



# **The JCT Povey Lecture**

**Leading on Sustainability**

Francis Salway

12 November 2009



## **Introduction**

On Thursday 12 November the JCT Povey Lecture was given by Francis Salway, Chief Executive of Land Securities Group PLC and 2008/9 President of the British Property Federation. His lecture, entitled 'Leading on Sustainability', was presented at the Bevin Hall, Local Government House, Smith Square, London.

The JCT Povey Lecture is an annual event at which an eminent person is invited to give his/her thoughts on significant matters that are relevant to the construction and property industry.

The JCT Povey Lecture was inaugurated in 2003 as a public acknowledgement and tribute to Philip Povey who served the Joint Contracts Tribunal for 50 years.

## **Biographical Details**

**Philip John Povey – Barrister** – commenced in construction as a legal adviser to the NFBTE, now the Construction Confederation, in 1951. At the same time he began to assist the Joint Secretaries of the Joint Contracts Tribunal (the JCT).

Philip first became Director of Legal Services at the Confederation and then its Director General. He later became the first Secretary-General of the restructured Joint Contracts Tribunal Limited in 1998.

Philip's work for the JCT became well known through the publication of JCT Standard Forms of Contract, which in time found their way to many parts of the world. He had a keen mind, which steered him around what he viewed as the less important or parochial issues for which the industry seems to have a particular attraction and enabled him to get to the core of a problem and to resolve it. He was an extremely skilful draftsman who invariably managed to satisfy the demands of many disparate, often competing, bodies.

Although there were committees, working parties and individuals that provided valuable input, it was Philip who shouldered the burden of writing the text.

He retired from the JCT at the end of 1999 but died suddenly only 18 months later, in 2001.

## **About JCT**

The Joint Contracts Tribunal was established in 1931 and has for 78 years produced standard forms of contracts, guidance notes and other standard documentation for use in the construction industry.

The Joint Contracts Tribunal is an independent organisation representing all parts of the construction industry and is the leading provider of standard forms of building contract. The following are Members of JCT:

British Property Federation Limited  
Construction Confederation  
Local Government Association  
National Specialist Contractors Council Limited  
Royal Institute of British Architects  
The Royal Institution of Chartered Surveyors  
Scottish Building Contract Committee Limited

and JCT Council is comprised of five Colleges representing:

employers/clients (including local authorities)  
consultants  
contractors  
specialists and sub-contractors  
Scottish building industry interests.

Chairman: Peter Hibberd MSc, FRICS, MCIArb

Chief Executive: Neil Gower BA Hons, Solicitor

Past Chairmen:

1931 – 1956	Sydney Tatchell CBE, FRIBA
1956 – 1960	Sir Percy Thomas OBE, PRIBA
1960 – 1973	A. B. Waters CBE, GM, FRIBA, FRIAS, PPCIArb
1973 – 1978	P. H. Bennett CBE, MA, FRIBA, FRSA
1978 – 1983	Norman Royce FRIBA, PPCIArb
1984 – 1988	Patrick H. Barry OBE, RIBA
1988 – 1995	Roger M. Squire MA, FRICS, FRSA A. M. Millwood OBE, FRICS, FCIOB (Acting Chairman – May to September 1995)
1995 – 2002	Roy Swanston Hon DSc, FRICS, FIMgt, FRSA
2002 – 2007	Christopher Vickers CBE, FRICS, ACIArb Neil Smith FRICS, MCIArb (Acting Chairman – December 2007 to February 2009)

## Leading on Sustainability

Francis Salway  
Chief Executive of Land Securities Group PLC

We are faced with a challenge of immense proportions – reduce CO<sub>2</sub> emissions by 80% by 2050 or else face a degree of change to the global eco system which will result in widespread flooding, areas the size of whole countries no longer being suitable for agriculture and, with all this, the risk of social unrest. We have never suffered physical change on this scale within so short a time span.

I do believe that we can take some encouragement from the Victorians and their introduction of labour laws in the 19<sup>th</sup> century. At that time, it was clear that capitalism was exploiting labour in a way that was detrimental to society. This issue was initially addressed by evangelists such as Robert Owen at New Lanark at the head of the Clyde Valley in Scotland. The inspiration set by Robert Owen and others with model communities and more sympathetic labour practices was followed by the introduction of poor laws by Robert Peel and others.

So, I see exactly the same pattern evolving now in the face of capitalism's, or more specifically, consumers' exploitation of the environment – with inspiration from a small number of evangelists being followed by recognition from government that they must show a lead by enforcing ever higher standards of practice.

We, within the property and construction industries, have a major part to play. The Carbon Trust have estimated that buildings account for 44% of all carbon emissions in the UK, with non-residential (or commercial buildings) accounting for 18% of all carbon emissions.

To succeed in reducing carbon emissions by a large enough amount, we will need, in my view, 3 things:

1. Individuals and companies to change behaviours, particularly around waste.
2. Government to introduce a substantial and interlinked system of fiscal carrots and sticks to help change behaviours and encourage investment, where needed – for example, road pricing with the receipts used to give breaks to encourage the purchase of greener vehicles or insulation of homes.
3. Engineers to make a massive contribution through technological innovation – and I am confident they can and will.

## **Planning**

But I will start with a different aspect of government policy – one that is closer to home for me – planning. It is clear that the form and dispersion of towns and cities in the UK was shaped when transport facilities were limited – with concentration of population in townships where people could walk or, later, use public transport. The contrast with the United States is quite clear. In the states much of the urban landscape was built up when travel by car was readily available to the masses.

This August on holiday in the states I asked how long it would take to walk somewhere – and the answer was “you don’t walk” (or was it “you can’t walk”?). And the influence of planning on carbon emissions from buildings goes beyond density of townships – to where those towns are located. There is a very good reason why states such as Florida and Arizona stayed with low population densities for so many years. Living there is unpleasant for much of the year without air conditioning. As we see urbanisation rolling out at such a rapid rate across so many countries in the far east and in the developing world, we must hope that planning is applied to ensure use of public transport and perhaps even to ensure that the cities identified for growth are in, where possible, more benign climates. Of course, the reality is that planning cannot keep pace with mass urban migration in these countries.

Within the UK, we are beginning to see the positive impacts of concentration of new development in city centres around key transport nodes. In 2005 Land Securities completed a major office redevelopment in London of 600,000 sq ft with 320 car spaces and 200 bicycle spaces. In 2007 we completed a similar sized building with 48 car parking spaces and 380 cycle spaces. The car spaces are generally underused but we have had to create an additional 40 bicycle spaces to bring the total to 420. Next year we complete an office building half the size with no car spaces at all, 40 motorcycle spaces and 200 bicycle spaces. That is transformational – and all happening within a very short timescale.

Likewise, discussions with people in their late 20s living in inner London suburbs reveals that many of them do not own cars by choice, but instead make use of car club sharing facilities.

## **Policy framework**

Moving on to other areas of government policy. In my view, it currently feels like the government is out-sourcing all the difficult bits about carbon reduction to the private sector through the setting of some high level (and not yet even attainable) targets for reduction in carbon emissions. But if the government’s targets are to be met, the government itself will have to take far more responsibility at a national policy level for driving changed behaviours.

The government needs to take action to internalise the costs of consumer choices which currently externalise their environmental impact – for example how much we use our cars, how much we buy goods transported over large distances.

Politicians are petrified that this will be unpopular with voters and we saw this with the 1.8 million signatories on the recent petition against national road charging. But would people adapt their usage of cars to a system of national road pricing that was flexed according to both congestion and journey length? I think so – definitely. Consumers have shown themselves to be extremely efficient in adapting their behaviour to achieve the best outcome for themselves.

Holland and Denmark are proposing to roll out road pricing schemes within the next 3 – 5 years. It is almost certainly only a matter of time before other high density western European countries do the same.

The government also needs to take responsibility for the planning of local area energy generation. We know that large scale power stations are not efficient because they waste a large part of the heat generated and incur transmission losses. Smaller local generation projects, where waste heat can be made use of in the community, reduce carbon emissions in relation to the total useful energy delivered – and they add to the resilience of energy networks. But, it is unrealistic to expect individual property owners to provide on-site generation of energy. Local authority wide solutions have to be the answer – and the lead has been shown on this in a number of Scandinavian countries where both residential and commercial occupiers happily sign up to a local heating and energy network to secure the massive efficiency benefits.

Another small point in terms of planning, the government also needs to take responsibility for setting environmental standards at a national level rather than delegating this to local authorities. It is immensely inefficient for developers to have to comply with varying environmental policies in each local authority area. Quite simply, it makes it less likely that clever solutions will be developed as there are no economies of scale.

Having identified a number of areas where government could do better, I have to say that, in my experience, this government has led by example in how it manages many of its own buildings. You will frequently have read articles talking about the government occupying energy inefficient buildings, but this is a function of the age of the buildings. Our own experience at Land Securities – and we have managed estates of millions of square feet for the government – is that government has taken action to ensure that those buildings are occupied in the most energy efficient manner possible – subject to the constraints of the buildings themselves. We ourselves have introduced a number of ideas for

small energy saving initiatives, and we have copied a number from the best practice we saw being applied within government buildings.

## **Partnering**

It is clear to me that companies cannot achieve all their environmental objectives in isolation. Much has to be done in partnership. And the property and construction industries are constantly faced with the challenge, or opportunity, of a multiplicity of people and organisations being involved.

Sometimes this simply requires effective liaison between different bodies. However, in the key areas of landlord – tenant relationships, there is often an inherent conflict of interest in energy management – the landlord has to pay for any improvements to M&E plant which result in future energy savings, but it is the tenant who enjoys the benefit of the reduced energy bills. So the landlord and tenant relationship breaks the natural ‘invest to save’ link.

The Carbon Trading scheme under the government’s CRC or carbon reduction commitment has so far failed properly to take into account this unusual split between landlord and tenant interests. Property landlords are being made responsible for the trading of carbon credits – effectively fines, but it is the tenants who use energy in buildings. Unless the government changes the system, or landlords deal with the significant administration of passing on CRC credits to tenants, the effectiveness of the CRC scheme may fail to have the desired impact in the tenanted property sector.

Going back to my point about partnering, we have also spent a considerable amount of money, in terms of people’s time, to get closer to our occupiers to advise them on some potential energy saving behaviours and to ensure that our control of buildings is integrated with their use of them. With a collaborative initiative such as this, we achieved a 29% reduction in CO<sub>2</sub> emissions in a city of London office building in a year – and won a European award for it. Hours spent in listening and guiding can achieve the same impact as years of technological advance by engineers.

And we are making great progress in formalising working together with our tenants on energy management. We are on the point of entering into agreements with a number of our occupiers on collaboration and integration of energy initiatives using the ‘better building partnership’s green memorandum of understanding framework’.

And, of course, partnering goes much wider than just the landlord-tenant relationship. Introducing sustainability into the construction of new buildings involves a complex inter-relationship between client, designers, lead contractors and trade contractors. I have never been a believer in disinterested outsourcing of environmental obligations to suppliers or service partners. The



way forward has to be a true partnership between the various parties contributing to the construction process.

And it is good that JCT has taken a lead in providing a framework for managing these relationships through its 2009 publication, 'building a sustainable future together'. This document establishes a broad contractual framework for dealing with sustainability issues.

### **Elimination of waste**

Massive reductions in energy usage and generation of waste can be achieved simply through changed behaviours. You can see this by comparing the way of life of those now in their 30s and 40s and the way of life of those who lived through rationing in the war and post-war years. With the rationed group, light switches are turned off, paper is re-used and there is virtually no wastage of food – and, significantly, you find a much greater variation in temperature in their homes according to the season.

If we can persuade occupiers of our office buildings to accept an extra 1° of centigrade variance in internal temperatures, we can reduce energy consumption by some 10%. And there is a FTSE listed company, which is a household name, where staff are now expected to wear jumpers in the office in winter.

### **Competition**

A few words about competition. We can take great encouragement from the fact that business is a competitive field, and a high proportion of businesses are taking a competitive approach to being seen as leading on the sustainability agenda. Some of the zeal comes from simply wanting to make a positive contribution, some from the knowledge that this will be attractive to potential new staff joiners – and some simply from the competitive streak which runs through businesses.

So, we and a number of others in the property sector don't just say that we will comply with, for example, part I Building Regulations, but that we will exceed them by 20%.

Likewise, we know that a number of major building contractors have pushed themselves way beyond minimum requirements to look at recycling of materials, whether it be demolition waste or choice of materials for site hoardings, and leaner methods of construction which reduce energy consumption. And, there is again, the old issue of simply eliminating waste – it has been estimated that some 13% of materials delivered to site are then not used at all and treated as waste. The scope for reducing energy in manufacturing through reducing this waste element is absolutely enormous,

and I would expect targets around this to be increasingly evident in construction contracts.

## **Engineering**

Moving on to engineering, I have a great confidence that engineers will devise solutions which enable us to construct buildings with carbon emissions at low levels which are not currently attainable.

I remember when current part 1 regulations were introduced, a colleague estimated that the theoretical increase in construction costs would be some 10%, but that the figure would very quickly be reduced to 3% or thereabouts through careful orientation of elevations, suncreening and engineering efficiencies.

I have no doubt that the central part that buildings play in national carbon emissions will result in an increased focus on the built sector by the best engineers.

And the government needs to be flexible and alive to emerging technologies. It needs to accept that best practice solutions may change through time as engineering develops – the current government is wedded to bio-mass, but it is becoming increasingly clear that burning bio-mass emits CO<sub>2</sub>. The theory of replanting trees to absorb this CO<sub>2</sub> is flawed, because we cannot sequestrate at the same pace as we emit. So bio-mass is making the problem worse.

## **Economic growth**

I have spent a lot of time talking about management or behavioural initiatives to reduce the use of energy. But we clearly will not hit the required targets on reduction in CO<sub>2</sub> emissions without an extensive contribution from new technologies. Sustainable energy will clearly be a growth sector within the economy – and the prize for world leaders in this field is to create massive export growth.

It is also clearly the case that engineering solutions focused on energy efficiency and renewable energy sources will be a massive growth area – nationally and with export potential. We only have to consider the Crown Estate's recent announcements about North Sea wind farms which have the capacity to produce ten times more wind power than is being produced nationally today – and take Britain to its target of 20% of electricity from renewable sources by 2020.

This is known as the Round Three (or R3) Licensing Awards, and the Carbon Trust have predicted that this could take Britain to a £70 billion wind and wave market supporting 250,000 jobs.

## **80/20 or 98/2**

So many of us in the room are involved in new building projects that we can easily forget that in any one year no more than 2% of the national stock of buildings is likely to be renewed – leaving 98% of existing, mainly energy-inefficient buildings.

For a sector that accounts for 44% of carbon emissions, it is quite clear that real progress against targets for carbon emission reduction will not be met unless real progress is made on the 98% of existing buildings. Changes in behaviour can lead to a certain amount of improvement, but nowhere near enough to achieve national targets for 2050. And lower energy costs will be enough to lead to some financially rational investment in small energy saving initiatives, but the level of investment required to reduce carbon emissions by 80% on the existing built stock cannot currently be justified in pure financial investment terms or anything like. So massive subsidy or other financial incentivisation is required.

Perhaps we need a ‘cash for clunkers’ scheme, but I don’t think we will get one. So what can we ask for? Unlike in the USA, the UK always seem to have a reluctance to use carrots and sticks in the tax system to drive behaviours and redirect capital investment. There is good evidence that tax allowances change investment decisions – and these allowances can be temporary.

I would certainly advocate a much higher level of ‘enhanced capital allowances’ for investment in energy saving plant and building adaptations. However, I think the simplest route may be to use the property rates system to reward those who occupy energy efficient buildings and to penalise those who occupy energy-inefficient buildings. You can easily achieve this by awarding a low rate in the pound for the energy efficient buildings and a high rate in the pound for the inefficient buildings. This will change occupier behaviours. It will also change landlords’ investment decisions because rates form part of an occupiers’ total property budget, and it is the total property budget which ultimately determines rent affordability levels.

### **Land Securities’ contribution to the sustainability agenda**

Before I close, a few words about Land Securities’ contribution in the field of sustainability. I am immensely proud that in 2007 we were judged by [sustainablebusiness.com](http://sustainablebusiness.com) to be one of the 20 most sustainable businesses in the world – covering all sectors. And, last year, the Dow Jones index rated us as the global leader in the real estate sector on sustainability.

Our involvement in this area goes back as long as 1981 when we first appointed an energy manager. We then appointed an environmental manager in 1997. Over this whole time period we have also benefited from employing a

far greater number of engineers than you normally find in property companies. So, we understand buildings, both in terms of their design and their subsequent operation.

It was during this decade that we shifted from an emphasis on the engineering aspects to wider management of our environmental impact across the whole business. We were the first company in the property sector to achieve ISO 14001 for introducing an environmental management system across all areas of our business.

As early as 2002 we participated on a voluntary basis in the Carbon Trust's emission trading scheme – the forerunner of the government's proposed new CRC emissions trading scheme. We were the only property company to do so. We made money from trading credits – and, much more importantly, it helped us to reduce carbon emissions across our estate, on a per square metre basis, by 28% over five years.

The Carbon Trust believed in our commitment, believed in the sustainability credentials of the new developments we were undertaking and, I am happy to say, recently chose one of our buildings, New Street Square in Holborn, for their UK headquarters.

On recent major construction projects, we have achieved in excess of 90% recycling or reuse of demolition waste materials and, in London, we have been one of the pioneers of use of energy piles for heating and cooling to create a renewable energy source for our new projects. We have learnt from this about the trials and tribulations of emerging technologies and have had to refine our approach on this two or three times over three schemes.

On a simpler basis, we are great believers that you have to measure first in order to then be able to improve. So, at our new project at New Street Square, we have installed energy screens in the lift lobby. These show, quite simply, how much water and electricity the buildings are using that day – compared to the day before, the week before and the month before. People really respond to the implicit challenge and we can see change behaviours reducing energy and water consumption.

On a similar vein of transparent measurement, we have recently committed to going beyond the statutory minimum requirement of energy performance certificates to putting up display energy certificates in all our London office buildings. This means that instead of certifying the energy a building is designed to consume, we will be showing the much more meaningful measure of the actual energy it consumes. We know that some of our buildings may score poorly, but it is only through measurement and benchmarking that we will drive improvement.

And, within the construction industry, we are immensely impressed by how the small cadre of principal contractors in the construction industry have similarly grasped the sustainability agenda. We believe it will give them competitive advantage, as many of their competitors will simply not be able to deliver on what we now take as a given in terms of management of waste and energy usage on site.

## **Conclusion**

To conclude, the business world is engaged and government is engaged, but I sense government is lacking the courage of its convictions in terms of introducing financial carrots and sticks. So, am I optimistic? Yes. Am I totally confident? No. Am I committed? Yes.



The Joint Contracts Tribunal Limited  
28 Ely Place  
London  
EC1N 6TD

E-mail: [stanform@jctltd.co.uk](mailto:stanform@jctltd.co.uk)

Website: [www.jctltd.co.uk](http://www.jctltd.co.uk)