



RE-VALUING SUSTAINABLE CONSTRUCTION

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Mr President, Chair, Ladies and Gentlemen

1. Introduction

Let me start off with some well known statistics about the built environment and the construction industry¹. The built environment accounts for:

- 40% of all the raw materials taken out of the earth's crust by weight;
 - 40% of waste streams; and
 - 40% of greenhouse gas emissions in terms of energy end usage.
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As noted by the European Commission² and many others, from a sustainable development perspective, *"the construction industry faces an environmental challenge that is greater than that of any other industrial sector"*

It is not surprising therefore that so much has been spoken about sustainable development by politicians, business leaders, design professionals, academics and researchers, civil society, and the like.

So many organisations are devoting significant resources and effort to the challenges of sustainable development, including NGO's, business councils, professional bodies, government organisations, R&D organisations, and the like.

So much has been written about sustainable development, and so much information is available, including research reports, technical guides, design guides, rating systems, management systems, and more.

So many strategies, policies, action plans, and regulations, and so on have been developed around the world.

And so many new technologies and innovative designs have been developed and are available.

And yet, despite all this activity, many hold the view that there is little progress towards the goals and ideals of sustainable development, and that there is so much more that needs to be done to place this earth on a path of sustainable development.

1 EC; Sustainable Construction; <http://europa.eu.int/comm/enterprise/construction/suscon/sustcon.htm>

2 *ibid*



Against this background, the objective of this presentation is to:

- examine the blockages and obstacles to achieving sustainable construction;
 - point towards overcoming these blockages and obstacles; and
 - to conclude, I will examine the role of the CIB in overcoming these blockages and obstacles.
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To examine the blockages and obstacles, I will not look at it from the usual perspective of *people*, *planet* and *prosperity*.

Rather, I will examine the blockages and obstacles from the perspective of *legislation*, *advocacy* and the *business case* for sustainable construction.

Furthermore, my presentation will focus on the environmental or green dimension – although I believe that many of the arguments and conclusions that I will draw are applicable to the social dimension as well.

In examining the blockages and obstacles, I will also examine the roles of various parties along the built environment supply chain and life cycle, including:

- the materials manufacturers;
- the design profession and the contractors;
- financiers, developers, owners and operators; and
- government – as policy maker and regulator.

And I will also examine the influence of civil society on these parties, and the role of advocacy.

2. Materials Manufacturers

Starting off with the materials manufacturers – the providers of the inputs into the construction process.

Substantial amounts of cement are consumed in the construction process worldwide. In the year 2000, about 1,6 billion tonnes of cement were produced globally, requiring the equivalent of 60 to 130 kilograms of fuel oil and 110 kWh of electricity to produce one tonne of cement³. The production of cement accounts for about 5% of global man-made CO₂, a major greenhouse gas contributing to climate change.

Worldwide, most cement manufacturers are in fact taking steps to reduce the harmful environmental effects of cement production, and to enhance the efficient use of natural resources and energy.

In particular, the major cement manufacturers, including Lafarge, Holcim, HeidelbergCement and others, have produced an Agenda for Action for the cement industry – under the auspices of the *World Business Council for Sustainable Development*⁴. Most of these companies produce annual sustainability reports – which largely are all showing improvements in many sustainability indicators.

Although possibly not as far advanced as the cement industry, the steel, aluminium, brick, timber and similar industries are also beginning to examine their role in sustainable development, and industry-wide strategies and company sustainability reporting are appearing.

3 WBCSD (2002). *The Cement Sustainability Initiative; Our Agenda for Action*. World Business Council for Sustainable Development. <http://www.wbcds.ch>

4 *ibid*



But why are these organisations taking up the challenge of sustainable development? What are the drivers?

To answer this, we need to look at Corporate Governance and Corporate Responsibility, which has become an issue of worldwide importance.

One of the earliest definition of Corporate Governance is that by the Economist and Noble Laureate Milton Friedman⁵:

➤ Corporate Governance is to conduct the business in accordance with the desires of owners or shareholders’;

➤ *which generally will be to make as much money as possible;*

➤ while conforming to the basic rules of the society embodied in law and local customs.

Over time this definition of Corporate Governance has widened, and it now encompasses the interests of not only the shareholders but also stakeholders.

While not trying to downplay the leadership and personal commitment and conviction of many industry leaders, it must however be acknowledged that the advocacy exhibited by stakeholders and in particular, as illustrated in these slides⁶, by green “movements”, has contributed significantly to placing sustainable development on the corporate agenda.

This slide is in fact of demonstrations at a cement plant in Spain⁷.

Legislation and potential legal action has also placed sustainable development issues high on the corporate agenda.

The response by corporations to advocacy and legislation has largely been a ‘business response’ and there is growing consensus amongst business leaders that Corporate Responsibility can enhance business value through :

- the mitigation of risks; and
 - building reputation and competitive advantage.
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Now, at the same time that Corporate Social and Environmental Responsibility is being recognised as enhancing business value, interest is also being developing amongst investors in measuring Corporate Responsibility as a proxy for ‘Quality of Management’ – that commodity that makes a company a good investment⁸. As a result, we have seen more and more companies publishing social and environmental responsibility reports, triple bottom reporting, and so on – which in turn is having a positive impact on placing these companies on a path supporting the objectives of sustainable development.

But a third factor is also contributing to placing sustainable development issues on the corporate agenda. Several investment institutions have established Socially Responsible Investment reporting products (SRI products), linking Corporate Responsibility management to their SRI assessment of companies.

5 India Infoline. *What is Corporate Governance*; <http://www.indiaonline.com/nevi/what.html>

6 Acknowledgements; Greenpeace; http://www.greenpeace.org/international_en/multimedia/image-view

7 *ibid*

8 Arthur D Little. *Speaking the Same Language; Improving Communications between Companies and Investors on Corporate Responsibility*. Business in the Community / UK Social Investment Forum; http://www.bitc.org.uk/resources/publications/speaking_pub.html



Collectively, for the time being at least, sustainable development is on the corporate agenda of many companies.

A major initiative that has been established by business to respond to and to further the needs and objectives of sustainable development is the *World Business Council for Sustainable Development* – of which the current Chairman in fact Bertrand Collomb, Chairman of Lafarge Cement. The *World Business Council*, which is a coalition of 160 international companies, advocates reporting on sustainable development by its members. The Council has also produced several sector reports – of which the cement industry is one of them.

Specifically, the *Council* notes⁹ that:

- companies are under increasing pressure from key stakeholders to be transparent about their values, principles and performance as regards sustainable development (i.e. a response to advocacy);
- there is a growing recognition by many *Council* members that external reports dealing with this subject support a company's position and strengthen its reputation; and
- these reports are part of an effective response to the need for greater accountability and transparency.

Clearly, mitigation of risk and building reputation is a key driver in the materials manufacturing sector – just as we have seen in the chemical, petroleum and other product orientated industries.

Of the Council's 160 or so members:

- 7% are from the cement industry;
- 4% are from construction (which I will return to later); and
- 2% from the engineering sector.

At the very least, one can see that sustainable development issues are on the agenda of the leaders amongst the broader construction industry and materials manufacturers sector.

Another major international initiative is the *Global Reporting Initiative* (GRI), which is affiliated to the UN Environmental Programme. The GRI produces globally applicable *Sustainability Reporting Guidelines*¹⁰ which have been adopted by many companies, including many of the large materials manufacturing companies. Again, we see that the cement manufacturing sector is well represented.

The stock exchanges and investment indexes around the world, including the *Dow Jones*¹¹, the *FTSE*¹² and even the *Johannesburg Stock Exchange*¹³ are also encouraging companies to report on their Socially Responsible Investment as a means for shareholders to assess the value of the company.

Again, we see some of the large cement companies participating, including Holcim and Lafarge.

9 WBCSD. *Striking the Balance; Sustainable Development Reporting*. World Business Council for Sustainable Development; <http://www.wbcsd.ch>

10 GRI. *Sustainability Reporting Guidelines*. Global Reporting Initiative; <http://www.globalreporting.org/guidelines/2002.asp>

11 DJSI. *Dow Jones Sustainability Indexes*; <http://www.sustainability-indexes.com/>

12 FTSE. *FTSE4Good Index Series*; <http://www.ftse.com/ftse4good/index.jsp>

13 JSE. *JSE Socially Responsible Investment Index*. JSE Securities Exchange; <http://www.jse.co.za/sri>



And then, there are the many advocacy groups that have in the past, and continue to do so, raise questions about the commitment of these major organisations to sustainable development, labelling them as “*posing as friends of the environment and leaders in the struggle to eradicate poverty*”¹⁴.

These tensions between the advocacy groups and business have certainly contributed significantly towards placing sustainable development on the corporate agenda.

In summary, I believe that many of the materials suppliers are taking proactive and reactive steps to commit to the needs of sustainable development. The response of these companies is, understandably, largely a business response:

- mitigation of risks;
- building reputation and competitive advantage;

Driven by:

- legislative requirements;
- investor demands; and
- advocacy.

3. Financiers, Developers and Users

One of the difficulties in examining the blockages, obstacles and drivers of sustainable construction when looking at the demand side for construction is the diverse structure of financiers, clients and users in our industry.

For example, on the civil-works sector, financiers, developers and users include:

- the petrochemical sector;
- manufacturing;
- mining;
- roads authorities;
- municipal services;
- and so on.

The building sector includes:

- private residential – including the home-owner and the rental market;
 - public residential;
 - private non-residential – including commercial and retail; and
 - public non-residential – including the public schools, hospitals, prisons, etc.
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Clearly, this is a very dispersed and diverse group of stakeholders, with:

- very different buying motives;
 - different expectations about value and return on investment on built assets; and
 - different reasons for engaging with the principles of sustainable construction.
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Turning first to the financiers – who play an important role in development throughout the world. Finance institutions are also beginning to link finance to sustainable development issues, and an important move in this direction was the adoption of the *Equator Principles*¹⁵ by several leading international banks. The *Equator Principles* is a voluntary set of guidelines developed by the banks for managing social and environmental issues related to the financing of development projects.

14 CorpWatch. *Greenwash Awards*. <http://www.corpwatch.org/campaigns/PCC.jsp?topicid=102>

15 The Equator Principles; <http://www.equator-principles.com/principles.shtml>



Specifically, the banks undertake:

- to ensure that the projects that they finance are developed in a manner that is socially responsible and reflect sound environmental management practices; and
- not to provide loans where the borrower will not or is unable to comply with our environmental and social policies and processes.

The Principles however only apply to projects with a capital cost of \$50 million or more – which is typical of the more capital intensive industrial projects (including cement plants).

To examine the blockages, obstacles and drivers within this sector, it is useful to examine possible best practice organisations using the *Global Reporting Initiative's* guidelines – where we see, for example:

- 4% of the organisations are from the retailing sector;
- 1% from real estate;
- 2% from aviation; and
- and so on.

Note that 1% of 418 members amounts to about 4 companies – which is a very small number of real estate companies worldwide using the GRI Guidelines.

One of the organisations using the GRI reporting guidelines is the *British Airways Authority* (BAA). BAA airports are among the top 20 energy users in the UK, and the major fossil fuel consumption at BAA airports are:

- aircraft fuel consumption;
- energy used in airport buildings (of which tenants use 50% of the energy);
- surface transport fuel.

BAA¹⁶ has set a relatively ambitious ten year objective, namely “a reduction in absolute CO₂ emissions of 15% on 1990 levels by March 2010”.

The *Canary Wharf* property development, investment and management company in the UK also reports annually on the GRI guidelines, and clearly sees sustainable development issues as a means of building reputation and competitive advantage, and has set very ambitious goals¹⁷. The Canary Wharf Estate is probably a leading example of what can be achieved in sustainable construction.

J Sainsbury, one of the world's largest retailers with interests in financial services and property, also reports using the GRI and other guidelines.

Sainsbury has a very ambitious environmental programme and goals and targets¹⁸, and is clearly seen to be building a strong reputation in this area.

Clearly, issues of sustainable development are being raised at the level of the Corporate agenda of many organisations in this sector. But it is necessary to examine why this is taking place – and what are the drivers. The answer is similar to that which is driving sustainable construction issues in the materials manufacturing sector, namely:

¹⁶ BAA. *Sustainable Development, Environmental Objectives*;

http://www.baa.co.uk/main/corporate/sustainable_development/environment/objectives_frame.html

¹⁷ Canary Wharf Group plc. *Environmental and Social Report 2001 – 2002*;

<http://www.canarywharf.co.uk/downloads/Canary%20Wharf%20Environment.pdf>

¹⁸ J Sainsbury plc. *Environmental Report 2003; Being Greener 03*; <http://www.j-sainsbury.co.uk/csr/envrep2003/index.htm>



- reduced costs from eco-efficiencies, and especially energy costs;
- mitigation of risks;
- building reputation and competitive advantage;
- legislative requirements;
- investor demands; and, possibly
- advocacy.

But, while there are many similarities that are driving sustainable development on the corporate agenda between the materials supply sector that I discussed previously and the finance, developer and user sector, there are also some differences – which I will return to later.

But, let me continue with some of the reporting initiatives.

Apart from the *World Business Council for Sustainable Development*, the GRI, the *Dow Jones SRI*, the *FTSE4Good* and others that I spoke of earlier, there is a whole plethora of similar initiatives around the world.

For example, in the UK, there is the *Making a Corporate Commitment*¹⁹, whose members commit to improving their performance of:

- greenhouse gas emissions;
- production of waste; and
- consumption of water,

as well as at least one, but preferably more, of:

- reducing use of raw materials;
 - developing a biodiversity action plan;
 - implementing a green travel plan; and/or
 - reducing emission of other gases.
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Members of this organisation include BAA, local councils, and retailers such as Boots, Safeway and Sainsbury's – some of which I spoke about previously. Issues of sustainable development are clearly being addressed by these organisations – with various levels of success.

Another organisation in the UK is *Business in the Environment*²⁰, which consists of over 700 member companies “committed to improving their impact on society in the community, environment, marketplace and workplace”.

BiE produces an annual Corporate Responsibility Index, and again we see familiar names in the UK from this sector, including:

- BAA;
- Canary Wharf Group;
- Tesco;
- Safeway; and
- Sainsbury.

But one also has to ask where are the other leading local and international companies.

These examples of companies shown here, I believe, illustrates a reinforcing loop through:

19 MACC2. Making a Corporate Commitment; <http://www.macc2.org.uk/whatis/index.htm>

20 BITC. Business in the Environment; http://www.bitc.org.uk/programmes/programme_directory/business_in_the_environment/



- commitment by these and other forward looking companies towards adopting the principles of sustainable construction; and
 - the positive role that SRI reporting organisations are playing in leading or supporting the process – which is reinforcing and driving the actions of business organisations towards adopting the principles of sustainable construction.
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But, there are also worrying signs. A recent report by Arthur D Little²¹, which was commissioned by *Business in the Community* and by the *UK Social Investment Forum* notes that “the SRI community as a whole is in danger of losing credibility” with the mainstream investment analysts, fund managers and company investor relations managers. There are just too many such reporting organizations at present, with competing and sometimes conflicting messages. The implications of this on further broadening the base of environmental reporting by companies is at present not clear.

To continue to examine the drivers for sustainable construction, it is useful to look at the *US Green Building Council* and the LEED accreditation system which is widely used in the USA.

A key driver of the LEED system is the Executive Orders of the California state government for the siting and building of state facilities^{22,23}. Executive Order D-16-00 establishes the Governor’s sustainable building goal, namely:

“... to site, design, deconstruct, construct, renovate, operate, and maintain state buildings that are models of energy, water, and materials efficiency; while providing healthy, productive and comfortable indoor environments and long-term benefits to Californians.”

The *US Green Building Council* has over 4000 members, and an analysis of the membership is shown here. Of interest is, proportionally, the low representation by members of client organisations, with only 1% of their members being from utility companies and 2% from the retail sector. In contrast, the professions account for 63% of the membership.

To date, LEED accredited buildings represent a conservative estimate of 4% of the new construction market²⁴.

Of interest is that the *US Green Building Council* has recently released a report on *The Costs and Financial Benefits of Green Buildings*²⁵. A summary of the costs and benefits is given in this slide in \$/ft². The Green Building premium is small, about 2% of the initial cost, whereas the potential savings in energy over a 20 year period exceed this initial green cost.

But to place the costs and financial benefits into perspective, it should be noted that the cost of space per employer including operation and maintenance is typically only about 6% to 10% average annual employee costs, or about 1% to 5% average annual total operational costs in a normal services type organisation. Savings of, say, 10% on total operational costs of between 1% to 5% are not going to be major drivers in an organisation.

However, the environmental benefits, for example, a 36% reduction in greenhouse gas emissions is very significant. Such benefits are usually accrued outside of the organisation, and need to driven

21 Arthur D Little. *Speaking the Same Language; Improving Communications between Companies and Investors on Corporate Responsibility*. Business in the Community / UK Social Investment Forum;
http://www.bitc.org.uk/resources/publications/speaking_pub.html

22 State of California, Governor’s Executive Order D-16-00. August 2000;
http://www.governor.ca.gov/state/govsite/gov_homepage.jsp

23 State of California, Governor’s Executive Order D-46-01. October 2001;
http://www.governor.ca.gov/state/govsite/gov_homepage.jsp

24 <http://newsmanager.commpartners.com/agcenv/issues/2004-01-30/5.html>

25 *The Costs and Financial Benefits of Green Buildings; A Report to California’s Sustainable Building Task Force*, October 2003; <http://www.usgbc.org/Docs/News/News477.pdf>



through legislation and other drivers, such as the Executive Orders of the California state government, and other forms of advocacy.

Let me return to this point of advocacy. At the one end of the spectrum, we have seen advocacy by organisations such as Greenpeace and other ‘Green movements’ targeting largely the big and visible issues²⁶:

- the chemical and petro-chemical companies;
 - genetically engineered food;
 - the burning and slashing of the rain forests to create agricultural land for food;
 - and so on.
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Images²⁷ such as these due to oil spills are very vivid and capture the attention of the public and government officials.

However, with some exceptions, we are not seeing civil society voice significant opposition to the ongoing environmental issues due to construction and the built environment. I believe this lack of advocacy by civil society is an obstacle to furthering of sustainable construction amongst financiers, clients and users of the built environment.

Rather, the advocacy is being driven by the professional organisations (which I will talk about later), by peer organisation, the materials suppliers, and so.

Turning back to the business case for sustainable construction in the finance, owner, user sector. Corporate governance addresses materiality factors. Materiality Corporate Responsibility issues are those that really affect value, namely reputation risks such as environmental pollution, product tampering, genetic modification, pricing policies in third world countries, concerns over child labour, and so on – the issues that highlighted internationally by advocacy groups.

The list of potential risks under the Corporate Responsibility label is very long. However, for any one company, the list of actual risks that really could affect shareholder value is in fact far shorter²⁸.

Notwithstanding the significant effort by several owners and operators of buildings that I have highlighted here, it is necessary to ask whether environmental issues are in fact a materiality factor in the bulk of this sector, and whether environmental issues really represent financial or reputation risks to financiers, owners and operators of the built environment. There are many notable financier, owner and operation organisations that are not showing the same level of commitment as some of the organisations that I have highlighted here – which we see from the limited participation of clients for construction products in SRI reporting initiatives.

It is necessary to ask the question: *is sustainable construction a materiality factor?*

As noted by the *World Business Council for Sustainable Development*, the market effectively reflects the financial values of goods and services through pricing mechanisms, but it is not good at pricing many environmental assets and services like a stable climate or a rich biodiversity and forest cover.

Is sustainable construction is valued?

In summary, notwithstanding the laudable efforts of some forward looking companies, the response to the imperatives of sustainable construction by financiers, developers and users is somewhat limited.

26 Acknowledgements; Greenpeace; <http://www.greenpeace.org>

27 *ibid*

28 BITC (2003). Speaking the Same Language; www.bitc.org.uk/docs/Speaking_the_same_language_report_2003.pdf



The business case is not clear, there is a question as to whether sustainable development is a materiality factor, and are there worrying signs about the proliferation of SRI products and their potential to impact. The influence of legislation is limited, and there is limited influence by advocacy groups.

4. National / Local Strategies and Legislation

Let me jump now to national and local strategies and legislation – which one would intuitively look to as being key drivers of sustainable construction, especially in conditions of market failure.

Worldwide, there is no shortage of national and local strategies, policies, legislation and regulation dealing with sustainable development.

For example, the EU strategy for sustainable development set some very ambitious guiding principles in 2001²⁹:

- an absolute decoupling of GDP growth from resource consumption, emissions and waste;
- a reduction of energy consumption by a factor of 4 in one generation;
- a reduction of material consumption (dematerialisation) by a factor of 10 by 2050;
- a halt to the destruction of soil properties by construction; and
- protection of the biological diversity of landscapes.

The construction industry clearly impacts on all of these.

But in the EU and many other countries, we have seen very little impact of these strategies, and a recent study has identified the following as key problems with many sustainable development strategies^{30,31}, and in particular in middle-income and developing countries:

- strategies are not country-led, but were induced or even imposed by external agencies;
 - competition between policies, ‘policy inflation’ and ‘capacity collapse’;
 - strategies are all too often not integrated into a country’s mainstream decision-making systems, and in particular in government economic planning, and private sector investment decisions – frequently resulting in mere ‘planners’ dreams’, with little political, civil society or business commitment and demand for further action;
 - few links between policy and on-the-ground realities;
 - very many strategies are little more than wish lists, lacking clear priorities or achievable targets;
 - very narrow base of participation, usually due to lack of time and resources.
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As noted some time ago by a member of the European Commission³², the problems that we are seeing are linked to establishing appropriate political governance models:

- most governments these days (the good, the bad and even the ugly) have an Environment Department and an Environment Minister;
- however, sustainable development requires more than just a department, a minister and white papers;
- it requires a mosaic of institutions, policies and values; and
- good governance is required to create a political eco-system that is adequate to save the real one.

29 European Communities (2001). EU Sustainable Development Strategy; A Test Case for Good Governance; <http://europa.eu.int/comm/environment/forum/susdevstra.pdf>

30 IIED (2002) Bridging the Knowledge Gap in SD Strategies: Research Partnerships for Sustainable Development. www.iied.org/docs/wssd/bp_knowl_gap.pdf

31 Dalal-Clayton, B. The MDGs and Sustainable Development: The Need for a Strategic Approach. www.iied.org/docs/mdg/MDG-ch5.pdf

32 Patten C (2000). Sustainable development and Governance. OECD Observer, April 2004; www.oecdobserver.org/news/fullstory.php/aid/353/



The state of national sustainable development strategies, and the supporting legislation and regulation, is summarised in this slide by Bertrand Collomb, Chairman of Lafarge, who is the current Chairman of the *World Business Council for Sustainable Development*³³, in which he notes:

“The ability of governments to work together and tackle global concerns appears to have faded at a time when a clear lead is needed most.”

And similarly Mikhail Gorbachev, the last president of the Soviet Union, Nobel Laureate and currently president of *Green Cross International* made some hard-hitting statements earlier this year³⁴:

- Following Rio for the first time in history, the world community managed to map out and agree on a strategic plan designed to address the twin problems of poverty and ecological disruption;
 - However, serious obstacles emerged as implementation moved forward;
 - By and large, the governments of the industrialized countries chose to retract their commitments
 -
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Gorbachev then goes on to say:

- International social democratic parties, and “green” movements worldwide as well as thousands of NGOs representing millions of members also stand behind the sustainable development principle;
- Together, these groups and movements are a powerful force whose pressure is being increasingly felt by the ruling elite ...

There is growing international concern that governments are not rising to the challenge of sustainable development.

But while the international social democratic parties, the “green” movements, the NGO’s and others are a powerful force for sustainable development, the focus to date has been the visible issues – and as I pointed out earlier, the issue of sustainable construction is by-and-large not being raised.

Where is the advocacy for sustainable construction?

But to be fair, there are some isolated voices and exceptions – largely by the professions and the component suppliers. For example, Directive 2002/91/EC of the European Parliament, which became law in January 2003, deals with the energy performance of buildings³⁵. In the UK for example, the Government has three years from that point to implement it – but there is concern about how effective government will be in setting robust and legally binding targets.

In what is reportedly an unprecedented show of unity, “the UK’s leading environmental organisations have joined forces with captains of industry and housing charities to call on the Government to set a binding target for reducing the amount of energy we use in our homes³⁶”.

5. Designers and Contractors

Turning now to the designers and contractors, and their role in supporting sustainable construction.

33 WSSD (2004). Bertrand Collomb, Chairman of Lafarge, Becomes New WBCSD Chairman
<http://www.wbcsd.ch/plugins/DocSearch/details.asp?type=DocDet&DocId=NDE3NA>

34 Gorbachev, M (2004). *For a Global Glasnost*. Tribune Media Services International;
<http://www.commondreams.org/views04/0422-14.htm>

35 NHER. News; EU Directive; <http://www.nher.co.uk/eudirectivefags.shtml>

36 Sustainable Energy Partnerships. *Environmental Groups Unite with Big Business to Demand Energy Efficient Targets*; <http://www.ukace.org/pubs/press/PR040315.pdf>



The role of contractors and builders is examined in the report produced by the Confederation of International Contractors' Associations (CICA), which was facilitated by the United Nations Environment Programme (UNEP)³⁷. The CICA report is somewhat inconclusive about the role and contribution of contractors and builders to sustainable construction, but does make reference to the European Construction Industry Federation's (FIEC's) European Charter for the Environment.

This Charter constitutes a statement of principles, and the basis of the Charter is largely about:

- supporting initiatives and policies laid down in the EU Treaty; and
 - promoting actions to encourage public and private clients in such manner that construction projects take account of the concept of 'sustainable construction'.
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The role of contractors is therefore seen as being one of including advocacy, but the ability of contractors to influence clients is in fact somewhat limited.

An interesting question that can be posed is whether contractors will ever be in a strong enough position to be able to undertake not to build infrastructure that will not or is unable to comply with environmental and social policies and processes – as do the financiers referred to previously that subscribe to the Equator Principles.

The actions in the FIEC Charter illustrate the position and role that the contracting industry finds itself in – by and large the contracting sector has a very limited influence on the form and nature of construction, which is largely influenced and determined by clients and the design teams.

Rather, contractors have a role to play in minimising environmental impacts during their construction activities – though waste management, pollution control, etc.

The drivers of the role of contractors in sustainable construction is illustrated further in this screen shot of the *Associated General Contractors of America's* (AGC) Homepage³⁸. As shown at the left of the screen, the AGC homepage has a section on Environmental Services, covering:

- Compliance Assistance;
- Advocacy and Outreach;
- Green Construction;
- Environmental Publications;
- and so on.

But, it is interesting to note the main advertising bar on the Homepage – “Construction Lawyers; a global network of construction law firms”. This says something about our industry.

This is illustrated further by the publications on offer in the section on Environmental Publications:

“Construction Guide Book for Managing Environment Exposures: Don't let environmental liability threaten your profitability or put your construction company out of business. Protect against the high cost of environmental liability with our Construction Guidebook for Managing Environmental Exposures.”

This response is not surprising when considering the legislative environment in the USA. For example, the information brochure produced by the EPA for contractors notes that:

37 CICA (2002). *Industry as a Partner for Sustainable Development; Construction*. Confederation of International Contractors' Associations;

http://www.uneptie.org/outreach/wssd/contributions/sector_reports/sectors/construction/construction.htm

38 AGC. Associated General Contractors of America; <http://www.agc.org>



.... depending on the regulation, a violation can result in a civil penalty up to \$27,500 per day and a criminal penalty of up to \$250,000 and 15 years in prison.

I don't raise this here in a negative sense, but rather the AGC Web Site illustrates so vividly that legislation is a key driver for the actions of contractors within the context of sustainable construction.

But legislation is not the only driver of the response of contractors, and many contractors also see environmental responsible reporting as building reputation and competitive advantage. For example:

- Skanska is a member of the *World Business Council for Sustainable Development*, and
 - Balfour Beatty and the Taisei Corp are listed on the *Dow Jones Sustainability Indexes*.
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Similarly, Balfour Beatty, Carillion, John Laing and other contractors subscribe to the GRI sustainability reporting index, reinforcing that the major contractors do see Corporate Responsibility and sustainable development as key factors.

Turning briefly to the consulting sector report produced by the International Federation of Consulting Engineers (FIDIC), facilitated by UNEP³⁹. The Consulting Engineering report notes that:

"The consulting engineering industry is uniquely positioned to provide leadership in implementing sustainable development because it plays a central role in society throughout the world."

The report then presents a Call for Action for the consulting engineering industry, which includes the three central components of my presentation, namely the business case, legislation (including policy) and advocacy:

- *communicate the business case for sustainable development* – a point which has been raised consistently throughout this presentation. But I have to stress that the business case is not simply about cost reductions through eco-efficiencies, but also about developing long-term relationships with clients to help them to build reputation and competitive advantage through green construction;
 - *become leaders as well as doers – become party to the policy making process*. I would add influence legislation – “raising the level of the bar”, balancing the needs of clients with the needs of society and the needs of the environment;
 - *teach others about the problems with our current production-consumption model, and about the concepts of sustainable development* – which is an advocacy role.
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In addition, the Call for Action also identifies the role of the consulting engineer in technology development;

- *develop technologies that foster sustainable growth while maintaining and enhancing quality of life;*
 - *learn more about the impending problems of non-sustainable behaviour, and the technologies needed to solve them.*
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Many designers are in fact providing leadership in implementing sustainable construction – and in doing so are also building reputation and competitive advantage for themselves, as is illustrated in this slide;

"HOK today announced that it has achieved its goal to become the first architectural design firm with 100 LEED Accredited Professionals."

39 FIDIC (2002). *Industry as a Partner for Sustainable Development; Consulting Engineering*. International Federation of Consulting Engineers;
http://www.uneptie.org/outreach/wssd/contributions/sector_reports/sectors/consulting/consulting.htm



In summary, designers (and contractors) are the intermediaries in the process, interpreting and advising clients within the context of legislation and within the context of societies needs. The designers and contractors are however only advisors and implementers, and are currently not in a particularly powerful decision making process with regard to the choices.

But designers and contractors need to play a strong advocacy role, and:

- *communicate the business case for sustainable development*; to build reputation and competitive advantage through green construction
- *influence legislation* – “raising the level of the bar”, balancing the needs of clients with the needs of society.

6. A Role for CIB

Ladies and gentlemen.

As I have illustrated, so much is being done by so many to further the objectives of sustainable construction. Is there a role for CIB, and if so, what is it?

Clearly the CIB has a very important role to play – the challenges facing our industry (and our planet) and enormous, and there is so much still to be done to overcome the blockages and obstacles to sustainable construction.

The traditional role of the CIB is the technical role, which must be continued and strengthened – as is reflected by the activities of the CIB’s Commissions.

But, to make a meaningful impact on sustainable construction will require the CIB and its Members to be involved in a wider role, as is for example identified in the Strategy for Action in the CIB’s Agenda 21 for *Sustainable Development in Developing Countries*⁴⁰.

Specifically, as I have tried to show in my presentation, the ability of the CIB and its Members to make a meaningful impact will depend on building and communicating the business case, and in encouraging the development and implementation of appropriate legislation – both of which require an advocacy role.

So it is not really a question of “what to do”, but rather “how to do it” – how to mobilise the necessary resources, and how to develop the necessary relationships that can influence the path of sustainable construction?

Key elements of any CIB strategy should therefore be to:

- i) Strengthen, or facilitate the establishment of, national and international private sector client driven forums for sustainable construction (possibly along the lines of that of the *World Business Council for Sustainable Development*), bringing together financiers, clients, owners and users who are committed to sustainable construction.
 - ii) Experience world-wide in our industry has shown that effective change must be client driven – but it must also be balanced by legislative drivers and incentives. A key element of a strategy must therefore be to actively engage with and support governmental organisations in the development of policy, strategy and legislation impacting on sustainable construction. This could include, for example, observer status with various organisations such as ISO and EU Working Groups.
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40 CIB (2003). *Agenda 21 for Sustainable Construction in Developing Countries*;
<http://www.sustainablesettlement.co.za/policy.html>



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- iii) Unlike private sector clients, public sector clients generally take a broader view of the business case for development, including the social impacts and intangible costs of sustainable construction – such as the broader costs of air pollution. The CIB should therefore strengthen or facilitate the establishment of national or regional public sector forums impacting on sustainable construction (such as the Green Building Council and other similar bodies), bringing together public sector clients and regulators.
-
- iv) The CIB should facilitate monitoring, reporting and commenting on the status of sustainable construction worldwide.
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Much of what I have described here is in fact already identified in the CIB's strategy for Sustainable Construction⁴¹, and a more detailed action plan together with a brief for a Sustainable Building and Construction Forum is being developed in partnership with UNEP-IETC, CICA, FIEC, FIDIC and others.

But clearly, what I have described here requires extensive national and international participation, which will require the participation of the CIB General Secretariat, CIB Working Commissions, and CIB Member organisations at the national and international levels – as well as the participation of CIB partner organisations.

Ladies and gentlemen, I would like to close off with an extract from a document produced by Graham Winch and Roger Courtney in developing the CIB's strategy for what is now known as Re-valuing Construction⁴²:

- the outputs of construction have a value to the business or organisation or household which at present is difficult to articulate;
- that perception of value is driving construction decisions;
- the value of construction to an economy and to society is being discovered; and
- value can be enhanced if construction can deliver higher quality outputs more efficiently

The parallels between the rationale developed for the CIB's Re-Valuing Construction Theme and Sustainable Construction is striking.

The challenge for the CIB, and for our industry in general, is to place a value on sustainable construction – and to get sustainable construction valued amongst:

- governments;
 - financiers, clients, owners and developers; and
 - civil society.
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Finally, I would like to acknowledge the input and support of colleagues of mine from CSIR Building and Construction Technology – and in particular Chrisna du Plessis, Jeremy Gibberd and Llewellyn van Wyk

Thank you

41 CIB (2003). *A CIB Strategy for Sustainable Construction*;

<http://www.cibworld.nl/pages/ib/0302/StrategySC.html>

42 CIB (2002). *CIB Strategy for Re-engineering Construction*; <http://www.cibworld.nl/pages/begin/Proposal.pdf>