

Site Planning in Architectural Projects- Principles and Approach

*Jit Kumar Gupta

Buildings have critical and important role in making human settlements, productive, efficient, liveable and sustainable. No city can be made smart and sustainable, unless it is supported by built environment, which is energy and resources efficient. Buildings, as largest consumers of energy, resources and generators of waste, are known to use over 40% world's total energy, 30% global raw materials extracted, 25% timber harvested, 16% fresh water



withdrawal, 35% of world's CO₂ emission, generators of 40% municipal solid waste and 50% ozone depleting CFC besides making 30% residents suffering from sick building syndrome. With number of people rushing towards urban centres, energy requirements of cities due to buildings, is going to rise sharply in future. As per McKinsey Global Institute Report (April, 2010), '*India Urban Awakening: Building Inclusive Cities*', India would be required to create on annual basis, buildings to the tune of 700-900 million sqmts (*equal to the built-up volume of Chicago City in USA*), to meet the emerging needs of urban India. Considering the large volume of built space to be created, its implications in terms of resources, energy and waste are going to be colossal. Despite huge implications, very little focus is being given to mitigate the adverse impact on the environment caused by rapid and uncontrolled growth of building industry. Thus building, as a sector, would require close scrutiny and monitoring for effecting overall economy in the levels of energy consumption and for making cities resource efficient and sustainable.

Experience and studies have shown that adopting an integrated and passive approach to design and designing with nature, using natural elements of Sun, Space and Greenery, can help in proper site planning. Integrated approach to building design is known to essentially revolve round; rationalising site planning; optimising shape and size of the buildings ; evolving sustainable built form; optimising surface to volume ratio; promoting building efficiency , rationalising ratio between length and depth of the building, making building structure light and cost-effective; adopting solar passive techniques; controlling

lighting, heating, ventilation ; using solar energy, optimising landscaping etc. Making optimum use of existing natural elements/sources and vegetation, offer the best options for creating green buildings. In order to ensure that buildings are made energy and resource efficient, they must be planned and designed to conform to the stipulations laid down by the Indian Green Building Council (IGBC) ,for site planning and designing of buildings.

Making buildings sustainable will be largely contingent upon the quality of site selected and approach used for site planning, designing buildings including defining building fabric, their placement in the context of site and its footprints. In this chapter we will define and explain the approach which can be considered for adoption for site planning of any project to make the buildings/project sustainable and rational.

Site Planning

Site planning is considered and valued as the most crucial aspect of architecture while evolving design solutions and placing them within a given site. Architectural solutions have their origin and genesis in the site on which they are to be located. All sites remain unique in their fabric, shape, size, area, location, physical features, orientation, surroundings, environment, ecology, and accessibility. Accordingly, design solutions provided by Architects remain different, distinct and unique, considering response of the designer to the site and its surroundings.



Site planning remains a complex and intricate process, involving number of elements and studying number of contexts including; positioning of structures and designing internal and external elements. Site planning is considered both an art and science of determining the basic fabric, footprints and typology of buildings besides locating them in the context of a given site, having due regard to prevailing orientation, landscaping, infrastructure, mobility, parking, privacy, view etc

Site planning essentially involves arranging structures on a given land besides shaping spaces between them. Kelvin Lynch considered site planning, as a process linking architecture, engineering, landscaping and city planning. Creating logical relation between mass, space, zoning, services & maintenance is also known to be the outcome of site planning besides locating activities and objects in space and time. Site planning is

considered, both as a compromise between the site, modified to work out building program taking into account features of site. Since land remains the basic and essential platform of site planning, accordingly site planning is also reckoned as art and science of planning, designing and management of land. Considering numerous implications and its role and importance in promoting sustainability of architectural projects, site planning has to be done with sensitivity, care and caution to eliminate any possible adverse impact and blend the project with local environment, ecology, climate, culture and bio-diversity.

Suggested Principles for Site Planning;

Considering the major implications of site planning in the context of making architectural projects sustainable, cost-effective, rational, supportive and making value addition to prevailing quality of environment, ecology and local bio-diversity, it will be essential that broad principles governing the process of site planning must be defined and detailed to serve as a guide to all architects while planning the sites of their projects. These principles should revolve around;

* ***Respecting site and respecting all physical features existing on site-*** to make optimum use of such features in the designing of the built environment and placing various project element in site planning

Planning with nature, using natural elements of sun, space and greenery-** should invariably be the approach which should form the guiding principle of site planning. Any site planning leveraging the nature and ***panchmahabhutas including Prithvi, Jal, Agni, Vayu and Akash shall always remain relevant and logical never failing on the altar of sustainability.



* ***Adopting strategy of protecting, preserving enhancing and promoting*** available physical features -shall invariably help in making site planning more rational and realistic

****Minimise fingerprints of proposed buildings-*** to cover minimum area of site for leaving large open area within the site, to be used for promoting landscaping, creating green spaces and for giving a sense of more openness in the site, besides overcoming limitations imposed by smaller land area. Having minimum building footprints will help in higher order of ground water recharging, lower incidence of heat island, lowering temperature on site, reduced demand of energy for heating and cooling and ensuring adequate air, light and ventilation besides making living and working area more user friendly.

***Keeping maximum area under open** – will go a long way in promoting air, light and ventilation, creating large landscaped area providing enlarged scope for water absorption, making provision for the parking space, open space for sit-outs, space for basic services and ground water re-charging.

***Identifying entire range of flora and fauna-** on site and preserving them by making them integral part of site planning and building design process to impart a distinct ambience, character and culture to the project.

***Making adequate provision for rain water harvesting** -and ground water recharging to help in making available large amount of precious water resource and reduce the demand on ground water.

*** Opting for brownfield development by using areas** which were earlier used for buildings, to help in minimising adverse impact of green field development and regenerating the existing derelict areas.

***Providing setbacks of adequate width,** - for ensuring availability of adequate air- light and ventilation within and outside the buildings and for facilitating vehicular access of the fire/ambulances vehicles, in case of natural and manmade disasters, for creating landscaped area within the site, providing space for parking, to mitigate outside noise and to promote privacy.

***Minimising damage to the site--** by minimising changes to existing environment, ecology, bio-diversity of the site and by making value addition to the site through rational site planning

***Restoring the derelict area** existing within the site by developing them and restoring them to original status for promoting sustainability of the project.

*** Site planning of Planning steep sites and sites falling in the hill areas/ contoured sites-** should preferably be based on placing and designing buildings along the contours to the extent possible so as to minimise damage to physiography and environment. When placed across contours, buildings must involve minimum cutting/filling and damage to the structure of the site.

*** Minimising changing/tempering with the existing physiography of the site**

*** Preserving and protecting all areas and elements of natural areas/ scenic beauty and protecting all good views of built/ manmade /natural heritage to and from the site**

***Evaluating, analysing and mitigating the adverse impact of development on site and adjoining areas, communities, ecology and environment**

Approach to Site Planning

After briefing about the principles to be considered and approach to be adopted for site planning, it will be relevant to define and describe the process which needs to be followed in order to evolve rational options for site planning. Rational site planning needs to be considered and evaluated looking at the broad range of concerns and issues related to building design and their inter-relationship before finalisation. Site planning should essentially be made a synthesis of a number of collated factors and should be based on carrying out detailed study and analysis of existing physical aspects of site ; vision/ program of client; designer's own creative inclination; concerns of community; interests of end user; zoning /bye-laws requirements for regulating the density, height ,coverage ,geometry of development, road widths ,parking and drainage requirements; protection of natural resources ; Neighbourhood Character; Physical Characteristics etc. Accordingly site planning must incorporate an accurate description of well-defined, well-designed and well-executed site analysis, which remains critical for evolving cost-effective, environmentally sustainable and eco- friendly design options. Considering the total fabric and structure of any architectural project, site planning process includes large number of elements involving; buildings, roads, walkways, trees, gardens, water bodies, landscaping, plazas, environment, services, parking, natural and manmade features etc.

Considering large number of elements and factors involved, following approach is being suggested for rationalizing and optimizing the process of site planning of any project for achieving its sustainability.

i. Looking at Project brief

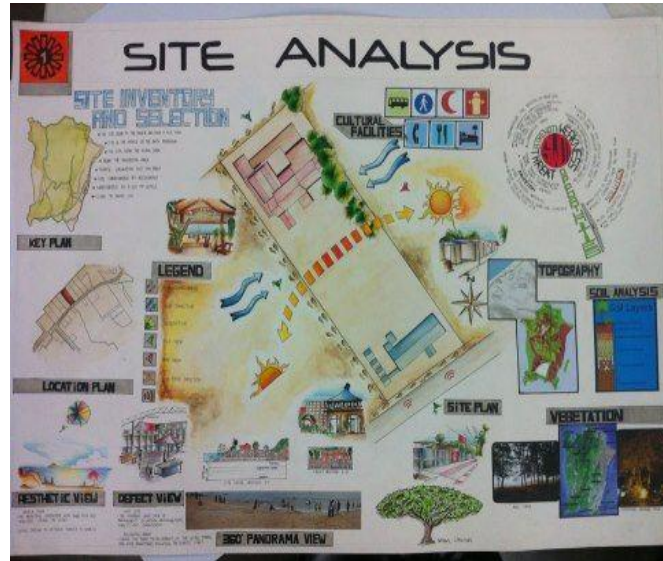
Before undertaking the exercise of site planning of any project, it will be important to understand the genesis, context, intent and content of the project. Reference in this regard needs to be made to the project profile already prepared; so that scope of the project, built spaces requirements, services and infrastructures to be provided, are clearly delineated, understood and appreciated. If no such document is available, then such a document must be created for keeping the project on track , within its defined scope and for avoiding any complications and omissions arising out of time overrun / cost-overrun, at a later date

ii. Locating and Understanding Site

- After having understood the project profile and requirements of the project, it will be critical to do a detailed study and analysis of the site identified for the

project for understanding its complexity, uniqueness, strength and locational peculiarities.

Understanding site remains critical, important, vital for preparing rational site planning and state of art designing of buildings. Before starting planning of site and designing of buildings proposed; site needs to be properly documented, visited,



studied, analyzed and understood thoroughly and objectively. Preparing site plan and designing buildings have to be the outcome of the prevailing site conditions and in responsive to those conditions. Premeditated design have always failed to produce great and sustainable solutions and do justice to the project, making them in majority of cases irrational/ unsustainable.

Site for its proper understanding and planning needs to be studied and analysed in terms of Location; Accessibility; Shape and size; Topography; Vegetation; Infrastructure; Orientation; Wind Direction; Local culture, soil conditions; View from site /View to site; Prevailing typology of buildings; Structures existing within site; Existing encumbrances- electric /gas lines, water bodies etc; Local Building bye laws; Developmental Controls- Height, FAR, Setbacks ,land use etc; Restrictions imposed by Master Plans/ statutory document.

Understanding site has been valued and observed to greatly help in understanding and appreciating the contexts of ; defining and designing structure and contours of the project; positioning buildings; determining solid and void relationship within site; determining shape, size & and volume of buildings; determining distances and relationship between buildings; planning and designing state of art buildings; planning and designing sustainable buildings; making buildings cost-effective/energy /waste efficient ; planning spaces rationally and objectively- both internal and external; placing buildings and determining building setbacks; preparing landscape design; evolving Traffic and Transportation/mobility Plans ; preparing Infrastructure plans; evolving service plan ; preparing drainage plan and providing Rain water Harvesting.

A detailed and accurate survey of the site indicating the shape, size, dimensions, orientation, easements, levels / contours of site, difference in levels between site / surrounding properties, location/ height of existing physical features on site/ surrounding properties, existing flora & fauna, use/height of surrounding buildings, details of means of accessibility, location and availability of municipal services including roads, water supply, sewerage, electricity, drainage location of institutions of healthcare, education and shopping areas etc, relevant to project profile, will be critical and valuable for good site planning.

Survey of site should be supplemented with getting soil available at site or assessing soil bearing capacity along with ascertaining the water table for taking a call on the design of buildings. This will be critical for projects involving creation of multi-level basements for meeting the parking needs and buildings with large footprints which fall in the category of high-rise buildings.

- Physical survey and soil testing should be supplemented by visit of the architect to have a realistic feel of site and its settings and surrounding besides understanding the context of the site with its neighborhood communities and the city. Site needs to be looked out both from inside and outside and from top and bottom. Critical and objective evaluation and appreciation of the different facets of the site will help in planning of the site in a realistic manner based on the prevailing ground realities.
- Carrying out a detailed SWOT analysis will further help the designer to understand the strength of the site, enumerate its weaknesses, identify opportunities offered by the site and possible threats, which need to be encountered. Locating and understanding site, will always remain most vital component of site planning process. Thorough and objective site analysis remains most valuable and potent mechanism/ critical for evolving cost-effective, environmentally sustainable and rational design solution for any project. Site analysis has been valued for evaluation of site in terms of its existing potential, understanding environmental impact of development, Impact on community, Impact on adjoining development/properties, defining project design, defining scope of project and understanding development constraints.

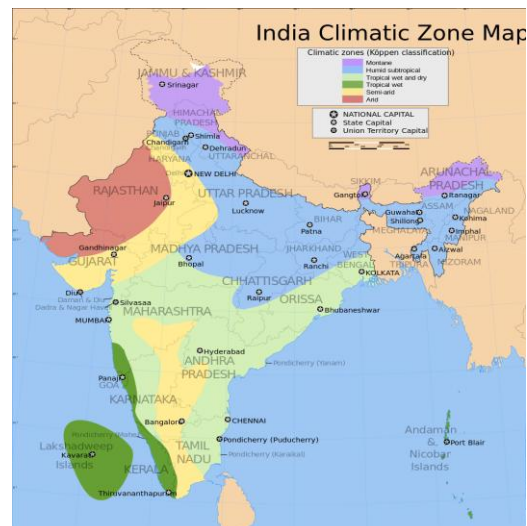
iii Evaluating Building Controls & Building Regulations

Detailed study and understanding of the provisions made in the prevailing building bye-laws, zoning regulations, architectural controls, zonal plans, zoning plans, development plans etc shall be vital for evolving site plans which will stand the testimony and scrutiny of legal framework for statutory approvals. Accordingly, it will be desirable to know the applicable building controls to the project site in terms of; permissible ground coverage, maximum permissible height, prescribed floor area ratio, minimum stipulated setbacks, area zoned as building envelop, area permissible under basement, norms prescribed for parking/population density/dwelling units, extent of projections permitted, positioning of entry and exits, number of storeys permitted, requirements of public health services, mobility within/outside buildings, structural stability of structure, requirements of fire exit/disaster for the buildings, distance to be left between buildings etc, so that site plan remains within the confines of these statutory limits. These controls need to be followed and clearly defined in the site plan so that building designs are also prepared within the same framework. Limitations on height/ setbacks/coverage imposed by the location of the project close to airport, location on highways, heritage areas, wetland, protected monuments, defence installations and coastal areas, also need to be clearly deciphered, defined and followed as part of site planning process.



IV Studying Climates

Climate will be one of the major determinants of the shape, size and location of the buildings in the site. Climate shall invariably be studied in the three distinct contexts in terms of; Micro, Meso and Micro climates. In the Macro context, site will be studied at the zonal level for ascertaining precisely in which climate zone it falls. Based on climatic considerations, India has been divided into five distinct climate zones including; Hot and Dry; Warm and Humid;



Temperate; Composite and Cold climate Zones. Depending upon the relevant zone, site plan will need orientation to mitigate the adverse impact and challenges posed by the prevailing climate of the zone. At the second level, city climate shall be considered so that design solutions could be made more realistic, based on general climatic conditions prevailing at the settlement level. At the lowest level, site climate will need detailed study and analysis, which will be major determinant of contours of site planning and building design. It will include evaluating all the distinct features prevailing on the site and in its surroundings for evolving site specific planning. Based on climatic consideration site planning shall address all issues related to heat radiation and humidity, based on orientation, movement of sun and prevailing wind direction.

V Understanding Orientation

Orientation is the position/positioning of site with relation to points of compass and other specific directions. Orientation is the most critical factor which needs to be effectively leveraged in site planning/building designs, in order to evolve rational site plan and energy efficient/sustainable/green building designs, by making optimum use of solar light/heat/radiation and the available wind energy. However, requirements of building design would vary from region to region, state to state, cities to cities and within regions, states and cities. Accordingly, buildings with regard to sun, wind, heating, ventilation, cooling and lighting will have to be oriented differently in different regions.

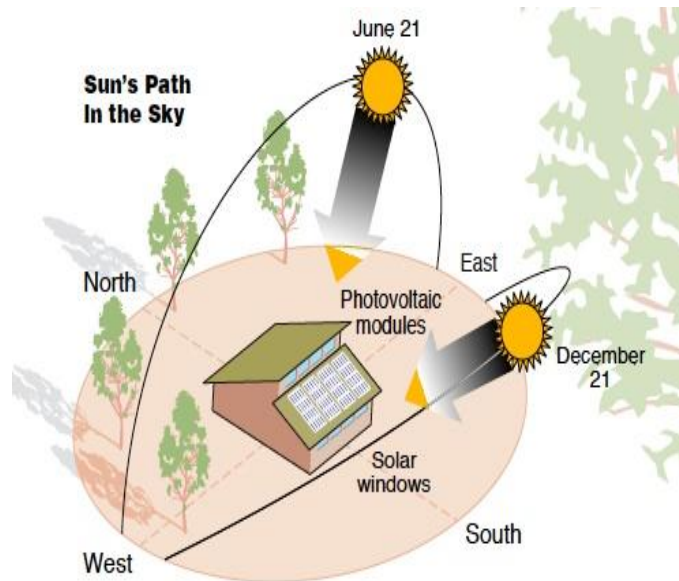
In order to ensure that buildings make best use of solar and wind energy, it would be essential that majority of buildings would have the site advantage of having best orientation where such buildings are to be constructed. Accordingly, in this context, urban planners have important role cast for themselves for ensuring, that while preparing the layout plan of the area, highest consideration is given to orientation, so that maximum number of plots have the distinct advantage of best orientation. Once this is ensured at the planning level, it would be much easier for the Architects to evolve a design which would be energy efficient. Further, the planners should ensure that ratio of plot width and depth is fixed in such a manner that the entire depth of built-up area permitted on a plot should have access to natural light during the day, minimizing the requirement of artificial lighting. This would be particularly important in case of row housing, where plots have the limitation of drawing light from front and the rear only.

Understanding site orientation would essentially involve; looking at the position of North, South, East and West with respect to project site. Context of each cardinal direction needs to be understood and appreciated with respect to these directions,

both individually and collectively. These cardinal directions have both positivities and negativities besides strength and weaknesses, considering the climate zone in which they are located. South- East remains best orientation in composite climate whereas North orientation is considered best for sourcing glare- free and uniform natural light, without any heat gain. North direction provides good opportunities for having large area under glazing and remain most suitable for industrial buildings, because sun never rises and sets in the North.

If North remains the coolest side, South remains hottest in terms of highest radiation. Sun also remains at highest altitude both in summer and winter in the Southern side. However, elevation of sun remains much higher during the Summer as compared to winter. Sun revolves around North during summer, as it rises in the North- East and sets in the North- West. During winters, Sun revolves around South, rising in the South- East and setting in the South- West. Considering the

movement of Sun, with sun not available in the North, in Cold regions locating buildings on the North direction/slopes needs to be invariably avoided due to obvious reason of non-availability of sun. Buildings in hill areas should preferably be located on the Southern slope, followed by East and west sides in order to maximize the heat gain provided by the Sun.



West direction has its inherent limitations and implications and is known to be worst orientation in all hot climate regions due to maximum heat and horizontal radiations falling in that direction and accordingly exposure of the buildings in this direction needs to be minimized and avoided to the extent possible. However, it will not be possible to avoid western direction in the large projects having setbacks on all sides or sites having exposure to western direction. Accordingly, while preparing site planning, minimum building surfaces should be given exposure in the west side to avoid heat gain. In order to avoid the adverse impact of the heat on west side, mechanism of providing properly designed shading devices could be used as an option. Planting rows of deciduous trees for shading the western walls or

greening western walls through well-planted creepers, will be other options available for reducing impact of heat on such walls. Painting western walls or adopting cavity walls for west can reduce the adverse impact of heat on western side.

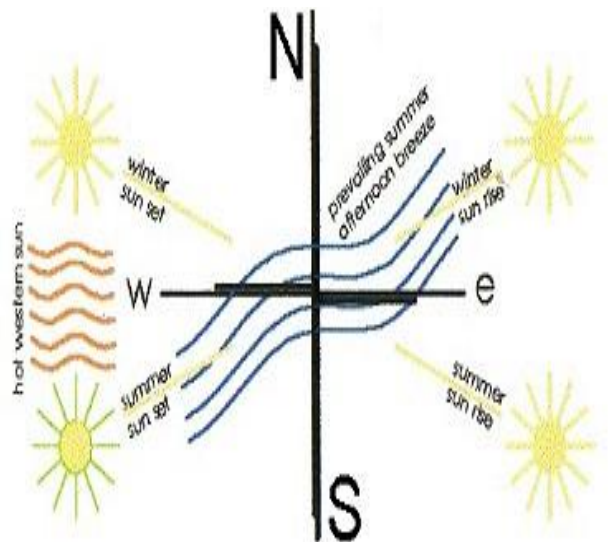
Accordingly, it will be desirable that detailed study and analysis of the site orientation must be made along with studying and mapping the behavior and movement of Sun, during different seasons of the year while preparing the site plan and designing buildings. Good and bad sides of the site need to be clearly identified and demarcated while preparing site plan/building plans. All areas involving human habitation should be placed along good orientation, whereas all areas providing worst orientation, should be made to house non-habitable areas of the project in site plans.

Considering the entire context, orientation plays important role in site planning and siting buildings. When combined with wind direction and sun path, orientation help in providing optimum solution regarding how buildings should be oriented and sited. Orientation along with sun path will always remains major determinant site planning, positioning of the buildings and that of placement of rooms inside buildings

vi. Ascertaining Wind Direction

Prevailing wind direction will be another major determinant for evolving rational site plan. Wind direction remains location and season specific and accordingly varies during the year. However, it will be appropriate to consider and identify the direction, in which for majority of the time wind flows. For designing / evolving climate responsive site planning/building design, it will be important to consider and map the direction of wind in which it flows for majority of the time in the year and to channelized it through interiors of the buildings to minimise the adverse impact

of radiation and humidity on the human living. This will be particularly important in the case of sites falling in the warm and humid climatic zones, where cross-ventilation emerges as the most important feature of the building design to counter



the adverse impact of high percentage of moistures present in the air. However, in case of cold regions and hot climate regions, cross ventilation has to be invariably avoided during the flow of the cold winds in cold regions and that of hot winds in the hot an dry regions, during the daytime.

f

vii Defining Setbacks and Building Envelop

Set-backs remain the most important component of site planning and positioning of buildings. Adequate set backs are always considered vital for promoting sustainability and liveability of the project. Set- backs in the shape of minimum distance to be provided, are generally defined as part of the building rules and zoning plans, where no construction is permitted. There is no limit prescribed for the maximum width of the setback to be left within the site. While designing and placing buildings in site, there remains considerable flexibility for defining the set-backs, particularly in the projects having large area. Accordingly, it will be desirable that due care and caution **is** used while deciding the set-backs. Minimum set-backs can be considered for sides having worst orientation whereas maximum setbacks should be provided on sides having best orientation. Maximum set-backs provided in the front side of the site will also make value addition to site planning for reasons of safety, security, sealing buildings from noise, privacy, developing green spaces, avoiding demolition during widening/laying infrastructure. Fire safety, air-light and ventilation in buildings are the other determinants of the extent of set-backs to be provided in the site. Identifying open spaces to be left within buildings, positioning of existing flora- fauna and area to be used for landscaping, can also be factors considered, while site planning for determining set-backs.

While dealing with irregular sites, it will always be appropriate to respect the roads facing the site. All buildings must be placed, planned and designed, parallel to the streets on which they fall and site plans should invariably be evolved on that principle. All irregularities in the site, need to be adjusted as part of building design process. Irregular set-backs should be invariably avoided in site planning.

viii Defining Exit and Entry to the Site

Entries and exits and their numbers, defined in the project also are known to impact the site planning due to provision of accessibility to be made for the mechanised/non-mechanised vehicles, pedestrians, public, private, vip, loading/unloading of goods, parking etc. in the site. Accordingly, they need to be carefully considered for location. In case of big sites/campus having multiple exits, entries and parking, preparing rational site plan requires lot of study and analysis.

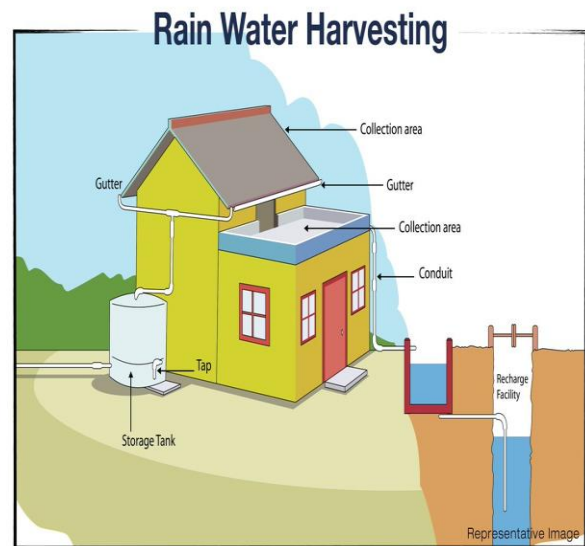
ix Existing Flora and Fauna

Site planning needs to invariably value the prevailing physical conditions on the site and also give credibility to the trees and vegetable wealth existing on site. Accordingly, all the trees and physical encumbrances existing on the site, along with their size, shape, foliage, age, canopy, cover etc., must be duly identified, mapped and marked accurately on the site plans in order to prepare rational site plans. Decisions need to be taken right at the outset regarding existing trees, whether they are to be adjusted as integral part of the building design or integrated with landscaped area or made part of the space marked for parking/ services. Such a strategy will help in not only saving all trees existing on the site but will also help in designing and positioning of the buildings, placing of open spaces and services in the site planning.



x Making provision for Rain Water Harvesting and Solar Energy Generation

Rain water harvesting must be made integral part of site planning by earmarking dedicated space in the plan for not only harvesting the rain water but also for meeting the demand of non-potable water for the landscaping and other needs of the buildings. In addition, adequate provision should also be made in the site plan for recharging the ground water so as to add to the ground water resource of the area. Site planning potential can be leveraged for promoting the sustainability of the project if dedicated area is marked for generating energy from renewable



and natural resources. These provisions shall be made based on prescribed norms and standards.

Adequate provision shall also be made in the site plan for minimising the adverse impact of heat island by innovatively designed pathways, walkways etc .Low lying area available in the site should be considered for creating water bodies as part of site planning to collect rain water and also for modulate prevailing climate besides promoting greening on a large scale.

xi. Valuing surrounding land uses and buildings

For optimum site planning and creating sustainable design solution for proposed project/buildings, it will be relevant and desirable that prevailing pattern of planning and that of surrounding land uses and buildings should be brought under close focus and consideration. While taking decisions regarding planning and designing of the project, incompatible land uses existing in close vicinity to project site need to be avoided to the extent possible considering its implications , adverse impact it may have on the project and issues they may create in planning and designing. Adjoining structures/development needs evaluation in terms of their height, setbacks, building footprints, materials, typologies etc, which will be important in the context of privacy, ensuring flow of air, light, ventilation and sunlight , within and outside buildings, Prominent Vision lines / Visual linkages, to natural and made objects are invariably considered relevant and Important elements in site planning and building design process. Views to site as well views from the site need careful consideration, evaluation and inclusion while preparing site plans and design of buildings.

Conclusion

Considering the broad parameters explained above and factors defined by Indian Green Building Council (IGBC), for evaluating and rating of green buildings, preparing rational site plans for any project should be essentially based on the factors involving; adopting Integrated approach to design; preserving sites ; adopting passive approach to Architecture solutions; providing basic amenities; promoting proximity to



local transport; respecting natural topography; promoting tree preservation , promoting rain water harvesting, adding to the environment, ecology etc. Adopting the defined principles, approach and process, would be valuable and helpful for putting in place rational site planning for the project and evolving sustainable building designs. Site planning approach for both small, medium and large projects shall be at variance, depending upon nature of project, location, client perception, climate etc of the project but basic principles governing site planning and building design will always remain same. To conclude, site planning and building design should have genesis in and should invariably revolve around;

- Site planning and designing state of art building shall always have their genesis in careful site analysis.
- Before going for site planning / building design- ensure site is properly/accurately surveyed, documented -- mapping everything within/ outside the site which would be relevant for its planning/designing.
- Site survey should include details of ; determining accurately dimensions of outer boundaries, area of site, angles of all sides ,contours/levels at regular intervals- gradient, landform, elevation, drainage pattern etc ; existing trees/flora fauna- in terms of type, size, location, shape, pattern, aesthetics, ecology; existing water bodies ;electric lines; existing services- both underground /over-ground/within /outside; approach roads- inside/outside along with their dimensions; existing structures – within/outside of area of site; views of the site- within /outside ; existing water table/ floodability, low lying areas etc;
- Testing Soil, for determining the soil load bearing capacity
- Locating North in relation to site along with other cardinal directions for quantifying the context of site planning, site orientation and building design.
- Identifying Wind direction /pattern of wind flow;
- Defining Setbacks to be left within building as per bye-laws; Defining- 'No building Zone'- to be left within site, as per Master Plan/National /State Highways, applicable legal framework etc; Defining Mandatory,' No building zone'-- to be left , when located near defense installations/ protected monuments/ zoo/ botanical gardens/ electric installations; Defining-'No Building Zone' --to be left when site located near water bodies/rivers etc ; Defining right of way for High Tension Electric Lines when passing through site
- Obtaining Zoning Plan of the site , when site allotted by any Development Authority/Urban Local Body/Improvement Trust/ Industrial Corporation etc will be useful and should guide the site planning and building design process..

- Site planning and building design should be carried out simultaneously for rational planning and designing with site planning dictating the location of various project components and buildings to be housed within the site..
- Planning residential complexes must focus on segregating the vehicular and pedestrian traffic while keeping vehicles on periphery and making core as the pedestrian paradise.
- Site planning needs to be based on making assessment of parking requirement and decide where parking is to be provided- surface/stilts/ground- for making adequate provision of space for parking, within and outside buildings.
- Site planning- for large sites calls for carrying out detailed land suitability analysis of the area in terms of area to be preserved, area to be conserved and area fit for development. Derelict areas remain vital for development and accordingly needs to be addressed in site planning. Site planning of large sites must be carried out initially by drawing a master plan; in terms of area zoned for different uses along with broad road network.
- Requirement of adequate and appropriate lighting/ ventilation are the critical factors to dictate positioning of building. North direction remaining best for glare free/uniform/cool light
- In irregular project sites- plan for regular buildings with walls running parallel to abutting roads and residual irregular spaces used for landscaping/ defining setbacks.
- In site -planning and building designing-- respecting site, respecting nature, respecting existing topography and valuing existing water bodies must remain the most important consideration.
- Site planning must be based on considerations guided by climatic conditions prevailing at Regional/ Settlement/Site levels
- Valuing prevailing wind direction for rational site planning and positioning of buildings in site while looking for desirable winds/undesirable winds
- Looking at the views from/to site to make optimum /best use of views focusing on nature, avoiding views of slums /industry /pollution etc

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- *Note; All images shown in the text are sourced and have genesis in the Google.com , which are gratefully and thankfully acknowledged by the author.*

Author;

- ***Ar Jit Kumar Gupta***
#344/40-a, Chandigarh-160036
Former, Director, College of Architecture,
IET Bhattal (Pb)---- mail-jit.kumar1944@gmail.com