

Castle debate – Environmental aspects, Law and Policy. Sustainable Buildings

Summary of Castle Debate on Sustainable Buildings, 29th March 2011

Environmental issues are multi-faceted and complex. They can only be understood and addressed if a multi-disciplinary approach is adopted. The Castle Debates have been established to provide factual and objective information on an environmental issue, together with appraisal of the applicable law and regulation and relevant current policies. By bringing together leading practitioners, scientists, lawyers and policymakers these matters are subject to debate and scrutiny.

The second Castle Debate on Sustainable Buildings was held at the Law Society in London on 29th March. The event was fully booked.

The speakers were Jon Lovell, Head of Sustainability at Deloitte, Professor Robert Lee of Cardiff University and Andrew Stunell, Parliamentary Under Secretary of State at CLG. A summary of the Debate is set out below.

Pamela Castle, Chair's Introduction

Sustainable building is the practice of creating structures and using processes which are environmentally responsible and resource efficient throughout a building's life cycle from siting, design, construction, operation, maintenance, renovation and destruction:

using energy, water and other resources efficiently;
protecting occupant health; and
reducing waste, pollution and environmental degradation.

Existing and new build, commercial and domestic, freehold and leasehold are all separate categories which will need to be taken into account.

Many thanks to the Law Society and Sykes Environmental for all their help and support and to the ENDS Report for their sponsorship. Thanks also to other organisations such as UKELA, the Environmental Law Foundation, the Aldersgate Group and the NNFCC for dissemination of information.

There is significant continuity and overlap between all of our Debates and as they all address very broad issues, in all probability we will have to return to specific related issues at a later date.

Jon Lovell: Sustainable Buildings: the 'Science'

The transformation of the existing built environment into something which is sustainable, that is, of low environmental impact (not just carbon), strong market appeal and ongoing durability in the context of future economies and climate.

The interrelationship between energy, environmental performance, carbon output and occupier appeal, market prevalence etc. is not very well understood within the commercial real estate or homebuyer markets in the UK; neither is how the energy efficiency of buildings interplays with the internal environmental quality and the health and productivity of occupiers.

The construction and occupation of buildings, both residential and non-domestic give rise to just under half all UK emissions. Roughly half the life cycle impact of property in energy terms arises from operational emissions and the rest is wrapped up in the manufacture of materials, their distribution to construction sites, the construction process, refurbishment and demolition.

There is profound disappointment and frustration that the recent Budget has provided that the term 'zero carbon' will only apply to regulated energy use (heating and lighting) and not to unregulated energy use relating to electrical use in appliances etc.. Furthermore, the term 'allowable solutions' remains undefined. It is difficult therefore for developers to know what is exactly meant by 'zero carbon'.

The scale of the existing stock challenge is massive, and is now amplified further by the scaling back of the zero-carbon policy:

- 25 million existing homes to be retrofitted by the end of 2050 and 21 million minutes within which to do it:
- A staggering amount of retrofit required on non-domestic buildings across the UK, a challenge complicated by the heterogeneity of building types and uses.

There is a widespread awareness deficit, lack of transparency, confusing price signals and inadequate regulation.

Professor Robert Lee

Looking at existing legal mechanisms for achieving environmental sustainability, we have firstly, corrective taxation, such as the Climate Change Levy. The relationship with the Levy and the Renewables Obligation Certificate has become contested however because where people have invested in self generation, they have found that if they take the Renewables Obligation financial assistance they cannot claim zero carbon under the Levy because that is regarded by the Government as double counting.

Other mechanisms are tax relief (for example, exemption from Stamp Duty on zero carbon homes) and subsidies (such as under the Warm Homes and Energy Conservation Act 2000 in a mechanism involving both public and private sectors, not unlike the Green Deal in the Energy Bill). Also relevant is the recently proposed Renewable Heat Incentive, which gives tariff support in the form of quarterly payments in two phases: first non-domestic and then domestic.

It is difficult to pitch taxation and subsidies accurately however, so other forms of regulation are called for to drive towards the carbon targets in the Climate Change Act 2008 (80% reduction in carbon emissions by 2050 against a 1990 baseline). We can expect further regulatory initiatives through the carbon budgets set to meet this target. But the main form of regulation in this area is through the Building Regulations. Legislation such as the Sustainable and Secure Buildings Act 2004 (sponsored by Andrew Stunell) allows extension of the scope of the Building Regulations to fuel and powering, monitoring, recycling and anti-crime provisions within buildings. The RIBA calculated that almost half the world's renewable resources are consumed by buildings.

With regard to planning, sustainable development is incorporated into all statutory planning functions but it is also important to tie in existing standards into the planning system, for example, the Building Research Establishment Environmental Assessment Method (BREEAM), Energy Performance Certificates and the Sustainable Homes Code covering wider sustainability issues such as surface water run off from buildings or well-being and buildings.

Other soft law, privately driven mechanisms include green leases for leasehold property; environmental management agreements for single lets; MoUs covering, for example, energy and waste water use in a building; and conditions in sale and purchase agreements.

There is vast array of mechanisms and it is time for consolidation and harmonisation. One difficulty, however, is that although many initiatives focus on new build, the carbon footprint of modern buildings, in design if not always in use, is low. The main problem is with the existing stock.

Andrew Stunell MP, Parliamentary Under Secretary of State, CLG

To achieve sustainable building we need a mixture of increasing awareness and encouraging people to take ownership of the problem, develop financial levers and a regulatory environment.

Currently, your house produces twice as much carbon than your car.

Other points: Part L of the Building Regulations, which improves the requirements on energy sustainability of all buildings by 25% has been adopted, the key recommendations provided by the Zero Carbon Hub have been accepted as part of our approach to zero carbon, and in addition to narrowing the definition for new homes we can bring existing buildings up to speed: it is all the F and G homes which are leaking like sieves..

Under the Green Deal contained in the Energy Bill, the owner, the occupier, the householder is entitled to an interest free loan from their energy company which will be repaid by not taking all the consequent savings on their bills. Also the so-called Energy Company Obligation will provide similar support to households to the order of £10 billion.

Unfortunately there is often a gap between what is claimed and what is reality. My two focal points are to get retrofitting going and to get compliance 100% better than it is now and that is about design problems, construction problems and user error.

Questions and Answers

1. Do you see a time when unregulated emissions will be included in the zero carbon definition?

Andrew Stunell I am not sure how matters will develop. The overriding issue now is that we desperately need houses but we are quite clear that in the course of this Parliament we have to be very measured in turning up the regulatory heat on the construction industry

2. Geoffrey Lean, Daily Telegraph: one of the most discouraging things about the Budget is what looks like a wholesale demolition of the planning system. Would you comment?

Andrew Stunell The Localism Bill is overhauling the planning system but the National Planning Policy Framework is to be retained, which will simplify matters and a draft will be published in July. Sustainable development will be at the core which will continue down through to borough and district wide plans but parish and neighbourhood plans will be in the hands of neighbourhoods and communities, compared with the current planning system which is very much 'top down' . It is necessary to better integrate Building Regulations and the planning system.

Jon Lovell Reducing the weight attached to centrally guided principles to locally determined standards and aspirations has its dangers. In particular, one can easily envisage a scenario where

affluent, well-educated communities have the power to block any form of development they do not support, whereas others – those less equipped to ‘play the system’ will have to take the consequences. It seems a recipe for amplified social injustice.

Professor Robert Lee The planning system has done a great job in protecting us against urban sprawl and concrete jungles and we play with the planning system at our peril. There is danger of leaving it open to capture. On the other hand the overhaul of the Building Regulations to eliminate redtape and make them more workable would be welcome.

Andrew Stunell In practice, the planning system is already in the hands of a small minority and it is this we are trying to rectify.

3. Are there any moves to basically move something like BREEAM into a code for sustainable buildings as has happened with the Code for Sustainable Homes?

Jon Lovell Remember that the Code for Sustainable Homes is a voluntary suite of standards, much in the same way as BREEAM. So moving to a Code for Sustainable Buildings may have little effect on raising standards of new development when policy can already require BREEAM standards to be imposed locally.

4. Jenny Lynch, MHP: what should be done with dealing with F and G homes? The Green Deal is obviously a good incentive but do we need a bit of a stick somewhere? Should Green Leases be mandatory for public sector buildings?

Andrew Stunell This, together with other matters, is being considered by the Green Ministers Group under the chairmanship of the Secretary of State for Defra, and I am unable to answer your question at the moment.

Jon Lovell It would be very sensible to supplement the Green Deal ‘carrot’ with a ‘stick’ to back it up, but I would like to highlight that the prospect of minimum performance standards for existing stock under the Green Deal proposals, and for that matter, the borrowing capability of the Green Investment Bank will not come into play until 2015, that is, in the next parliamentary period.

5. Andrew Warren: Director of the Association for the Conservation of Energy: it appears that only one in three commercial transactions have an Energy Performance Certificate attached to them. Why are trading standards officers not being basically mandated to enforce the law?

Andrew Stunell We are looking at Energy Performance Certificates and seeking ways of strengthening them and make them useful in relation to the Green Deal

Jon Lovell The enforcement angle is an important one but the really important question is to ask why is the market not demanding more effective use of EPC’s to inform lettings and sales. There are a whole number of reasons why EPC’s have not had their intended impact: there is no correlation between EPC ratings and the actual energy performance of buildings-in-use, energy costs to date have not been sufficiently high to drive a shift in behaviour and you can acquire an EPC for a few pounds now but based on limited intelligence on how the building functions.

6. Lucy Bruce Jones, Norton Rose LLP: do you consider that having regular building MOTs would be preferable to EPC’s and would lead to more sustainable improvements being implemented in residential and commercial properties?

Professor Robert Lee I think partly the answer is yes but what is the driver to have an MOT?

Andrew Stunell It is important that getting compliance right does not have a regulatory cost and there is a great deal of pressure across Government to reduce the regulatory burden.

7. Do you think there is sufficient focus on demolition as a policy measure? I remember Brenda Boardman saying that 10% of the housing stock should really be demolished, where there is no prospect of retrofitting in any sensible way?

Andrew Stunell This is not a priority for action in the near future and in any event it would come under the auspices of Defra. There is much you can do with refurbishment

Jon Lovell I think it would be stretching it to say that on carbon grounds there should be wholesale demolition

Bob Lee On the domestic front we are desperately short of new build housing and we can ill afford to take 10% of the housing stock now

8. Mark Fermore, ESI: are the targets which focus exclusively on operational emissions sufficient to achieve our wider carbon reduction targets especially in relation to industries such as the nuclear industry?

Jon Lovell The answer is, no they are not and I think I made the point in my presentation that we have to very rapidly start looking at the embodied energy and carbon content of property. The area is very complicated and I think the Government is already minded to look at what regulatory levers might be available and I would also say that there are a number of planning authorities which are beginning to accept reductions in embodied carbon where it can be demonstrated that it is a more cost effective way of delivering life cycle emissions reduction through embodied improvements than, for example, on-site renewable energy.

Andrew Stunell The concept that it took a lot of energy to build, to put in those bricks, to fire those blocks and to cut up the wood is nowhere near pricing. Work is going on at both EU and UK levels at the moment but I cannot see any quick results

9. Mayer Hillman, Policy Studies Institute: expressed concern that only the UK had been considered and that the current targets are inadequate.

10. Stephen Sykes, Sykes Environmental: how do we know how to take the first step to a sustainable building and to know that we are on the right road and that the solution is objectively verifiable.

Jon Lovell It is going to be fundamental for the customer, whether commercial or domestic, to have confidence in the market. It is absolutely right that central to the Green Deal initiative, for example, is the establishment of strong accreditation standards for that kind of advice. The most cost effective way of dealing with carbon is behavioural change and energy efficiency; feed-in-tariffs, for example, have their place in driving part of the market, but in carbon terms are at the lower end of the hierarchy.

Andrew Stunell We have 3-4 million homes with cavities and no insulation and for people to be saving up for solar panels is potty. So it is about transparency of information and EPCs, properly regulated and supported, will be a way of doing that. I think it will be increasingly difficult to sell a house which has not had the Green Deal and some professional assessment on how well it is doing.

Professor Robert Lee Anyone selling, buying or renting property, whether commercial or domestic, must seek professional help but professionals too must rise to the challenge. For example what does the average domestic conveyancer have to say by way of advice on EPCs?

Pamela Castle, Chair's summary

Thank you very much indeed for an exhilarating debate. It was very wide ranging, but the major issues appear to be that there is a major gap between policy and reality especially with regard to existing building stock. There is a general lack of knowledge and dissemination of information and public engagement is essential. There is a wide range of mechanisms and drivers and there is a need for consolidation and more research.

The next three Debates planned are UK Water Security (19th April), Sustainable Transport (24th May) and Farming and Food Security (21st June).

Many thanks to all those who participated.