

Conference 2021

Question and answer session with Gina Windley, Levit Bernstein

Q1 I live in Lambeth, where embodied carbon in demolition is a pretty hot topic. Lambeth council makes all the right noises on these issues, but they are still looking at implementing plans that they came up with some years ago, involving demolition and rebuilding. This is for all sorts of political and other reasons. Huge campaigns have taken place in the borough about refurbishment rather than demolition mostly end up going to court and that sort of stuff because the council has dug its heels into its demolition policy and seems not to be able to go back on that. Do you have any insights into that type of campaign?

A1. It is difficult when you are up against politics. There may also be some issues of landlords being tied into contracts that have been signed on the dotted line – but I suppose the only thing to do is to continue to protest and, if not successful this time, you could be in the next project. I don't have any personal or practice experience with this kind of thing in Manchester, so I'm unable to respond about London policy.

Q1 - response Do not worry – a lot of the information you have given us is helpful. The problems we have are the gaps between what you are saying in your presentation, which is correct, and the politics on the ground delivering it.

A1 – follow up response. The main takeaway is that we need policy and building regulations to stop these things from happening. That would avoid the problems and support retrofit, not demolition. The other thing we need to do is to ensure that we built to a good standard of passive house or equivalent.

Q2 – Another factor on this issue is the unnecessary building that is going on in London in these *Opportunity Areas*. Huge towers, full of flats for investor properties are going up in Hackney, where I live. They will be sold at high prices and don't help address London's housing crisis. They have both operational and embodied carbon emissions. It's a major problem to address - with those that set up the plans and where the ideas come from. It is a major factor in trying to counter the climate change emergency. It shouldn't just be about social housing tenants having different heating systems - there are loads of other things as well. It's no good that local authorities declare a climate emergency when they are also building massive developments. One occurring now in Hackney will have 400 luxury flats. In this case, the council is the developer and this is not a single case.

Another problem is the question of steel and concrete being big carbon emitters, as you pointed out. I think you mentioned timber buildings as a lower carbon emitter, but there isn't the expertise to build these new types of buildings. I can give you an example of a timber-framed building constructed on a housing estate in Hackney in 2011. It was so poorly built that all the tenants now have to leave the building while major works are carried out. We have a whole range of different problems attached to everything that you have rightly

raised.

A2. Yes, it is a complex issue and, at the moment, I think the most important thing that we can do is retrofit the existing building stock. Using timber at this time is difficult – with all the fire regs and most developers not wanting to build with timber - as they see it as being combustible. This raises many issues. It stops us from building with low carbon materials such as timber since it is seen as a fire risk.

But there are things that can be done to make timber-framed buildings safe.

Some timber-framed buildings are going up. One that has gone up recently, near to me, is cross-laminated timber – that is - glued timber panels. Some of these may have gone up in London, but this is not as widespread as they need to be.

Q3 When I was last involved in this issue, about six years ago, the orthodoxy was that new buildings came out better because the operational emissions would be lower and offset the embodied carbon. Has that orthodoxy changed for council buildings? I'm a bit worried about being ambushed by my council when I say that this is not the case. Are there other figures that would contradict our arguments against demolition?

A3. As far as I am aware, carbon emissions are the same across the board. You can, of course, build with low carbon materials, so it doesn't matter and therefore focus on low operational carbon. There might be slight truth in that, but we should be focusing on the whole performance of our buildings. We should fix our existing homes, before adding to the whole carbon bill of operational and embodied carbon.

Q4 What can we do about educating and raising more awareness about what is going on in our communities – especially older people. We are talking here about the materials used for buildings and that so many homes are being built. What can we do? It would be good to have presentations like this for our TRAs – to let people understand and prepare their minds on what might be required.

A4. You are right - carbon literacy is something that needs to be addressed - across the board, not just for the elderly but more generally. We need to know what these Net Zero things are and what they mean. Events like this are a good platform to learn. Another resource is the Architects' Climate Change Action Network. They post all their webinars on YouTube. You could have a community get together - to watch some of these and then - hold a discussion about them. This would encourage more interest.

Q5 There are other materials such as Hempcrete – a mix of hemp and lime that is like concrete but has negative embodied carbon emissions. Ljubomir Jankovic from Hertfordshire University said earlier this month in '[The Conversation](#)' that not taking embodied emissions into account could mean overshooting carbon emission targets by several decades. He said, 'even a home retrofitted with numerous reclaimed materials and with negative operational carbon emissions will take 21 years to reach Net Zero'.

You mentioned French Architects - Lacaton and Vassal. We mentioned them in our Manifesto for a positive future for social housing in London. Their work on up-grading / retrofitting social housing is exceptional. These architects win prizes all over the place and are highly regarded in the architectural sphere. However, I wonder how much of their philosophy - '*Never demolish, never remove or replace, always add, transform, and reuse!*' has filtered down. You have given us some examples – but there is a question of how much this

is being taught in architectural schools and applied in the industry. What needs to change? Is it that it is just the market that determines what is built? Do you think younger architects are more informed on the issues and more sensitive to not tearing down (particularly, social rented homes)?

A5. That is a good question. In terms of younger people, the Architects Registration Board advocates that sustainability is taught in architectural schools throughout the country now – albeit a bit late. I specialised in sustainable architecture for my masters’ degree and I touched on it in my undergraduate degree. So I was already switched on to the topic. Many other architects are too. We have a sustainability team in our office as we are quite privileged, being a large practice.

Architecture is mainly client-led, so people come to us. They want the work and will say they want a certain number of flats or dwellings on a site. They are not particularly interested in what is already there. We need to advocate for tenants and other building users - highlighting the need for - new, net-zero properties, existing homes retrofitted and if possible, reuse of materials to move a circular economy. A lot is happening, e.g., at Meridian Water, they are currently working on a circular economy scheme. I think that being switched on to reducing carbon is in its infancy. We need to be looking more at embodied carbon, how to calculate it and do whole-life carbon assessments. This is included in the London Plan, so watch this space. Over the next few years, we will start to see real change in the industry (fingers crossed).

Q5 response – yes, the London Plan is better than national policy – but it's not as good as it could be.

A5 further comment. In Manchester, of course, we don’t have to follow that London Plan. Our practice advocates for our clients to follow it, but we need national policy. We need more in the industry to sign up to support part Z being part of the building regs – mandating whole-life carbon assessments and having limits on embodied carbon. This would help get this to the forefront of the media and industry.

Q6. Isn’t a lot in this debate focused on changing people's behaviour and about us being 'educated' about how to use heat pumps – with Mr & Mrs Joe Average doing the heavy lifting on this? It strikes me that what has got us into this mess is globalisation and unrestrained free-market capitalism. I don’t see the super-rich seeking to have fewer yachts and take fewer private planes, but everyone else is asked to have retrofitted accommodation or be Scandinavian with underfloor heating. Then there is getting all this infrastructure in place – changing gas boilers, putting in heat pumps that look inelegant from an engineering point of view, and a lot of pipework. That all has to be put in. But, we seem to value bankers more than people getting a sweat up in their daily work and fixing things with screwdrivers and wrenches and there is a dearth of the latter at the moment. Who is going to do all this?

A6. There is a gap and I don’t know what we can do as individuals other than trying to convince the government to do something about it.

It is a great opportunity though. There will be a lot of new green jobs available that will help boost our economy. Kate Raworth’s book – *Donut Economics* sets out all we need to know about how we can change our economy – which I would recommend.

Q7 I understand that from 2035 we cannot install any new gas boilers. That doesn’t mean

that you have to go back and change the boilers already in peoples' homes now. In 2003, a friend of mine built his own place. He installed a heat source from the ground, as his wife is Scandinavian. He dug all the pipes in, and got his water temp up to 55 degrees and so only had to get to the 65 degrees to kill off harmful bacteria such as Legionella. Doing this is very common in Sweden. The thing I'm stuck on is the carbon neutral. I want to know what my carbon emissions are now so I can get to carbon neutral.

A7. There are tools to help in doing this, but they are at a very high level.