BUILDING FOR A CHANGING CLIMATE

How can our buildings sit lightly on the earth as well as withstand the vagaries of a changing climate?

We know it won't be the climate itself that causes the concerns.

After all, what's a marginal increase in temperature? But changing temperature will affect weather patterns, in turn creating more extreme weather events and knock-on impacts for, well, everything.

In the UK we've got a great start on understanding the potential future impacts of climate change. We have established this with some of the longest running data sets on past weather and the work of the UK Climate Programme. This provides models and scenarios for a variety of changes to weather patterns and highlights that a future climate is likely to be very different from today.

Whichever way you look at it, 'business as usual' simply won't allow the built environment sector to thrive over the decades lying ahead. Commercial properties are currently managed to need a complete overhaul after 25 years. The more extreme future climate scenarios could have a significant impact on this. But it's domestic property and infrastructure schemes that are at far greater risk as they are designed to last a lot longer, taking us even further into the unknown and at an age where our weather patterns might be radically different from today's.

So what do we do about it? The solution is twofold: first, we must adopt design methodologies such as Alex Gordon's 'Long life Loose fit Low energy' to manage longitudinal change. And, second, we must create new financial models to incentivise this.

The technical solutions are becoming well understood as demonstrated by the Technology Strategy Board's Design For Future Climate competition including the Ely Bridge Future Climate Code, developed by a partnership including Forum and White Design Associates. What is required next is to build a cross industry agreement on an integrated approach to design and planning and to avoid the potential unintended consequences, such as the drive for energy efficiency increasing insulation and air-tightness but also increasing the risk of overheating and reducing in-door air quality.

And the financial models are emerging as well, with greater interest in investments providing stable returns over extended periods of time. This would then allow developers and owners to think about the long term and integrate technical solutions up front or design in future flexibility. This is exactly what the Principality Building Society is doing as investor and asset owner in the Ely Bridge Development Company, giving them a strong motivation to maximise longer-term value rather than maximise short term gains. And we can learn from other industries, such as Forum's work with the Sustainable Shipping Initiative. Working with others we have developed an interesting and replicable model to overcome the split incentives often cited by developers and owners, ensuring benefits for the owner, user and investor.

It would be difficult to miss the irony behind this: one of the key speakers at the recent Future Climate Code roundtable we hosted was unable to attend because of the impact the extreme weather (in this case, torrential rain) had on our UK transport infrastructure. I can't tell you that the chaos caused by the recent rain, or Hurricane Sandy for that matter, was caused by man-made climate change. But I can say that the news – and more and more our day-to-day lives – include weather –and driven by superlatives… 'driest,' 'wettest, 'heaviest', 'record-breaking.'

The real challenge for all of us is to plan for uncertainty and the long term. All of our models are predicting this is just the beginning of a very bumpy road toward a very different climate. We can try to ignore that extreme weather is increasingly the new normal, or we can grab the opportunity to use all the tools available to us – technical, political and financial – to adapt and thrive.

Source: http://thisbigcity.net/building-for-a-changing-climate/