The Road to Zero Carbon

Integration was the key word in Hurley Palmer Flatt's recent breakfast talk on our zero carbon future.

As the company's associate director Annie Marston and divisional director Paul Scriven were eager to emphasise in their initial presentation, zero carbon isn't a pipe dream. In fact, it is very much part of our present, as developments such as BedZed in London's Hackbridge prove. As Scriven said: "*The first sign of zero carbon was meant to have occurred in 2015/2016. Building regulations were meant to be taking us there and we were going to be forced to achieve it. There was a slight change of plan. The GLA ended up saying that if you can't achieve zero carbon, then we need investment, there's research and development going on the science. They basically created a 'cash in-lieu pot'. So, zero carbon is real now. And anyone doing a residential development who is captured under this policy requirement will understand that.*" Looking into the future, the CO2 target for 2050 is the equivalent of the total consumption back in 1850.

However, to achieve the ambition across the nation requires a marriage of both government legislation – in the shape of the 2008 UK Climate Change Act, for instance, or the 2017 UK Clean Growth Strategy – and industry buy in. Scriven sees reasons to be optimistic: *"When you look at BREEAM and LEED that are striving and taking us beyond legislators' requirements towards a better, more sustainably future, they all reference our industry standards. Even the GLA's new policy is referencing the industry standards."* Importantly too, the grid is being rapidly decarbonised to the point where the gap between the CO2 emissions of gas and electricity is closing.

So, what are the hurdles that have to be overcome? Cost is the obvious answer. But as Marston illustrated, a Carbon Trust study has identified a £1.6bn opportunity in the UK's large business buildings for energy savings. It estimated that businesses could save 15 per cent annually on bills, while retro-fitted energy saving measures had less than a one year pay back for 50 per cent of firms it surveyed. In other words, the economics stack up.

What is required now, according to Marston, is the need to *"get everyone on board at the beginning throughout the life cycle of the building. At the master planning stage, you need zero carbon experts there. And we shouldn't just stop at the end of design development. We need to integrate our design processes even more."* As Scriven chimed: *"We have to be adaptive, we have to be considerate. When we*

develop our buildings, we have to make them flexible." And we have to work together as a community of designers. *"If we want a true zero carbon future, do we need to start thinking about rights to fresh air? Do we need to be thinking about rights to sunlight in terms of our photovoltaic performance? If we start adding technologies into a development that use the environment – solar panels, for example – but then we create other buildings around it preventing it from becoming energy efficient then we aren't going to get to zero carbon,"* said Scriven.

At a time when people are becoming increasingly interested in environmental data, concerned at the energy we're burning or the pollution we're creating, getting to zero carbon is going to require a combination of nudge theory and city-wide master planning, legislation and industry benchmarking – not simple but definitely possible.

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