

Urban Housing

Lecture 7

Site Analysis

First important terminology to define site analysis. Analysis before you get into the architectural details of a site or even before you do a building or so it is the preliminary phases of any housing architectural or urban design process it also includes the study of climate factors, geography, historical factor and legal and infrastructural context. Particularly into a specific site so every sites have different characteristics and different context of the zone. So site analysis vary from site to site, region to region and of course country to country.

Consideration of Physical characteristics to the site:

First important characteristic is a selection of a site. Very important even before you choose anything we choose lot of opportunities we take lots of choices to select a particular thing. Now housing as a commodity when it reaches the target population, the site which is provided for that plays a very important role and the selection of it takes a much more TBS process so the selection of a suitable site is the crucial step in the design of a building or planning a settlement. Specifically a housing complex. Location selection, so the first key parameter we are going to look at is on what basis do we locate a site or how do we choose it first important demographic , which means that the target population without them we are not going to build a site. Any property value would not raise without consideration of the migrants or any economic balance would not be achieved without the population of it. So in that case if you provide a housing complex where you have older people and you try to compensate with them you might not or you might have to loose the younger population so there has to be a proper balance between the kind of agers or age profile or demographic profile where balanced population of both age and income wise is most desirable at this always leads to the success rate where a market made up of predominantly hold the residence lacks a younger market to move up and purchase the larger older homes which means that itlowers the resale price. So a proper balance of demographic profile has to be created taking up the count or taking up the analytical information of what are the male

population, female, age wise segregation so all these has to be done as a preliminary study before you look at a site. Migration patterns of course form where people migrate how do they migrate where do they migrate and in what they migrate that there is search of what do they migrate. So especially migration patterns have happen within india in search of a job. So which means that they try to focus on a place where job opportunities are more and where industries are more. When industries are more you need to provide housing for that. You need to locate sites analysing the migration pattern on which area do they migrate and housing should be based on those parameters.

Prevailing land costs and rental values

As you could see metaphorically in this image a 12 month tour of the use costs us less than staying at home for a year dental values advance so high the ambition of many marketers or investors are to just boost up the values but in a country like India or say a developing country the reach need not be too high people cannot afford it there is an boom in an industry there is a new product which is being launched for anything and everything land cost go high more people come in land cost go high but what happens to the people the economic profile is the same there is no up gradation of the life style there is no increase in salary so when the salary remains the same but the rental values goes up what will happen you will have of obviously there are certain rules that has to be imposed to control the land cost and rental values these are also from the private investor point of view the prevailing cost and the rental values are have also should be taken into consideration in order to choose a particular site. Area that experience high level of demand for industrial and commercial development drive up the land prices so this one key parameter a reasonable mix of market rate and social facilities will generally rate reasonable rate and that are desirable so every housing complex should always have a balance of social incoming facilities which will cut down the market prices or make it more reasonable and desirable for the users cost it's a competitive environment people everywhere are running behind now in search of house is especially and there are lot of developers that have groom up in the past decade so which means that need the wide or saturated with the independent living facilities wood work both the condition may adversely affect what the housing situation is what the rental value is so there is again has to be a

proper balance between the provision of facilities within the environment so that the rental value could be probably mitigated based on those factors and that also creates rental rates that are more acceptable by the population,

Site Selection

Now moving on to a site selection this is a other so the minute difference between location selection and site selection is that location in on a larger scale you have those parameters to get a location for what we called as a site selection

So site is a much smaller part which is embedded in the location you select where you just provide a space for housing or say a different functional amenity. Now how do we select a site the selection of site will be based on the creating a social environment there are lot of interaction that has to be taken care of and this interaction should be facilitated by the site you select. There has to be a proper of different ages different cultures different people different outlooks different economic condition , different work mixes. So that people interact with each other. so when this interaction happens a site sustains and this sustainability creates a better opportunity for that site to trigs for longer year

Size and Density

Next is size and density you cannot build a house say if you take a one or two Acre development you cannot build 10000 houses or 10000 unit in it or provide it you give a 5 or 6 acre site and build 10 buildings in it. Both doesn't work in a country like us so the size or the area of your particular site and the density that is required based on the migration pattern and the population of that particular area both has to go hand in hand in auditor provide efficient site, size and efficient density. So that the target population are also considered while the provision of houses. Otherwise this creates accurate environment or over crowed situation that leads to congestion

Topography:

Next topography a flat plane probably along the river along a water body, along a road more accessible sites good topographical conditions good

water facilities so all these natural factors and topography play a very important role in creating a aesthetic development of a site. A flat site, a wet land, a contour land all these creates different typologies of housing that would make housing more interesting. So the topographical part of a site is also be taken care of in order to provide good aesthetic value to your development.

Planning :

More importantly the major stage where you suggest how to plan your development the first important character is vistas what are your site neighbours what are your surrounding and how much you can view from your site say for example you would have heard developers saying that there is a lake view from the house, there is a nice view from your house, there is a nice garden view from your house. So these are the vistas taken into consideration which gives you a proper sufficient reasonable rate of selecting that particular from views point of view

Accessibility to social and civic facilities :

Any person to buy a piece of land or say a partial of land or say one or two BHA apartment they will defiantly look into few social and civic facilities that are available in a walk able distance with them so availability of post offices , availability of ATMs banks dispensary clinics. All these have to be taken care of when you locate a site in a particular location. So when these all facilities are available to a particular user he would close his eyes to buy whatever he suggest.

Proximity :

Important part is proximity to retail hospitals and healthcare. So the previous one and work together. If pings of these social infix facilities to available to user within a mild radius. You can walk and access it so this is more important in a development putting things in a accessible way or say creating an environment that is more accessible through walk walking environments or walking neighbourhood proof to be more efficient than mutable neighbourhoods and thing should be available close to be each other.

Surrounding housing profiles/ urban context:

Surrounding housing profiles always influences what a site character is. You cannot create an icon in a housing neighbourhood compare to the others. So which means that you might have to study the morphology of the existing environment even before you plan so once you locate a neighbourhood you locate a site and once you plan certain parameter based on vistas. Your housing development should relate to the harmonious environment that is created. So you are going to key in your design or your development in a particular contexts. So everything has to go hand in hand with the development you do. So the morphology has to be identified, studied, surveyed your profile should match the morphology. In a single key or a graphical representation your place that is your development surrounded by key attributes which is nothing but

The uses activities, sociability, access linkages, comfort & image so these when further elaborated into intangible like uses activities includes fun, special useful sociability includes how much cultural social interaction you have or the users have with in your living environment. Access and linkages that is the proximity of different social facilities and the comfort the physical comfort one person feels in the housing development. So when these intangible connects with these different key attributes and the measurement that have taken care of a housing development would prove to be successful. Lastly climatic factors this is an architectural attribute, to a planning where even before you start a building you would analyse what are the climatic factors so that you propose a building or you propose a development based on summer sun, winter sun, sun angles, shading, raining you orient your building to maximize wind directions, you orient your site in order to have efficient rainwater harvesting, you orient your topography the morphology looks similar in order to maximize energy efficient buildings. so all these climatic factors have to be also taken into consideration even before the planning or the execution of the building.

Housing Design

Moving on to the Housing design. So here we look at different physical housing typologies. There are innumerable typologies that have been designed in every city. Every one of us would tend to say our own houses individual typology. But to classify everything under one roof, so we have few different things. so the generalise categories are free standing

/detached dwellings and attached/multi user dwellings. so within these categories we look at different typologies that come under each of them. First single detached housing means it is a single house, probably a villa. There is one plot of land and there is one house or one dwelling that is one family lives within that unit. So that is called as single detached housing. It is a development consisting of building and only one dwelling which is separate from any other. Attached dwelling house, this almost is similar to row house category where the vertical levels accommodate one dwelling but horizontal levels that is through the row have different housing units that might be harmonious or monotonous in nature so attached dwelling house means dwelling which is attached to another dwelling or a building but which doesn't have another dwelling above it or below it so it has a individual car park space and it has an individual lane it own.

Multi dwelling house means a number of dwellings attached in a single so you have a single plot you have a dual occupancy apartments so the minute difference is that the core or the staircase is within you will have a two or three units within one single plot of land so it has common areas and the development can be started island can include common areas, common infrastructure within but in the exterior it looks as a single

Residential apartment building so here another minor difference is that they could be a purchaser who can enjoy the housing unit or the purchaser can rent it out to a tenant or it could also be lease to a family so apartment building has common facilities a decompound it and it also to a three story high where there is a multi-occupancy rate within one same building social housing otherwise called as affordable housing in 1920s London or say the slums of London where shattered these were the first proposed units by the London county council. So this is provided usually by a public authority or a housing development board of the particular city. the key function of a social housing is to provide accommodation that is affordable and accessible to all so this can be a mix of typology like row house or it can be a multiuser dwelling so every individual houses has its own entry and it is prevailed at a low cost

Housing cooperative, is a legal entity usually held by a corporation where there are different shareholders who invest on that so every shareholder is granted an access to the housing unit inside it which means that the

resources from them or used it consists of one or more buildings it is a type of housing 10 year which is different from other type of housing units which is nothing but where in a single row house or a attached unit occupancy could be single or it could be rented out or released out here the ten year is completely different and it is one single building where multiple housing units could be attached

A shop house interesting category where you have mercantile in the ground floor and you have things above it so it is the house with the shop below in simple terms. It's an architectural building typology which is vernacular to southeast Asian region you could find and around japan and china where you have the mercantile running around that forms the promenade of the streets or fussard and above you will have houses where people dwell probably the same owners of the shop or it could be rented out.

Classification of typologies: Now classification of typologies. Now we looking at different typologies that prevail in our Indian context. So we can classified as rural and urban in rural we have public and traditional urban we have public and private. Public is nothing but it is given by the municipal authorities of the state government under different schemes traditional vernacular typology and private is as you could see a state independent flats quarters. And public in urban area is would be the slum clearance sites and services mostly the low income or the housing provided by the central government or a state government through schemes in order to promote a safe environment of for the low income and economically weaker section and the traditional house is mud agricultural house potters weavers agraharam, chettinad and toda.

Rural housing:

As you could see in the image a single monotonous housing that is be replicated into different sites and plots everything is the same you have a staircase access to the terrace but the most important or negative impact of all these building is that these are not designed into taken into consideration the social and economic conditions of the target person so when this is not taken into consideration what remains is this meaning housing just remains as housing which has an negative impact on the

society as well as the negative impact on the environment. This is not been cherished so the person who tends to live in this probably might rent it out so the value of it might change and there is no good aesthetic value that is also attributed it in contrast to it you could see a house which is taxed above you could see a small plinth you could see a small house where the functional spaces are arranged around a central Hurth. The above house is being built by the government and the below house is being built by an individual user the cultural conditions social conditions economic conditions are not taken care of everything is taken care of here. even though the house is thin, simple it has an architectural and aesthetic value to it more importantly the functional aspects of every users who build the own house is being taken care in the special plan of it. The above house are planned and the below houses are planned taking into consideration all these factors.

Agriculturalist/ potters/ weaver house:

You could see the much modern or a contemporary way of representing so what was before a thinnai that is sociable part of the house has now become a sale part of view which means that it generates a revenue generates micro economy. Which means that these spaces that built by the users itself occupy a lot of flexibility in it. Which means that one space could be put into use after couple of years. An intern it changes but the previous house which you saw built by the government it is not flexible for any users. Buildings build by them have common shared spaces where the women folk entertain themselves in terms of having a communal gathering close around the well. So wells forms the backyards of the house which also plays a social gathering there are few couple of children who play in and around those places and a well is being shared so this is the common or a social amenity that brings in people together in different houses so four or five houses share a common part which is this gathering spaces. More importantly handicrafts play very important role in rural housing typologies. Every people follow the shop house which means that every people work there and live there. So for working there they need to identify spaces which are comfortable for them to work in. So the anthropometry of every space would be changing according to their profession weavers house will have the space to accommodate the waving machine of the hand looming or a handicraft person or a person working with portry will have a

outdoor will have a backyard space where he could store his clay pots or there is a private working space for the clays to be moles together. So all these has to be taken care by a public housing authority which decides to provide houses housing for a rural areas. Another interesting typology is the agrapharam.

Agrapharam :As you could see it's a typology where you have road in the central and in the end of the house you could see a temple at the corner and surrounded by houses on either sides and all the houses are more linear in character and of course the streets are bit narrow which end up in axial. Temple, the above image represents a plan of one of the segments or one of neighbourhood in kallakurichi and tamil nadu where you have one particular road and you have few narrow parcels of land which abort the road on either streets all of the form a linear geometry so one could question if there is a wall to wall construction if this walls are so narrow how could the light come in. The answer is very simple the planning of this agrapharam takes into consideration one two three or a couple or a series of courtyards the open space is which you could see on the roof slaps which pulls an light which means that the courtyard sides is may vary in terms of size interms of scale or interms of hierarchy and the users might also vary so the etymology of the space is or is follow you will have a grand stairway or the puramthinnai or the mainthinnai where social gathering happens and as you move on from puramthinnai you move into agamthinnai or you will have a small safety room which is locked and which is being accessed from either sides then you will move into probable courtyard or the rezhi which is the spaced surrounded by courtyard for the functional uses. Thalam or adukkala where another hierarchy of courtyard probably these two courtyards host the main functions of the houses any special occasion would be held there moving onto the next phase which would be the service part where you will have the pooja room, you will have the kitchen, you will have the well probably the store room and finally that's leads into a communal space where you have the toilet and the backyard space which you will have the other way. So these series of courtyards play a very important role in also ensuring adequate supply of light, air inside the building. So ventilation solved functionally spaces are arranged one according to each other and every space gives another attribute to the remaining spaces when these form a settlement you could see a

monotonous arrangement of all these spaces. So this further enriches the character of any settlement even though it is monotonous in nature for every elevation or street hazard of every user will change. So this internally creates a harmonious environment so even this cannot be planned in a modern context so these are vernacular typology which dictate you what are the role of individual people who play in the organising settlement.

Chettinadu House

An important typology which is exhibited or which has exhibited the grandeur in one important part of south India so it has otherwise called as naattakottai nagaradhas house which means that these people are from poombukar where they fled because of the flood and they have settled in parts of sivaganga district. So now the image dictates you how grandeur should be the house usually the houses are 1:2 1:3 1:4 in ratio where you see the palatial attributes in an elevation like this. So the top most part you could see are attributes that are taken into consideration the religious aspects. The balustrades the arched windows and these arch from a colonial influence and the compound wall always to restrict people from entry . so there is also hestivics tells that if this was a ditty which means that the family followed a religious practice or this was Britisher this family was influenced through colonialism. So this the palace or this the palatial house which exhibits a contrast from a religious act tributes of architectural characters along with the colonial characters. This space of the house is called as mogappu as the image shows the grandeur a double height space with granite columns that are flanked by either sides the entire plan is symmetrical in nature you could see Italian marble flooring you could see side colonnades that are flanked and you could also see a grand staircase that are opened up. This is the front part of the house where the entire investors are say business people would sit in chat. This is the next part of the house once sketch illustrating a place resting for a man. The plinth that is raised above the ground is nothing called as a kanakku pillai room where people used to check notes , check accounts of what has been sold or what has been purchased. The sketch has been attributed so where the column form granite and tea could part of it so the grandeur is also not based on what the architectural element are and also the materials. An Italian marble floor Indian granite barmy steel hoods all play a regional contrasts but work and go hand in hand each other the major part of the

house which is called as a valavuvasal which is nothing but a central courtyard where the religious or the special occasions happen and interestingly the house was planned based on two important functions one was exchange of business second was weddings this place plays a very important role where the wedding ceremony happens and an additional advantage of space is you have an open courtyard which is surrounded or opened on top which is also efficient in sucking the air out of the space to provide or ensure adequate supply of light the verandas or the eaves that project out of the corner prevents rain from getting inside or the rain water drains inside and the pots the bigger pots that are kept here are important aspects of collecting rain water so in modern days we are calling it as rain water harvesting during rains the entire arrangement of the setting spaces move inside again rural typology suggests how flexible spaces were planned even though it is for one particular functional use it has been moved or made into different typologies of uses. In other words we could call it as these spaces need not be mentioned by a length width or height which means it has fourth dimension which is also called the social characters of the every space. The amount of sociability exhausted in these kind of rural environments though the typology might be small like a potter's workshop in an agricultural house or it might be as grand as a palace like this but the social character remains the same but the hierarchy might vary and the grandeur of it varies because of the economic conditions of individual users. The plan metric form which tells you the entire floor area which is rectangular in shape which extends from one road to another road so it's in the ratio of 1:2 or 1:3 sometimes you basically have the street over here from it you enter you have two flanking corners you enter through a small thinnai you move into a space so the space before the major courtyard the central courtyard is the mudhal kattu which means that the area which is built before or after the first courtyard so the space which is built after the courtyard the space behind it is the space for the women folk so culturally people have been biased in terms of creating social barrier. So the space beyond the courtyard on towards you right is the men folk space. space on this would be the women folk space so both of it exchange in terms of ceremonial occasions in the central courtyard when you move to back you have backyard which you will have the toilet facilities, other facilities along with the kitchen. Now another important of compound of this is the entire house is symmetrically the same when you

but set the entire along a particular axis both of it prevails the same. So the last part of this is cluster housing

Cluster housing:

Cluster means getting together things as verbally it says so now in a housing cluster which means that you are providing a shared atmosphere for different housing typologies. As conceptual image explains different houses arranged central on courtyard or a central courtyard is nothing but a common facility. So the important aspect of it is it has a powerful physical form for urban design especially when you target different densities or different communities clustering concepts helps you in doing lot of things it is related in size it creates harmony it creates well balanced environment and it also provides equality to the housing users and above cluster housing we will be looking at velappy housing design by charls korea after the chapter and it is also in the means of aspects territorialities it creates a border with itself and finally it also protects users from climatic conditions especially rain falls.