



Grand Designs: Greening the Built Environment

Green building is a hot topic. In this Alert, we provide some guidance on the following questions:

- What is a "green" building and why is it a hot topic?
- What are the main regulations affecting green buildings?
- How are landowners, developers and occupiers of property affected by the greening of buildings?

What is a "green" building?

There is no single standard which defines a sustainable or green building but, put broadly, it is a building located, designed, constructed and operated so as to minimise environmental impact in terms of energy use and emissions, water efficiency, waste management and the use of sustainable construction materials.

Why is "green" building a hot topic?

UK greenhouse gas ("GHG") emissions are on the increase. The Government has admitted that it is unlikely to meet its own domestic GHG reduction target. At the same time power generators and the manufacturing sector argue that, to date, they have shouldered the burden of GHG regulation notwithstanding the fact that energy use from homes and commercial property accounts for nearly half of UK emissions.

Add to that the fact that the Government has committed itself to a huge increase in housebuilding (up to 3 million new homes by 2020) and it is easy to see why the real estate sector is now the focus of climate policy.

What are the main regulations?

One of the difficult issues around the regulation of sustainable buildings is the breadth of issues covered, from location, construction and design to on-going operation. So, not only are the regulations governing sustainable buildings new, they also cut across traditional boundaries and run the risk of duplicating, or even contradicting, one another.



Location of new buildings

The location of a new building is primarily a planning issue. The main vehicles for delivering planning policy are:

- Planning Policy Statements (“PPSs”), which set out strategic planning policy;
- Regional Spatial Strategies (“RSSs”), which set out regional planning policy; and
- Development Plan Documents (“DPDs”) which set out local planning policy.

The Government’s White Paper, “Planning for a Sustainable Future”, published in May 2007, sets out the framework for integrating climate change issues into the planning process. The Government is proposing to introduce a new Planning Bill this year or early 2008.

The White Paper commits the Government to:

- introducing a supplement to PPS1, setting out how regional and local authorities should integrate climate change issues into their RSSs and DPDs, as well as in determining individual planning applications;
- extending permitted development rights to householders (and subsequently to commercial properties) for certain types of micro-generation so that no express planning permission is needed¹;
- reaffirming its target of 60% of new housing to be provided on previously developed land; and
- amending national guidance to focus new development in town centres ahead of edge-of-town or out-of-town locations.

The Government has recently consulted on the first of these: the draft PPS1 Supplement, entitled “Planning and Climate Change”. The final version is due to be published by the end of 2007. Specifically, PPS1 urges local planning authorities to prepare planning policies that:-

- “secure the highest viable standards of resource management and energy efficiency and reduction in carbon emissions”; and
- locate development so as to “secure the fullest possible use of sustainable transport” and to “take into account the potential of de-centralised energy supply based on renewable and low carbon technology”, as well as to “protect biodiversity”.

In practice, what this means is that local authorities are adopting policies which aim to concentrate, rather than disperse, development with a view to maximising accessibility and minimise travel distances. On a site-by-site basis, local policies encourage layout, building orientation and landscaping aimed at minimising energy consumption.

Sustainable design

Design issues are regulated by both the Building Regulations and the planning process.

This is an area of some controversy: developers argue that local authorities should not be allowed to set their own (higher) standards for the environmental performance of buildings in local planning policy, as this is a matter properly dealt with in the Building Regulations.

1 The Government estimates that by 2050, 30% to 40% of the UK’s electricity demand can be met by installing micro-generation equipment on residential and commercial property.



Critically, the draft PPS1 Supplement acknowledges that planning authorities **may** require higher standards of environmental performance from buildings in certain situations.

In looking at sustainable design principles, a distinction needs to be drawn between residential and commercial property.

A. “Zero carbon” homes

The Government sees its commitment to deliver more new homes as an opportunity to promote development in a “greener” way. In December 2006, therefore, it announced a target for all new homes to be “zero carbon” by 2016. A zero carbon home is one with zero net emissions of CO₂ from all energy use over the course of a year (including from energy appliances). That target is to be achieved principally by a progressive tightening of the energy efficiency standards in the Building Regulations.

Building Regulations currently set out an overall energy/carbon target for homes but allow flexibility in how that is to be achieved eg. through better insulation, draught-proofing etc.

In addition, the Government has published a Code for Sustainable Homes. Compliance with the Code is currently voluntary but the Government is proposing to make the energy/carbon aspects of the Code mandatory, through a tightening of the Building Regulations. The minimum energy/carbon standards are in places higher than those in the current Building Regulations.

In addition to covering energy/carbon standards, the Code rewards other environmental considerations, such as use of sustainable construction materials, the availability of recycling facilities and cycle spaces.

B. Sustainable commercial buildings

Policy on sustainable design in commercial buildings is less prescriptive at national level by comparison with residential development, but the Government has set up a task force to identify appropriate energy efficiency measures for commercial buildings and has committed itself to a timetable and action plan for substantial carbon emissions reductions from the commercial sector over the next 10 years.

Although national mandatory design standards for the commercial sector lag behind standards for the residential sector, for many commercial developments this is fast becoming an academic point. This is because an increasing number of local planning authorities are, in practice, requiring enhanced sustainability standards to be designed into new developments via the planning process.

The draft PPS1 Supplement encourages local authorities to:

- expect at least 10% of the energy supply required in large developments to be on-site and renewable or connected to low carbon energy supplies (the so-called “**Merton rule**”);
- require sustainable urban drainage systems (“**SUDS**”) which seek, through good design, to minimise run-off and pollution and control excess water, if possible, through harvesting;
- require sustainable waste management; and
- use planning agreements to control the longer-term management and maintenance of the property to secure sustainability objectives.



Some local authorities have sought higher standards of environmental performance than would otherwise be required by, for example, requiring a "sustainability statement" to be submitted with a planning application (including an assessment of the energy efficiency aspects of the development proposal, an assessment of water efficiency, proposals on how to deal with waste, an indication of what sustainable drainage system is proposed and the kind of sustainable construction materials to be used). The legality of some requirements may be open to challenge.

A scoring system is then applied to the proposal and the development will, in order to achieve compliance with planning policy, be required to meet a minimum rating. In relation to commercial property development, this rating is achieved under the BREEAM² assessment process.

Sustainable construction

The EU requires energy performance certificates ("EPCs") and display energy certificates ("DECs") to be prepared for certain buildings on their construction or subsequently. An EPC must be prepared by an accredited assessor recording the energy efficiency of a building on a scale of A to G, with A as the highest rating. The EPC will also provide advice on the energy efficiency measures which could be put in place to improve the rating of the building. An EPC will be required when a building is constructed, sold or leased. In addition, a DEC showing the annual operational rating of a building based on energy consumption must be displayed in buildings over 1,000m² which are occupied by a public authority or institution providing public services to a large number of people. The Government has proposed a phased introduction of these requirements between now and October 2008.

Another important development in reducing environmental impacts in the construction phase is the proposal to require site waste management plans ("SWMPs") under the Clean Neighbourhoods and Environment Act 2005.

The proposal is that from April 2008, SWMPs would be required for any construction or demolition work subject to a minimum value (yet to be decided). The plan essentially details the amount and type of waste that is expected to be produced on-site and sets out how it could be re-used, recycled or disposed of. The plan is then updated during the construction phase to record how the waste is managed.

SWMPs will be a statutory requirement for larger construction projects but, as implied above, local planning authorities, can and do require construction waste to be managed in accordance with an agreed plan under a condition imposed as part of the planning permission, failure to comply with which can lead to enforcement action under the Town & Country Planning Act 1990.

Regulating sustainability after construction

Any major refurbishment of or extension to an existing building will require either planning permission or Building Regulations consent and sustainability criteria will be taken into account as discussed above.

Further, as indicated above, local planning authorities may require a developer and/or landowner to enter into a planning agreement to secure the on-going management and maintenance of properties to secure sustainability objectives. Typically, this will include on-going obligations as regards landscaping, but also, possibly, financial contributions to the authority to carry out other works, such as the on-going maintenance of SUDS.

² The Building Research Establishment's Environmental Assessment Method.



Finally, from 2010, the Government is proposing to introduce a new emissions trading scheme – the Carbon Reduction Commitment (the “CRC”) which will affect organisations³ with electricity bills of £500,000 or over. Critically it regulates energy use (as well as direct emissions) and will affect organisations such as large retailers, office blocks, light industry and manufacturing, multiplex cinemas etc.

The impact of sustainability on business

There is no doubt that the “green revolution” as far as it relates to buildings is, to some extent, hype, but there are real issues here for anyone who owns, occupies, develops or invests in property. Some of them are summarised below. Although there is a great deal of uncertainty about what the precise requirements are going to be, what is for sure is that this is a one-way street: sustainability in terms of the construction process and on-going operation of buildings is here to stay.

Green building: how it impacts on business

- The sale or letting of most commercial properties will only be allowed if EPCs are in place. Currently, there is no accreditation scheme for assessors for commercial property. There is expected to be a shortfall in assessment resource next year. How will this impact on any planned real estate transactions you may be involved in?
- If you occupy buildings, you will be required to comply with the CRC from 2010. However, that will impact investment decisions taken now: occupiers will be sensitive to the potential cost of taking properties now with poor energy efficiency ratings if this is likely to lead to penalties under the CRC in due course. Conversely, buildings with good energy efficiency ratings are likely to be more attractive to occupiers.
- The Government has committed itself to continuous upgrade in the energy efficiency requirements of the Buildings Regulations. Compliance with these standards will be required on the construction of new buildings and any major refurbishments. Investors need to think now about whether the buildings they are investing in will be capable of meeting the Building Regulations when refurbishment is due in, say, 10 years time.
- The enhanced sustainability requirements now being imposed on developers are going to have a potentially significant cost implications. Developers need to think about the extent to which they can both shape these local and regional policies and, if necessary, challenge them so as to minimise these costs.
- Green buildings will give rise to carbon credits, first under the CRC, but, possibly, under other schemes in due course. Landlords and tenants should be considering now when negotiating mid to long-term leases, how to allocate the costs and benefits of these green credits between them.

³ That is, broadly companies and groups of companies.



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