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Housing Policy & Planning

Lec – 25
Planning for Plotted Housing

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Hello in the last lecture we discussed about the housing strategy for the new housing areas of a city. Today we will discuss about the principles of plotted housing as a subset of the new housing strategy for a city. So before we come to the plotted housing and its principles of planning let us have a quick recap what we discussed last day. We discussed that the housing for the new areas, the major part of the work in house land assembly, because you did more amount of land to create more number of housing.

So four methods we discussed either land acquisition or you can go for land readjustment, you can go for development control or you can go for public private partnership. So through this methodologies you can assemble lands, second part will be the land subdivision. So land subdivision is basically the methodology to divide a bigger chunk of land into small pieces of land based on our requirement.

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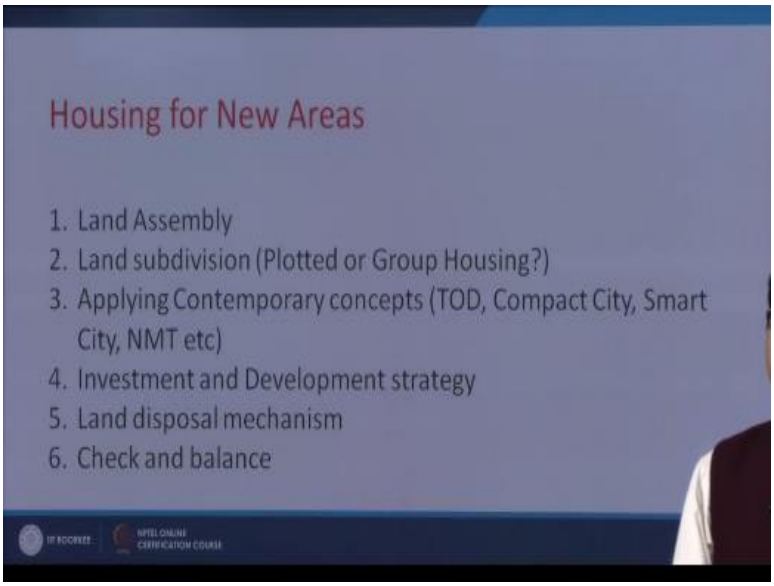

So requirement maybe in the terms of plotted housing and group housing. So we will discuss one by one today's and next lecture, after this we will discuss that while we make the land subdivision considering the population and the type of the housing required. So the concept like transitorian to development, the concept like compact city smart city and non more Christ transportation and some other concepts should be considered before the land subdivision.

Because land subdivision is the method or action which will determine the type of housing which will come in a particular plot. Next we will discuss the investment and development strategy, so investment and development strategy could be public by government organization, it could be joint clinchers using public and private both investment and it could be private as well.

Land disposal mechanism, land disposal if the land is acquired by the government that is the public land, so public land is developed for some town ship or some public purpose, so that land should be distributed over distributed or allocated or disposed through a common lottery system. Otherwise, if it is acquired by the private investor separate mechanism can be thought out. And apart from that there could be shake and balance by the public authority.

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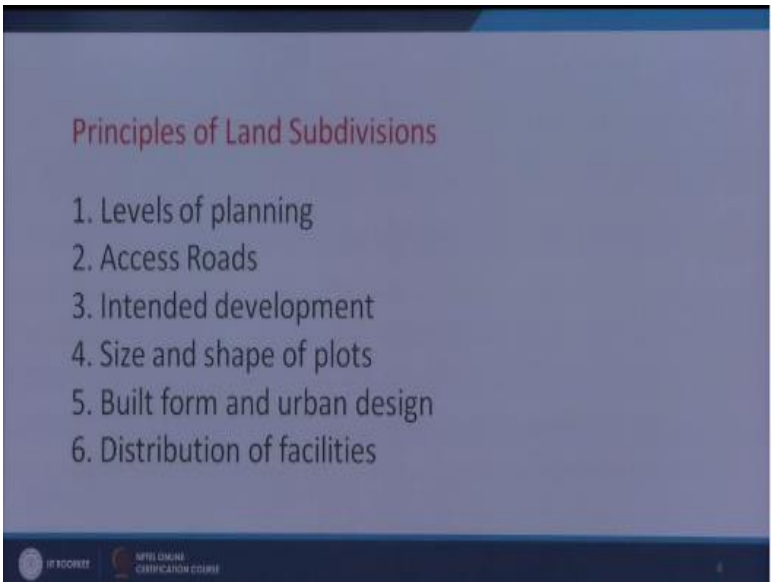

We discussed few principles of land subdivision like levels of planning. We discussed that the planning is done at the several levels at the cluster level, labeled level, sector level and also at the city level so based on the population like we started the discussion at the cluster level which is nothing but the cluster of few families, few blocks or buildings which shares the common facilities in terms of the small open space or small facility.

Similarly at the labor hood level at the sector level or at the little hard that you see city of sub city level various kinds of facility defines its level of the hierarchy. The access roads were also discussed, two types of access road we discussed one is local road and collective road, so local road and collective roads both give the access to the plots, small roads provides access to the smaller plots, bigger roads provides the access to the bigger plots that is the principles.

And collective road collects all the issues from this small or the local roads and text to the arterial road or the major junction so that the zone to zone transportation with your city is possible. Then intended development beyond the city limit when we go for new housing areas, new housing strategy so our intension that what kind of development, what scenarios of the development we want, we want to have.

So based on that intension that vision or how do we look, how do you want to see city, this kind of parameters also done influence the land subdivision exercise. Fourth we discussed about the size and shape of the plot that the size and shape of the plot should be such that our wastage of the land should be absolutely minimum, because we told in various occasions that land is a very carefully commodity.

So based on that the size and shape of the plot will be the optimum and it should be determined by the calculation of the population to be accommodated within this way in the plot and accordingly the size can be determined. Then built form and the urban design, urban design is the design which consists more than one building, more than one blocks, more than one building complexes in a different plots.

So that is the urban design how we can bring some harmony, some concepts, some visual continuum in a series of plots or series of building blocks that is the urban design as a hold. Apart from that there are features like built form, other built form which also can be integrated in the overall development of the building then distribution of the facility. So distribution of the facility is done at the various levels cluster level neighborhood level and sector level.

So now based on this discussion we will have a discussion on plotted housing so plotted housing is a one subset of a the large lands subdivision around the city so in around a city for the new areas what we are going to develop for the further population or further housing some part could be plotted housing and some part could be housing by enlarge so plotted housing as discussed or as we defined.

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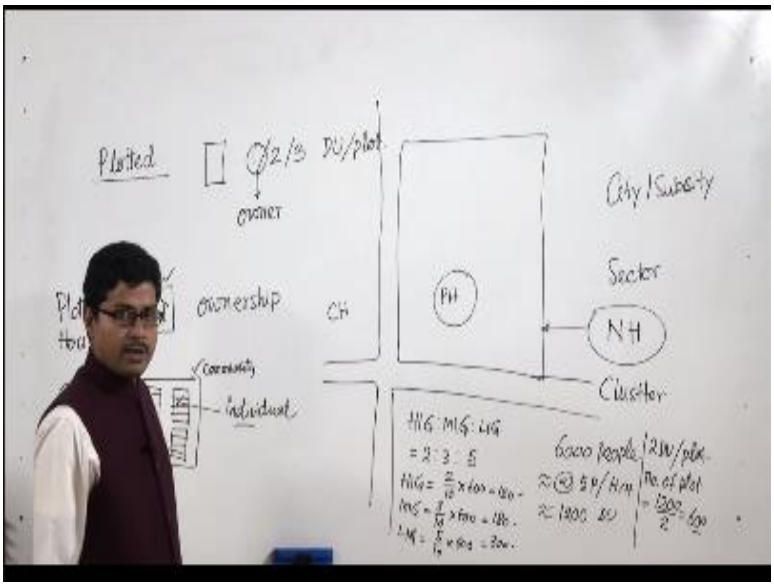

Earlier also that plotted housing is basically small plot small plots which can accommodate minimum 1 or maximum 2 or 3 dueling units in a particular plot so o1, 2or may be 3 dueling unit per plot can be accommodate but here the land ownership or the plot ownership belongs to the first owner which is who is owner the plot and may be the second and the third owners those can be for them the house can be given on rent.

So the well we talk about the total number of ownership in terms of it is build ability but the basic differentiation of the plotted housing than the group housing is that that with an a plot the owner they owner enjoys the ownership of the building and the plot both so if this a plotted housing so owner ownership belongs to plot as well as building both but in group housing when it is a group housing but when we talk about group housing it is not like that the plot is bigger and definitely there are more number of building.

So that many people can stay together and can enjoy some common facilities so here the ownership of the plot is by community not by individual but ownership by the apartment or the unit you was you where staying is by the individual that we fundamental difference of the plotted housing and group housing so based on that we may we discuss the plotted housing and it is

implication so plotted housing so you can understand that in plotted housing and individual owner enjoys his here sole ownership on the land and the plot he can do whatever he wants to develop the kind of building kind of landscaping kind of coloring etc…

But definitely some development controls are there that he as to avoid by now if this is a neighborhood I hope you can you have already understood and the concept of neighborhood concept of cluster in the last lecture we have discussed the concept of cluster neighborhood sector then city or sub city level so we are talking about how at the neighborhood level we can go into further sub dividing the plots into smaller pieces of plots for the individual owners that is the plotted house housing.

So probably you have air marked the various selector or various neighborhood in overall land sub division and you have air marked this plot as a plotted housing and this plot as a group housing or this plot as cooperative housing whatever it may be so how do how we proceed for the plotted housing now based on the overall housing strategy or the city plane strategy some population definitely will be assumed.

So based on then population we can determine the number of plots and the size of plot so considering for example in a neighborhood in a pollution we have to accommodate say 6000 people so 6000 people means if we consider at the rate of 5% per household then which will equate to 1200 dealing unit that mean 1200 family will be living there so for discussion or for our convenience if we consider that one plot that if you consider that one plot that dueling unit or two family will be sharing one plot will be sharing each plot.

Then number of plot will be 600 now this 600 numbers are plot can be hire income group can be middle in group or can be look lower income group so based on your for a strategy or for all mind it given by the housing strategy exercise you can determine the ratio let us example that out of 600 your ratio for different category of housing is say for example say HIG : MIG : LIG say 2:3:5 so in that case if the total number is 600 then your HIG will be right. So this is the final, final number of plots you have to accommodate in for each particular economic group now definitely.

Based on their portability the side of the plot for hire income, middle income group and lower income group will not be similar or same so how do you determine the number of the side of the plot let us taken another example for example for example for our convenience we are calculating it in a very easier manner in a simplified manner but the actual calculation could be little more integrate also but let us understand at least some basics theory basic assumptions so that we can understand and any more we will work we can execute that or you can apply that with a simple or simple mathematical calculation now let us taken an HIG.

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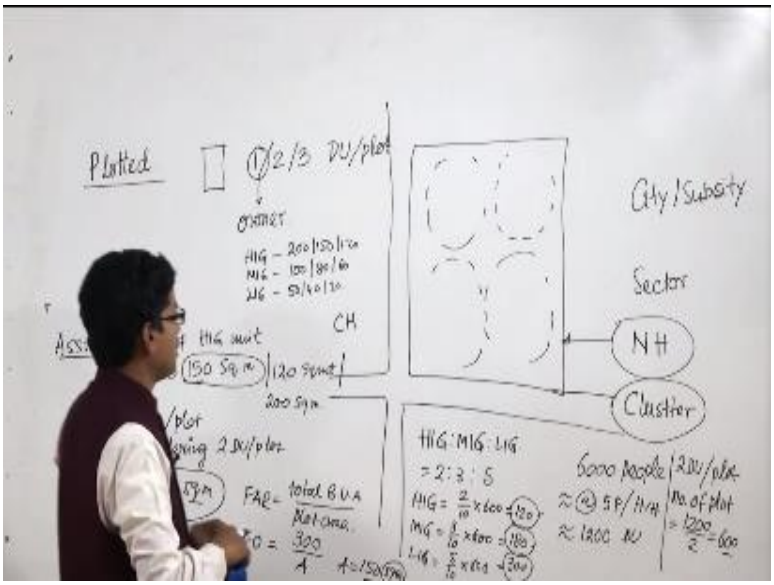

So in HIG plot now based on the city side or the city profile we can take a average size of the HID HIG dueling in it for example let us assume the size of HIGT unit say 150^2m we are assuming it can be 200 it can be 120 it can be any amount so 150^2m so if you want to accommodate two unit per if you want to accommodate two unit power plot so, so this is the buildup area so buildup area /plot considering two dueling unit/plot will be 300^2m so this becomes a total buildup area in a plot for a higher income group plotted housing plot now let us .

Let us go to that discussion of the a floor space index two three lectures back we discuss that the density is very much related to the concept of floor area ratio or floor space index so floor

space index is nothing but the total buildup area divided by the plot area now if this is the total buildup area this is the total buildup area, buildup area and let us assume the plot area as A so based on our FAR formula we know that FAR is equal to total buildup area divided by plot area.

So therefore if now you can check to the building regulations and the developing way that the FAR provided to that area is to or 1.5 or 1.75 or 2.5 so let us assume that FAR is two and total buildup area we know 300 so plotted a is a so therefore A becomes A = 150^2m right so this become this size of the plot so similarly we can calculate the size of the each plot HIG MIG and LIG now if you want to make a variation of the plot size is it is possible that within the same economic group you can try to bring little more variation for example HIG two HIG one HIG three MIG one MIG two MIG three starting from the basic in need to the little higher unit to the.

Little bigger unit so considering that for example you have taken 150^2m/u you can consider like 120^2m you also can consider 200^2m so based on that for example HIG could be 200 150 120 we can assume MIG as 100 80 or 60 in square meter right. Similarly LIG could be 50 40 30 so this type of variations you can bring in a projects I means to assume and then you can play with the size of the plot area now so once you come to the plot size and the number of plots now it is up to you that how you are going to accommodate all those plots ion a particular given chunk of land.

So here you have to go back again to the concept of cluster which we discussed so traditionally ion a neighborhood they could be four cluster five cluster six cluster so based on the facilities now ion this junction let us taken look of the what are the gradients which makes neighborhood what are the gradient in terms of the facilities and the land? So here basically four types of component you are dealing with to make up plotted developed in a particular piece of land.

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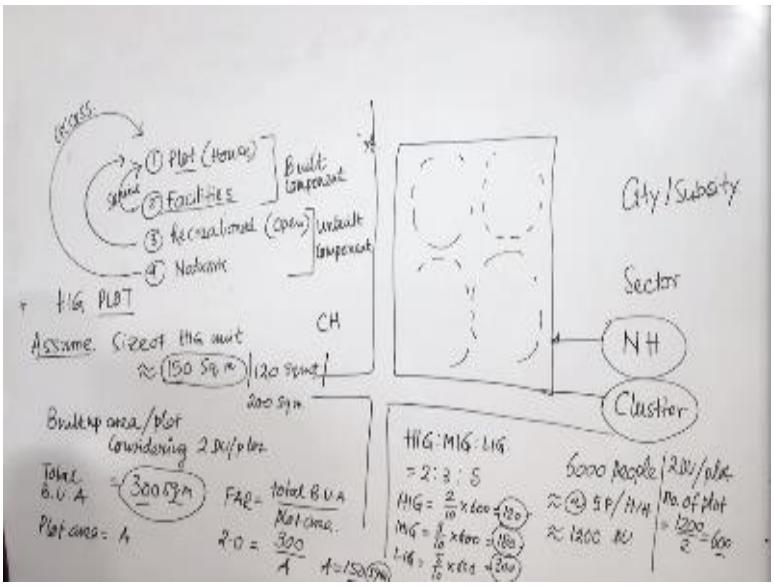

The number one is the plot itself plots for house number two is the facilities right facilities based commercial school health and education and all this thing facilities three is discretional or open space and forth is your network, now these are the broad four components of your plotted housing out of this four component this two components are basically built component and this two is basically not built or un built component right.

So purpose of giving the facilities as a built component is to enable the houses to give the essential surface like the day to day start it is like vegetable or grocery or any types of facilities which we want from our neighborhood for today or every day basis, the purpose of recreational is to give the people who are living there as a cytological or mental relief when you go to some park or the play ground when children's play in the play ground they get the mental satisfaction.

So this is one of the important need for the recreational you meet with your people or meet with your friends or relation so that is so this recreational space is fulfilling your need for your relations meet for your social need and this is fulfilling your some of the basic need and also the network which is another component of un built element this is giving you to the access so the facilities given you the essential service the recreational spaces are giving the social fulfilling

social or recreational or need fulfilling and network is fulfilling your access need or connectivity need.

Now it is very important to see that in a plotted development how you keep a balance between the built component and un built component, un built component is very is very important to make a relation between the built and un built component now there could be two approach one approach could be.

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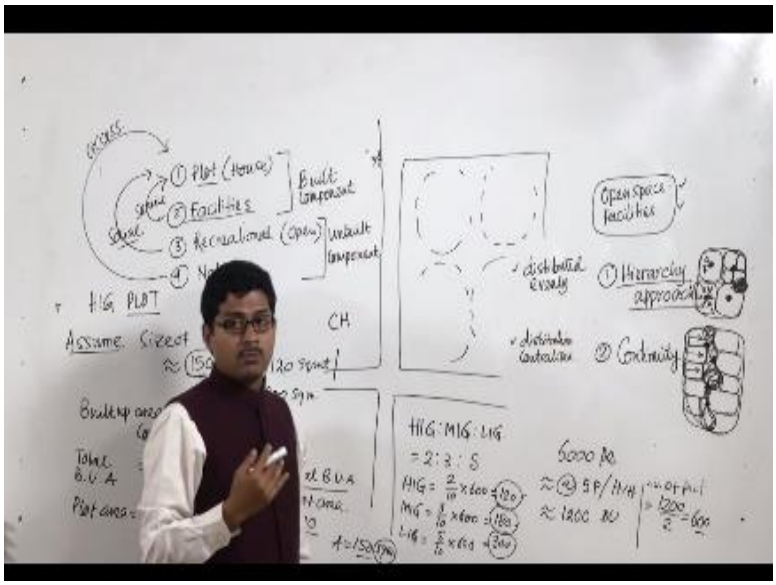

Now in this point we have to go back to the discussion of the higher key of the planning which discuss last lecture we discus that hearer key will be in terms of the cluster in terms of the neighborhood and higher level of the planning like sector but here we are dealing with a simple one neighborhood for our convenience of the discussion it one neighborhood how we can come out with a very specific distribution of the plots or the land area for plotted areas and the network areas so for that we can distribute the open space or open recreational area and facilities.

So this two are very important part one is you are the un built component and this built component this two area how you are distributing open space and facilities over the whole area

based on that you can take two approach one approach is you can go for distribution with the higher key approach so higher key approach enable see you that if this is the total component you can distribute over four component and each four component can have further four micro component so this the higher key approach another approach could be that you can distribute the open space and facilities as a continuity so another is your if this is your neighborhood.

So your clusters could be based on you can be placed on different location and different fashion and some part could be a continuous area to provide the facilities and the open space as a continual state of access. A continental access a continuous facility a continuous accessibility, so from every location they can access, now based on this to have advantage and disadvantage.

If you provide this facility and open space in the hierarchical approach that means for open your placing open space for every sector every component separately provide facilities for every cluster. But here you are not providing open space and cluster separately you are providing as a continuous structure plan right. So here the hierarchy approach the advantage is that here it is distributed almost evenly but here the distribution could be evenly or it can be centralized also.

Centralized son basically here the distribution is centralized because the facility and open space we are giving a center we are not giving in the other side considering or assuming everybody will be available to reach that facility with easy connectivity. So apart from this it has the advantage and disadvantage in separate aspect also, for example in this approach everybody will be able to reach their facility within a facility. But here but for bigger facilities they have to walk far because for example there is a larger facility say primary school. So am body living here they can approach the local open space or the totter with say like 40 to 50 meter away from their house.

But on the other hand for accessing a primary school or a bigger little bigger facility there at the neighborhood they have to work a lot on the other hand if this kind of continual approach is taken we can place varies kind of facility in different location. So everybody gets a everybody gets all the facility but in a different type of accessibility. Now this two approach can give us to different scenario a two different mythology to make a plotted housing.

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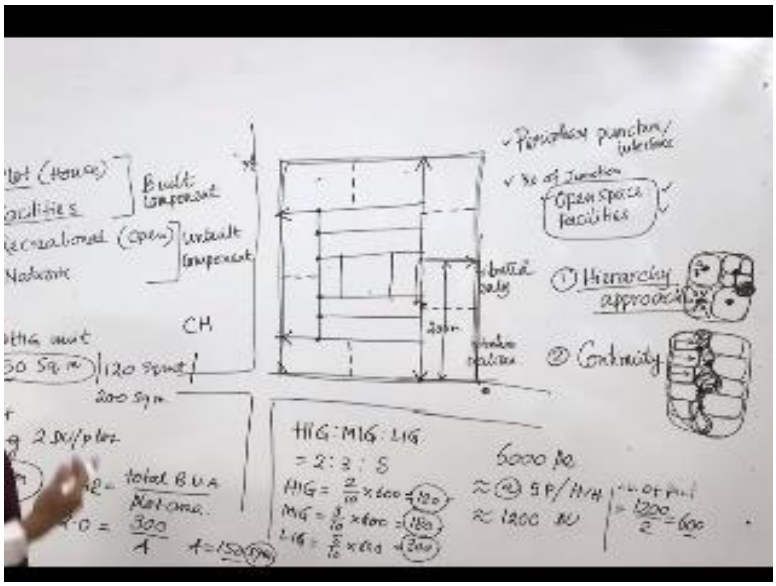

Now let us discuss some of the element related to network so we discussed about the open space and facilities could be distributed as a centralized and distributed area as per the hierarchy or it be continuous now for the network the objective of the network is to connect the open space and facility. Some basic principles are there which we should maintain for laying of the network of the connectivity. If this is there peripheral road which is usually a higher level of load may be local road or a collective road may be cybermall road or may be arterial road.

So usually at the higher level of road we do not make too many punctures giving the local road so this is a on entry those is another entry this could be another entry so around the peripheral we max to max. We give more than like two puncture in a one side one puncture in this side another puncture in this side. So interface is local road and the higher road should be minimum at the peripheral. So in the peripheral the puncture or interface with the local road and the higher road will be minimum.

Second is that inside the neighborhood you can make n numbers of the junctions with the local road and that is inevitable there could be junctions like this there could be roads like that so here even if it is kind of junctions are there with a very facility like 40 meters or 50 meters . Even then

it is not that much dangerous as dangerous like the if we get to much punctures in the peripheral area because in the peripheral area high speed traffic or more number of traffic is there.

So we do not disturb the more number of traffic road in a more number of puncture may be one or two punctures. So that is the number two privilege that is the number of number of junction inside and outside. Then another very important point is the vehicular and non vehicular circulation here you can see that it is visually based on the vacuolar network which may be 10 meter or 11 meter or 12 meter but what about the non vacuolar those who are walking so non vacuolar network and vacubalility is also a very important parameter here so if you find that this distance is very long set more than 200 meter so think about a example that there is a bus stand here somewhere here and my house is here.

So how do I come here I have to go there and come like this so why not we can have a pedestrian connection here or may be here or maybe here so this similar locations respective of the your vacuolar connection we can have many numbers of pedestrian connection to provide the pedestrians are to provide the common people to access the their plots from the public transport terminals of public transport stoppages so that is another principle that is the vacuolar and non vacuolar interface like affects from this vacuolar and non vacuole interface inside.

The neighborhood now based on your principle of a higher approach continuous approach you can make the road network in a different fashion now after the discussion lat us have quickly some pictures of plotted housing so that you can understand the principle in a better weight so here you can see that this plotted housing is done on the bases of the higher approach this is one neighborhood in every neighborhood is contributing one different cluster.

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The facility are distributed although the open space or the digressional open space is continuous in this example, I showed before here you can see that all the facilities these are distributed over the neighborhood and the punctures of the local road from the major roads only one not multiple because to reduce the accident to reduce the condition but inside the neighborhood you can have multiple numbers of junction, multiple number of punctures as well this is a plotted layout ,for the very poor people low income group housing here you can see that even if the vacuolar punctures is not there in various point the pedestrians punctures.

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Are there so that people can work and reach that destination so this kind of elements at their in a plotted housing here also you can see the pedestrian puncture and in this is a major road inside the road you also can see various different kind of puncture I mean the local road so that is possible if it is a within the neighborhood but outside the neighborhood we cannot have the more number of puncture may be 1, 2 may be another one tree. So that major concept now in this layout you can see that.

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It is the concept the second approach where we discussed the open space and facility have provided as a centralized green areas where a continuous area session in this continuous session one element is cleared that you won't find very defined higher of the open space boundary of the open space is very much irregular whereas earlier example, we have seen that boundary of the open space are very much regular.

Here only the center open space is very much regular which is rectangle but other open space are not that much regular in this example also you can see the irregular profile of the open space but this kind opens give some amount of feeling continuity and largeness whereas the maintenance of the open space becomes sometimes TDS or sometimes challenging whereas regular open space is always better to maintain because it is surrounded by the plots this is another approach you can see but this kind of approach take lot of land ,land areas for achieving this kind of density is very less.

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If we go to this type of approach where centralized green areas and the open spaces are provided and this kind of local roads are provided as a we call to which is ending as a dating so that but it is design in such, so that some car can than take around and come back to the road so this is the basically overall some of the pictures I have shown in the projects various projects are there you can browse internet or the books and the reports. You can see many examples are there you can see and always referred back.

So today we discussed the basically principles of plotted housing two fundamental approach to discussed one is the central higher approach where the planning is done in a various higher session another is a continuous approach where the facilities are providing in continuous recontional open space the open and the native art is basically making non build component whereas the building and facilities making the build component of a plotted housing and also we discussed how to calculate the number of building unit and the size of building unit or the plot based on some assumption and based on some overall guidelines given by housing strategy so next time we will discussed the principles of the group housing so thank you the today.

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