

Sustainable Procurement in Construction
22nd October 2009
London
Held in conjunction with Mott MacDonald

E9453

Sustainable procurement is now a vital consideration for all business. It is a means to mitigate risk from climate change, from bad press, from project failures. It offers opportunities to differentiate from competitors, to change supply chains, create new markets, change social situations, and aid the halting of climate change.

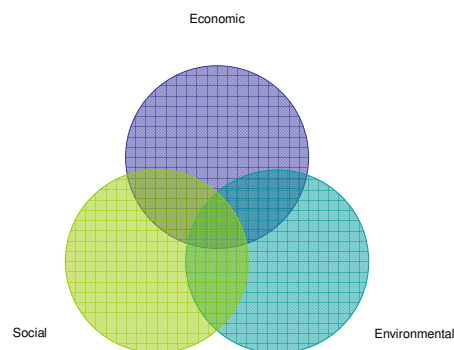
This briefing is informed by CIRIA's Sustainable Procurement in Construction event, held in London on 22nd October 2009. Neil Henderson, Senior Project Manager at Mott MacDonald was our chair and the speakers were Shaun McCarthy, Director at Action Sustainability, Andrew Robb, Procurement Manager for Transport for London, and Andrew MacAskill, Supply Chain Director, Skanska. Their presentations were

- *About sustainable procurement: who's doing what and why – Shaun McCarthy*
- *Case study – a client's perspective – Andrew Robb*
- *Case study – a contractor's perspective – Andrew MacAskill*

As Neil Henderson said, sustainability means different things to different people. A lot has been written about it but what is being done to make this industry sustainable? This CIRIA event offered lessons in the general principles of sustainable procurement and examples from which to pick out common themes and methods to take to our own businesses. Inspiration was also in abundance.

Sustainability and its many definitions

Sustainability seems to be understood in a number of ways. Or perhaps it is that what constitutes sustainable behaviour is varied and wide-ranging. Sustainability is, after all, about the triple bottom line. In 1987, the Brundtland Commission expressed it in this way, sustainable development is 'development that meets the needs of the present without compromising the ability of future generations to meet their own needs.'¹ Adjacent is the oft displayed Venn diagram, sustainability residing where the three concerns of economic, society and the environment coincide.



¹ Report of the Brundtland Commission, [Our Common Future](#), was published by Oxford University Press in 1987

More specifically, Sir Neville Simms, Chairman of the Sustainable Procurement Task Force, defines sustainable procurement as 'using procurement to support wider social, economic and environmental objectives, in ways that offer real long-term benefits.'²

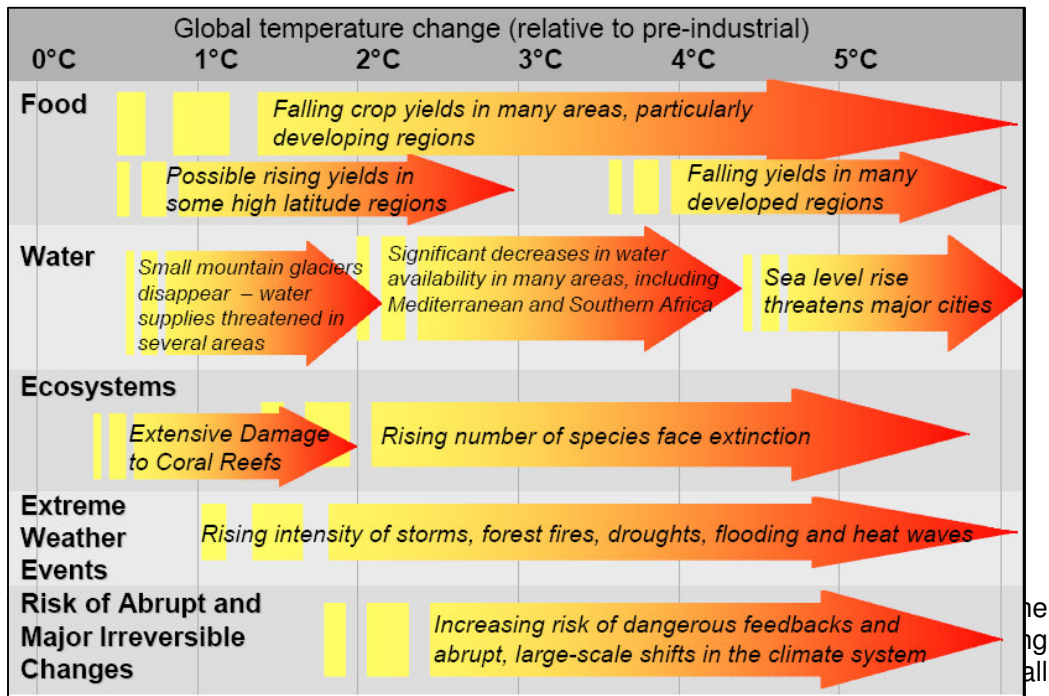
This conference illuminated the many ways in which organisations seek to become sustainable and how they do it practically. Shaun McCarthy began, though, with discussing why organisations seek the triple bottom line.

The Intergovernmental Panel on Climate Change has been warning of the effects of changes in atmospheric concentrations of carbon dioxide for some time. The science of the greenhouse effect is very well established. Evidence shows that since the Industrial Revolution, CO₂ levels have risen and human activity clearly puts the gas into the atmosphere. There is very little doubt in the broad scientific community that climate change will happen and the effects of this are already being found. This is motivation enough for some to act, to change their behaviour, to change their practices at work.

Due to the lag between atmospheric CO₂ concentration increases and meteorological changes, we live in almost absolute certainty of climate change for the next 40 years, a legacy of our forbearers. The changes in temperature and the effects it will have just in this country are reported in the UK Climate Projections (UKCP 09) revised this year by the UK Climate Impacts Programme (UKCIP). These present the results derived from complex models of the climate. In order to give users of these the most useful numbers, the results themselves seem complicated. There is, however, a whole suite of tools and reports available to describe the changes we can expect and their impacts, as was presented in CIEF's event in the summer ('What does climate change mean for construction?' held on 14th July 2009, CIEF event E9204). What is clear is that the weather we experience in this country will change markedly, even if we do manage the IPCC's recommendation of stabilising the climate at a 2°C rise. Our first motivation for sustainable procurement is, therefore, the stabilisation of the climate and next may well have to be climate change adaptation.

The economics of climate change should be of interest to any business. In 2006, the then Chancellor of the Exchequer, Gordon Brown, commissioned economist Nicholas Stern to look at the monetary cost of climate change. Although a 2°C temperature increase does not sound like much, Stern was shown that the results are dire, as illustrated below.

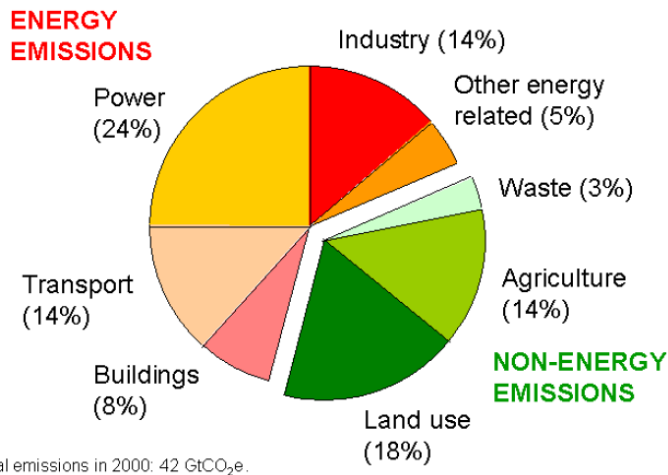
² Procuring the Future - The Sustainable Procurement Task Force National Action Plan, available from www.defra.gov.uk/sustainable/government/publications/procurement-action-plan/index.htm



businesses need to consider climate change now.

CO₂ is still often the headline but it is not the only story

With climate change being such a pressing matter, control of CO₂ emissions is still a big story in sustainable procurement. This diagram shows where CO₂ originates.



Significant changes are needed to business practices to achieve reductions in CO₂ emissions. However, this should not be the only

concern. The WWF's Living Planet Report 2008⁴ describes how nations use the Earth's resources. The consumption of the Earth's assets is compared to the rate at which they are replenished. Only resources that are generated were studied, so fossil fuels are not included. The findings were that we are effectively using the resources of three planet Earths and as we do so, we are working ourselves into ecological debt; in using more than one planet's resources, we are hindering its ability to provide for us in the future. As well as showing that our carbon footprint is

³ Stern, N (2006): Stern Review: The Economics of Climate Change, Cabinet Office – HM Treasury, London

⁴ assets.panda.org/downloads/living_planet_report_2008.pdf

too large and that we are putting more greenhouse gases into the atmosphere than can be absorbed, the Living Planet Report quantifies our overuse of water, land for growing food and wood and our over-fishing of the seas. We are patently failing to live sustainably if we accept the Brundtland Definition (see above). There is much to consider if we are to consume natural resources responsibly with the future in mind. Shaun's tip for the next big story is water.

A Client's Perspective

That carbon emissions are not the only concern became more evident as we listened to the challenges and objectives that Transport for London (TfL) is tackling. TfL's approach to sustainable procurement is informed by policy from the Mayor of London. The *Responsible Procurement* programme is employed by all parts of the Greater London Authority. Its aim is to purchase goods and services in an environmentally and socially responsible manner in order to achieve benefits for London and Londoners. This offers huge scope of influencing lives, particularly given the substantial budgets of the organisations involved. Responsible Procurement deals with seven themes. These are:

- Supplier diversity
- Community benefits
- Skills and employment
- Workforce welfare
- Fair employment
- Ethical Sourcing
- Environmental sustainability

Reflecting the current economic situation, the Mayor's Economic Recovery Action Plan, published in December 2008, is to stimulate economic activity, support those detrimentally affected by the downturn whilst ensuring that London is prepared to benefit from the next period of growth. This has ensured that skills and employment are topical issues. For example embracing fair employment means that TfL expects contractors to pay at least the London Living Wage (currently £7.60 per hour). London businesses are encouraged to take on apprentices, thus providing employment and training. Steps to aid business, particularly small ones that have previously been under-represented in the supply chain, have included standardising pre-qualifying processes, bidder briefings, facilitating consortia bids, rapid payment to SME's (within 10 days) and use of CompeteFor. CompeteFor is an online system, set up for bids for work on the Olympics. It has now been opened up for all to use. Skanska is also using this facility.

In order to turn policy and themes into actions, each project is looked at on a case by case basis and appropriate outputs are agreed depending on the size and scope of the contract. It is important not to overload small projects or try to deliver benefits with little relevance to the contract. In implementation, results can be achieved at different stages of the procurement process. The process is shown in the next schematic.



The greatest opportunities tend to be at the start of the procurement process (steps 1-6 in Andrew's diagram above), especially for environmental gains. This is the time to ask 'Do we need to buy it? What do we need to buy?' In steps 5 to 8, there can be a lot to learn from talking to the suppliers. There is often expertise and guidance to be found there that can inform the requirement. This is also the stage where the buyer should consider if there is anything that can be done to support sustainable markets, such as supporting markets for secondary goods by specifying 'recycled' products. It is not necessarily easiest to secure benefits through supplier selection; the most straight forward way to deliver sustainability benefits is through sustainable specifications and contracts and terms and conditions. This is not where the work ends though. Throughout the project, working with the contractor, having communicated the goals of responsible procurement, can yield greater successes. If the contractor learns from such projects, they might go on to use the same approach with other clients, thus propagating the responsible procurement benefits, if not the philosophy.

A Few Myths – careful what you ask for

Knowing what is the more sustainable choice isn't always obvious. For example, one report compared the Toyota Prius, the celebrity choice for greener credentials, and the Hummer, a vehicle perhaps epitomising the image of a gas-guzzler. Its authors managed to show that the Hummer could be deemed the more environmentally-friendly car. They did this by taking into account more than just the emissions of the vehicle being driven. There is also the research and development of each vehicle, how it is produced and what happens to it at the end of its life. Because the Hummer is a well-established piece of technology, R&D was written off. The Prius is technically greatly advanced but this makes it more resource-hungry in production

and more difficult to recycle when it will no longer work. As time goes on, the Prius production could be streamlined and the R&D will become proportionally less significant, then, even under this report's measures, it should fare better than the Hummer. In the meantime, Shaun does not recommend the Hummer to enhance your green image!

How far to take a sustainable procurement policy

Seeking a supply chain that is sustainable at every link, may seem a daunting prospect. However, firstly there are some easy wins to be had. It may be obvious but the most sustainable purchase is the purchase you don't make. Happily, this is also the cheapest! To achieve this step in sustainable procurement needs good demand management. That must be part of any sustainable procurement operation.

Some organisations, perhaps acting on past bitter experience of their own or their competitors, do go a long way to understand and know in detail the sustainability of their goods and services. Earlier this decade, one sportswear brand suffered a major campaign against it when it was publicised that its trainers were being produced in Indonesian factories employing physical and verbal abuse of workers. This seems to have left a scar on the sportswear industry. To guard against future similar allegations, a rival company now claims to know where all its sportswear is made and where all the fabric used in those products also originates. This isn't enough for them though. They now seek to know the origin of all the fibres in all the fabrics they use. This may seem like an extreme pursuit. However, in this case, the company has a sound basis for this approach. Firstly, they consider failure on their part to account for the supply chain high risk – the public does not seem to easily forget a mistake from their industry, and cotton is known to be picked, in some situations, by forced labour. Secondly, the environmental impact of the fibres may be very large. Cotton is very resource-hungry.

How far you choose to go down your supply chain is very dependent on the context of your business. This came up repeatedly in the discussion at the CIRIA event. You need to understand your supply, be aware of the risks there and decide how much effort is justified.

Leaders in the Field

Shaun highlighted a number of leaders who seem to be getting their sustainability policy very right. Marks and Spencer's Plan A is a good example. Not only did they think about where and what their products came from, also they considered what happened to their products after they were sold. They looked at how their clothes were washed and now seek fabric suitable for 30°C washing and suggest this temperature on the wash labels, where 40°C was the standard recommendation. They run a scheme with Oxfam which encourages M&S customers to take unwanted M&S clothes to Oxfam for resale by offering them a discount voucher to spend back at M&S. This is one of a number of partnerships with charities.

The Swedish government started a whole new market, and associated industry, for bioethanol vehicles. It offered a 10-year contract for its entire fleet and made this a requirement. Saab rose to the challenge, designed solutions and a new industry was created.

The Prison Service in the UK replaces 50000 mattresses a year, spending £2million. This creates a huge mass of waste. However, they have now found contractors who will take the disposed of mattresses and recycle them into carpet underlay, fence panels and roof tiles. Not only will this save landfill space, it also saves money.

How to proceed

Having been motivated by the facts of climate change, inspired by the opportunities to change businesses and lives, impressed by the examples described to us at this event, you may still need help in where to begin. The process is to define, prioritise, implement, measure your sustainability goals, then define, prioritise, implement and measure all over again. This is an iterative process. More than one speaker emphasised that it is a journey that they are on, a progression towards sustainability in their procurement.

The definition of sustainable procurement for your business will depend on what it is that you do, what is that you want to achieve and the commercial motivations. These are very important considerations. Having them clear will aid comprehension in your own organisation and, in turn, throughout your supply chain.

Measuring requires a flexible framework. The development of the framework will be part of the process rather than fixed rules and set of metrics.

A supply chain can be complex. It will take time to fully understand it.

It is important to consider the size and nature of the projects and give it the most appropriate sustainability targets. As emphasised by both presenters of case studies, it is important not to overload a small project and a large project with big budgets offer a variety of opportunities.

Andrew Robb's selection of useful support tools and aids

There is helpful advice and tools to aid with sustainable procurement; there is even some funding available. Andrew named several sources:

- CompeteFor (also recommended by Andrew MacAskill)
- Supply London
- Train to Gain
- Mayor of London's Green Procurement Code
- FORS (The Freight Operators Recognition Scheme)
- Diversity Works of London
- Sedex



A Client's Perspective

The motivation for Skanska's sustainable procurement stance is clear; this is an organisation that is determined to be the most sustainable of its kind, the greenest of project developers and contractors. This is built into its goals and behaviour, how and with whom it does business. Attainment of this status is a process. Andrew MacAskill sees this as a journey. Before 2008, Skanska was a *vanilla* organisation meeting all the demands of compliance. Now, that vanilla hue is turning green, with

environmental policies in action. Beyond about 2013, Andrew foresees Skanska heading into deep green, making its work futureproof. The deep green vision means zero waste to landfill, no environmental incidents, zero net energy, zero net CO₂ emissions, zero hazardous materials and zero water discharge.

How can this green ideal of operating be achieved? The answer seems to be with strong leadership and communication. The first is evident in the scale of the ambition and the rapidity of some of the changes already made in the business. An understanding of the goals and methods has been disseminated to all stakeholders; the employees understand these and have been trained to put it into action, the supply chain is provided with guidance and the customers know what to expect. In fact, customers that do not prescribe to the sustainability philosophy are not worked with. Skanska knows that it cannot compete with a less responsible and cheaper contractor if the customer is satisfied with that sort of offering.

The challenges are large but Skanska, like TfL, takes a pragmatic approach. As we can see from the examples, opportunities to change operations and achieve greater sustainability vary between projects. Large projects often enable big changes. In order not to overwhelm a smaller project with sustainability targets, these have more modest ambitions. In dealings with suppliers, a similarly practical view is taken. 80% of Skanska's turnover is spent with the supply chain; without carrying the supply chain with them, any green vision would remain a dream. If the management system is not sufficiently developed, Skanska is willing to offer tools of their own to the organisation. Electronic trading is employed, saving both parties money. Simple, standardised guidance is offered and pre-qualifying questionnaires will soon be standard use, all to communicate clearly the aims of Skanska's procurement process as early as possible.

Examples of Skanska's achievements are evidence that the approach has been a success. Projects that show commitment, a deep understanding of the issues and opportunities, and not a little imagination, demonstrate various resource savings. In the replacement of gas mains, the introduction of vacuum excavation required investment in machinery but it yielded a reduction of excavation site areas of 25% and a 30% reduction in greenhouse gases from vehicle movements. At the Barts Hospital in London, various steps were taken to manage waste. These included 3-dimensional design that allowed plasterboard to arrive on site pre-cut, thus reducing waste and transportation load. Waste savings overall are up to 30% on that project. In supplying a new office block with furniture, this will probably be purchased from a large manufacturer offering a sustainable product economically. A project office, though, has smaller, more modest needs. In this case, a local supplier is contracted to provide the furniture only for the duration of the project then it is taken back or sold on for re-use at the project's completion. In this way, environmental needs are satisfied and by employing local people, a social target is also met.

Both case studies at this event, demonstrated that the challenges are large but through engagement with all stakeholders and alignment of the whole supply chain, they are evidently surmountable. By understanding the supply chain, both up and down, being alive to opportunities and employing some creativity, the triple bottom line can be achieved in a huge variety of ways.

Shaun's top tips

As a renowned leader in the sustainable procurement, Shaun McCarthy's advice is invaluable. He was kind enough to share his top tips with the audience:

Be aware of the issues. This December's international meeting in Copenhagen and the legislation that will follow it will change priorities and risks.

Understand why you are pursuing sustainability. Unless you are pursuing an organisational goal, think again. You can't be a sustainable business unless you are in business.

Understand your impacts and risks. Understand your supply chain. A deep and rigorous interrogation of your motives and a thorough understanding of your supply chain will lead to better understanding of what you are trying to achieve and, then, how it can be done.

Make a plan

Look ahead, beyond the recession. This not the time to be shelving sustainable procurement as it will be a long process and that process will go beyond the current economic situation.

The Chair's summing up

Neil summarized the content of the presentations and the issues arising from the discussions very nicely:

Social and economic factors are very important alongside the environmental considerations.

There are lots of issues not just numbers to reconcile.

The appropriateness of policy and demands is key, particularly for SME's and smaller projects.

We're on a journey. We are still learning how to do sustainable procurement. Support is available, and good examples can illuminate the way.

Sustainable procurement makes commercial sense.

Set targets, set them carefully, but be prepared to move them as you learn and as projects vary.