

Appreciating Area of Model Colony: A Case Study from Pune

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Abstract: This paper concerns with the study of an emerging residential suburb from Pune, by analyzing the current situation and identifying its problems. The Physical survey and study of urban form from Model Colony shows that predominant use of land is for residential purpose and there is less availability of land for recreational as well as for public purpose.

Key words: Model Colony, Land Use Survey, urban form survey, physical infrastructure survey, social infrastructure survey, road inventory survey

Introduction

Development of an area depends upon the coordination between the sectors. Which can be obtained by overall growth of that area in social as well as economical way. As per hierarchy of plans planning at initial stage starts with the Local Area Plan, Neighborhood Plan, Development Plan and Regional Plan. The aim of this study is the 'Area Appreciation of Model Colony, Pune'. While planning any new city or for rejuvenating any city the first is the detailed study of that area and then proposing new ideas for that. Accordingly, this study includes the study of land use, characteristics of buildings, physical infrastructure, social infrastructure and the road network. The analysis of study is based on the comparison of its results with the standards given in Urban and Regional Development Plans Formulation and Implementation (URDPFI). Basically, Area appreciation is a technical analysis to understand all the site issues which covers all the factors related to urban planning.

Approach to the study

Study area considered for this Area Appreciation includes area bounded by Ganeshkhind Road, Fergusson College Road also known as F.C. Road and Chaturshringi Road. Which includes Cosmos Bank Lane, B. M. Thorat Chowk with famous educational institutes such as Symbiosis Institute, Central Bee Research Institute, etc. This area appreciation includes results of physical surveys, house hold surveys, physical and social infrastructure surveys and road network surveys.

Pune and Model Colony

Pune is second largest city in Maharashtra. Pune is known for its Educational Institutes and for its heritage and culture. Model colony is situated North West to Pune in ward 14 in Shivajinagar. Model colony constitutes Wada structures, water bodies, famous educational institutes. It is newly emerging residential suburb near prominent colleges. The population of Model colony is 20,000 and consuming an area

of 797764 Sq.m. Since it is an up market residential colony in Shivajinagar, land rates are very high.

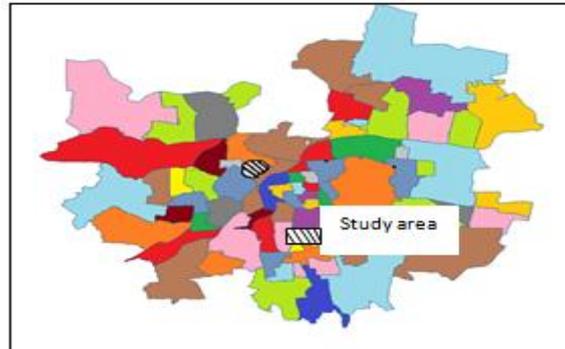


Fig. no. 1 map showing study area

Land use survey

The base map of Model colony was the primary source for land use survey. This survey mainly deals with the marking of predominant land use in that area. Predominant land use is the major activity in the land. The land was marked as either residential, commercial, industrial, recreational, public semipublic, agricultural, special areas or as open space. Analysis of this land use study is obtained by comparing the percentage of each land use with the standard percentage given in the URDPFI guidelines. This analysis revealed that residential and commercial land use in Model colony is more than the required standards. However public and semipublic use of building along with the recreational use should increase.

Table 1. Comparison with URDPFI guidelines

Land Use	Area (sq.m)	%	Standard Area %
Commercial	60686.41	8	4-5
Residential	415306.91	52	35-40
Mixed	13053.35	2	-
PSP	51304.35	6	14-16
Transport	206236.04	26	15-18
Water body	222394.07	3	-
Recreational	28783.51	3	20-25
Total	797764.64	100	100

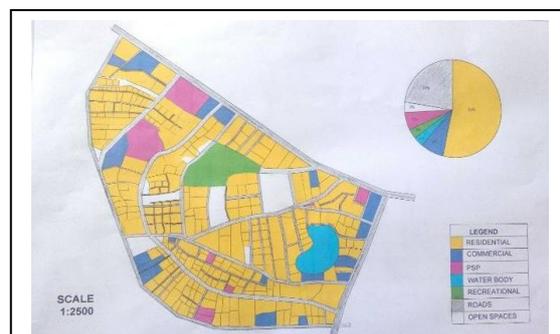
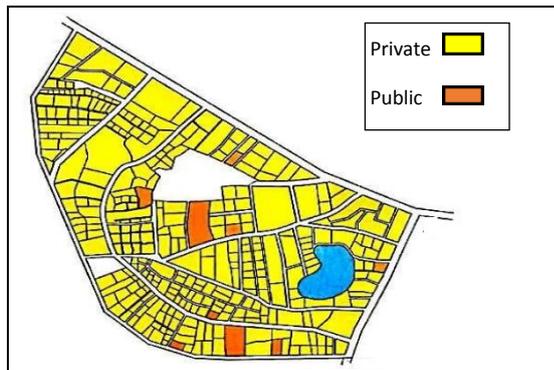


Fig no. 2. Base map of study area

Urban form survey

Urban form survey of Model Colony includes study regarding history of Model Colony, heritage of Pune, administrative system of Pune, ownership of buildings (Map 2) and building typology in Model Colony. Pune is 8th largest city in India and 2nd largest city in Maharashtra. Pune is administrated by Pune municipal corporation (PMC). Pune is sub-divided into 41 administrative wards for proper administration. Model Colony lies in ward number 14. Population of Model Colony is 20000 and the population density is 25094 per Sq. Km. Ward office of Model Colony is situated on Gokhale Road. Model colony is developed as an inner district sub urban area of Pune. Since it is upmarket residential colony there are more bungalows, private houses and apartments than the Wada structures. Wada structures in Model



Map 3. Ownership of building

Colony preserves the heritage of Model Colony. Fig. 3 indicates ownership of buildings in Model Colony. Due to newly emerging residential town most of the buildings are privately owned. However, some essential buildings such as post office, telephone exchange, schools, temples, etc. are publicly owned. 93% buildings of Model Colony are privately owned while 7% buildings are publicly owned. Also study regarding building typology in model colony revealed that 61% buildings are apartments, 36% buildings are bungalows, 1% buildings are row houses and 2% are Wada structures.

Physical infrastructure survey

Physical infrastructure survey of Model Colony includes detailed study of water management system (Fig.4), solid waste management system, sanitation system and provision of Electricity. Fig. no. 4 indicates water management system

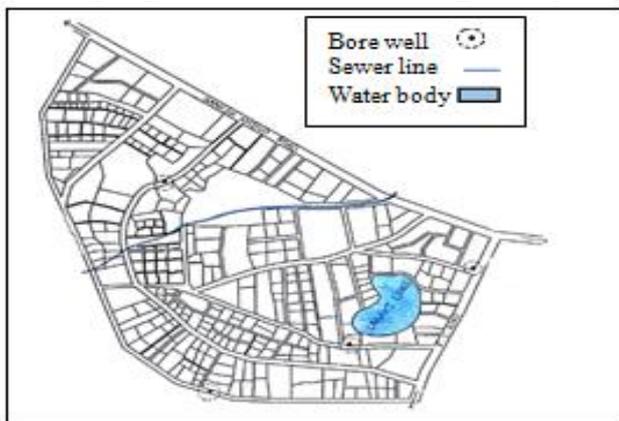


Fig no. 4. Physical infrastructure

Model colony, which includes study of source of water and water supply timing. The prime sources of water for Pune city

are Mula, Mutha, and Pawana rivers, Khadakwasala, Panset, Warasgaon and Temgher dams. Khadakwasala dam is situated at 15 Km from the model Colony. Capacity of water storage tanks serving the study area is about 2.5 – 3 MLD. Water supply is done on an average for 7 hours /day to Model Colony. Diameter of main water supply line is 12 inches. Water treatment plants at Khadakki and Parvati Water treatment plants at Khadakki and Parvati are near to model Colony. This study revealed that 47.5% people living in that area have their own bore well along with PMC water supply. Study regarding solid waste management treatment of Model colony includes the study regarding process of collecting and treating solid waste, solid waste management method, segregation management and frequency of solid waste collection. PMC has provided 2 different colored containers for the collection of dry and wet waste; white container for dry waste and green container for wet waste. Ghanta trucks runs in Model colony collecting 95000 Kg wet waste per day. Sanitation generally refers to the provision of facilities and services for human excrement, often mixed with waste water. In survey regarding study of sanitation facility, location of public toilets was marked. There is no sewage treatment plant in the study area, however the sewage treatment plant at Tanajiwadi and Naidu are nearer to model colony. Since there is no any storm water management plant in model colony storm water let into river.

Study regarding provision of electricity revealed that 85% of the electrical connections in model colony are used for domestic purpose while 15 % are used for commercial purpose.

Social infrastructure survey

Social infrastructure survey of Model colony includes study regarding Educational facilities, Health care facilities and Open Spaces present in Model colony. Only 6% of land in model colony is predominantly in use for public and semipublic purpose, however according to standards it should be 14%-16% of total land.

Fig. no. 5 indicates Educational Institutes in Model colony. There are total 8 educational institutes in model colony including both government and private institutes. As compared

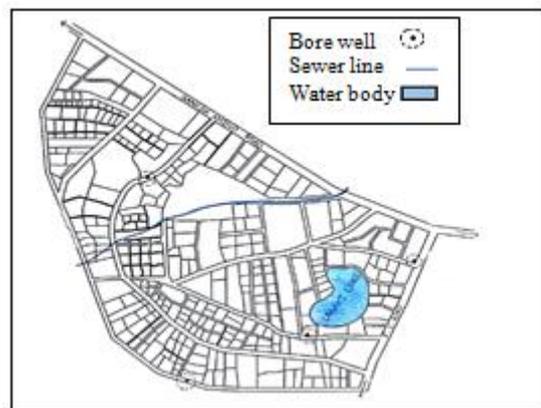


Fig no.5. Social infrastructure facilities

to standards of URDPFI, educational institutes in Model colony are less in number to fulfill the population.

Table 2. Educational institutes in Model Colony

Type of institutes	Count
Nursery school	2
Primary school	1
Secondary school	1
Junior college	2
Under Graduate institute	2
Research institute	1
Boarding institute	1
Other institute	1

There are total 9 health care facilities in Model colony out of which two centers are hospitals and remaining seven are clinics. Detailed study on this revealed that there are 7 clinics in model colony that have 2 beds and one hospital with 60 beds. However, is no proper method of dumping Bio-medical waste in Model colony.

Study regarding open spaces discovered that only 3.92% of land is occupied by open spaces in model colony. However as compared to standards of URDPFI, open spaces should constitute 10% of the total land. There are total 4 open spaces in model colony out of which 2 are public open spaces and 2 are private open spaces. There is one Chittaranjan Vatica in model colony which is public open space constitute major part in PSP land use.

Road inventory survey

Road inventory survey of Model colony includes study regarding classification of roads, position and condition of footpaths, parking availability and public transport system. Road network constitutes 26% of land of model colony Fig. no.6. indicates the classification of roads into subheads such as collector street, local street and neighborhood street. Every plot of model colony is well connected by the roads. Out of total road network 50% streets are local streets inside the model colony.



Fig. no. 6. Road inventory survey

Footpaths present in Model Colony are made up of interlocking paving blocks. These footpaths are well maintained and have good accessibility.

Study regarding bus stops in Model Colony revealed that mainly bus stops are present on F. C. Road and on university road and they are easily accessible for everyone. Parking is based on alignment i.e. either parallel, perpendicular or angular and on the type of vehicle either two wheelers, four-wheeler or other. Due to increasing number of vehicles parking problem is increasing in model colony as in residential apartment area off street parking is increasing.

Conclusion

Model colony is one of the emerging residential suburb from Pune. 52% land in model colony is predominantly used for residential purpose. Because of which recreational (3%), public and semi-public use (6%) of land in model colony is less than the required percentage. However, it is well connected through transport network.

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