

Episode 31

Is There an Optimum Housing Density When We Consider Sustainability?

With Graham Towers

The show notes: www.houseplanninghelp.com/31

Intro: Let's get to today's interview and it's on housing density. This ties in with the recent Google+ Hangout that we held and I was interested in whether we have any responsibility as self-builders to think about how we're contributing to the housing density of an area. So we're going to find out more with Graham Towers, architect, planner and also author and I started by asking him for a little bit of background on his career.

Graham: Well I trained as an architect in the sixties and had an interest in housing from the time that I graduated and I got a job working on high density housing design in about 1969-70. That led me into beginning to think about what was happening to cities in terms of the fact that we were working on a high density area of old housing in Islington which was being demolished to make way for a new high density scheme.

Having worked on that for a couple of years I began to ask myself should we really be doing this? What about the people who are being driven out of this area because of the fact that their homes are being demolished and that led me to get involved with a community organisation in North Kensington, the Golbourne Neighbourhood Council, which was the first neighbourhood council in this country. That was the process where they were fighting this redevelopment, this wholesale clearance in their area, but were not entirely opposed to redevelopment.

One of the key things that emerged there was the Swinbrook scheme where an area of Victorian housing was demolished phase by phase. Some people had to move out but then people could be rehoused as each new phase was completed so the community could be kept intact.

And then I've gone from there into academic work for several years teaching planning actually and architecture. Then in the eighties I worked for Islington Architects Department where I was working mostly on the regeneration of housing estates built in the 1930s and the 1950s.

So we had to do a lot of community consultation with the tenants who were living in these houses. That was somewhere where it taught me a lot about how to deal with participation and user involvement in the design of housing and from there I left Islington in 1992 and since then I've been mostly researching and writing.

I've published three books on housing which deal with various aspects. One was to deal with community architecture, the second one was looking at how we can deal with problem estates from the sixties and the seventies and the more recent one was a general introductory book about the design of urban housing. So that's more or less up to date.

Ben: Maybe we could go back to the beginning when we're talking about housing density and I'll just ask you simply, what is it?

Graham: Well housing density is measured in various ways. It is basically a measure of the number of housing bed spaces on a particular area of land and there are various units for measuring it, but we don't need to go into all that. Do you want to go into that?

Ben: Go on, yep.

Graham: Well at the lowest level is net residential density, which is the number of beds spaces on a housing site and then there is gross residential density which includes the whole area with all the community facilities in it. Then there is a measure of density which is called development density which is, sort of, the density of the whole town, the whole urban area and these are measured in various ways.

They can be measured in bed spaces per hectare, which is a measure of the number of people who might be living there. They can be measured in housing units, dwellings per hectare, which is a measure of the number of houses but that doesn't necessarily tell you how many people are going to live there. And in some areas, particularly on the continent of Europe, not Britain particularly, there's a measurement in terms of housing floor space, the number of square metres for housing on a particular area of land.

So that tells you the level you might expect in terms of bed spaces, occupants, people living on an area but the other factor which is critical really is the level of occupancy. So you can have areas which are quite high in terms of bed spaces, I mean like this one for example, is quite high in terms of bed spaces, but most of the bed spaces are not fully occupied. So you can get areas where there's apparent high density but for low levels of occupation the number of people is not great. Whereas in social housing in particular, a lot of social housing is over occupied so that there's many more people living in an area than it was designed to take, so this creates housing stress and problems of maintenance and decay and social problems as well.

So that's where density becomes a problem. I suppose one of the factors is that in terms of energy conservation and tackling climate change we do have to build more high density housing because that means, first of all, when the houses are close together, particularly where it's terraced housing or flats, there is less heat loss because of the fact that they are protected by other dwellings. And it also has an effect on transport and services because in high density areas it's much easier to service for things like deliveries and refuse collection as well as things like providing bus services and good public transport and providing things like water, gas electricity, cable and so on.

All those things are cheaper in areas of high density and that's simply because they are cheaper and easier to provide, they use less energy and that's why I think if we are going to tackle climate change effectively we do have to be looking at density as being a key factor in reducing the cost of cities. And if you look at American cities you see these single house on a plot and then another single house that's so inefficient in terms of both the use of land and servicing and the energy costs that it's really not sustainable.

Ben: You've mentioned some of these points already but I would be quite interested in just going through this methodically. What are the benefits of low density housing and some of the benefits of high density housing?

Graham: The benefits of low density housing, I don't think in terms economic and climate change efficiency I don't think there are any benefits to low density housing myself.

Ben: But does it make a nicer place to live if you're, effectively you must be in a low density area here or would we not call this?

Graham: No I think the problem is if you get a very high density particularly if it's social housing, low income housing, it creates all sorts of problems so there are dis-benefits to that. If you get low density housing which is what has grown up in the western world particularly as a result of the garden city movement of the early 20th century, mass housing has become, particularly for those who can afford to pay for their housing directly, the norm has become low density suburban sprawl and that is highly inefficient in terms of the fact that you can't provide all the services that people need within walking distance or easy travel distance of their homes so it creates demand for a lot of roads, a lot of car travel, and that in itself is a dis-benefit.

I mean part of the problem which never seems to be addressed currently is the transport system in this country just doesn't work. Constantly you hear of long delays and jams on motorways and so on and that's because the transport system is designed to meet a low density environment and therefore the only efficient way people have, really, of travelling is travel by car. So the question of density has an effect on the way the whole society functions.

Now I suppose the argument in favour of low density is basically the garden city argument. Victorian cities were very high density and they suffered enormous problems in terms of health, transmission of disease, pollution from factories and coal burning. So, I mean, the garden city movement was a sort of justifiable reaction against the horror of the Victorian cities and we've created a lot of low density housing particularly in the period between the wars in the twenties and thirties. I think three million houses were built during that period mostly in the sort of peripheral estates, suburban sprawl, and there was in London, for example, there is a twenty mile ring of low density housing built around the whole city. A lot of that was private housing built by private developers, about two thirds probably, and then about a million houses built by the public sector for social housing.

In the post war period that went on, we had things like the new towns movement in the forties and fifties, which was part of the legacy of the garden city movement and, at the same time, from the fifties onwards particularly there were relatively high density housing estates built in the inner areas of cities, which were initially tower blocks, and then more complex forms of high density housing which proved to be unsustainable in the sense that the systems broke down and they became degenerated in terms of abuse and decay and overcrowding.

So I think from the 1970s onwards or late 1970s onwards, we began to be looking at some other intermediate form, not high density but not low density, so we are looking at something which was about the density of this area where there's terraced housing, which is relatively efficient because the houses are close together and they shelter each other in energy terms.

At the same time the research was beginning to show that although in the fifties a lot of terrace housing was knocked down and replaced by tower blocks and slab blocks and other forms of high density housing, in fact, the Victorian terraced house was about the same density as the tower blocks and slab blocks which replaced them so that it became obvious that what you needed to do was to create something similar in terms of density level, which would work because, although they had knocked a lot of Victorian housing down, a lot of it was kept and renovated and became highly valued.

I mean it's areas like this, for example, which is mostly terraced housing but it's a very highly valued environmental area, so this is the sort of model that we are looking at which is, on the one hand, it's a relatively high density but it's also efficient in the sense that it is relatively easy to service, it's relatively low energy consumption and it provides an attractive environment which people want to live in.

Ben: Are we saying here that there is an optimum housing density, really? You don't want to go down the low density route particularly I suppose in the UK where land is limited. We could use the land but we might regret that further down the line and then if we go too far the other way we will have issues of air pollution, a lot of traffic. Can you avoid those elements in high density areas?

Graham: Well if we look at the areas where housing works, the European cities is a good model actually, because a lot more people live in flats in European cities but it's also a very attractive environment which people appreciate. And those areas are not high density but they are relatively high density so, yes, there's an intermediate model which I think is basically what could be described as the model of the European city and some of Britain's cities as well.

Ben: Is there an onus on us as people who want to self-build, how can we be part of that? Do we just have to be mindful of how much space we are using?

Graham: Well, I mean, there's quite a well known study which I've quoted somewhere, I can't remember where it came from originally, but it was done in America to compare housing in suburban areas and in urban areas. So they took models of two families, one family living in a suburban area with a very highly efficient house, which had very high energy standards and one family living in a city area which was unimproved, and what they found was that the family living in the unimproved house in the inner city used less energy than the family living in the suburban house which had been highly insulated. That was because the family living in the suburban house had to travel long distances to work and all the goods and services that they needed had to be brought to their house whereas the family living in the city had all these things close by so they didn't need to travel to work and they could walk to work to their circle of services and so on.

I think that's a very instructive study because it just shows that a lot of models of energy efficient housing have been built in suburban areas but really that's not a sustainable model. You've got to have relatively high density coupled with good levels of insulation and energy efficiency and so on.

Ben: Would it be a crazy idea to say our cities of the future, perhaps we've got to make sure cars aren't in them? How can we create really dense areas that also are full of fresh air and a few green spaces that are shared obviously but how do we achieve that?

Graham: Well I mean I have a view that the smaller cities in Britain are useful models because they have relatively high density and they have concentration of services, which means you can walk to most places. That's partly the reason I moved to Brighton because it has all these things. Its setting and the environment is good but the actual city itself is compact, it has high levels of service and it's easy to walk to most things you need to do whether it's health care or shopping or visiting friends.

There's a town in Germany where they have more or less banned private cars and everybody has to use public transport, which I think is one part of the answer. There's a model city in Abu Dhabi which they have built recently which is highly energy efficient and in terms of energy one of the things that, the ironies is that in hot climates dispersed housing needs much more cooling so it needs a lot of energy to cool it rather than to heat it and air conditioning costs a lot of money in terms of running it. So part of the model that they've used in the city of Abu Dhabi is to be densely built so that there are narrow streets which keep out the sun and reduce the

heat concentration and that means, because it's a compact city, it's easy to service and they have a space age form of transport system with automated cars that are run by computer and so on. I think we've got enough information now to work out how to build cities which are more sustainable and at the same time are very attractive.

Ben: Is there a case when a place is actually deemed full and I think about this from the biggest perspective of the world as well but does this come into this debate or is it totally separate?

Graham: Well there are areas like the favelas in South America and places like Mumbai in India where levels of population are so dense that it does create a lot of problems, I mean, particularly in the sense that the people living there are living in squalid conditions, which is something that doesn't necessarily relate to climate change but is something which we want to avoid in terms of human dignity and so on. So there is a level where . . . levels of crowding do become unacceptable for social reasons if for no other.

I think one of the other problems is that in terms of housing you can build housing at moderately high densities in forms which are sustainable and pleasant to live in, which means terrace housing and small blocks of flats, and there has been some movement in some parts of the world to creating a lot of housing in tower blocks and very high density housing notably Hong Kong and some cities in the east. So there's still a sort of movement in some areas, some places to build large numbers of tower blocks for residential use which I don't think is particularly desirable in terms of it doesn't provide a very good living environment.

I haven't sufficient experience of these large areas of tower blocks and so on to know, I've looked at some in Britain. There is one in Glasgow for example, Red Road, which is an extraordinary development of massive tower blocks set in a sort of almost suburban undeveloped area, which was built with virtually no services and no transport links, such an extraordinary thing.

So I mean that doesn't work because it's just housing and just provides shelter. It doesn't actually provide all the things that you need for an effective place to live.

There's a well-established theory that housing doesn't just mean dwellings, flats or houses it means all the things that are necessary for a residential environment. That means local shops to provide

food and basic services, it needs healthcare facilities, it needs open space where children can play outside and so on. So there's a whole gamut of things which are essential to effective and useful and good housing which has to be provided as part of the housing development. You can't just build houses and think that people are going to be able to function without all these support services.

Ben: So maybe we could just conclude by looking at, are there areas that don't work for one reason or another, energy efficiency is obviously very important or perhaps it is that the density just didn't work? Can you see a future where we are redeveloping large areas across, well across the globe I suppose?

Graham: Well my own view would be that if you are going to do that you would need to have housing that provides all the necessary support services.

The other factor is that it's been established that housing doesn't work very well if it's a sort of one class area. It probably works quite well for a relatively wealthy middle class people but it doesn't work very well for low-income people. Research has shown that, in mixed communities where there is a mix of tenures, a mix of incomes, a mix of social skills and so on, that mixed communities work better in the sense that for poorer people, the lower income people, the people without employment skills, those people are more successful in mixed communities than in social housing ghettos where there are one class communities.

So the current thinking is that for the health of society it's better to have communities which are mixed in these various things, mixed in income levels, age mix, and education levels, so that in all senses communities should reflect social structure as a whole. Mixed communities is currently thought would be the most successful way of providing housing.

Ben: Well Graham we've had some great information today so I should just like to thank you very much.

Graham: OK, thank you for coming.