent. The total number of lots after fragmentation was 1,131 in the year 1984 and the number rose to 1,382 in 2000.

Building Height

In 1962, most of the houses in Dhanmondi Residential Area were single storeyed (72.9 percent). Two storeyed houses were 24.3 percent and only 2.7 percent houses were more than two storeyed. In 1984 one storeyed buildings were 24.78 percent, two storeyed buildings were 51.34 percent and more than two storeyed structures were only 3.54 percent. Before 1990 there were no six-storeyed buildings in Dhanmondi. Now, they are about 21 percent of the total buildings.

The present law of plot fragmentation does not allow physically fragmented 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 has to be taken through group approach. This creates some operational problems while selling or redeveloping the plot. On the other hand owners of the apartments are free to have their title on the plot individually. Ownership of their subdivision would be undivided and not demarcated over the land. But they may sell or mortgage their title over the land individually. They do not have to take group initiative. This law of land fragmentation induces apartment housing as a remedy to the complicated situation of *tenancy in common*.

Most of the surveyed real estate developers prefer Dhanmondi as a location for apartment projects over other areas of Dhaka City. The buyers prefer Dhanmondi for its better physical and social environment, its location near the centre of the city and its better accessibility. At present the percentage of one and two-storeyed structures is 46 while that of four and five-storeyed structures is only 15.17. The 65 percent buildings upto 3 storeys

in Dhanmondi have potential for redevelopment. It may be predicted that the majority of these buildings would be demolished for the construction of apartments.

Ground Coverage and Floor Area Ratio

In Dhanmondi, the lot size ranges between 15 decimals and 33 decimals which is big enough to accommodate bungalow houses. Originally most of the buildings in Dhanmondi were one or two storeyed, every lot had a single structure and all of them were residential. Building coverage of land was very low; the average building coverage rose to about 0.50 in the year 2000. With the introduction of planning permission to allow six-storeyed buildings in Dhanmondi, six-storeyed apartment buildings started to come up from 1990. The six-storeyed buildings leave minimum setback space around them, resulting in more intensive use of ground space and constituting higher Floor Area Ratio (FAR) values. With the increasing trend of construction of six-storeyed buildings, the intensity of land utilisation within the lot is increasing, which is indicated by the higher FAR value. In 1962 the FAR value was only 0.39, in 1984 it increased to 0.79 and in 2000 it rose to 1.68.

Decrease in Population

The population of Dhanmondi in the year 1991 slightly decreased from that in 1981. During the period from 1981 to 1991, the structural pattern of buildings and the building coverage did not change substantially, but a large amount of residential land use had changed to non-residential use. This might be the reason for the decrease of population in 1991. As six-storey multi-unit apartments started to be built from the year 1991, intensification of land utilisation started. It is expected that rapid growth of population has taken place by now. But recent population data was not available.

Spatial Pattern of Development

About fifty percent of the plots of the area are being used for non-residential activities. The three major non-residential activities i.e. offices, clinics and educational institutions are scattered all over the areas of Dhanmondi. The spatial distribution of the apartment buildings was also found to be scattered. The distribution of fragmented plots do not have any relation with the location of arterial roads. The whole Dhanmondi residential area has now become a very potential area for the location of apartment buildings and for non-residential activities. Geographical centrality of the area, better environmental quality, greater accessibility, availability of large houses within large plots have made this area suitable for non-residential activities.

Influence of Dhaka's Spatial Structure over the Change

Goodall's Explanation

These ongoing changes in Dhanmondi is not isolated within its spatial limit. These are linked to the activities and spatial expansion of the city. The present trends of development

is a part of the greater spatial expansion and internal land use reorganisation of the whole city. This phenomenon was explained by Goodall (1972) observing land use restructuring of expanding or contracting American cities. Outward expansion will have repercussions for the internal structure of that urban area. This is in addition to the reorganisation within the existing built-up areas caused by pressures of growth in those areas. Outward expansion influences internal structure because that expansion is only part of an urban environment, and peripheral communities must rely on other parts of the urban area for various facilities and opportunities. Variations in the pattern of outward expansion have differential effects on internal structure.

Prior to demolition of old buildings, changes in the ownership and use can occur when alternative users are willing to pay higher prices/rents for that real property than existing occupiers. Of particular importance is the case where a change of occupier signifies a change of use, as from residence to office, or a change in use intensity, as when large single-family houses are subdivided into a number of self-contained flats. The original building is not specifically designed for its new use, and adjustments, if any, are made by means of internal alterations, leaving the shell of the building intact. This reflects the rapidity with which the demand for various types of accommodation changes with urban growth relative to the slow adjustment of supply in terms of the number and types of buildings. This is a key to the explanation of the *zone of transition*.

For individual building, the process of change falls into a number of stages. Starting from an equilibrium situation where a building is occupied by the user for which it was designed, the first stage is represented by the replacement of the original use by another use but with little or no modification of the structure. The new use represents either a higher-order activity or an increase in intensity of use by the same activity. A second stage brings partial conversion or modification of the building to better accommodate its new occupants. This is most likely where the building occupies a site with considerable access advantages. Finally, the building is demolished and replaced. Not all buildings fulfill this sequence, nor do similar buildings appear at the same stage at the same time. However, these stages do describe the process of adaptation in the structural stock of the urban area in order to accommodate changing demands. It also shows that demolition and replacement stems primarily from external economic pressure for change rather than from obsolescence or physical deterioration.

Spatial Structure of Growth and Land Use in Dhaka City

Dhaka is experiencing massive land use restructuring due to rapid population growth and spatial expansion. There have been some prominent changes in the characteristics of different zones, intensification of use, change in use, alteration of location for optimum uses and invasion and succession. The importance of Dhaka City was enhanced radically in 1971 when Dhaka became the national capital of the new sovereign state of Bangladesh. Even in the 1960's Dhaka was experiencing very rapid population growth (of over 6 percent annually); this growth became even faster after 1971. Present Dhaka is six times bigger than Dhaka of the late fifties.

One basic feature throughout the city's history is the mixed, rather than segregated, land-use. The restructuring process is also characterised by the massive growth of the informal sector, in housing, in commercial activities, and in industrial or manufacturing functions. The planning and implementing authorities have fallen far short of keeping up with the changes, and lost control over "unauthorised" growth.

Dhaka Metropolitan Development Planning (DMDP) studies have revealed that the 1980's were a period of major land conversion from rural to urban. It was calculated that between 1983 and 1991 some 14,000 acres of land were converted to urban use within Dhaka Statistical Metropolitan Area. Almost two-thirds of this land (62 percent) is in the fringe areas. The same areas, however, accounted for less than one third of total population growth (30 percent) in the same period. The position was the reverse in the central urban zones where 70 percent of the population growth occurred but with only 38 percent of the increase in newly converted land. Further studies revealed that although urban land increased overall by about 50 percent the new land absorbed only 32 percent of the population increase, with 68 percent being absorbed via densification within the already built-up areas. The DMDP study concluded that, in the inner zones 80 percent of population growth was by densification and 20 percent on new land, while in the outer zones 42 percent of population growth was by densification and 58 percent on new land. The main lesson is that even in a period of extensive land conversion, the highest in Dhaka's history, two-thirds of population increase was within the already built-up area.

Expansion of Dhaka City created demand for new spaces for new urban activities and Dhanmondi being located close to the central part of the city attracted some higher order activities (central functions). The present study found that 50 percent of the plots are non-residentially used, and one-fifth of the structures are six-storeyed. At present, there is a strong trend towards construction of six-storeyed apartment houses. The developers keep Dhanmondi on top of the priority list for apartment projects. All these above factors would make the change faster. Similar trend is observed in case of other planned high or middle income areas of the city— Gulshan, Banani, Baridhara and Uttara.

Compatibility of the New Uses

The present study finds that most of the non-residential activities take place in the residential buildings. The non-residential uses are not even themselves compatible in these residentially designed buildings. The organisation of space of these buildings is not suitable for these non-residential functions. Utilities and services were not reorganised or updated for six-storeyed apartment buildings that contributes to higher values of FAR. Clinics have 24-hour function, which is likely to disturb the residential environment of the area and can be responsible for spreading infectious diseases. Posh educational institutions generate demand for car trips for each student and the schools have a common time schedule of starting and ending thereby creating severe traffic jams.

Limitation of the Building Construction Rules

Building Construction Rules allow schools and clinics (less than 10 beds) in a residential area. But there is no guideline about the density or distribution of these services. In

Dhanmondi, within an area of 485.9 acres there are 161 offices, 124 educational institutions, 103 medical facilities, 30 party centres and 14 shopping centres besides restaurants and fast food shops.

DMDP Provisions

Development Management Report (part 1) of Urban Area Plan (RAJUK, 1995) considers Dhanmondi Residential Area as having potential for densification and can continue to provide sites for offices, commercial development and residential uses in 4-6 floor developments. It recommends detailed plan for Dhanmondi to provide upgraded/rehabilitated utility services (water, gas, electricity, telephone, sewerage, etc.) in view of on-going densification. The Report (part 2) recommends planning rules for density control: current RAJUK practice for allowing six storey buildings in planned developed areas should continue. If high densities are to be permitted anywhere it should be in areas where infrastructure provision is highest.

Interim Planning Rules (part 3) of Urban Area Plan (1995-2005) encourages Mixed Use Planned Zone. The purpose and intent of the Mixed Use Planned Zone is to allow a variety of residential densities and some commercial uses in residential neighbourhoods. The allowed commercial uses are intended to support the daily and commercial service needs of the neighbourhood, conserve energy by lessening automobile dependency and enable more diverse neighbourhoods that optimise the use of both land and available urban service and facilities. Mixed uses may occur both horizontally and vertically, but controls should be established to maintain the character of these neighbourhoods primarily as residential areas.

Metro Dhaka Interim Development Management Rules

General provisions of Interim Planning and Development Rules permit the use of any part of a single detached dwelling as a convenience shop, office or light workshop (e.g. handicraft) provided that:

- (a) the gross floor area so used does not exceed 50 (fifty) percent of the gross floor area of the dwelling-house;
- (b) the inherent nature of its operations do not create a nuisance to neighbouring uses by means of noise, dust, odour or excessive traffic;
- (c) the use shall be incidental and subordinate to the principal use of the site as a residence and shall not change the character and external appearance of the dwelling;
- (d) there shall be no exterior displays or advertisement;
- (e) there shall be outdoor storage of materials or supplies;
- (f) there shall not be on-premises activities and/or uses which are only permitted in industrial zones;
- (g) additional parking spaces are provided if considered necessary by the Town Planning Executive Officer.

Above provisions might be effective for new construction or redevelopment that would seek land use clearance or building permission from the Planning Authority. But, in the case of an existing building, there is no penalty for violation of above provisions.

Conclusion

All types of non-residential uses are not incompatible and undesirable for residential areas. Many of the non-residential uses such as schools, shops, health centres, etc. are local needs and requirements of residential areas. But the mushroom growth of all these land uses is not desirable. In the original plan of Dhanmondi Residential Area, provisions of these local needs were not made. Hence they grew, out of necessity, in an unplanned haphazard way.

DMDP might be partially effective to check undesirable new construction or redevelopment. DMDP was approved under section 74 (1) of Town Improvement Act, 1953 through gazette notification as the new plan of Dhaka on 3rd August 1997. Planners in RAJUK concerned with granting planning permissions might face difficulty in getting guidelines from DMDP. The DMDP project did not complete its planning of the third and lowest level, Detailed Area Plan. Even there is no initiative to revise the Plan after every five years.

The use of taxation policy is a very potent and versatile instrument in controlling the undesirable land use in any area. The growth of non-residential use in a residential area is simply because it is profitable for the landowner and also for the tenants. Now, it may be possible to limit non-residential growth by making it unprofitable for both the owner and tenant by application of taxation policy. This means that a burdensome penalty tax can be imposed on both the owners and the tenants for any undesirable non-residential use and for that the planning authority should have the power and authority to impose taxes. For this rules may be framed as per the Act or Ordinance of the concerned planning organisation.

References

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