

# Changing Scenario and Emerging Planning Norms for Educational Infrastructures in Planned Townships:

## Case study of New Town, Kolkata

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### Introduction

In the post independence India several New Townships have been developed mainly by government initiatives. Those were large and having population of 50000 to 20 lakhs. Mainly those were financed by government. By and large the development of social infrastructures, specially educational facilities were provided by government/public authority. In the late nineties, the government policy for foreign direct investment (FDI) was made. A new trend of developing new townships emerged. Major cases were found as self financing irrespective of government or private initiatives. Repeal of Urban land Ceiling Regulation Act (ULCRA) and Special Economic Zone (SEZ) Act accelerated this trend in the recent times. Thus developments of community facilities for the upcoming residential developments now become a matter of commercial viable issues instead of mere social commitment. This socio-economic change of status quo of education facility influences the existing planning norms. i.e. UDPFI very much. This paper deals with the emerging norms of educational facilities and suggests some guidelines for developments, considering physical as well as economic feasibility. The suggested norms and guidelines are limited for implementation to newly developed urban areas primarily. However it may be used in the similar cases with local considerations.

### The Changing Scenario

Scenario of educational facilities are fast changing in terms of policy, supply, demand etc. the changes may be classified into broad categories as below:

- *New policy/programme in the national and state level for education:* Traditional education, being state subject used to be provided by state/central government and in some cases by local governments. During couple of years it has been spread among private institutions in cities also due to change of policy.
- *Socio-economic change:* Due to several economic and social changes education has now become a service and sometimes becomes a premier commercial venture. Several private initiatives are there in urban areas for efficient discharge of education as essential service. Degraded performance of government school accelerated this.
- *Change in mind set up:* General concept of education among common people is also in changing phase in urban area. People don't compromise in quality education if they can afford education from private schools and colleges.

## Impact of Changes in Planning and Developments

The visible impact due to above change is reflected in the demand and supply of educational facilities. Number of higher-educations, vocational and training institutions conduct sessions on hired spaces of commercial complexes. Tutorial homes of Engineering, Medical, management, marketing etc are being spread in urban areas in high pace. Traditional concept of university/college in a bigger land is hardly viable without government subsidy. Besides, skill oriented training and educational units are also often associated with similar industrial/commercial setup. With the increase of affordability of a section of urban population and with the increase of vehicular ownership intercity trips among various sectors/areas of city/ mega city have been increased. Traditional way of providing elementary education to child within a neighbourhood is not necessarily a primary condition. On the other hand for the marginalized people in the urban areas need for non formal educational infrastructure is required since formal education cant serve them.

## Emerging issues in Physical Planning

Since the enactment of FDI and SEZ act recently, numbers of new planned urban areas are to be set up. Large scale infrastructures are to be developed by private and public developers. The changes and inputs as described above encompass various issues in physical planning.

- Land being the key resource for the development of any infrastructures the main issue lies in the types of educational facilities and the quantity of land required for that. UDPFI guidelines provide general norms for this. Norms, set in UDPFI guidelines, are yet to integrate with the availability in reality. As per the provisions, only 20 %of total land would be occupied by educational infrastructures, if fully followed as per the UDPFI guidelines. So the legitimate land requirements are first issue considering the availability of land in the present perspective.
- UDPFI guidelines does not take care of the new and diversified educational need, which may involve only the built spaces, in developed buildings.
- The developed land cost of any new township is very high. For the present study, the break even cost of each cottah land is around 1 lakh. To afford a higher secondary school plot of area 1.6 ha is a matter of huge investment for the developers, entrepreneurs.
- The trend of demand of educational facilities from private entrepreneurs is diversified. This is quite unpredictable and depends on the market economy.
- Flexibility in planning norms becomes also a crucial issue.

## Case Study of New Town, Kolkata

A New Town of population of 10 lakh is being developed in the adjacent areas of Kolkata in an area of 3075 ha. The basic objectives of development of New Town are to absorb future metropolitan growth, establish a complementary Central Business District and to control the unplanned growth over and around the area under development.

Entire area of New Town falls outside the Kolkata Metropolitan Area. It is situated approximately northeast of the KMA. City and regional level health, educational & cultural facilities are likely to come recently. A major thrust has been given to IT business development, Non hazardous industries are also likely to come. A state government company named West Bengal Housing Infrastructure Development Corporation (WBHIDCO) is entrusted for planning and development of the New Town. The norms and standards adopted for the educational facilities in Action Area –I, whose area is 660 ha and having a population of 2.5 lakh (approx) is discussed below.

### Educational facilities provided

There are two types of land. Those are Bulk and non-bulk. It is assumed and incorporated in the Development Control Regulation that the community facilities required for the bulk lands would be provided by the bulk plot owner as per the size and hierarchy of the plot. For non bulk plots and apartments which were disposed by the authority, facilities have been provided. The norms adopted are developed after studying the existing demand, implications of land saleability, affordability of the developers, feasibility of the location etc. Adopted norms are given below.

Table I: Nos and areas of educational facilities in New Town, Kolkata

Sl. No	Facility	Land area in sqm for each unit	No Provided for action area I Population around 2.5 lakh
1.	Nursery School (a) Detached plot (b) Attached to PS (c) Attached to HS School	500	29
2.	Primary School (a) Detached plot (i) With field (ii) Without field (b) Attached to HS school	2500 1500	7 3
3.	Higher Secondary School (i) With field (ii) Without field	8000 5000	3 7
4.	Residential School	10400	2
5.	College	20000	2
6.	Research Centre	20000	1

Source: Internal Report of WBHIDCO

### Comparison with Existing Guidelines, norms and adopted standards

Table II: Comparison with the TCPO norms, UDPFI norms and the adopted provision in New Town

Facilities	TCPO Norms	Norms in UDPFI	New Town, Kolkata
Nursery School	Na	1 for 2500 population @ 0.08 ha	1 for 3000 population @ 0.05 ha 60% isolated plot 20% attached with primary school 20% attached with the HS School

Primary School	1.2 ha	1 for 4000 population @ 0.4 ha	1 for 7400 population @ 0.25ha to .15 ha 50% isolated plot (35% have own field and 15% have community field attached with) 50% are attached with HS school
Senior Secondary/higher secondary school	2.4 ha	1 for 7500 population @ 1.6 ha	1 for 2200 population @ 1.6 ha 30% have own field 70% have community field attached with
Residential School	Na	1 for 1 lakh population @3.5 ha	1 for 1.5 lakh population @1.5 ha
Handicapped school	Na	1 for 45000 population @0.5 ha	Not specified
Colleges	6.0 ha	1 for 1.25 lakh population @4.0 ha	1 for 1.5 lakh population @1.5 to 2.5 ha

Source: UDPFI guidelines, Vision 2025 of Kolkata, Internal Report of WBHIDCO

NA-not available

### Location of facilities as adopted in Physical Planning

As suggested, the physical layout of plotting school and colleges also has been done suitably. Plots not having own field are placed beside the community play area as shown

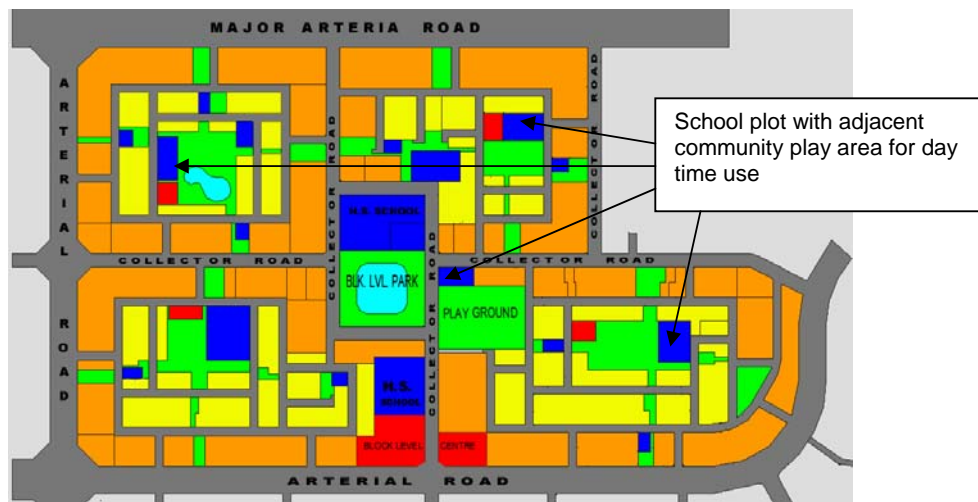


Fig I: School plot beside the community play area

### Suggested Guidelines for Educational Infrastructures in Planned Townships

There is problem to incorporate single norms in any planning intervention in India where regional disparities prevails in terms of geography, culture, economy etc. However a suggested framework for development and planning of educational infrastructures are proposed here:

- Primary and senior secondary schools proposed to be used in double shifts with bigger intake.
- To optimize the land utilization the community play areas are to be grouped along with primary or higher secondary schools for day time use and its management related legislative provisions, if any, to be enforced by local government.

- ✚ For unpredictable higher educational demands land should be earmarked as bulk plot in tune of 1% of total land in addition to existing provisions of schools and colleges
- ✚ Educational and institutional zone must be created. Comprehensive development may be there by BOT basis for accommodating training/ vocational /continuing education etc for those who need only floor spaces for their institutes.
- ✚ Space norms for isolated school plot is as under
  - Nursery school- 0.05 ha
  - Primary school- 0.2 ha to 0.3 ha with field inside the plot  
0.12 ha to 0.15 ha if plot is associated with community play areas
  - Higher Secondary School- 0.8 ha to 1.0 ha with field inside the plot  
0.4 ha to 0.5 ha if plot is associated with community play areas
- ✚ Additional space allocation for peak hour traffic in front of any schools, colleges and other educational facilities are also proposed as below:

Table III: Additional space reservation in front of Educational infrastructures

Type	Length in m	Depth in m	Area in m <sup>2</sup>	Use Premises
Type – I	50 min.	5 minimum	250	Higher Secondary School, Primary School
Type – II	40 m minimum	3 m minimum	120	Nursery School, College, Residential School etc
Type – III	15 m	4 m	60	As required for other facilities

Mobile / informal schools are to be permitted and recommended to use the additional spaces as above.

## Conclusion

The emerging norms as adopted in New Town or as the recommendations above are indicative and need proper validation in other conditions like hill areas, bay area etc and also for other economic and social conditions. There is scope for further study in the modalities, norms, legislations for providing the educational facilities in the planned townships.

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