



environmental
guide for
construction
sector

green today, greener tomorrow

Sustainability in construction has long been a topic of debate, and as a result the sector is probably better versed in the topic than many others - and its commitment to the concept greater. However, the scale of the industry, its diversity and complexity mean that not only is there still scope for greater sustainability still there, but the pressure to take further steps – often backed by legislation - increases year by year.

This brief guide outlines the current state of affairs and the unique challenges the construction industry faces. Reading it will give any manager an overview of current thinking, relevant legislation and likely future developments. We hope you find it valuable and a useful introduction to a challenge that continues continue to shape and change the construction industry.

The construction industry is significant: its output is worth over £100bn a year. It accounts for 8% of Gross Domestic Product (GDP) and provides employment for around three million workers. Businesses throughout the economy are reliant on the performance of our built infrastructure, such as roads, rail and power stations, so therefore the output of the construction industry has a major impact on the ability to maintain a sustainable economy.

The industry also has a major impact on the environment. For example, buildings are responsible for almost half of the UK's carbon emissions, half of our water consumption, about one third of landfill waste and one quarter of all raw materials used in the economy¹. The construction industry clearly has a central role to play in promoting sustainable growth and development.

environmental guide for construction sector

this outlines: Relevant legislation and codes, Key issues for the industry, Climate change, Waste, Responsible timber sourcing, Health & Safety, Community engagement

One of the major clients of the construction industry is the public sector, which is responsible for directly procuring approximately a third of all construction². In 2007, the UK Government's Sustainable Procurement Action Plan set out its aim to procure more sustainable properties and infrastructure throughout the public sector. This, together with the demands from other key stakeholders such as regulators, private sector clients, City investors, and local communities to address environmental, social and economic impacts, is driving sustainability within the construction industry.

The industry is complex and includes companies and businesses involved in house building; the extraction, processing and distribution of raw materials such as sand, gravel and cement;

builders' merchants selling a vast range of building materials and products; and contractors involved in large-scale construction projects such as road building, rail engineering and other infrastructure. In addition, small firms and self-employed builders make up a significant proportion of the industry. The environmental and sustainability issues affecting the sector are therefore numerous and diverse, and could include climate change, waste minimisation, health and safety, community engagement, skills and training, and sustainable procurement

relevant legislation and codes

PART L OF THE BUILDING REGULATIONS (IN ENGLAND AND WALES) (PART L)

Part L was introduced by the Government on 6th April 2006, and concerns the implementation of energy efficiency measures. These regulations raise the energy efficiency of new buildings by 40%, compared with the Part L 2002 requirements. They also improve compliance by introducing new energy performance requirements for building services within all new buildings.



For more information: www.communities.gov.uk/planningandbuilding/buildingregulations

THE ENERGY PERFORMANCE OF BUILDINGS (CERTIFICATES AND INSPECTIONS) REGULATIONS 2007

These regulations establish a system for the introduction of building Energy Performance Certificates (EPCs). These certificates give a rating of the energy performance of a building using an A to G classification scheme, which have to be supplied on sale or. For more information: www.campaigns.direct.gov.uk/epc/

THE EU EMISSIONS TRADING SCHEME (EU ETS)

The EU Emissions Trading Scheme (EU ETS) puts a price on carbon that businesses use and creates a market for carbon. It covers electricity generation and the main energy intensive industries – power stations, refineries and offshore, iron and steel, **cement and lime**, paper, food and drink, glass, ceramics and engineering and vehicles. The EU ETS works on a “cap and trade” basis. EU Member State governments set emissions limits for all ‘installations’ covered by the scheme in their country. Each ‘installation’ is then allocated allowances equal to that cap for the particular phase in question. ‘Installations’ may meet their cap by either reducing emissions and selling the surplus, or letting their emissions remain higher and buying allowances from other participants in the EU emissions market. For further information: www.ec.europa.eu

CARBON REDUCTION COMMITMENT (CRC)

The CRC is a cap-and-trade emissions trading scheme targeting energy use emissions from large non-energy intensive organisations such as **large retail organisations**, offices, banks, universities, hospitals, large local authorities and central government departments. Organisations will be covered by the scheme if their half-hourly metered electricity consumption is greater than 6,000 MWh a year, so it will generally affect organisations that pay annual electricity bills of over £500,000. The proposed qualification year for assessing entry into the CRC will be 2008. The first stage of identifying CRC participants will start in 2009 and detailed information packs will be sent out in early 2009. The scheme is expected to begin in January 2010.

relevant legislation and codes / guidelines

CODE FOR SUSTAINABLE HOMES

The Code for Sustainable Homes is intended as a single national standard to guide the industry in the design and construction of sustainable homes. It is an independent assessment and rating system that helps potential buyers to understand the environmental performance of their new home. It covers nine areas: energy/CO₂, water, materials, surface water run-off, waste, pollution, health and wellbeing, management and ecology and builds upon the BREEAM EcoHomes assessment.



For more information: www.communities.gov.uk/planningandbuilding/buildingregulations/legislation/englandwales/codesustainable/

SITE WASTE MANAGEMENT PLANS

New regulations came into force on 6th April 2008 making site waste management plans compulsory for all construction projects in England costing over £300,000. For more information:

www.netregs-swmp.co.uk/

THE CORPORATE MANSLAUGHTER AND CORPORATE HOMICIDE ACT 2007

This Act came into force across the UK on 6th April 2008. It introduces a new offence for prosecuting companies and other organisations where there has been a gross failing, throughout the organisation, in the management of health and safety with fatal consequences. In England and Wales and Northern Ireland, the new offence will be called corporate manslaughter. It will be called corporate homicide in Scotland. Under a new approach, courts will look at management systems and practices across the organisation, providing a more effective means for prosecuting the worst corporate failures to manage health and safety properly. For more information:

www.justice.gov.uk/publications/corporatemanslaughter/

BREEAM

The Building Research Establishment Environmental Assessment Method, or BREEAM, is a voluntary measurement rating for green buildings. It covers the following main building types: Retail, Education, Prisons, Courts, Healthcare and Industrial. Specialised buildings are assessed under the 'BREEAM Bespoke' method. BREEAM assesses the performance of a building in the following areas: management, energy use, health and wellbeing, pollution, transport, land use, ecology, materials and water. Buildings are assessed against these criteria and credits are awarded according to performance. The building is rated Excellent, Very Good, Good or Pass depending on the total score gained. For more information: www.breem.org

key issues

CLIMATE CHANGE

Climate change is considered to be one of the most significant environmental issues affecting business and industry, and the construction industry is no exception. The relationship between the construction industry and climate change is two-fold. Firstly, the energy used by a building over its whole life cycle - from the extraction and manufacture of building materials and their transport to site (embedded energy) to its operation, maintenance and demolition - is significant. Secondly, the anticipated weather related impacts of climate change, such as flooding, coastal erosion and subsidence, will not only require new building techniques and materials to withstand the extreme weather conditions, but will also influence the choice of site and may cause interruptions to projects. In recent years, regulation (such as amendments to the Building Regulations – Part L, Energy Performance of Buildings and the EU ETS) has gone some way to addressing some of these issues. However, companies in the construction industry can take voluntary action through product innovation, designing for energy efficiency in buildings, identifying climate change risks and preparing mitigation and adaptation strategies.

WASTE MINIMISATION

Waste is another major issue for the construction industry. The industry generates more waste than any other sector in England, and the disposal of construction waste is costing the industry more and more each year in landfill charges. There is significant scope to increase resource efficiency and reduce waste in both construction and demolition phases. This can be achieved through designing-in waste minimisation, procuring materials with a high recycled-content, developing site waste management plans and improving the recovery of materials for recycling during demolition – treating waste as a resource. Packaging waste, such as pallets, plastics and cardboard, is also an important issue for builders' merchants.

HEALTH AND SAFETY

Health and safety is widely recognised as an important issue for an industry considered to be one of the most dangerous. The industry is heavily regulated, and it has been under increasing scrutiny from the Health and Safety Executive (HSE) in recent years. This, and the clear social and economic benefits of health and safety, has driven

continuous improvement. This issue is typically well managed by the industry, especially by the large, well-known construction companies; however, performance data shows that there are still a significant number of accidents occurring across the sector as a whole. Recent corporate manslaughter legislation has increased the risk of litigation and compensation in the sector.



RESPONSIBLE TIMBER SOURCING

In recent years, the construction industry has been under the spotlight regarding the sourcing of timber from illegal and irresponsibly managed sources. Timber has been the focus of several high-profile non-governmental organisations' (NGO) campaigns, and many companies and specific projects have come under scrutiny, damaging their reputations. This issue has particular relevance to house builders and contractors, and further down the supply chain, to builders' merchants. Clients, especially in the public sector, are demanding that timber used in their projects, particularly tropical hardwood, is from legal and responsibly managed sources. The government provides advice on timber procurement via their Timber Procurement Policy, which public sector clients especially will be following. For more details visit <http://www.proforest.net/cpet/uk-government-timber-procurement-policy>.

key issues

With these reputational and contractual drivers in mind, it is important to engage with suppliers in order to have confidence in what is being procured. Having the following policies and procedures in place supports this engagement:

- A 'responsible timber' purchasing policy,
- Supplier standards and auditing procedures
- Verifiable evidence, such as valid Chain of Custody (CoC) certificates



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COMMUNITY ENGAGEMENT

Maintaining a good relationship with stakeholders, especially local communities, is key to the license to operate of many construction companies, especially those working on large scale projects in densely populated areas. As well as the positive contribution new construction projects can have on society at a local level, such as job creation and regeneration, they can also attract negative attention from local stakeholders due to impacts such as noise, disruption and pollution caused by increased vehicle movements and waste. Early involvement of local communities and engagement throughout the project can preserve the license to operate and enhance reputation.

Community engagement is also an important issue for those involved in the extraction and processing of building materials. It has become good practice to engage with local communities through initiatives such as regular newsletters, open days and educational site visits to engender support for maintenance, improvement and expansion of facilities and sites. In undertaking stakeholder engagement, companies should identify:

- The key stakeholders involved
- The main issues and how to manage them
- Social and environmental impacts, both positive and negative
- Relevant communication channels to be employed
- Process for handling complaints, and a procedure for reviewing this process

conclusion

The construction industry has positive and negative environmental, social and economic impacts. As a result, it has significant ability to play a central role in promoting sustainable growth and development. The sustainability impacts and issues of relevance to the sector are numerous and diverse, and this guide only covers a few of these. Companies in the construction industry should identify and focus on those impacts and issues that are most relevant to its business, operations and stakeholders.



The construction industry has positive and negative environmental, social and economic impacts.

USEFUL LINKS

Strategic Forum for Construction

www.strategicforum.org.uk

Centre for Construction Innovation

www.ccinw.com

Department for Business Enterprise
and Regulatory Reform - Construction Unit

www.berr.gov.uk/whatwedo/sectors/construction/

Department for Communities and Local Government

www.communities.gov.uk

Building Research Establishment

www.bre.co.uk

Building Research Establishment Environmental
Assessment Method

www.breeam.org

Construction Industry Research and Information Association

www.ciria.org

Considerate Constructors Scheme

www.considerateconstructorscheme.org.uk

Constructing Excellence

www.constructingexcellence.org.uk

Waste Recycling Action Programme

www.wrap.org.uk/construction/

Health and Safety Executive

www.hse.gov.uk

UK Green Building Council

www.ukgbc.org

World Business Council for
Sustainable Development,
Cement Sustainability Initiative

www.wbcscd.org

NetRegs

www.netregs.gov.uk/netregs/businesses/construction/



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