

Draft Strategy for Sustainable Construction A consultation paper July 2007

**DEPARTMENT FOR BUSINESS
ENTERPRISE & REGULATORY REFORM**



Draft Strategy for Sustainable Construction

A Consultation Paper

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Foreword

The UK construction industry is vast: its output is worth £100bn a year. It accounts for 8% of GDP, and employs 2.1 million people. However, buildings are also responsible for almost half of UK carbon emissions, half of water consumption, about one third of landfill waste and 13% of all raw materials used in the UK economy.

To achieve our sustainable development goals, we have to change the way we build.

The Stern Report highlighted the importance of taking early action to combat climate change and Government is consulting on a Climate Change Bill that will commit the UK to increasingly stringent carbon budgets. Industry needs to respond to this new reality. The public sector procures about 40% of non-domestic construction and we will use this influence to drive up the sustainability of our built environment.

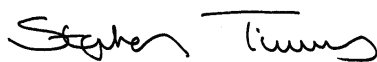
With this in mind this document aims to establish a joint Government and industry Strategy for Sustainable Construction.

Our aim is to:

- Make a step change in the sustainability of the construction industry and then to drive continuous improvement;
- Support the development of a committed, skilled and adaptable workforce and take forward change in the construction industry in order to enhance efficiency; and
- Create long term certainty so that industry can innovate and lead internationally in products and services for sustainable construction.

This draft Strategy is just a start. We know it does not contain all the answers – but it does provide a basis for an intelligent discussion between industry, NGOs and Government. Over the consultation period Government will be actively engaging with all stakeholders in order to improve the evidence base, refine the targets and to share priorities for action.

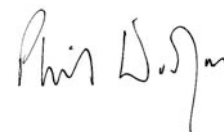
Our goal is that our construction industry should be a world beater, training a skilled and committed workforce, and a world leader in environmental responsibility.



Rt Hon Stephen Timms MP
Minister of State
for Competitiveness



Yvette Cooper MP
Housing Minister



Phil Woolas MP
Minister of State
for the Environment



Rt Hon Margaret Hodge MBE MP
Minister for Culture



Mike Davies Chair,
Strategic Forum for Construction

1 Executive Summary

1.1 This draft Government / industry Strategy provides a catalyst to achieve a step-change in the sustainability of the procurement, design, construction and operation of all built assets. We identify priority areas for action and create a process for measuring progress toward agreed targets.

1.2 At present, there is no single plan of action on sustainable construction that applies across Government and industry. Instead, there are a variety of policies, regulations, performance standards, guidance documents and voluntary initiatives that apply to many issues and audiences produced by many organisations.

1.3 While it is impossible to subsume all of these into one strategy, there is a pressing need to be clear on our shared aspirations, priorities, actions, milestones, and deliverables to move closer to achieving our vision for sustainable construction for the short (to 2010) and medium term (2010 to 2020). In delivering the Strategy we do not envisage implications for the Planning system.

1.4 This is a draft Strategy for consultation, and the government will consult widely, in order to achieve an agreed partnership approach with industry to drive forward the sustainability agenda. The document is aimed at decision-makers in Government, the construction industry and non Governmental organisations. This strategy document does not cover the implementation of sustainable development policy in Northern Ireland or Scotland, which is mostly taken forward using devolved powers. These include the Building (Scotland) Act 2003, which allows building regulations to be made to further the achievement of sustainable development.

Our Vision for a sustainable construction industry

1.5 This draft has been developed within the framework of the guiding principles outlined in the UK Government Strategy for Sustainable Development published in March 2005 "Securing the Future" and within the context of "Rethinking Construction"¹ which is the industry's principal change agenda.

1.6 Within the four priority areas for action identified in "Securing the Future", our vision for a sustainable construction industry is:

Sustainable Consumption and production

- An industry which will design better products and services reducing the environmental impacts from the use of energy, resources and hazardous substances.
- An industry which will reduce, and ultimately eliminate waste in construction through improved design, procurement, and greater re-use and recycling of resources.
- An industry where there will be re-use of existing built assets and the construction of new, long lasting, energy conscious and future-proof (adaptable and flexible) buildings and structures which are easy to maintain, operate and deconstruct.

¹ http://www.constructingexcellence.org.uk/pdf/rethinking%20construction/rethinking_construction_report.pdf

Climate change and energy

- An industry which minimises carbon emissions during construction.
- An industry which builds buildings which have a lower carbon footprint in use, leading to the construction of zero carbon buildings.
- An industry which builds innovative solutions to climate change challenges for the future.

Natural resources and enhancing the environment

- An industry which facilitates conservation of water resources in new construction and refurbishment projects.
- It is an industry which recognizes that Green Infrastructure² plays a valuable role in delivering a range of social, environmental and economic benefits to society.
- An industry which is proactive in creating, managing and enhancing wildlife habitats and natural landscapes.

Creating sustainable communities

- An industry which employs and nurtures a committed, skilled and adaptable workforce working in an environment of zero accidents and incidents with appropriate arrangements for education and training, employment, health and safety.

1.7 The vision also extends to the ways in which the construction industry and its clients operate, namely:

- Procurement - Clients will have the capability to procure construction based on whole life value and the confidence to allow the construction industry to be innovative in the delivery of sustainable development.
- Integrated teams – The construction industry will maximise the value and expertise which exists in its supply chains and will consistently offer projects developed on a whole life value basis.
- Design – Good design is synonymous with sustainable construction. No building, public space, infrastructure or place can be considered genuinely well designed if it does not contribute to environmental, social and economic sustainability - the triple bottom line.
- Innovation – There will be innovation in construction bringing about both radical change and continuous improvement in the way the industry conducts every aspect of its business.

² http://www.tcpa.org.uk/downloads/TCPA_biodiversity_guide_lowres.pdf

Setting priorities

1.8 In order to realize this vision, effort needs to be prioritised. There are activities which are already receiving a considerable amount of attention, and others that have not been developed. The intention of this Strategy is to concentrate on these areas which can achieve results.

1.9 During the past 18 months we have undertaken a gap analysis, taking views from industry on which areas should be considered priorities. Following a public consultation and stakeholder events, we developed a Review of Sustainable Construction³, which was published in October 2006. That Review laid out many of the main government and industry initiatives which currently exist, thereby forming a platform on which to base priorities for the Strategy. Further soundings from industry were taken in a series of workshops held in January and February 2007 to inform this analysis of what changes need to take place to enable us to approach the vision described in paragraphs 1.6 and 1.7 above. This underpins the specific proposals set out in this Consultation Document.

1.10 The messages emerging from these considerations were clear. There are key improvements to be delivered across energy, water, biodiversity, waste and materials. And in order to deliver outputs in those areas, it is important to concentrate on client and industry improvement in procurement, supply team integration, design, simplification, innovation and the people agenda. These priorities are developed in the following chapters, with the industry improvement elements (the means) addressed in Chapters 4 – 8, followed by the output elements (the ends) in Chapters 9 - 12.

1.11 A consequence of this priority setting exercise is that some areas are not developed in this Strategy. They are not being ignored – it's simply that things are happening elsewhere. One such area is Planning, since the Planning White Paper was published on 21 May 2007. And although Energy is included as a priority area, a more comprehensive statement of Government's energy policy is included in the Energy White Paper⁴, published on 23 May 2007. Infrastructure is not highlighted, largely because Civil Engineering organisations are currently developing a sustainability strategy for this area. Moreover, many of the sustainability aspects are addressed in an environmental assessment methodology for assessing infrastructure projects, CEEQUAL⁵, and whose use is already included in the Government's Common Minimum Standards⁶. Health and Safety is another area which is not explored in great detail, as there is a considerable amount of legislation and action already in place, aimed at improving health and safety in the workplace.

³ <http://www.berr.gov.uk/files/file34979.pdf>

⁴ <http://www.berr.gov.uk/energy/whitepaper/page39534.html>

⁵ CEEQUAL – The Civil Engineering Environmental Quality Assessment and Award Scheme, www.ceequal.com

⁶ http://www.ogc.gov.uk/construction_procurement_common_minimum_standards_for_the_built_environment.asp

How will the vision be achieved?

1.12 Within the priority areas, we set out the direction of travel of Government policy as it relates to the construction industry. We bring together key initiatives driven by Government Departments, Agencies, industry bodies and individual organisations with the aim of providing the industry and its clients with an integrated approach towards achieving more sustainable outcomes. Some actions are not new, the main aim being to add clarity, increase awareness and garner industry and client support for sustainability in the construction sector. We highlight what others can do, proposing specific actions that will need to be agreed and adopted by individual organisations and companies within the industry.

1.13 Our work falls into the following categories:

- Being clearer about what we want to do and doing what we have already said we would do. In this document we set out the priorities to enable the construction industry and its clients to make progress towards our vision of sustainable construction.
- Specific commitments from Government Departments and the construction industry and its clients to deliver on the sustainability targets.

What difference will this Strategy make?

1.14 This Strategy is not about introducing new legislation: rather, its emphasis is on making existing regulation work better. The aim is to improve the sustainability of the built environment with a focus on the following key areas:

- Reduced carbon footprint of activities within the construction sector, and better use of resources⁷;
- Reduced daily water consumption in new buildings;
- Zero net waste, at construction site level;
- Effective use of Government procurement power as an enabler to transform the market for innovative and sustainable solutions⁸;
- Development of voluntary agreements and initiatives by the construction industry and its clients with the aim of reducing the carbon footprint and use of resources within the built environment;
- Greater uptake of training programmes, improving skills and increasing retention rates of skilled workers within a safer industry.

⁷ UK Government Sustainable Procurement Action Plan, 2007, <http://www.sustainabledevelopment.gov.uk/publications/pdf/SustainableProcurementActionPlan.pdf>

⁸ UK Government Sustainable Procurement Action Plan, 2007, <http://www.sustainabledevelopment.gov.uk/publications/pdf/SustainableProcurementActionPlan.pdf>

What milestone targets have we set?

PRIORITY AREA	TARGETS
PROCUREMENT	<ul style="list-style-type: none"> ➤ 50% of construction projects by value should be undertaken by integrated teams and supply chains by the end of 2007.¹ ➤ Complete review of Government's construction procurement strategies by summer 2008 and the delivery of whole life value.² ➤ From 1 April 2009 only timber and timber products originating either from independently verified legal and sustainable sources or from a licensed Forest Law, Enforcement, Governance and Trade (FLEGT) partner will be demanded for use on the Government estate - appropriate documentation will be required to prove it. From 1 April 2015, only legal and sustainable timber would be demanded.³
DESIGN	<ul style="list-style-type: none"> ➤ 60% of all publicly funded or PFI projects, with a value in excess of £1 million, to have used the Design Quality Indicators⁴ or equivalents by the end of 2008.¹ ➤ 20% of all projects, with a value in excess of £1 million to have used the Design Quality Indicators and BREEAM or equivalents, and achieve an excellent rating, by the end of 2008.^{5,6} (proposed new target for industry) ➤ 100% of construction new build projects on Government estate will meet BREEAM excellent standard (or equivalent).⁷
INNOVATION	<ul style="list-style-type: none"> ➤ Increase the current 55% "innovation active" enterprises in the sector⁸ by 5%, to match and then track the benchmark for all UK enterprises.⁹ ➤ A 10% increase in the number of enterprises in the sector taking up UK and European innovation support products and schemes by 2012.⁹ ➤ Government to update list in Quick Wins (environmental product standards) in 2007.³

<p>PEOPLE</p>	<p>SKILLS</p> <ul style="list-style-type: none"> ➤ Increase the number of Construction Skills Certification Scheme card holders to 1.6 million by 2010, and to 2.0m by 2015.⁶ ➤ Ensure the content of all qualifications are reviewed, and where appropriate include sustainability components and provide skills necessary to apply the latest technologies, by 2010.⁶ ➤ Provision of work experience places to increase to 16,000 by 2010 and to 20,500 by 2015.⁶ ➤ All domestically trained and competent construction workers to be still involved in the industry after 5 years - target achievement by 2010, and for 10 years - target achievement date 2015.⁶ <p>HEALTH & SAFETY</p> <ul style="list-style-type: none"> ➤ Reduce the incidence rate of fatal and major injury accidents by 10% from 2000 levels by 2010.¹⁰ ➤ Reduce the incidence rate of cases of work-related ill health by 20% from 2000 levels by 2010.¹⁰ ➤ Reduce the number of working days lost per 100,000 workers from work related injury and ill health by 30% by 2010.¹⁰
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<p>CLIMATE CHANGE</p>	<ul style="list-style-type: none"> ➤ All new homes to be zero carbon by 2016, with building regulations locking in improvements in 2010 and 2013.¹¹ ➤ By 2010 the general level of energy efficiency of residential accommodation in England to be increased by at least 20 per cent compared with the general level of such energy efficiency in 2000.¹² ➤ All new homes built with English Partnerships or Housing Corporation funding to achieve a 25% improvement over current building regulation requirements in terms of carbon emissions from April 2008 as set out in the Code for Sustainable Homes.¹³ ➤ Introducing Energy Performance Certificates for all homes (on construction, sale or rent) to be phased in from August 2007 for 4 bedroom houses.¹⁴ ➤ Reduce carbon emissions on the central Government office estate by 12.5% by 2010/11 and 30% by 2020 relative to 1999/2000 levels.³ ➤ Central Government's office estate to be carbon neutral by 2012³. ➤ Departments to increase their energy efficiency per square metre by 15% by 2010 and 30% by 2020³. ➤ To set in place a clear timetable and action plan to deliver significant reductions in carbon emissions from new commercial buildings within the next 10 years.¹⁵ ➤ Subject to consultation, making it mandatory to have a rating against the Code for Sustainable Homes for every new home from April 2008.
<p>NATURAL RESOURCE PROTECTION</p>	<p>WATER</p> <ul style="list-style-type: none"> ➤ All new homes built with English Partnerships or Housing Corporation funding to meet Level 3 of the Code for Sustainable Homes (105 litres per person per day) from April 2008.¹⁰ ➤ Amendments will be made in 2008 to the Building Regulations to introduce a whole building performance standard for new homes, to be set at a target level of 125 litres/head/day. Defra will review the Water Supply (Water Fittings) Regulations 1999 in 2008 with a view to introducing component based standards for key fittings.¹⁶ ➤ A reduction in water consumption to an average of 3 cubic metres per person per year for all new office builds or major office refurbishments on the Government Estate.¹⁷ ➤ Reduce water consumption by 25% on the office and non-office estate by 2020 relative to 2004/5 levels.³ ➤ Public consultation on options for ownership and adoption of Sustainable Drainage Systems will take place towards the end of 2007.

<p>SUSTAINABLE CONSUMPTION & PRODUCTION</p>	<p>WASTE</p> <ul style="list-style-type: none"> ➤ By 2012 a 50% reduction of construction, demolition and excavation waste to landfill compared to 2005.¹⁸ ➤ By 2015, zero net waste, at construction site level.^{18,19} ➤ By 2020, zero waste to landfill.¹⁸ <p>MATERIALS</p> <ul style="list-style-type: none"> ➤ 50% of products with type III Environmental Product Declarations by 2010.^{5,20} (proposed new target for industry) ➤ 50% of buildings and construction schemes over £1m in value using stewardship and responsible sourcing principles²¹ by 2010.⁶ (proposed new target for industry)
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¹ Strategic Forum for Construction.

² Public Sector Construction Clients Forum, 2006.

³ UK Government Sustainable Procurement Action Plan 2007 (<http://www.sustainable-development.gov.uk/publications/pdf/SustainableProcurementActionPlan.pdf>)

⁴ www.dqi.org.uk

⁵ BREEAM: Building Research Establishment Environmental Assessment Method.

⁶ These targets are based on the proposals put forward at the industry consultation workshops held in early 2007.

⁷ http://www.ogc.gov.uk/construction_procurement_common_minimum_standards_for_the_built_environment.asp

⁸ Department for Business, Enterprise and Regulatory Reform (BERR) definition of construction sector, including products and services with contracting; data sourced from Community Innovation Survey 4, 2005, data from 2002-4.33.

⁹ BERR lead on encouraging improvement in innovation performance in Business.

¹⁰ "Revitalising Health and Safety" www.hse.gov.uk/statistics/pdf/prog2006.pdf

¹¹ Department of Communities and Local Government December 2006. "Building a Greener Future" consultation document.

¹² Department of Communities and Local Government, Housing Act 2004

¹³ Paragraph 2.31 of

http://www.communities.gov.uk/pub/173/BuildingaGreenerFutureTowardsZeroCarbonDevelopment_id1505173.pdf

¹⁴ Department of Communities and Local Government News release 2007/0110 dated 11 June 2007.

¹⁵ Department of Communities and Local Government. New Target.

¹⁶ Announced as part of the Housing Green Paper Policy package on 23 July 2007.

¹⁷ <http://www.sustainable-development.gov.uk/government/estates/targets-guidance.htm#waterconsumption>

¹⁸ <http://defraweb/environment/waste/strategy/index.htm>

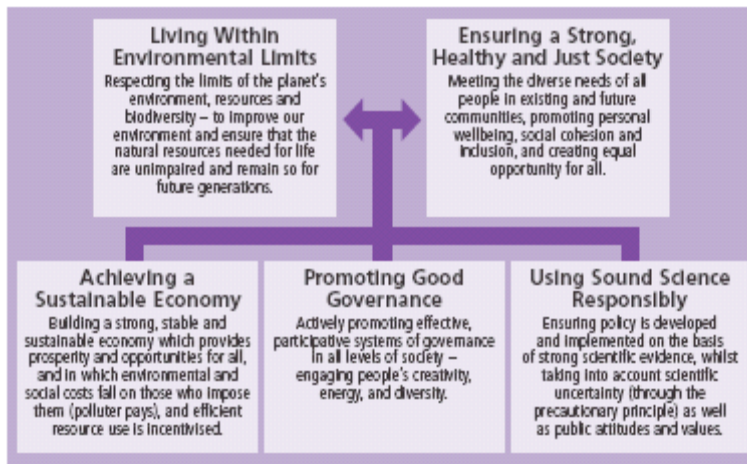
¹⁹ The concept of "Zero Net Waste" is explained in: <http://www.wrap.org.uk/construction/index.html>

²⁰ An environmental product declaration, EPD, is defined as "quantified environmental data for a product with pre-set categories of parameters based on the ISO 14040 series of standards, but not excluding additional environmental information" Type III EPDs are environmental product declarations containing quantified product information, with an obligated 3rd party validation.

²¹ See example of responsible sourcing and stewardship under Category 3 Materials, Code for Sustainable Homes at http://www.planningportal.gov.uk/uploads/code_for_sustainable_homes_techguide.pdf

2 Introduction

2.1 The UK Government is committed to the principles of sustainable development. The guiding principles outlined in the UK Government Strategy for Sustainable Development, "Securing the Future", published in March 2005 set the agenda to deliver a better quality of life using long-term solutions that will benefit everyone.



2.2 In 2000, the Government published its Strategy for Sustainable Construction: Building a Better Quality of Life⁹ which presented a way forward for Government and industry. Since then, there has been research into and progress towards sustainable construction by Government, academia, non-governmental organisations and industry. Much of this was summarised in the Review of Sustainable Construction¹⁰ published by the Department of Trade and Industry in October 2006.

2.3 There is a growing sense of urgency to address sustainable development at all levels of the construction industry. This sense of urgency is reinforced by recent reports on global issues such as climate change, water scarcity and poverty.

2.4 Consultation during and following the Review of Sustainable Construction highlighted the need for a new forward-looking strategy to provide a platform for action across Government and industry. This document proposes that strategy.

Why produce a Strategy?

2.5 As one of the UK's leading industries, responsible for over 8% of GDP and employing over 2 million people, the construction industry has a major impact on the sustainability of the UK as it affects most aspects of our lives, the environment and economies worldwide. The industry can therefore help deliver the five guiding principles for sustainable development as highlighted in the UK Strategy for Sustainable Development.

2.6 For instance, the construction, occupation and maintenance of buildings account for around 50 per cent of UK emissions of carbon dioxide. Waste from the construction sector - over 100 million tonnes a year - dwarfs that generated by households.

⁹ <http://www.berr.gov.uk/files/file13547.pdf>

¹⁰ <http://www.berr.gov.uk/files/file34979.pdf>

2.7 The public sector procures about 40% of the non-domestic construction in the UK. We are committed to driving up the performance of the public estate. We set out in this document, a series of measures that Government will be taking over the coming years to improve – dramatically – the environmental performance of its estate. Industry needs to recognise the imperative of combating climate change. Stern set the scene and the Government responded by committing, in the Climate Change Bill, to setting legally enforceable carbon budgets. This is the reality against which Government has set out its own procurement Strategy. Government looks forward to working closely with industry to deliver these environmental improvements. We aspire to be world leaders in all aspects of combating and adapting to climate change and are certain of the competitive advantage it will bring.

2.8 There are also powerful reasons why a sustainable construction Strategy will be beneficial to the industry.

2.9 At the broadest level, the resultant increased awareness by organisations of the influence of the sustainability agenda on future Government thinking, will make them better placed to face the strategic challenges of the future.

2.10 At a business level there are opportunities to reduce costs and improve efficiency through, for example, reductions in energy usage and waste. A greater awareness and understanding of the regulatory framework and future Government plans allow for better risk management and reduced costs of compliance.

2.11 A competitive market advantage can be obtained through reduced cost and higher profitability, enhanced reputation, improved customer loyalty, attracting and retaining the right staff, potential increased market share and enhanced stakeholder value, by demonstrating how sustainability is linked to core business strategy.

The “Egan” agenda

2.12 Sir John Egan’s “Rethinking Construction”¹¹ was published in 1998. It remains at the heart of the Department for Business, Enterprise and Regulatory Reform (BERR) relationship with the industry through the Strategic Forum for Construction and it continues to influence the agenda in key areas such as public procurement. For instance, most recently, the Strategic Forum has sought to ensure that the 2012 Olympics will be a catalyst for the widespread adoption of best practice across the construction industry by developing its 2012 Construction Commitments¹².

2.13 “Rethinking Construction” sets out an approach whereby substantial improvements in quality and efficiency can be made.

¹¹ http://www.constructingexcellence.org.uk/pdf/rethinking%20construction/rethinking_construction_report.pdf

¹² <http://www.strategicforum.org.uk/2012CC.shtml>

Rethinking Construction



2.14 In 2002 “Accelerating Change”¹³ identified the 4 main areas of focus which were key to the delivery of these improvement targets. They are:

- Client leadership
- Integrated teams and supply side integration
- Culture change in ‘people issues’; and
- A focus on the product

2.15 It is therefore to be expected that the themes of procurement, integration, the people agenda and a focus on the product feature extensively in this Sustainable Construction Strategy. The construction industry is only going to deliver consistently a better product if there is widespread adoption of the Rethinking Construction approach. The Constructing Excellence demonstration projects, selected on the basis that they will be exemplars of the Egan principles, consistently outperform the wider industry against a broad range of key performance areas¹⁴.

¹³ http://www.strategicforum.org.uk/pdf/report_sept02.pdf

¹⁴ <http://www.constructingexcellence.org.uk/>

2.16 We are also promoting sustainable construction on the demand side through encouraging the widespread adoption of the 2012 Construction Commitments, endorsed last July by Margaret Hodge, Tessa Jowell, Ken Livingstone, David Higgins (Chief Executive, Olympic Delivery Authority) and Peter Rogers (Chairman, 2012 Task Group). Since then over 300 firms and organisations have signed the Commitments which feature the following headings:

- procurement and integration,
- commitment to people,
- client leadership,
- sustainability,
- design quality,
- health and safety.

2.17 In addition the Government is using its position (40% of construction output is for the public sector) to encourage demand for more sustainable construction through Transforming Government Procurement and through the Common Minimum Standards. The Construction Clients Group is also reviewing the Clients Charter with a view, amongst other things, to promote more sustainable construction.

How will the Strategy be delivered?

2.18 BERR will set up a strategic partnership with the construction industry, involving the Strategic Forum for Construction and its Sustainable Construction Task Group, to monitor progress and recommend changes to our Strategy to ensure that we achieve our objectives.

2.19 We set out in Section 14 of this document our proposed approach to monitoring, evaluating and reporting on our achievements.

2.20 Biennial progress reviews are proposed allowing us to re-set milestones, priorities and actions as necessary.

2.21 Working together, Government Departments and the construction industry will ensure that the Sustainable Construction Strategy is relevant, implemented and monitored. To guide us we have set out a suite of milestone targets designed to provide the industry and its clients with a clear framework within which we can develop a programme of actions. These are summarized below and indicate how success can be recognized.

2.22 This document is laid out in four parts. These introductory chapters are followed by sections – on the means by which our performance on sustainable construction can be enhanced (procurement, design, innovation, people and better regulation); on the ends to be achieved (progress on climate change, water, biodiversity, waste and materials); and on delivery and monitoring arrangements for the Strategy.

2.23 What we are seeking is widespread engagement in making the construction industry more sustainable. The following lays out our approach.

3 How to respond

3.1 A formal consultation exercise is being run with the following objectives:

- To establish a consensus on the range and prioritisation of the issues that we address in the draft Strategy;
- To develop implementation plans to achieve the milestones, identify barriers to delivery and develop workable solutions;
- To assign measurable actions with a monitoring and evaluation system;
- To obtain commitments from industry, specifically individual businesses, setting out specific actions and to identify who will be responsible for implementation of these actions.

3.2 Questions on which we are seeking your input are raised throughout this document and repeated in Annex 1. Your answers to these questions are important to help us improve the sustainability of the construction industry.

3.3 We are also looking forward to hearing your views on what you will do and what actions your business will take to support the vision of sustainable construction.

3.4 The consultation process opened in July 2007 and the last date for receipt of responses will be 30 November 2007. Replies can be made electronically and the response questionnaire downloaded from our website:
www.berr.gov.uk/construction/sustain

3.5 A response can also be submitted by letter, fax or e-mail to:

David Hughes
Department for Business, Enterprise and Regulatory Reform
Construction Sector Unit,
1 Victoria Street
London SW1H 0ET
Tel. 020 7215 0993
Fax. 020 7215 6151
e-mail to: [**david.hughes@berr.gsi.gov.uk**](mailto:david.hughes@berr.gsi.gov.uk)

3.6 When responding please state whether you are responding as an individual or representing the views of an organisation. If responding on behalf of an organisation, please make it clear who the organisation represents and, where applicable, how the views of members were assembled.

Additional Copies

3.7 This document can be downloaded from BERR's website (see the link above). If, however, hard copies are needed, these can be obtained from the BERR Publications Orderline:

BERR Publications Orderline
ADMAIL 528
London SW1W 8YT
Tel: 0845 015 0010
Fax: 0845 015 0020
Minicom: 0845 015 0030
Web: www.berr.gov.uk/publications

Consultation Questions

3.8 These are contained in Annex 1 and are aimed at obtaining industry comments and contributions to ensure that the Strategy is developing along the right track. Government is particularly keen to have consultees' views on the future direction they believe the industry might best take over the timeframe envisaged by this document.

Confidentiality and Data Protection

3.9 Information provided in response to this consultation, including personal information, may be subject to publication or disclosure in accordance with the access to information regimes (these are primarily the Freedom of Information Act 2000 (FOIA), the Data Protection Act 1998 (DPA) and the Environmental Information Regulations 2004). If you want other information that you provide to be treated as confidential, please be aware that, under the FOIA, there is a statutory Code of Practice with which public authorities must comply and which deals, amongst other things, with obligations of confidence.

3.10 In view of this it would be helpful if you could explain to us why you regard the information you have provided as confidential. If we receive a request for disclosure of the information we will take full account of your explanation, but we cannot give an assurance that confidentiality can be maintained in all circumstances. An automatic confidentiality disclaimer generated by your IT system will not, of itself, be regarded as binding on the Department.

3.11 The Department will process your personal data in accordance with the DPA and in the majority of circumstances this will mean that your personal data will not be disclosed to third parties.

Partial Regulatory Impact Assessment

3.12 Please see Annex 2.

What happens next?

3.13 We aim to run a programme of events during the consultation exercise designed to engage the wider industry in the prioritisation and development of action plans to achieve the milestone targets and long-term aspirations. For further information please contact David Hughes at the Construction Sector Unit at the address above.

3.14 We intend to publish a summary of non-confidential responses to the consultation on the BERR website within 3 months of the close of the consultation and to publish the final Strategy document soon thereafter.

Organisations Consulted

3.15 A list of those organisations and individuals, which have contributed to formulation of this Consultation Document, is shown at Annex 3.

Code of Practice

3.16 The Cabinet Office Code of Practice on Consultation has been followed in the preparation of the consultation for this Strategy document. The complete code is available on the Cabinet Office's website:

<http://www.cabinetoffice.gov.uk/regulation/consultation/index.asp>

Comments or Complaints

3.17 If you wish to comment on the conduct of this consultation or make a complaint about the way this consultation has been conducted, please write to:

Kathleen McKinlay,
Consultation Co-ordinator (Bay 566)
1 Victoria Street,
London SW1H 0ET
Telephone: Kathleen on 020 7215 2811
Or e-mail to: Kathleen.mckinlay@berr.gsi.gov.uk

4 Procurement

Targets and milestones

4.1 50% of construction projects by value should be undertaken by integrated teams and supply chains by the end of 2007.¹⁵

4.2 Complete review of Government's construction procurement strategies by summer 2008, and the delivery of whole life value.¹⁶

4.3 From 1 April 2009 only timber and timber products originating either from independently verified legal and sustainable sources or from a licensed Forest Law, Enforcement, Governance and Trade (FLEGT) partner will be demanded for use on the Government estate -appropriate documentation will be required to prove it. From 1 April 2015, only legal and sustainable timber would be demanded.¹⁷

Background and rationale for action

4.4 The theme of client leadership is a familiar one in the construction industry. Successive industry reviews, particularly the Latham¹⁸ and Egan¹⁹ reports, have identified the importance of the client in driving change and gaining full value from the construction industry.

4.5 The Sustainable Procurement Task Group chaired by Sir Neville Simms, reprised this theme when it challenged the Government to use its buying power to make rapid progress towards the targets set out in the UK Sustainable Development Strategy – “Securing the Future” (2005). This buying power is particularly strong in the construction market where the public sector accounts for some 40% of the industry’s output. That is why construction has been identified as a priority area in the Government’s response to the Task Group, the UK Government Sustainable Procurement Action Plan²⁰ – *“We will encourage key suppliers to have plans in place to reduce the carbon footprint of their activities and their supply chains. Our initial focus will be on construction.”* The Sustainable Development Commission is the body identified as scrutineer of the Government’s progress on sustainable procurement and the National Audit Office continues to have an overall Government procurement watchdog role.

4.6 For the public sector there is already an extensive range of standards, advice and guidance forming the procurement framework, and these continue to be developed.

¹⁵ Strategic Forum for Construction

¹⁶ Public Sector Construction Clients Forum, 2006

¹⁷ UK Government Sustainable Procurement Action Plan, 2007,
<http://www.sustainabledevelopment.gov.uk/publications/pdf/SustainableProcurementActionPlan.pdf>

¹⁸ “Constructing the Team”: ISBN 011752994 X

¹⁹ http://www.constructingexcellence.org.uk/pdf/rethinking%20construction/rethinking_construction_report.pdf

²⁰ UK Government Sustainable Procurement Action Plan, 2007,
<http://www.sustainabledevelopment.gov.uk/publications/pdf/SustainableProcurementActionPlan.pdf>

4.7 Feedback from the construction industry and Government clients indicates that the material contained in this range of information is of a high quality. If these were all effectively implemented, there would be significant progress towards sustainable construction. However investigations by the Sustainable Development Commission²¹ and the National Audit Office²² have concluded that many Government construction projects do not meet the agreed sustainability standards in design, construction or operation.

4.8 The goal of the Sustainable Procurement Action Plan is for the UK to be among the EU leaders in sustainable procurement by 2009 and to help achieve a low carbon more resource efficient public sector. We want to move towards sustainably built and managed properties and infrastructure throughout the public sector which respect the Government's wider sustainable development goals, in line with Departmental Sustainable Operations Targets. Our intention is for Government supply chains and public services to be increasingly low carbon, low waste and water efficient.

4.9 While it is essential that the public sector plays a full role, we should not forget that the private sector accounts for more than half of the output from the construction industry. In addition, the industry itself can play a key role in making construction more sustainable through its own supply chains.

Actions & deliverables

4.10 Below, we have set out the key actions to which the Government is already committed in this area and what we intend to do, either to ensure existing commitments are met or to fill gaps.

4.11 We have also set out what the Public Sector Construction Clients Forum (PSCCF) and the Strategic Forum for Construction are doing to ensure that practices within the construction industry are improved.

4.12 In addition, offsite construction is a key approach to deliver measurable improvements in quality, cost and time predictability and improved health and safety of construction projects in both the private and public sector. We set out what the Department for Business, Enterprise and Regulatory Reform will do to share best procurement practice.

Key actions to which the Government is already committed:

4.13 As part of the Comprehensive Spending Review a new set of public service agreements which incorporate the principles of sustainable development are to be agreed to help deliver objectives and targets.

4.14 Permanent Secretaries are accountable for their Departments' overall progress against these achievements and for ensuring, from 2007-08 onwards, that key staff in their Departments have performance objectives and incentives that drive the implementation of the Sustainable Procurement Action Plan.

4.15 Budgeting and accounting practice is being improved by providing clear advice in the HM Treasury's (HMT) Green Book guidance on environmental appraisal and through National Audit Office scrutiny to ensure unnecessary obstacles are not placed in the way of sustainable solutions. In addition, supplementary guidance to HMT's Green Book will be issued during 2007.

²¹ Sustainable Development in government; fifth annual report 2006

²² Building for the Future: Sustainable Construction and Refurbishment on the Government Estate

4.16 The Department for Environment, Food and Rural Affairs (Defra) will consult during 2007 on proposals for a centre of sustainable procurement excellence to provide coherent quality support, guidance and advice²³.

4.17 Defra will establish a Products and Materials Unit to develop evidence on sustainability impacts across a range of priority products and materials and facilitate and instigate whole life cycle improvements.²⁴ These products are the focus of a 'road mapping' process to identify the full range of environmental impacts and develop interventions to address these impacts. The roadmaps will capture evidence on the impacts of each product across its life cycle, develop a vision of the future, and begin to chart short, medium and long-term interventions to help transform each product towards that more sustainable future. The roadmaps will be developed and implemented gradually and collaboratively with a wide range of stakeholders. If successful this approach will be expanded to include other products and services.

4.18 The greater use of collaborative procurement will raise standards as will the inclusion within Government contracts of appropriate arrangements for suppliers and sub contractors to provide products and services that comply with the Departments' sustainable operations targets.

4.19 The Office of Government Commerce (OGC) and Government Departments will work together to strengthen their strategic engagement with key sectors to ensure suppliers have plans in place to lower their carbon footprint and that of their supply chains. This Strategy starts to do this with the construction sector.

4.20 The White Paper "Transforming Government Procurement"²⁵ committed the OGC, working with Departments across Whitehall, to:

- A higher calibre OGC to deliver improved standards focused on driving better value for money on a whole life costing basis;
- Focus top talent on the most complex and critical procurement projects;
- Strengthen procurement capability in Government Departments; and to
- Encourage greater collaboration between and across Departments.

²³ UK Government Sustainable Procurement Action Plan, 2007, <http://www.sustainabledevelopment.gov.uk/publications/pdf/SustainableProcurementActionPlan.pdf>

²⁴ <http://www.defra.gov.uk/environment/waste/strategy/strategy07/pdf/waste07-strategy.pdf> Ref:Defra, 'Waste Strategy for England 2007', May 2007, Cm 7086

²⁵ http://www.hm-treasury.gov.uk/media/4EA/89/government_procurement_pu147.pdf

- 4.21 To deliver this, OGC will have strong powers to:
- Set out the procurement standards Departments need to meet;
 - Challenge Departments' performance and ensure remedial action is taken;
 - Ensure appropriately skilled people are in place; and
 - Demand collaboration when buying common goods and services.

Key actions to which the Public Sector Construction Clients Forum is committed:

4.22 The Sustainable Procurement Action Plan²⁶ and "Transforming Government Procurement" present significant challenges for Government procurement. In the context of construction there is a key role for the Public Sector Construction Clients Forum (PSCCF) and its Working Groups in encouraging delivery of the Government's aspirations on the ground.

4.23 The PSCCF comprises representatives from the main procuring Departments. Transforming Government Procurement concluded that the PSCCF should now shift from policy development to delivery. It has produced a number of key outputs and the next 12-18 months will be spent ensuring that these are effectively implemented throughout supply chains working on public sector construction projects.

- 4.24 In particular the PSCCF will:
- Analyse construction market activity to identify potential demand/capacity issues;
 - Assess public sector client capacity and capability;
 - Work to better embed best practice;
 - During 2008 review the construction procurement strategies set out in Achieving Excellence in Construction²⁷ to ensure alignment with the delivery of whole life value.

4.25 Offsite construction can deliver measurable improvements in quality, cost and time predictability and improved health and safety of construction projects in both the private and public sector. However, to employ successfully offsite solutions the procurement process needs to take account of, and plan for, the fact these are essentially manufactured products from factories. The procurement of offsite construction is not necessarily more difficult than in respect of onsite build, though the procurement process can be different. It is, therefore, vital that clients and their professional advisers fully understand how to plan procurement programmes to achieve the full benefits offered by offsite techniques.

4.26 In order to accelerate the take-up of offsite construction BERR is working with OGC to support Buildoffsite to develop a forum of private and public sector clients to share best procurement practice for offsite solutions.

²⁶ UK Government Sustainable Procurement Action Plan, 2007, <http://www.sustainabledevelopment.gov.uk/publications/pdf/SustainableProcurementActionPlan.pdf>

²⁷ http://www.ogc.gov.uk/ppm_documents_construction.asp

Key actions to which the Strategic Forum for Construction is committed:

4.27 To meet the target of at least 50% of construction projects by value being undertaken by integrated teams and supply chains the Strategic Forum for Construction is developing an action plan including:

- Convening a high level group to demonstrate the business case for more integrated working.
- Promoting the adoption of the 2012 Construction Commitments²⁸ throughout the industry.

In support of the Strategic Forum for Construction BERR will:

4.28 Approach a number of Departments responsible for key construction programmes and invite them to take part in a series of integration pilots and demonstrations.

4.29 In partnership with a number of other Government Departments (including OGC and the Health and Safety Executive (HSE)) and the Regional Development Agencies, run a series of regional roadshows to promote integration and the other best practice contained in the 2012 Construction Commitments.

The Public Sector Construction Clients Forum will:

4.30 Review the procurement strategies set out in Achieving Excellence²⁹ in Construction to deliver greater value including supply chain integration.

4.31 Promote the "Fair Payment Charter" which has been developed by the Public Sector Construction Clients' Forum to be widely adopted in supply chains on public sector construction projects.

The Construction Clients Group will:

4.32 Review the Clients Charter to ensure that it is effective in enabling clients to assemble integrated teams.

4.33 Identify demonstrations of integrated supply teams from private sector clients.

Consultation Questions

4.34 What specific actions could the construction industry take to lead by example and procure construction projects more sustainably?

²⁸ <http://www.strategicforum.org.uk/2012CC.shtml>

²⁹ http://www.ogc.gov.uk/ppm_documents_construction.asp

5 Design

Targets and milestones

5.1 60% of all publicly funded or Public Finance Initiative (PFI) projects, with a value in excess of £1 million, to have used the Design Quality Indicators (DQIs)³⁰ or equivalents by the end of 2008³¹.

5.2 20% of all projects, with a value in excess of £1 million to have used the Design Quality Indicators and Building Research Establishment Environmental Assessment Method (BREEAM) or equivalents, and achieve an excellent rating, by the end of 2008. (proposed new target for industry)

5.3 100% of construction new build projects on Government estate will meet BREEAM excellent standard (or equivalent).³²

Background and rationale for action

5.4 Good design is integral to all aspects of sustainable construction and underpins all the sections within this Strategy. It is not an optional extra. Good design is synonymous with sustainable design. No building, public space, infrastructure or place can be considered genuinely well designed if it does not contribute to environmental, social and economic sustainability - the triple bottom line.

5.5 Good design helps to create buildings, spaces, places and structures that are fit for purpose, soundly built, durable and attractive. It is responsive to context, and a clear expression of the requirements of the brief; flexible and adaptable to future needs and technologies; uses resources efficiently; and represents whole life value for money.

5.6 Delivering design quality requires strong leadership. Recognising this, the Government has called for all public bodies with a responsibility for delivering and managing the built environment to appoint a 'design champion'. The Government wants to encourage the appointment of effective design champions throughout industry and Government. The role of a design champion will vary from organisation to organisation, but the purpose remains clear: to provide leadership and motivation, ensuring that every relevant organisation or project has a clear vision and strategy for delivering good design.

5.7 The Commission for Architecture and the Built Environment (CABE) is the Government's adviser on architecture, urban design and public space. It champions and promotes better places and spaces and highlights the benefits these can bring. CABE offers a range of services and best practice guidance. We recommend that early use is made of both the services on offer and best practice guidance in taking projects forward.

5.8 Post-Construction Evaluation (PCE) and Post-Occupancy Evaluation (POE) are tools which can also be used as indicators of design quality and sustainability.

³⁰ www.dqi.org.uk

³¹ Strategic Forum for Construction.

³² http://www.ogc.gov.uk/construction_procurement_common_minimum_standards_for_the_built_environment.asp

5.9 PCE usually takes the form of an in-depth objective study of how the building and its systems perform against the original performance specification. It is not currently that common but has the potential to be used more widely. POE involves systematic evaluation of about the performance of buildings in use, from the perspective of the people who use them. It assesses how well buildings match users' needs, and identifies ways to improve building design, performance and fitness for purpose. Thus it is very useful in providing a feedback loop between project teams and the projects they work on.

5.10 Using any one of these tools in isolation will only give a partial picture of design quality and sustainability. Tools for specifically assessing the environmental quality and performance of buildings and infrastructure have the potential to be used as holistic indicators of design quality if used in conjunction with other indicators to build up a composite picture of design quality across a construction project or site. A good design process can play a synthesizing role in bringing the use of these tools together to help deliver sustainable construction, building up a composite picture.

5.11 It is clear that no single sector can address design quality alone. Concerted action is required needed from the following groups: Government, clients and client advisers, developers, project teams – architects, engineers, planners, procurers, contractors, sub-contractors, materials suppliers, finance managers, facilities managers and professional institutions.

Actions and Deliverables

5.12 Below we have set out the key actions that the Government is taking to support the industry and its clients either to ensure existing commitments are met or to fill gaps. We have also identified key actions that businesses in the construction industry might consider taking.

Key actions to which the Government is already committed:

5.13 The Office of Government Commerce (OGC) to embed further the OGC Common Minimum Standards³³ and the requirement to use BREEAM assessment or equivalent. BREEAM is a recognised tool for assessing the environmental credentials of buildings. And as an example of BREEAM's use, the Department of Health is currently redeveloping its own version of BREEAM - the NHS Environmental Assessment Tool. When it is reissued it will be BREEAM for Healthcare and will be an accredited tool such that for new builds a score of "Excellent" will be required or for refurbishments a score of "Very Good".

5.14 Make guidance on whole life costing and whole life values more readily available to all those involved in procuring buildings.

5.15 Encourage the use of Design Quality Indicators (DQI) and Post Occupancy Evaluations (POE) on all appropriate Government funded construction projects – buildings and infrastructure.

5.16 Build upon the success of the Prime Minister's better public building award and Ministerial Design Champions.

5.17 Improve civil servants' sustainable development skills through the National School of Government.

³³ http://www.ogc.gov.uk/construction_procurement_common_minimum_standards_for_the_built_environment.asp

What more will the Government do?

5.18 By end 2008, BERR and the Department of Communities and Local Government (CLG) will explore with the relevant bodies the scope to raise the profile of sustainable building designs and designers, through relevant design award programmes, including a possible additional award for modernised buildings, and possible development of an international award.

What more should businesses do?

5.19 Insist on the appointment of an effective Design Champion on all major projects.

5.20 Insist on integrated design and construction teams in prequalification.

5.21 Demand the use of DQI (or equivalent), BREEAM, PCE and POE from contractors to get both objective and subjective information about a project.

5.22 Seek the advice of national and regional Design Review panels³⁴ on projects that are significant because of the nature of the site, their size, or the uses to which the projects will be put.

5.23 Involve the end users, operators and maintenance staff of buildings, spaces and infrastructure projects early on in the design stage through DQIs and equivalent tools so they can contribute to design.

5.24 Incorporate learning from DQIs in final designs.

5.25 Ensure that lessons learnt from past projects are incorporated in subsequent projects by systematically carrying out PCEs and POEs.

5.26 Establish cross-professional knowledge transfer networks to share good practice and learning.

³⁴ <http://www.cabe.org.uk/default.aspx?contentitemid=163>

Consultation Questions

5.27 Is target 5.2 stretching, achievable and realistic? If not then please propose an alternative. Which organisation or organisations should be responsible for this target?

5.28 Which of the proposed actions for business do you consider to be a priority? Why? What are the barriers to implementing this action and how might they be overcome? Who should take the lead in implementing this action?

6 Innovation

Targets and milestones

6.1 Increase the current 55% “innovation active” enterprises in the sector³⁵ by 5%, to match and then track the benchmark for all UK enterprises³⁶.

6.2 A 10% annual increase in the number of enterprises in the sector taking up UK and European innovation support products and schemes by 2012³⁷.

6.3 Government to update list in Quick Wins (environmental product standards) in 2007.³⁸

Background and rationale for action

6.4 BERR defines innovation as the successful exploitation of new ideas. It is more than the generation of new knowledge or technology, but a means of exploiting that to obtain competitive advantage in markets, and so is a key driver of competitiveness. It can also include identifying new solutions and ways of working, with application to products, processes and services³⁹. There is wide scope and potential for major benefit therefore to use innovation as an enabling mechanism for achieving more sustainable construction.

6.5 The key challenge is to focus on how innovation might apply to the supply-side of the construction sector, for example products, design, use of environmental technologies and sustainable materials, the construction process itself and to adaptation of the existing built environment to improve its sustainability.

Actions & Deliverables

6.6 Below we have set out the key actions to which Government is already committed in this area and what more we intend to do, either to ensure existing commitments are met or to fill gaps. We also set out the key commitments of the Technology Strategy Board and Research Councils.

³⁵ BERR definition of construction sector, including products and services with contracting; data sourced from Community Innovation Survey 4, 2005, data from 2002-4.33

³⁶ BERR lead on encouraging improvement in innovation performance in Business

³⁷ BERR lead on encouraging improvement in innovation performance in Business

³⁸ UK government Sustainable Procurement Action Plan 2007 (<http://www.sustainable-development.gov.uk/publications/pdf/SustainableProcurementActionPlan.pdf>)

³⁹ On 19 June 2007 the Secretary of State for Industry announced the establishment of the first of 5 industry-led action groups on innovation in services. Two reports were released for publication that day: a Department of Trade and Industry report on Innovation in Services (www.berr.gov.uk/files/file39965.pdf) and a report by the National Endowment for Science, Technology and the Arts (NESTA), “Hidden Innovation” which pinpointed the importance of innovation in services in a number of sectors, including construction (www.nesta.org.uk/informing/policyandresearch/highlights/hiddeninnovation.aspx).

Working with industry, Government will:

By End 2007

6.7 Have commenced a 2-yearly survey of the level of “innovation active” firms in the sector as an Innovation Key Performance Indicator (drawing on the UK Innovation Survey), to assist in target setting and performance monitoring.

6.8 Encourage and support the UK National Technology Platform for the Built Environment – including the development of its strategic agenda of the industry’s research priorities.

6.9 Encourage the industry, through the National Technology Platform and the Strategic Forum for Construction, to develop clear targets for increased R&D, knowledge transfer, and the use of advanced design methods by their members through:

- Engagement with relevant Knowledge Transfer Networks – such as those on the Modern Built Environment, Materials, Resource Efficiency, Integrated Pollution Management (IPM-Net) (land remediation, waste and water) and Sensors.
- Identifying, promoting and encouraging research and development through:
 - Grant for Research and Development and SMART administered by the RDAs⁴⁰ and Devolved Administrations⁴¹ respectively
 - Knowledge Transfer Partnerships⁴²
 - Increased involvement in applied University-based R&D in conjunction with the Research Councils
- Identifying, promoting and encouraging a target number of collaborative research projects which can seek support from:
 - The Technology Programme⁴³ Collaborative R&D product
 - Framework Programme 7⁴⁴
 - The EurekaBuild initiative (utilising grant support from the Technology Programme and the Grant for R&D)

6.10 Encourage engagement in the new EurekaBuild umbrella initiative, which will provide construction and their supply chain firms with assistance to find research and development partners in European and other Eureka signatory countries.

By Spring 2009

6.11 Encourage the development of at least two low-carbon communities through the Carbon Challenge Programme managed by English Partnerships; the Programme aims to spur the house-building industry’s response to climate change by accelerating the creation of a number of zero and near-zero carbon communities.

⁴⁰ Regional Development Agencies

⁴¹ Devolved Administrations of Scotland, Wales and Northern Ireland

⁴² www.ktponline.org.uk/

⁴³ UK Government Technology Programme

⁴⁴ European Community 7th Framework Programme for Research, Technological Development and Demonstration Activities (2007-2013)

The **Technology Strategy Board**, working with Government will:

By End 2007

6.12 Develop a Technology Application Area concerned with the Built Environment, helping define appropriate opportunities for support through the Technology Programme's bi-annual collaborative research competitions, alongside underpinning technology developments in the Materials, Design Engineering, Sustainability and ICT technology themes.

6.13 Develop an Innovation Platform proposal on "Low Impact Buildings". If BERR's, Defra's and CLG's proposal is approved by the new executive Technology Strategy Board, the intended focus is on the reduced consumption of energy, water and materials in the built environment. Two initial priority areas are proposed:

- Development, including robust validation and demonstration of affordable, high-efficiency insulation technologies for solid-walled homes (approximately one third of the domestic housing stock – 7 million homes), together with integration of renewable energy systems.
- Technologies for new housing to meet the energy and water efficiency targets set out in the Code for Sustainable Homes and anticipated future Building Regulations, leading to net zero-carbon new dwellings by 2016 (subject to consultation).

By Spring 2008

6.14 Review the progress of the Knowledge Transfer Network for the Modern Built Environment. Funded by the Technology Programme, the network is operated by BRE, CIRIA⁴⁵ and Arup and aims to encourage the transfer and adoption of technology-based knowledge to the sector. As part of the review the TSB⁴⁶ will seek views from companies actively engaged in the KTN as to progress and future direction of the network.

6.15 Consider how the UK can maintain its participation in the European Research Area Network for sustainable building (ERABUILD), which will propose a successor project to focus on renovation for sustainable buildings and improved use of Information and Communications Technology in better value-driven construction processes. This would allow the UK to learn from and co-develop the latest techniques in Europe in fields such as:

- Retrofitting insulation/cladding, low-carbon energy integration and water conservation systems to different building types, including incentive mechanisms;
- "Breathable" buildings and components – improving thermal performance while maintaining indoor environment quality.

6.16 Develop a work theme within the Low Impact Building Innovation Platform (if approved) to test and demonstrate equivalent resource efficient technologies and building systems for selected types of non-domestic buildings.

⁴⁵ BRE – formerly the Building Research Establishment; CIRIA, the Construction Industry Research and Information Association and BSRIA, the Building Services Research and Information Association

⁴⁶ Executive Technology Strategy Board

By End 2008

6.17 Build on the forthcoming Office of Science & Innovation Foresight report on “Sustainable Energy Management and the Built Environment project” – as and when it reports. This project is sponsored by CLG, Defra and BERR.

6.18 Encourage the research, development and demonstration of innovative adaptation techniques and more durable systems and components to improve the built environment’s (buildings and infrastructure) ability to contend with the anticipated effects of climate change.

The **Research Councils** will:

From 2007

6.19 Take full account of sustainability principles, opportunities for the use of environmental technologies and the resultant Sustainable Construction Strategy in the development of construction-relevant Research Programmes. Subject to budget approval, EPSRC⁴⁷ will seek to develop a third phase of its Sustainable Urban Environment programme, alongside its construction-relevant Innovative Manufacturing Research Centres (IMRCs) and its Sustaining Knowledge for a Changing Climate programme⁴⁸ within the UK Climate Impacts Programme.

⁴⁷ Engineering and Physical Sciences Research Council

⁴⁸ <http://www.k4cc.org/>

7 The People Agenda

Targets and milestones

Skills

7.1 Increase the number of Construction Skills Certification Scheme (CSCS) card holders to 1.6 million by 2010, and to 2.0 million by 2015. (proposed new target for industry)

7.2 Ensure the content of all qualifications are reviewed, and where appropriate include sustainability components and provide skills necessary to apply the latest technologies, by 2010. (proposed new target for Sector Skills Councils (SSCs))

7.3 Provision of work experience places to increase to 16,000 by 2010 and to 20,500 by 2015. (proposed new target for SSCs)

7.4 All domestically trained and competent construction workers to be still involved in the industry after 5 years - target achievement by 2010, and for 10 years - target achievement date 2015. (proposed new target for SSCs)

Health & Safety

7.5 Reduce the incidence rate of fatal and major injury accidents by 10% from 2000 levels by 2010⁴⁹.

7.6 Reduce the incidence rate of cases of work-related ill health by 20% from 2000 levels by 2010⁵⁰.

7.7 Reduce the number of working days lost per 100,000 workers from work related injury and ill health by 30% by 2010⁵¹.

Background and rationale for action

7.8 Built environment industries are labour intensive, with around 2.25 million people employed.

7.9 The industry relies on a flow of new recruits and the image of the industry is crucial in attracting them. Safety and how construction impacts on surrounding communities both have a bearing. Most workers need specific skills, and the industry needs to ensure new entrants and existing workers are competent. Construction is characterised by traditional build processes, but there is increasing use of new techniques, products, materials, in response to regulatory, competitive and customer pressures. Associated training is essential so that the industry can deliver on its commitments, and the expectations placed on it.

⁴⁹ "Revitalising Health and Safety" www.hse.gov.uk/statistics/pdf/prog2006.pdf

⁵⁰ "Revitalising Health and Safety" www.hse.gov.uk/statistics/pdf/prog2006.pdf

⁵¹ "Revitalising Health and Safety" www.hse.gov.uk/statistics/pdf/prog2006.pdf

7.10 The four built environment Sector Skills Councils (SSCs): AssetSkills; ConstructionSkills; Proskills; SummitSkills; have developed, or are developing their Sector Skills Agreements and Sector Qualification Strategies. They work together through ConstructionSkills and the Built Environment Skills Alliance (BESA) of the SSCs to help to develop a shared vision for a framework of standards and qualifications that will support productivity and lead to improved performance across the Built Environment. All the SSCs have suites of National Occupational Standards (NOS) of competence. These reflect best working practices including ethical, sustainability, international, legislative, health, safety and welfare, equal opportunities, respect for people requirements.

7.11 Construction and built environment SSCs have begun to work together on sustainability-related skills work (development of the Skills Matrix/work on a forward Sustainability Strategy), but work is still in its early days. There are good examples on awareness raising. E.g.: 'Top 10 things for SMEs to do' on sustainability.

7.12 There are many successful skills initiatives and pilot programmes in place, mainly driven by the SSCs. Many built environment companies do not engage in training, though it is difficult to generalise. Many small firms train apprentices, and large contractors, which usually do not employ trades people (or few), have training programmes for their site/project managers. The Institutions have Continuing Professional Development (CPD) programmes in place.

7.13 There has been some progress on safety; latest figures for 2005/06 put fatalities at 59 (as against 69 for 2004/05). However figures for 2006/07 are likely to show a worrying increase in fatalities. The major contractors take a strong lead, driving Construction Skills Certification Scheme (CSCS) – around 1 million registrations to date. There is strong regulation, policed by HSE under the Health and Safety at Work Act 1974, Construction Design and Management Regulations (2007). There is also increasing attention to health aspects, with work to improve the management of occupational health in the construction industry that, in part, builds on the Leicestershire occupational health pilot programme (2005/6).

7.14 Corporate Social Responsibility and Respect for People appear not yet to be widespread, although some programmes are in place. However, the principles underpin much of the work that the industry undertakes in this area.

7.15 The Academy for Sustainable Communities is the Government's national centre for delivering the skills and knowledge needed to make sustainable communities ('place-making'). It was established following the Egan Review of Skills for Sustainable Communities (2004), and works at a strategic level across the public, private and third sectors, and key professional groups. As the only national organisation with the mandate to work in this area, the Academy has a unique role supporting the construction sector to deliver sustainable communities.

7.16 The SSCs will play a key part, in conjunction with their industry and union partners, in helping to prioritise, and take forward specific skills and training related actions, including the development of relevant occupations standards, National Vocational Qualifications, and other training and development programmes.

7.17 ConstructionSkills would have a key role in monitoring progress against these milestones, in conjunction with the Learning and Skills Council, and training providers as necessary. Detailed mechanisms have yet to be sorted out.

7.18 Account will also need to be taken of developments arising from the Leitch Review of Skills (December 2006), and the Government's response to Leitch. Also

relevant is the Callcutt Review, which is looking at barriers to the delivery of housing, including sustainable housing, such as skills aspects. This Review is due to report later in 2007. At this stage, implications for the proposals set out in this draft Strategy are unclear.

Actions & Deliverables

7.19 Below we have set out the key actions that the SSCs are being asked to commit to. They take account of existing strategies, but represent the priorities and further work we consider necessary either to ensure existing commitments are met or gaps are filled. Following these are questions where we would like your views and your thoughts on what more industry could and should do.

Key actions to which the Sector Skills Councils are being asked to commit:

7.20 Champion and encourage a systematic and informed approach to training and development by companies, especially covering sustainability aspects.

7.21 Focus primarily on influencing the influencers (planners, designers and other professionals, clients, major contractors; project/site managers), and by so doing increase overall demand for relevant training and development.

7.22 Work with partners to secure the inclusion of modules on sustainable development in relevant professional training/education; and ensure that sustainable construction is a mandatory component of CPD for the professional institutions, building control, and planning officers.

7.23 Continue to work with the other Sector Skills Councils, Government, and other partners, to ensure that industry awareness and skills needs associated with Building Regulations are identified and addressed in good time.

7.24 Work to encourage good on-site practice covering sustainability, through improved provision and demand for comprehensive induction training for trades people and operatives, and company participation in Considerate Constructors and similar schemes.

7.25 Continue to work with the Academy for Sustainable Communities to champion 'place-making'⁵², and help to deliver the essential generic skills across the professions to enable the delivery of sustainable communities.

7.26 Build on the opportunities and momentum generated by the 2012 Olympics, to encourage associated training and employment opportunities.

7.27 Work with the Regional Development Agencies to stimulate a change in workplace culture in line with sustainability, to assist the development of relevant skills and knowledge, to encourage engagement between local companies and colleges.

7.28 Work with the Learning and Skills Council (nationally and regionally) and the Skills for Business Network to ensure that: Train to Gain Brokers have sufficient knowledge of the built environment industries; the programme operates effectively for industry's needs; and construction companies are able to make the most of opportunities under the Train to Gain programme.

⁵² Making Places: Creating Sustainable Communities: Academy for Sustainable Communities, www.ascskills.org.uk

7.29 Continue to work with the Health and Safety Executive, which will take forward existing and future strategies and programmes, and enforce relevant legislation and regulations, that contribute to the drive to improve health and safety in the industry.

7.30 Specific deliverables, and arrangements for monitoring progress, would be agreed with the Sector Skills Councils. Actual delivery mechanisms would need to be considered further – e.g. the role of the ConstructionSkills National Skills Academy. The Health and Safety Executive and Academy for Sustainable Communities have detailed deliverables and targets for their specific strategies and programmes.

Consultation Questions

7.31 If you agree that the proposed key actions and deliverables covered in the People Agenda reflect the main priority areas to deliver sustainability for the industry, what specific work streams and targets would help deliver these commitments?

7.32 Do you agree that these work streams and targets should be peer-reviewed by industry experts (e.g. relevant Sector Skills Councils), prioritised, and Action Plans developed to take the best ideas forward?

8 Better Regulation and Business Support Simplification

Making Regulation Work

8.1 The Government is committed to cutting red tape for business and the public and voluntary sectors. Regulation is essential: it provides protection and brings invaluable benefits. Better Regulation is about getting the balance between regulation and protection right: it is not about removing vital protections. Rather, it is about finding more effective ways of designing and delivering protection without increasing costs or deterring compliance:

- Cutting the cost of regulation. Government Departments have accepted a 25% reduction in the administrative burdens affecting the private and third sectors by 2010 and are set to deliver more than £2bn savings.

8.2 This is one of the most radical reform agendas in the world. And the Government is committed to further and on-going reform. The real test will be whether businesses feel the impact on the ground. Government is responding to what business, front line public sector staff and third sector organisations want. Government and these sectors must work together to achieve this.

8.3 Following feedback from stakeholders, the Government has improved its website where proposals for regulatory simplification can be posted directly to Government. Proposals and Departments' responses can be viewed making it fully transparent and accountable. This website (<http://www.betterregulation.gov.uk/>) provides businesses and the public with an opportunity to influence the way Government regulates. Government wants ideas or suggestions on how regulations impacting individuals or organisations can be improved, be it a way to reduce the time it takes to fill in a form or addressing overlaps between regulations. Every idea or suggestion submitted to this website will be published, as will all Government responses.

Examples

HSE - Reporting injuries at work can now be done by phone in a move which will save businesses both time and money. The HSE has improved the reporting process so it can be done in a 30 minute phone call instead of 2.5 hours of form filling, which cost the industry an estimated £21m.

Forestry Commission - The Forestry Commission's e-Business system eFIDs, which allows firms to buy timber and arrange deliveries electronically, has been nominated for a Government Computing magazine's CG Awards for Innovation. The system has been a great success with 100% of the Commission's competitive sales now being conducted electronically. One customer has already saved £70,000 per year and it's predicted to save the industry up to £1m per year when fully implemented.

The Environment Agency supports businesses by providing **advice** on legislative compliance and good environmental practice.

Services include:

- A **public register** of accredited carriers of waste, on the Agency's web site.
- **Awareness** campaigns on relevant issues, to help compliance with environmental obligations and good practice.
- Levelling the playing field for legitimate businesses through robust **enforcement** against those deliberately flouting the law.

The Agency also makes it easier for the construction industry to use waste-derived products by working with WRAP to develop Quality Protocols for wastes which reduce the regulatory burden. These set out **best practice** for collection and minimum processing requirements for different waste types which can increase the use of construction wastes and give confidence in the quality of waste-derived products.

Collaboration with the construction sector is also underway to develop a Construction Sector Plan with businesses and organisations representing construction contractors. Sector Plans direct and inform Environment Agency activities as well as guiding industry. In particular the Construction Plan will:

- Help the Agency identify the issues where it can make the biggest difference as a modern regulator, encompassing both voluntary measures and actions it will enforce;
- Identify milestones for construction businesses showing how they can move from basic regulatory compliance, through established good practice, to best practice activities and practices, and ultimately towards environmentally sustainable practices. In support of the plan the Agency is developing closer **liaison** with the construction sector and exploring ways in which it can **co-ordinate** its work with other regulators and ensure maximum **consistency** in how it approaches issues. The use of combined instruments to achieve environmental outcomes is also being explored.

The **NetRegs** website provides free information to SMEs on complex environmental regulations for different types of construction project. This is supported by all the main UK environment regulators: (Environment Agency (England and Wales), the Scottish Environmental Protection Agency, and the Environment and Heritage Service for Northern Ireland).

Business Support Simplification Programme (BSSP)

8.4 The Chancellor in his budget statement in March 2006 announced the Government's plan to simplify the existing (estimated) 3000 business support schemes to 100 or fewer by 2010. This initiative involves central Government Departments and their agencies and local authorities.

8.5 By 2010 all existing publicly-funded business support will close, merge into or be delivered through a joint new business support portfolio of 100 or fewer products and services.

8.6 Business Link⁵³ (including businesslink.gov) should be the primary channel for all publicly-funded business information, support and advice.

8.7 An introductory document (currently in circulation and open to responses) sets out the aims of a cross-Government programme to simplify business support. The document can be found on the BERR's Small Business Service website by following this link <http://www.berr.gov.uk/files/file38859.pdf>. A full consultation was published in June 2007⁵⁴.

Consultation Questions

8.8 We would be grateful for information from you on specific pieces of legislation which are impeding your ability to be more sustainable in your business operations.

⁵³ www.businesslink.gov.uk

⁵⁴ <http://www.berr.gov.uk/files/file39908.pdf>

9 Climate Change

Targets and milestones

9.1 All new homes to be zero carbon by 2016, with building regulations locking in improvements in 2010 and 2013.⁵⁵

9.2 By 2010 the general level of energy efficiency of residential accommodation in England to be increased by at least 20 per cent compared with the general level of such energy efficiency in 2000⁵⁶.

9.3 All new homes built with English Partnerships or Housing Corporation funding to achieve a 25% improvement over current building regulation requirements in terms of carbon emissions from April 2008 as set out in the Code for Sustainable Homes.⁵⁷

9.4 Introducing Energy Performance Certificates for all homes (on construction, sale or rent), to be phased in from August 2007 for 4 bedroom houses⁵⁸.

9.5 Reduce carbon emissions on the central Government office estate by 12.5% by 2010/11 and 30% by 2020 relative to 1999/2000 levels.⁵⁹

9.6 Central Government's office estate to be carbon neutral by 2012⁶⁰.

9.7 Departments to increase their energy efficiency per square metre by 15% by 2010 and 30% by 2020⁶¹.

9.8 To set in place a clear timetable and action plan to deliver significant reductions in carbon emissions from new commercial buildings within the next 10 years.⁶²

9.9 Subject to consultation, making it mandatory to have a rating against the Code for Sustainable Homes for every new home from April 2008.

⁵⁵ Department of Communities and Local Government December 2006. "Building a Greener Future" consultation document.

⁵⁶ Department of Communities and Local Government, Housing Act 2004

⁵⁷ Department of Communities and Local Government. Paragraph 2.31 of http://www.communities.gov.uk/pub/173/BuildingaGreenerFutureTowardsZeroCarbonDevelopment_id1505173.pdf

⁵⁸ CLG News release 2007/0110 dated 11 June 2007

⁵⁹ UK Government Sustainable Procurement Action Plan, 2007 (<http://www.sustainable-development.gov.uk/publications/pdf/SustainableProcurementActionPlan.pdf>)

⁶⁰ UK government Sustainable Procurement Action Plan, 2007 (<http://www.sustainable-development.gov.uk/publications/pdf/SustainableProcurementActionPlan.pdf>)

⁶¹ UK government Sustainable Procurement Action Plan, 2007 (<http://www.sustainable-development.gov.uk/publications/pdf/SustainableProcurementActionPlan.pdf>)

⁶² Department of Communities and Local Government. New Target

Background and rationale for action

9.10 The recent Stern Review⁶³ confirmed the urgency of taking action to tackle climate change – both its causes and effects. The threat of global warming is one that is already impacting on all of us and demands change from Government, industry and the public alike. At present the built environment accounts for around 47% of greenhouse gas emissions in the UK. Not only must the construction industry rise to the challenge of reducing those emissions, it must also consider how it will adapt its products to deal with the impacts of unavoidable climate change. Extreme weather conditions, hotter drier summers, sudden rainfall and rising sea levels can all damage buildings, roads, railways and drainage systems.

9.11 In response to the threat of climate change, the Government has already committed to a number of actions including setting 5 year carbon budgets in the Climate Change Bill⁶⁴, setting a clear target to make all new homes zero carbon by 2016 and introducing the Code for Sustainable Homes. Others are included in the Planning White Paper (published 21 May 2007), the Energy White Paper (published 23 May 2007), the Housing Green Paper Policy package (published on 23 July 2007) and Planning Policy Statements⁶⁵. These proposals and actions will begin to address the energy efficiency of buildings, design and construction practices, the development of new energy saving technologies and support for changing behaviours. And there is an awareness that good local environmental design can help mitigate climate change through the provision of shade and shelter. However, we recognise that there is a lot more to do both to ensure the commitments that we have already made are delivered and to fill the gaps in our approach.

9.12 Similarly tackling climate change will require direct action from the construction industry. Collectively and individually, the construction industry will need to consider how it is going to develop its workforce skills, its practices and procedures to ensure they are appropriate to deliver the quality of product that will be required in this new environment. The industry will also need to consider supply chain issues, to ensure they can meet the demand for certain products and approaches, and, in recognition of the problems of poor construction highlighted in the Housing Green Paper, its quality assurance systems. CABE's Housing Audit has shown that 82% of houses built in the last five years is not good enough, so industry must take a more responsible approach to ensure there is a significant improvement in the quality of the products it provides. Its quality assurance procedures must ensure that there is evidence to demonstrate that its products are not only fit for purpose but that they actually perform to their design specifications. Government can, and is, supporting this through a number of policies, for example the Code for Sustainable Homes, the Energy Efficiency Commitment⁶⁶ / Carbon Emission Reduction Target⁶⁷ and the Micro-generation Strategy⁶⁸. However, the shift in mind-set, behaviour and investment patterns needs to come from the industry itself.

Adaptation

⁶³http://www.hm-treasury.gov.uk/independent_reviews/stern_review_economics_climate_change/sternreview_index.cfm

⁶⁴ <http://www.defra.gov.uk/corporate/consult/climatechange-bill/index.htm>

⁶⁵ <http://www.communities.gov.uk/index.asp?id=1143803>

⁶⁶ <http://www.defra.gov.uk/environment/energy/eec/index.htm>

⁶⁷ <http://www.defra.gov.uk/corporate/consult/cert2008-11/index.htm>

⁶⁸ <http://www.berr.gov.uk/energy/sources/sustainable/microgeneration/index.html>

9.13 Although climate change is beginning to be taken into account in the development of building standards and construction guidance, more needs to be done to develop and implement adaptation strategies. More variable and extreme weather conditions will have a major impact on infrastructure, buildings and occupants. Innovation is required to future-proof new structures, and adapt current built assets to cope with climate change.

9.14 Defra manages the Adaptation Policy Framework to identify key risks and opportunities for climate change, providing long term policy direction and transparency. The UK Climate Impacts Programme⁶⁹ (UKCIP) is funded by Defra and provides scenarios that show how our climate might change and co-ordinates research on dealing with our future climate. An example of current guidance which is available is the developers' check list⁷⁰.

9.15 Chapter 10 (Water) also addresses adaptation issues.

Actions & Deliverables

9.16 Listed below are the key actions to which Government is already committed in this area and the additional actions we intend to take, either to ensure existing commitments are met or to fill gaps. We have also given some examples of actions that the construction industry is taking to ensure that it is in a position to benefit from and contribute to action to tackle climate change.

Key Actions to which the Government is already committed:

9.17 Increasing the energy performance standards for new homes via the building regulations by 25% in 2010, 44% in 2013 and moving to zero carbon in 2016.

9.18 Making it a condition of Government funding that all new homes built by registered social landlords and other developers and all new homes developed by English Partnerships will comply with level 3 of the Code for Sustainable Homes.

9.19 Subject to consultation, making it mandatory to have a rating against the Code for Sustainable Homes for every new home from April 2008.

9.20 Introducing Energy Performance Certificates. These will be available for marketed homes in Home Information Packs, which will be phased in from 1 August. They will be rolled out across other buildings on sale, rent and construction by January 2009.

9.21 Supporting improvements in the energy efficiency of existing homes by ramping up delivery under the Energy Efficiency Commitment / Carbon Emission Reduction Target; and by extending our obligation on suppliers to deliver energy efficiency in the home until at least 2020.

9.22 Further increasing the demand for improved energy efficiency from the public through, for example, the Energy Saving Trust's Energy Efficiency Best Practice Programme, grant and support schemes, research, and a national network of Energy Efficiency Advice Centres.

⁶⁹ www.ukcip.org.uk/

⁷⁰ http://www.london.gov.uk/climatechangepartnership/docs/adapting_to_climate_change.pdf

9.23 Supporting the development of the Energy Technologies Institute - a new partnership with some of the world's biggest energy companies to develop secure, reliable and cost-effective low-carbon energy technologies for commercial deployment.

9.24 Further supporting the development and uptake of new energy efficient products through for example, the market transformation programme, and guidance on micro-generation technologies which will enable informed decisions to be taken by the construction industry and consumers.

9.25 Promoting of the use of biomass for heat and power and as a source of renewable construction materials through the Biomass Energy Centre⁷¹ and the National Non-Food Crops Centre⁷².

What more will the Government do?

9.26 We will set in place a clear timetable and action plan to deliver substantial reductions in carbon emissions from new commercial buildings within the next 10 years.

9.27 We will work through the 2016 Zero Carbon Homes Task Force, to identify the barriers to implementation of the 2016 zero carbon homes target. This will focus on energy supply, skills, regulatory compliance, capacity and supply chain issues, research and consumer attitudes, and will work to put in place measures to address them.

9.28 We will develop proposals for improving the energy efficiency of existing non-domestic buildings.

9.29 The Biomass Strategy and the Government response to the two year progress report on the Strategy for Non-Food Crops and Uses were both published on 23 May 2007. These new publications take forward actions proposed in the Government response to the Biomass Task Force report and the Non-Food Crop Strategy two year progress report respectively and together aim to increase the sustainable use of biomass heat and power and low carbon renewable construction materials used in buildings⁷³.

9.30 We will take forward the Government's Adaptation Framework, which will be published at the end of 2007.

9.31 Climate Risk Assessment will help to protect business' investments and infrastructure in the face of a changing climate and is a process that is being developed by Government through the Adaptation Policy Framework to manage both their own work and to support continued adaptation activity across the UK.⁷⁴

What action is the industry already taking?

⁷¹ www.biomassenergycentre.org

⁷² <http://www.nnfcc.co.uk/index.cfm>

⁷³ The Biomass Strategy seeks to realise a major expansion in the supply and use of biomass in the UK. The response to the two year progress report on Non-Food Crops provides a refocused action plan for developing the strategy up to the end of 2009. Both documents can be found at:
<http://www.defra.gov.uk/environment/climatechange/uk/energy/renewablefuel/index.htm>

⁷⁴ http://www.ukcip.org.uk/climate_impacts/

Examples include:

9.32 British Institute for Facilities Management (BIFM) is leading better awareness of sustainability issues amongst the Facilities Management (FM) community through competency and Continuous Professional Development (CPD) programmes to Facilities Managers in the correct operation of commercial buildings. The aim is for at least 50% of the FM workforce to be accredited by 2010.

9.33 The Construction Products Association is showing leadership by looking at possible solutions to identify the barriers and opportunities along with key milestones and targets needed for industry and Government to ensure we are on the path towards zero carbon by 2016.

9.34 The UK cement industry achieved a 28% reduction of direct emissions of CO₂ from manufacturing between 1990 and 2005, thereby saving of over 3.7 million tonnes of carbon dioxide; improved specific energy consumption by 27% over the same period – hitting its 2010 target in 2006 - and between 1998 and 2005 reduced its fossil fuels consumption by 23%.

Consultation Questions

9.35 Are there other actions that the Government should be taking to help the construction industry rise to the challenge of climate change?

9.36 What targets could industry specifically sign up to, to increase the positive impact they can have on climate change through their activities?

10 Water

Targets and milestones

Potable water use

10.1 All new homes built with English Partnerships or Housing Corporation funding to meet Level 3 of the Code for Sustainable Homes (105 litres per person per day) from April 2008.⁷⁵

10.2 Amendments will be made in 2008 to the Building Regulations to introduce a whole building performance standard for new homes, to be set at a target level of 125 litres/head/day. Defra will review the Water Supply (Water Fittings) Regulations 1999 in 2008 with a view to introducing component based standards for key fittings.⁷⁶

10.3 A reduction in water consumption to an average of 3 cubic metres per person per year for all new office builds or major office refurbishments on the Government Estate.⁷⁷

10.4 Reduce water consumption by 25% on the office and non-office estate by 2020 relative to 2004/5 levels⁷⁸.

Surface water management

10.5 Public consultation on options for ownership and adoption of Sustainable Drainage Systems (SUDS) will take place towards the end of 2007.

Background and rationale for action

10.6 Water is an essential but scarce resource. It is commonly accepted that current water consumption patterns are unsustainable. Demand from society is rising while drier summers are predicted through much of Europe due to climate change. The need for water conservation is recognised and measures are coming on stream to encourage the construction industry to design higher standards of water efficiency for new buildings. These include the Code for Sustainable Homes in England, the recent consultation on mandating water efficiency in new buildings, and Ofwat's work in the Water Saving Group on infrastructure charge discounts for water efficient developments.

10.7 This Strategy covers the two main activities associated with water in the built environment: potable water use and surface water management.

⁷⁵ Department of Communities and Local Government December 2006. "Building a Greener Future" consultation document.

⁷⁶ Announced as part of the Housing Green Paper Policy package on 23 July 2007.

⁷⁷ <http://www.sustainable-development.gov.uk/government/estates/targets-guidance.htm#waterconsumption>

⁷⁸ UK government Sustainable Procurement Action Plan 2007 (<http://www.sustainable-development.gov.uk/publications/pdf/SustainableProcurementActionPlan.pdf>)

10.8 Defra is currently developing a new National Water Strategy to be published later this year, which will set out a coherent policy framework to underpin the Government's commitments for water availability and quality. It will outline the evolving priorities, and focus water policy through a climate change lens. The aim is to improve standards of service and quality, while balancing environmental impacts, water quality, supply and demand, and social and economic objectives. Water efficiency will be a key area of that Strategy.

Potable water use

10.9 Nationally, the current domestic usage of potable water has grown in recent years and is calculated at an average of 154 litres per person per day. This compares with less than 120 litres per person per day in certain parts of Europe. Since the South East of England and East Anglia receive less rainfall per person than countries such as Algeria and the Sudan and the supply-demand gap is becoming more difficult to balance. It is vitally important that we seek to reduce consumption substantially within the next decade, and particularly in those areas where supplies are scarce.

10.10 A number of water efficiency technologies exist for the construction industry but these are often aimed at new developments rather than existing build. They range from rainwater capture systems to innovative products, for example dual-flush toilets, low flow tap and shower fittings and sensor flow taps. Many of these features can be applied to both domestic and commercial buildings. The industry aims to phase out high-flow fittings by 2020.

10.11 The onus for promoting conservation is on water companies, regulatory bodies and the public, though it is often not demand-led. Advances in water efficient technology and innovation in recent years have generally not been widely adopted (aside from dual flush toilets). This Strategy provides the opportunity to build on existing measures for water efficiency, and for the entire construction sector to take a lead, building on benchmarks and existing good practice.

Actions & Deliverables

10.12 We have set out below the key actions to which Government is already committed in this area and additional actions we intend to take, either to ensure existing commitments are met or to fill gaps. We have also set out actions that businesses in the construction industry could take. Following this list are a number of questions on which we would welcome your views and your thoughts on what more industry could and should do.

Key Actions to which the Government is already committed:

10.13 Defra is currently looking into the feasibility of a product information / labelling scheme through the Market Transformation Platform Programme. This supports the initiative of the Bathroom Manufacturer's Association which will be launching a voluntary scheme for bathroom products in September 2007. Defra will continue to work with stakeholders to develop better information to support the identification of water efficiency products.

10.14 Regional measures to deal with water scarce areas. Defra's consultation on water metering, launched January 2007, focused on water stressed areas and proposed to give water companies greater powers to increase metering.

10.15 CLG and Defra are currently considering the outcome of their consultation on improving water efficiency in new buildings (which discussed a number of options including the introduction of a whole building performance standard and changes to

the water fittings regulations). They will publish a further policy statement shortly indicating proposed next steps.

10.16 Government is separately looking at ways of improving the water efficiency of existing domestic and commercial buildings, e.g. market transformation, reducing financial barriers, consumer education and awareness raising as well as regulation.

10.17 Government is also considering ways of regulating high water use fittings e.g. wet rooms, spa baths etc, by amending the Water Supply (Water Fittings) Regulations 1999 to make them notifiable to the local water company. This would enable water companies to exercise discretionary powers to install a water meter, so that water charges could reflect the true cost of the water used.

10.18 A fuller range of measures is from the Water Savings Group – see Defra website: www.defra.gov.uk/environment.

What more will the Government do?

10.19 If regulatory minimum standards for water efficiency are adopted, consider whether the water efficiency standards at the higher levels of the Code for Sustainable Homes might be used to progressively raise these regulatory standards as is currently proposed for code energy efficiency standards.

What more should business do?

10.20 Encourage metering of all existing buildings on refurbishment and change of ownership. Defra to consult with the water companies⁷⁹.

10.21 Defra's Market Transformation Programme is leading on developing codes of conduct / sets of standards for rainwater and grey water systems. Industry to develop installation and maintenance codes of practice.

10.22 Develop codes and standards for training of plumbers on installation of water-efficiency systems (including elements covering rainwater and grey water systems).

10.23 Development of training programmes for Facilities Managers and plumbers on the need for, and operation of, water-efficient buildings.

Surface Water Management

10.24 Good surface water management is a key issue for the construction industry, during the construction phase and afterwards.

10.25 A failure to take account of surface water during the construction phase can result in water pollution and disruption to the construction programme.

10.26 Building Regulations requires developers to consider all types of drainage systems, and lists them in order of preference. Sustainable Drainage Systems (SUDS) come first in this list, with conventional pipes last.

10.27 The philosophy behind SUDS is to mimic natural drainage patterns, removing pollutants from urban run-off and help manage flood risk at source. Landscaped SUDS features can be part of green space and green corridors and have the potential to contribute significantly to biodiversity.

⁷⁹ Defra Consultation on Water Metering in Areas of Serious Water Stress" January 2007

10.28 Many organisations are championing improved surface water management and many clients, contractors and consultants are aware of requirements for flood risk management through planning policy statements.

10.29 SUDS offer three principal benefits in both new developments and retro-fitted into existing developments, as follows:

- **Water Quality:** Surface water discharges are a source of diffuse pollution. Under the Water Framework Directive, diffuse pollution is likely to require greater focus in the future. SUDS are one mechanism for addressing this issue.
- **Flood Risk:** Efforts are being made to improve levels of flood protection in developments, driven by current needs and the prospective impact of climate change. SUDS, in conjunction with surface water management planning and flood routing, can be an effective way of managing flood risk.
- **Amenity:** SUDS require more imaginative use of open space within developments so that they can be integrated within the 'green space' within the public realm. Done properly, this can contribute to more attractive built environments and bring other benefits to communities.

10.30 A feature of SUDS is that they largely comprise 'soft engineering' which implies lower carbon inputs through: less deep digging, less use of imported engineering materials and less waste material for disposal. Whilst there is guidance in the implementation of SUDS, it is predominantly the exception rather than the rule for new developments. However, during construction a number of contractors will utilise surface water management plans to manage the pollution from the construction site.

Actions & Deliverables

10.31 Listed below we have set out the key actions that Government will take in this area to ensure existing commitments are met or to fill gaps. There are also questions on which we would like your views and your thoughts on what more industry could and should do.

What more will Government do?

10.32 Defra is currently examining options for resolving barriers to the take up of SUDS. It is anticipated that a public consultation on options for ownership and adoption of SUDS will take place towards the end of 2007.

10.33 Promote surface water management through an update to the Practice Guide on Planning Policy Statement (PPS) 25⁸⁰.

Consultation Questions

10.34 Do the targets and milestones presented at the start of the chapter appear realistic, achievable and sufficiently ambitious over the time frames envisaged? If not, then please suggest alternatives and who should be responsible for their implementation.

10.35 Are there any issues not covered in the above, which you feel should be addressed? If so, what are they and what targets and milestones would you propose?

⁸⁰ Communities and Local Government (2007) *Development and Flood Risk: A Practice Guide Companion to PPS25 'Living Draft'*, <http://www.communities.gov.uk/index.asp?id=1506265>

11 Biodiversity

Background and rationale for action

11.1 It is well documented that throughout the twentieth century, the increased modernisation of our lives has harmed biodiversity. The pressures of urban expansion place an ever-increasing demand on natural resources. However, development and biodiversity conservation can work together through adherence to relevant legislation, national and regional planning policies and biodiversity strategies and action plans.

11.2 Available evidence suggests that we will be subject to at least 50 years of climate change which we cannot prevent. We will therefore have to adapt to its unavoidable impacts. Efforts to mitigate climate change by reducing greenhouse gas emissions (e.g. growing biofuel crops or building wind farms) could create significant new pressures, as well as some opportunities, for biodiversity. In seeking to conserve biodiversity in a rapidly changing climate, we need to consider how ecosystems will be affected by changing climatic conditions and how the activities of the construction sector may exacerbate or reduce impacts on biodiversity.

11.3 The England Biodiversity Strategy, *Working with the grain of nature*, published in 2002, represents the bringing together of England's key contributions to achieving the EU Gothenburg target to halt the loss of biodiversity by 2010. The Strategy aims to embed biodiversity in all sectors of policy and decision making. A full report on the first four years of the Strategy was published in November 2006⁸¹, describing progress made and setting out forward work programmes to 2010. Additionally, Planning Policy Statement 9: Biodiversity and Geological Conservation (May 2006) shows how development plans and development control should treat nature conservation issues.

11.4 The long term vision in the England Biodiversity Strategy is to conserve and progressively enhance biodiversity as an essential component of urban infrastructure, thereby contributing to the quality of the urban environment and urban living and helping sustain thriving communities. One of the possible outcomes is that by 2010, conservation and enhancement of biodiversity maybe considered throughout the urban environment (including as part of all urban master planning, design and construction). For example, one way that this could occur would be for all construction projects over £500,000 to put in place a plan to protect and enhance the existing nature conservation features on, or adjacent to a site. Where this is not possible, mitigation or compensation would be provided to lessen the impact on, or replace as appropriate, the feature(s) of nature conservation value.

11.5 This Sustainable Construction Strategy will help to ensure that conservation and enhancement of biodiversity is considered throughout the built environment.

⁸¹ *Working with the grain of nature – taking it forward: Volume 1* - a full report on progress under the England Biodiversity Strategy 2002-2006

Actions & Deliverables

What more could businesses do?

11.6 The Construction industry could deliver further benefits for biodiversity by introducing a scheme whereby construction companies that are committed to biodiversity-related good practice could obtain recognition.

11.7 The construction sector could deliver further benefits for biodiversity by developing active partnerships with conservation-focused NGOs or Government agencies such as Natural England.

11.8 Another option would be to convene a construction and building materials industry workshop, bringing together companies from the design, planning, contracting, and building materials sectors and Government Departments to increase awareness about biodiversity and to develop new initiatives that deliver benefits to biodiversity. Such a workshop could also incorporate some companies that fall within the mining and forestry sectors, since these are closely associated with the building materials sector.

Consultation Questions

11.9 The aim of the proposal in paragraph 11.8 would be to create an integrated approach to maintain and where possible enhance biodiversity as a result of construction sector activity. Please say what you think would be helpful to companies in the construction sector to support the aims of maintaining and enhancing biodiversity.

12 Waste & Materials

12.1 Waste

Targets and milestones

12.1.1 By 2012, a 50% reduction of construction, demolition and excavation waste to landfill compared to 2005⁸².

12.1.2 By 2015, zero net waste⁸³ at construction site level⁸⁴.

12.1.3 By 2020 zero waste to landfill⁸⁵.

Background and rationale for action

12.1.4 Waste continues to be a major issue for the construction sector. The Government signalled the importance of construction waste in its new waste Strategy for England⁸⁶ published in May 2007. The industry is beginning to move away from waste management to resource management which will ultimately lead to improved economic performance. Longer term objectives should be more focussed on reducing the environmental impacts associated with waste production and resource management. This will require further development of life cycle data, especially resource use, of key construction products.

12.1.5 Waste regulation has been a principal driver of behaviour change within the construction sector. A reduction in construction, demolition and excavation waste will be significant for the environment as well as business efficiency. Leading companies in the industry have already demonstrated that waste reduction and recycling deliver worthwhile savings. And a study commissioned by Defra⁸⁷ identified that recovering energy from waste wood (currently mostly landfilled) represents a large potential carbon saving opportunity.

12.1.6 In addition, there are cost-neutral opportunities to close the loop and use higher recycled content and reclaimed product in projects. Continued increases in the landfill tax (both the standard rate and the inactive waste rate), and an increase in the aggregates levy rate, as announced in Budget 2007, will help drive resource efficiency and reduce waste, as well as diverting waste from landfill into re-use and recycling.

12.1.7 There are several existing Government sustainability targets, including:

⁸² <http://defraweb/environment/waste/strategy/index.htm>

⁸³ The concept of "Zero Net Waste" is explained in: <http://www.wrap.org.uk/construction/index.html>

⁸⁴ <http://defraweb/environment/waste/strategy/index.htm>

⁸⁵ <http://defraweb/environment/waste/strategy/index.htm>

⁸⁶ *Waste Strategy for England 2007*, see <http://www.defra.gov.uk/environment/waste/strategy/index.htm>

⁸⁷ Carbon Balances and Energy Impacts of the Management of UK Wastes, report by ERM (with Golder Associates) for Defra, March 2007:
http://www2.defra.gov.uk/research/project_data/More.asp?l=WR0602&M=KWS&V=Carbon+balance&SUBMIT1=Search&SCOPE=0

- Government to reduce waste arising by 5% by 2010 relative to 2004/5 levels and by 25% by 2020⁸⁸. And
- Government to increase recycling rates to 40% by 2010 and 75% by 2020.⁸⁹

12.1.8 These are high level targets for the economy as a whole, towards which the construction industry will need to contribute.

Actions and Deliverables

12.1.9 Below we have set out the key actions to which Government is already committed and what more we intend to do, either to ensure existing commitments are met or to fill gaps. Following these are questions on which we would welcome your views and your thoughts on what more industry could and should do.

Key Actions to which the Government is already committed:

12.1.10 Setting clear standards for good practice through the supply chain, on resource efficiency within public sector procurement of construction projects – and potentially in the private sector through client and developer commitments to similar standards. Common Minimum Standards⁹⁰ are in place for the procurement of built environments in the public sector and include a range of requirements for public sector clients on waste minimisation and management and resource efficiency, such as a minimum requirement for recycled content.

12.1.11 Continuing intervention to help develop markets for recovered materials – through quality standards, and sector agreements with manufacturers, including through the work of the Waste & Resources Action Programme (WRAP), whose remit includes developing markets for recovered materials, and engagement with the BERR funded Integrated Pollution Management (IPM-Net) Knowledge Transfer Network, which covers land remediation, water use and waste/pollution issues. For example, Defra's Market Transformation Programme (MTP) and WRAP have helped develop a voluntary agreement with the major plasterboard manufacturers and their trade association to reduce plasterboard waste to landfill and increase collection and recycling. It is intended to agree a sector-level agreement with the remaining elements of the supply chain.

12.1.12 Improving evidence on the environmental impacts of construction products. Evidence shows that buildings, construction and appliances account for 20-35% of all environmental impacts⁹¹. Through the MTP, Government is improving the evidence base on priority construction products and, building on this work, is developing policy roadmaps, which will chart the sustainability impacts (including waste and resource efficiency) and propose a range of corrective interventions across the life cycle of ten priority products including plasterboard (see 12.1.11) and window systems.

⁸⁸ UK government Sustainable Procurement Action Plan 2007 (<http://www.sustainable-development.gov.uk/publications/pdf/SustainableProcurementActionPlan.pdf>)

⁸⁹ UK government Sustainable Procurement Action Plan 2007 (<http://www.sustainable-development.gov.uk/publications/pdf/SustainableProcurementActionPlan.pdf>)

⁹⁰ http://www.ogc.gov.uk/construction_procurement_common_minimum_standards_for_the_built_environment.asp

⁹¹ EU-25 study, 'The Environmental Impact of Products' (EIPRO), May 2006

12.1.13 Setting an implementation framework to help deliver Government objectives on waste and resource efficiency. The Building Research Establishment (BRE) and consultants, AEAT, are developing, in discussion with the sector, a Government-funded Construction Waste & Resources Roadmap.

12.1.14 Developing clear regulation guidance and ensure consistent application of regulatory compliance. The Environment Agency is working with the construction sector to launch a Sector Plan that will set milestones for reduced waste and greater resource efficiency on construction sites. The agency will improve its relationship with construction businesses to offer more consistent guidance and regulation and remove barriers to better environmental practices.

12.1.15 The Environment Agency is running a three-year awareness campaign "Sitewise II" to improve the environmental performance of the construction industry as part of its small & medium sized enterprise strategy.

12.1.16 Raising awareness of improved waste management and resource efficiency within the construction industry through the BERR voluntary code of practice for Site Waste Management Plans (SWMPs), launched in July 2004, and Integrated Pollution Management (IPM)-Net Knowledge Transfer Network (KTN).

What more could Government do?

12.1.17 Defra is currently consulting on proposals to make SWMPs mandatory, building on the existing voluntary code and the experience of those who have already adopted SWMPs. The consultation closes on 9th July 2007. Depending on the consultation outcome, regulations could come into effect in April 2008. As well as encouraging greater resource efficiency, SWMPs are also intended to close down the market for illegal waste operators and to reduce the amount of waste crime and fly-tipping in the construction sector.

12.1.18 Clients to include contractual requirements for measurement and improvement of material resource efficiency for projects in England over £1m in value by 2009⁹². Government has a role in applying these to its own projects but also in encouraging the private sector to make such commitments. WRAP might have a role in encouraging the private sector to sign up to this commitment.

Resource efficiency encompasses waste reduction, use of recovered materials in construction, and recycling. The £1m threshold would capture around 10% of projects by number, 60-70% by value. Client requirements will encourage contractors to perform beyond the minimum regulatory standard for proposed Site Waste Management Plans (SWMPs), which will require measurement but not necessarily adoption of improved performance. This will also contribute to the Government's sustainable procurement policies.

12.1.19 Government to achieve waste-neutral construction in its major construction projects by 2012⁹³. Waste neutrality depends on reducing waste, segregating material for re-use and recycling and using more recovered material – and procurement clauses would require action on all these aspects.

To meet this proposed benchmark, one option is that the value of re-used or recycled materials employed on a construction project will at least equal the value of materials

⁹² For more details on this proposed target see Annex C3 to Waste Strategy for England 2007 (Box C3.3 on page 15) at <http://www.defra.gov.uk/environment/waste/strategy/strategy07/pdf/waste07-annex-c3.pdf>

⁹³ For more details on this proposed target see Annex C3 to Waste Strategy for England 2007 (Box C3.4 on page 16) at <http://www.defra.gov.uk/environment/waste/strategy/strategy07/pdf/waste07-annex-c3.pdf>

delivered to site that are wasted, while satisfying the criterion of no net adverse environmental impact from the adoption of good practice. It is proposed that value be credited for improvements in re-used and recycled content above standard practice and the value of materials reclaimed for use off-site. Value will be debited for materials delivered to site but not incorporated in the construction works (e.g. unused, off cut and damaged materials). The balance is termed "net waste". 'Zero net waste' could be defined in this way.

What more should businesses do?

12.1.20 Develop and implement a programme to encourage smaller contractors to measure current performance, identify good practice and reduce site waste. By way of example The National Specialist Contractors Council are developing a programme for their members.

12.1.21 Halve the amount of construction waste produced at site level by 2015 as a means of encouraging resource efficiency. This waste reduction proposal relates to the amount of waste generated on building and new build projects with a baseline of 2007, measured through performance indicators, such as cubic metres of waste per 100 sq. metres, or wastage rates of products and materials. This will contribute to the zero net waste site target.

12.1.22 Manufacturers to consider the resource efficiency of their products throughout their lifecycle e.g. designing out waste / less resources used, appropriate packaging, take-back schemes, and designing products for reuse and recyclability.

12.1.23 Designers/architects to consider waste minimisation and use of reclaimed and recycled materials within an overall framework of sustainable design. Consider the longevity of buildings and disassembly / deconstruction at the end of the buildings life.

12.1.24 Contractors and subcontractors, through the use of SWMPs, to consider waste reduction by designing out waste, more efficient use of materials through accurate ordering and on-site requirements such as adequate storage, logistics etc; and by encouraging the setting of targets following the waste hierarchy (Reduce, Reuse, Recycle).

Consultation Questions

12.1.25 Is it feasible to halve construction, demolition and excavation waste to landfill by 2012⁹⁴ from a baseline of 2005? Is the baseline date appropriate, and what specifically has to be done, and by whom, to achieve this target?

It is proposed that this target would not cover the diversion of waste from landfill to exempt sites, backfilling quarry voids, site restoration and landfill engineering. The target would therefore only cover (i) the estimated 18 million tonnes per year⁹⁵ of unprocessed, inert Construction, Demolition and Excavation (CD&E) waste (suitable for reprocessing into aggregate) entering licensed landfill for waste disposal and (ii) non-inert and mixed CD&E wastes⁹⁶.

12.1.26 Do the targets, milestones and proposals for waste appear realistic, achievable and sufficiently ambitious over the time frames envisaged? If not, then please suggest alternatively what these should be and who should be responsible for their implementation.

12.1.27 We propose new measures in paragraphs 12.1.18 and 12.1.19 to stimulate action to improve resource efficiency, reduce waste and increase diversion from landfill (through more re-use, recycling and recovery). Are these measures achievable and sufficiently ambitious? What needs to be done and by whom to achieve these aims?

12.1.28 New measures to stimulate action from companies to improve resource efficiency are proposed in paragraphs 12.1.20 – 12.1.24. Please prioritise these proposals and identify quick win opportunities with high impact.

⁹⁴ For more details on this proposed target see Annex C3 to Waste Strategy for England 2007 (Box C3.2 on page 15) at <http://www.defra.gov.uk/environment/waste/strategy/strategy07/pdf/waste07-annex-c3.pdf>

⁹⁵ Survey of Arisings and Use of Alternatives to Primary Aggregates in England, 2005: Construction, Demolition and Excavation Waste, Report for CLG by Capita Symonds, (2007).
<http://www.communities.gov.uk/pub/125/SurveyofArisingsandUseofAlternativestoPrimaryAggregatesinEngland2005Constructionid1508125.pdf>

⁹⁶ Data is less certain: WRAP estimate 15-20 million tonnes per year.

12.2 Materials

Targets and milestones

12.2.1 50% of products with type III Environmental Product Declarations by 2010⁹⁷. (proposed new target for industry)

12.2.2 50% of buildings and construction schemes over £1m in value using stewardship and responsible sourcing principles⁹⁸ by 2010. (proposed new target for industry)

Background and rationale for action

12.2.3 To assess fully the position of materials in a sustainability context requires consideration of a complex set of environmental, social and economic factors across their whole life-cycle. Use of life-cycle assessments (LCA) of materials and products has advanced in recent years alongside improvements in life-cycle methodologies.

12.2.4 The aim is to understand which parts of the life cycle have the greatest impacts, and where and how interventions can be focused to improve the environmental performance of products and services.

12.2.5 A programme of work within CEN (Comité Européen de Normalisation) under Mandate 350 will provide a standardised voluntary methodology for the assessment of the integrated performance of buildings. The scope of the work is to develop a voluntary standardised methodology for the assessment of the sustainability aspects of new and existing construction works and for standards for the environmental product declaration of construction products⁹⁹. The resulting standards will provide the means for the quantification of the impacts of the construction industry and for understanding the results of its decisions.

12.2.6 Responsible sourcing is an area of growing importance to the construction sector. The supply chains delivering these products and the stewardship that they show to their "service performance" (energy in use, thermal properties and ease of maintenance) and "end of life" (how the material is recycled, recovered or disposed of) is a matter of utmost importance when considering sustainability objectives.

Actions & Deliverables

12.2.7 Below we have set out the actions that the construction industry might consider taking. Following these are questions on which we would welcome your views and your thoughts on what more industry could and should do.

Key Actions to which the Government is already committed:

⁹⁷ An environmental product declaration, EPD, is defined as "quantified environmental data for a product with pre-set categories of parameters based on the ISO 14040 series of standards, but not excluding additional environmental information" Type III EPDs are environmental product declarations containing quantified product information, with an obligated 3rd party validation.

⁹⁸ See example of responsible sourcing and stewardship under Category 3 Materials, Code for Sustainable Homes at http://www.planningportal.gov.uk/uploads/code_for_sustainable_homes_techguide.pdf

⁹⁹ An environmental product declaration, EPD, is defined as "quantified environmental data for a product with pre-set categories of parameters based on the ISO 14040 series of standards, but not excluding additional environmental information" Type III EPDs are environmental product declarations containing quantified product information, with an obligated 3rd party validation.

12.2.8 Take forward actions from Defra's and DTI's¹⁰⁰ response to the two year progress report on the Strategy for non-food crops and uses, issued in May 2007.¹⁰¹

12.2.9 The Forestry Commission has initiated and continues to support the UK Woodland Assurance Standard, a mechanism providing assurance to users and buyers of wood that the product is derived from a sustainably managed source.

What more could Government do?

12.2.10 Already identified in the Code for Sustainable Homes was the suggestion that a probable future development regarding the environmental impact of materials is to reward resource efficiency, as well as the use of resources that are more sustainable, by developing Ecopoints¹⁰² per square metre as a measure for this item. However it may be that the Green Guide to Specification¹⁰³ will remain as a simple route for assessing the environmental impact of materials for smaller developments.

What more should businesses do?

12.2.11 Development of a suite of LCA tools to encompass design through to deconstruction.

12.2.12 Encourage material producers and users to adopt best practice for example through Environmental Management Systems, performance monitoring, product labelling and encouraging suppliers to adopt the same standards through supply chain management. For instance the Electrical Contractors' and the Heating and Ventilation Contractors' Associations have worked with CHAS (a national contractor safety pre-qualification scheme) to draft a set of 'core criteria' for assessing the environmental management capability of contractors of all sizes. The 'core criteria' cover climate change and a range of environment management issues in addition to waste management.

12.2.13 Set up independently verified product stewardship certification schemes for the product sector. The Building Research Establishment will start a development process for a Responsible Sourcing of Materials scheme during 2007.

12.2.14 Commission a project to look at the scope for setting a target for the use of renewable materials in construction in the UK.

Consultation Questions

12.2.15 Do you agree that the targets and milestones proposed for Materials will deliver improved resource efficiency with reduced environmental and societal impacts, and are sufficiently ambitious? If not, then please propose alternative targets.

12.2.16 What can you do to implement a whole life approach to sustainability in your business?

¹⁰⁰ Department of Trade and Industry. Now Department for Business, Enterprise and Regulatory Reform, BERR.

¹⁰¹ <http://defraweb/farm/crops/industrial/non-food/index.htm>

¹⁰² <http://www.bre.co.uk/filelibrary/cap/076.pdf>

¹⁰³ <http://www.bre.co.uk/greenguide/page.jsp?sid=435>

13 Delivery of the Strategy

13.1 A key part of the Strategy will be the development of an Implementation Plan setting out the specific actions to which a wide variety of organisations will commit. Many actions already appear in this document together with timetables and named organisations responsible for delivery. We list below key groups of organisations which will play a central role in developing implementation plans.

Key delivery organisations:

- Central Government Departments
- Regulators
- Local Authorities
- Regional Development Agencies (RDAs)
- Learning and Skills Councils; Sector Skills Councils
- Strategic Forum for Construction, including work being undertaken by organisations such as the Specialist Engineering Contractors' (SEC) Group
- Construction Umbrella Bodies
- Civil Engineering Organisations
- Individual companies large and small

The Regions

13.2 Many of the actions set out in this delivery plan will be delivered locally, but will have an influence through best practice at a regional and national level. While it is right that national bodies have taken a key role in developing this consultation draft and promoting its implementation (e.g. through construction umbrella bodies), Regional Development Agencies, Local Authorities and others, have a central role to play. Government expects relevant aspects of the Strategy to be embedded within Regional Economic Strategies, Regional Spatial Strategies, and Regional Housing Strategies, and to be embedded in procurement practice by the public sector.

13.3 Government is looking specifically to the RDAs to provide strategic leadership at the regional level through their own actions and investments as well as through their business support role to the construction industry.

13.4 Local Authorities and RDAs have distinct but complementary roles and an interest in collaborative working. The RDAs sit on design review panels in the interest of influencing qualitative aspects of development proposals and achieving the highest possible standards of design in the built environment. Collaborative working also takes place in terms of physical regeneration of places in the regions and it is here they also work with English Partnerships and the Housing Corporation among others. Delivery of this Strategy should provide the opportunities for further collaboration around common objectives.

13.5 Government, through CLG, will also encourage the embedding of sustainable construction targets within the strategies of the Regional Centres of Excellence.

13.6 An explanation of the specific roles of the RDAs/Local Authorities/Regional Assemblies in the delivery of the Strategy is set out below.

Regional Development Agencies

13.7 RDAs' statutory duties include duties to:

- further economic development and regeneration;
- promote business efficiency, investment and competitiveness;
- promote employment;
- enhance development and application of skills relevant to employment; and to
- contribute to sustainable development.

13.8 These duties sit well within the broader overall vision for the Sustainable Construction Strategy. In terms of the overall targets within the Strategy, the RDAs will seek to embed these within their Regional Economic Strategies, which have sustainable development at their 'core'.

13.9 In terms of construction, these strategies also drive decisions about the physical infrastructure and regeneration activities necessary for the regions to flourish economically, and include programmes for minimising any subsequent environmental impact. Regional Economic Strategies have strong connections with other regional strategies such as Regional Transport Strategies, Regional Housing Strategies and the regions' Spatial Strategies.

13.10 The RDAs and their regional partners have a key role to play driving implementation of the Sustainable Construction Strategy at the regional, sub-regional and local level, building on the work that is already underway. What follows is a number of actions to which the RDAs are already committed and intend to undertake, either to ensure existing commitments are met or to fill gaps.

What the Regional Development Agencies are already committed to:

- A number of construction Centres of Excellence have been established in the regions to raise awareness among the industry and Constructing Excellence¹⁰⁴ has provided the expertise in setting these up. These Centres of Excellence provide a direct link between public agencies and industry to facilitate a step-change improvement in the performance of their regions' construction/built environment sector in terms of productivity and quality. This is done through engagement with construction employers and all organisations involved with the development of the built environment to work towards the national objectives of Constructing Excellence.
- Regional Design Review Panels have also been established across the regions to help drive forward the quality of design in the built environment and actively support the demonstration and showcasing of exemplar buildings, whether through direct development of pilot demonstration projects or in partnerships through conditions set down in funding agreements.

¹⁰⁴ <http://www.constructingexcellence.org.uk/>

- The RDAs have agreed to use a set of Common Minimum Standards¹⁰⁵ relating to physical development linked to sustainability and best practice for all projects in which they invest.
- Underpinning this is a broad range of guidance, conditions and advice which Local Authorities, RDAs, English Partnerships and the Housing Corporation are required to take into account in developing their policies and in making procurement decisions.

What more will the RDAs do:

- Provide leadership through innovation; business support to industry; and work with training providers to develop skills of individuals.
- As clients, RDAs (and regional partners) are responsible for the physical development of the region. As such, RDAs can frame tender documents to include targets on sustainable development.
- Ensure that all construction activity in which RDAs are directly involved, should exceed the minimum sustainability standards.
- As a statutory consultee, RDAs can influence the outcome of planning application proposals to build higher quality and more sustainable buildings.
- Develop the necessary partnerships locally to deliver the Strategy in the regions to meet local needs – for example, to link these to procurement partnerships as set out in “Procuring the Future”¹⁰⁶.

Regional Assemblies and Local Authorities

13.11 In terms of the delivery of the Strategy, Local Authorities and Regional Assemblies, like the RDAs, will have a key role to play in delivery. Both bodies have important planning functions. Local Authorities also have an important role for enforcement of both planning and development standards.

13.12 Regional Assemblies are involved in both the preparation of Regional Economic Strategies led by the RDAs and in the preparation of Regional Spatial Strategies.

13.13 The targets contained in the Sustainable Construction Strategy will need to be embedded within the Regional Economic and Spatial Strategies and local public sector procurement guidance and practice.

13.14 The Sustainable Construction Strategy can be used to complement the work local authorities are already doing in driving forward sustainable development.

¹⁰⁵ http://www.ogc.gov.uk/construction_procurement_common_minimum_standards_for_the_built_environment.asp

¹⁰⁶ http://www.ogc.gov.uk/documents/1B_Tom_Iloyd_smith_Procuring_the_Future.pdf

14 Monitoring of Achievements

Targets and milestones

Overall Target

14.1 To carry out a biennial review of progress and re-set the milestones and actions accordingly.

Key Milestones

14.2 To prepare a summary report in 2009 and 2011 of progress against the Strategy.

14.3 To share progress and best practice in a biennial conference in 2009 and 2011.

14.4 To audit the Government's achievements in 2010.

14.5 To audit industry performance involving the Strategic Forum for Construction / Sustainable Construction Task Group in 2010.

14.6 Approach: This Strategy profiles a blueprint for action by Government and industry to improve the sustainable construction performance of the UK against given targets and actions, recognising that changes are needed from time to time.

14.7 The Strategy will need to respond to changing operational issues, achievements and new circumstances. The Plan, do, Check, Act cycles provide a useful approach.

14.8 Plan: The consultation process will result in an integrated Government and industry Strategy for Sustainable Construction.

14.9 Doing it!: Over time, actions will be implemented and progress towards the targets achieved. In addition, some milestones may change and new information may drive changes in the Strategy itself.

14.10 Check: It is proposed to develop a regular monitor of progress. Every 2 years a progress report will be published by BERR in partnership with industry – involving the Strategic Forum for Construction.

14.11 Action: The reports will identify: achieved targets, exceeded targets and targets not achieved together with new opportunities and issues that require new milestones, targets and actions.

14.12 Progress against the targets set out in Rethinking Construction is already tracked against an annually published set of Key Performance Indicators (KPIs).

14.13 The publication of the first set of UK Construction Industry KPIs in 1999 was followed by the Respect for People Key Performance Indicators (KPIs) in 2002 and the Environment KPIs in 2003. In addition, there has been a gradual development as the major sectors of the construction industry published KPIs specific to their area of activity.

14.14 Each year, on behalf of BERR, the KPI consortium carries out data collection surveys of clients and suppliers across the UK. Existing KPIs relevant specifically to this

Sustainable Construction Strategy, could be identified as part of the mechanism of reporting on the progress of our achievements.

Annex 1: Consultation Questions and Response Form

Invitation

You are invited to comment on the Government's proposals for the Strategy for Sustainable Construction, as contained in this document.

Your views are particularly sought on the actions proposed to achieve the milestone targets in each Section of the document future. It should be noted that, although all these proposals are being consulted on as part of a package of measures, they are not mutually exclusive, i.e. one or more of them could be amended in the light of the consultation exercise.

How to respond

Comments are invited on any aspect of the consultation documents. However, to assist our analysis of responses we would appreciate it if you could complete the response form below either electronically or in hard copy. Please feel free to submit additional comments, evidence and/or supporting documentation.

Responses can be returned by post or by e-mail. The deadline for receiving responses to this consultation is 30 November 2007. All responses received before the deadline will be considered.

Additional copies of this consultation document and the response form may be downloaded from the BERR website, www.berr.gov.uk, or obtained as hard copies from:

David Hughes
Department for Business, Enterprise and Regulatory Reform
Construction Sector Unit,
1 Victoria Street
London. SW1H 0ET

Please return your response to this consultation as soon as possible and in any event no later than 30 November 2007. Please reply direct to the BERR contact:

David Hughes
Department for Business, Enterprise and Regulatory Reform
Construction Sector Unit,
1 Victoria Street
London SW1H 0ET
Tel. 020 7215 0993
Fax. 020 7215 6151
e-mail to: david.hughes@berr.gsi.gov.uk

Response form for the consultation on the Strategy for Sustainable Construction

1.1.1.1.1.1 Respondent Details	
Name:	Please return your responses by 30 November 2007, by post or e-mail to: David Hughes Department for Business, Enterprise and Regulatory Reform, Construction Sector Unit, 1 Victoria Street London SW1H 0ET Tel. 020 7215 0993 Fax. 020 7215 6151 e-mail to: david.hughes@berr.gsi.gov.uk
Organisation:	
Address:	
Town/City:	
County/Postcode:	
Fax:	
Email:	

Organisation type **(tick one box only)**

- | | |
|--|--|
| <input type="checkbox"/> Approved Inspector
<input type="checkbox"/> Architects
<input type="checkbox"/> Civil/Structural Engineer
<input type="checkbox"/> Commercial Developers
<input type="checkbox"/> Consultancy
<input type="checkbox"/> House or property developer
<input type="checkbox"/> Housing Association
(Registered Social Landlords)
<input type="checkbox"/> Other non-governmental
organisation
<input type="checkbox"/> Builder/other contractor
(please specify)
<input type="checkbox"/> Local authority – Building Control
<input type="checkbox"/> Local authority –
Environmental health
<input type="checkbox"/> Local authority – other
(please specify) | <input type="checkbox"/> Manufacturer
<input type="checkbox"/> Trade body or association
<input type="checkbox"/> Private individual (unaffiliated)
<input type="checkbox"/> Professional body or institution
<input type="checkbox"/> Property funder
<input type="checkbox"/> Research/academic organization
<input type="checkbox"/> Specific interest or lobby group
<input type="checkbox"/> Individual in practice, trade or
profession
<input type="checkbox"/> Journalist/media
<input type="checkbox"/> Insurer
<input type="checkbox"/> Other (please specify): |
|--|--|

Please use an X in answering the following questions

Is your response confidential? Yes No

If "yes" please explain why.

Consultation Questions

General

Q1 Do you think that the broad coverage of the key themes and sub themes in this draft Strategy is correct? If not, then what themes or sub themes should additionally be covered?

Q2 In large part this Strategy focuses on the delivery of environmental targets. Is that the right focus?

Q3 What other measures should Government be doing to support the construction industry to become more sustainable – this could cover any aspect of the industry and/or any aspect of its supply chains?

Q4 Does industry have views on the use of building and planning standards across the country to promote the sustainability of developments?

Q5 What more could the construction industry do collectively to contribute to aspects of sustainability – what targets and actions could it sign up to?

Q6 If you represent part of the construction industry, what actions could your organisation sign-up to, to improve particular aspects of sustainability?

Q7 How do you think progress should be measured against the targets? Who should be responsible for measuring, evaluating and reporting on the actions of both Government and industry in moving towards the targets?

Q8 What in your view are the major costs and benefits of this Strategy for industry, clients, Government and the public at large?

Q9 Do you think that there will be compliance issues for small business and one-off clients that disadvantage these groupings relative to larger businesses and clients? If so, what are they?

Q10 Sustainability is a world-wide challenge, not simply a UK preoccupation. How can we best ensure that UK business takes full account of the trade opportunities this offers?

Q11 How can the Strategy be refreshed in future?

Procurement

Q12 What specific actions could the construction industry take to lead by example and procure construction projects more sustainably?

Design

- Q13 Is target 5.2 stretching, achievable and realistic? If not then please propose an alternative. Which organisation or organisations should be responsible for this target?
- Q14 Which of the proposed actions for business do you consider to be a priority? Why? What are the barriers to implementing this action and how might they be overcome? Who should take the lead in implementing this action?

The People Agenda

- Q15 If you agree that the proposed key actions and deliverables covered in the People Agenda reflect the main priority areas to deliver sustainability for the industry, what specific work streams and targets would help deliver these commitments?
- Q16 Do you agree that these workstreams and targets should be peer-reviewed by industry experts (e.g. relevant Sector Skills Councils), prioritised, and Action Plans developed to take the best ideas forward?

Better Regulation

- Q17 We would be grateful for information from you on specific pieces of legislation which are impeding your ability to be more sustainable in your business operations.

Climate Change

Q18 Are there other actions that the Government should be taking to help the construction industry rise to the challenge of climate change?

Q19 What targets could industry specifically sign up to, to increase the positive impact they can have on climate change through their activities?

Water

Q20 Do the targets and milestones in this chapter appear realistic, achievable and sufficiently ambitious over the time frames envisaged? If not, then please suggest alternatives, and who should be responsible for their implementation.

Q21 Are there any issues which have not been covered which you feel should be addressed? If so, what are they and what targets and milestones would you propose?

Biodiversity

Q22 The aim of the proposal in paragraph 11.8 would be to create an integrated approach to maintain and where possible enhance biodiversity as a result of construction sector activity. Please say what you think would be helpful to companies in the construction sector to support the aims of maintaining and enhancing biodiversity.

Waste

- Q23 Is it feasible to halve construction, demolition and excavation waste to landfill by 2012¹⁰⁷ from a baseline of 2005? Is the baseline date appropriate, and what specifically has to be done, and by whom, to achieve this target?
- Q24 Do the targets, milestones and proposals for waste appear realistic, achievable and sufficiently ambitious over the time frames envisaged? If not, then please suggest alternatives and who should be responsible for their implementation.
- Q25 We propose new measures in paragraphs 12.1.18 and 12.1.19 to stimulate action to improve resource efficiency, reduce waste and increase diversion from landfill (through more re-use, recycling and recovery). Are these measures achievable and sufficiently ambitious? What needs to be done and by whom to achieve these aims?
- Q26 New measures to stimulate action from companies to improve resource efficiency are proposed in paragraphs 12.1.20 – 12.1.24. Please prioritise these proposals and identify quick win opportunities with high impact.

Materials

- Q27 Do you agree that the targets and milestones proposed for Materials will deliver improved resource efficiency with reduced environmental and societal impacts, and are sufficiently ambitious? If not, then please propose alternative targets.
- Q28 What can you do to implement a whole life approach to sustainability in your business?

It is appreciated that not all consultees will wish to express an opinion on every question. Where no response is given it will be presumed that consultees do not wish

¹⁰⁷ For more details on this proposed target see Annex C3 to Waste Strategy for England 2007 (Box C3.2 on page 15) at <http://www.defra.gov.uk/environment/waste/strategy/strategy07/pdf/waste07-annex-c3.pdf>

to contribute to the consultation on that specific matter. Where consultees strongly support particular aspects of the guidance please use the comments sections of this form to note that support.

Please note that provision is made throughout this questionnaire for you to provide additional comments. If, however you wish to provide detailed comments on any aspect of the consultation then please append additional materials and supplementary documents, clearly marked and cross referenced to the relevant questions, as necessary.

Thank you for your time.

Please note:

All information in responses, including personal information, may be subject to publication or disclosure under freedom of information legislation. ***If a correspondent requests confidentiality, this cannot be guaranteed and will only be possible if considered appropriate under the legislation.*** Any such request should explain why confidentiality is necessary. Any automatic confidentiality disclaimer generated by your IT system will not be considered as such a request unless you specifically include a request, with an explanation, in the main text of your response.

Confidential responses will nevertheless be included in any statistical summary of numbers of comments and views expressed, although individuals will not be identified.

Names and addresses may be held in an electronic database of interested parties for the purpose of distributing future consultation documents on similar issues. However, any such details will not be given to any third party.

A summary of responses to this consultation will be published at www.berr.gov.uk

Paper copies will be available on request from:

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Annex 2:

Partial Regulatory Impact Assessment

Introduction

A2.1 A number of consultation workshops including representatives of various sub-sectors of the construction industry were conducted by the Department of Trade and Industry's¹⁰⁸ Construction Sector Unit during January-February 2007 in order to inform development of the consultation document.

A2.2 Many measures included in this draft have already been initiated. The purpose for their inclusion is to add clarity, increase awareness and garner industry support for sustainability in the construction sector. For these, a Regulatory Impact Assessment (RIA) will have already been completed or is being undertaken. The following explains this approach in the particular areas of procurement, water, waste and people issues.

Small Firms Impact Test

A2.3 There may be some impact on small firms, potentially in the fields of procurement and people, largely in terms of possession/access to the necessary skills and associated resources. The question of impact on small firms will be revisited should the consultation process reveal further relevant issues.

Procurement

Aim

A2.4 Clients will have the capability to procure construction based on whole life value and the confidence to allow the construction industry to be innovative in its delivery of sustainable development.

Objective

A2.5 An aim of the Strategy is to exhort those organisations which operate in the construction supply chain to recognise the importance and relevance of the sustainability agenda and then to encourage them to improve their performance in key areas.

Rationale for inclusion

A2.6 Rethinking Construction¹⁰⁹, Sir John Egan's 1998 report into the construction industry in Great Britain found that the highly fragmented structure of the industry (more detail below under "Competition Assessment") combined with a lack of client leadership militated against effective and cohesive working; particularly with regard to supply chains and therefore effective procurement. Although some improvement has

¹⁰⁸ Department of Trade and Industry. Now Department for Business, Enterprise and Regulatory Reform, BERR.

¹⁰⁹ http://www.constructingexcellence.org.uk/pdf/rethinking%20construction/rethinking_construction_report.pdf

been achieved in terms of overall procurement efficacy there is still considerable potential for further progress. The public sector is a large customer for construction (circa 27% of annual construction spending is by the public sector. If PFI projects are included, the figure rises to around 40%) which provides a major opportunity to realise a step change in supply chain behaviour.

Consultation

A2.7 Government Departments consulted in the course of the development of the Strategy which have been instrumental in its development include BERR, CLG, Defra, OGC, HSE and the Cabinet Office.

Options

A2.8 We are proposing that existing measures should be more effectively implemented.

Sectors and Groups affected

A2.9 The major groups affected by the Strategy are construction clients and industrial supply chains. Initially, recommendations contained in the Strategy are likely to bear disproportionately on small and occasional clients who lack sophistication and expertise in the field of procurement. For example, the results of BERR's on-going KPI survey reveal that from 3,100 separate reporting clients who commissioned work in excess of £2.5 million, 2,500 (80%) reported just once. If lower value contracts were included it is likely that the proportion of "one time" clients would be higher, therefore it is not un-reasonable to assume that the majority of construction clients rarely procure construction work.

Benefits

A2.10 The benefits will be more sustainable buildings which will result in lower emissions, less water and energy consumption.

A2.11 In addition, the Strategy will seek to benefit businesses by pulling together advice and guidance currently available from a wide range of sources rather than introduce new guidance for standards for procurement. The most recent important Government measures include the Sustainable Procurement Action Plan¹¹⁰ and Transforming Government Procurement¹¹¹.

A2.12 Further benefits are anticipated from increased clarity and focus on best practice that the Strategy will seek to achieve. Overall, in conjunction with wider Government initiatives the measures for procurement will seek to use Government procurement to deliver more sustainable solutions.

¹¹⁰ <http://www.sustainabledevelopment.gov.uk/publications/pdf/SustainableProcurementActionPlan.pdf>

¹¹¹ http://www.hm-treasury.gov.uk/media/4EA/89/government_procurement_pu147.pdf

Costs

A2.13 The Strategy does not seek to impose incremental costs on the sector. Moreover, it will aim to highlight and reinforce existing measures; therefore no additional costs should arise.

Competition Assessment

A2.14 The construction industry in Great Britain is made up of numerous small firms – in 2005 there were a total of 182,644 private contractors on the BERR's register, of which more than 90% had 13 or less employees (Source: Department of Trade and Industry's Construction Statistics Annual Report 2006). Industry structure is therefore diffuse and disparate, with no one firm holding more than a 10% market share. The majority of small firms tend to restrict operations to a localised area; hence competition likewise tends to be locally or regionally rather than nationally based; with only the larger contractors conducting operations on a national scale.

A2.15 The measures will not discourage firms from entering the market or introduce any on-going costs. Barriers to entry to construction are traditionally low, rendering entry to and exit from the market straightforward, a situation which these measures will not change. Likewise, market structure will not change: as stated above, the industry primarily comprises micro firms which will continue to be the case.

A2.16 The sector does not have a reputation for rapid innovation; however the measures in the Strategy, whilst not revolutionary will seek to encourage an improved approach to procurement. It is considered therefore that there will be no adverse impact on competition as the Strategy will seek to improve procurement practices in terms of sustainability throughout the industry, and will enable the sector overall to compete more effectively.

Enforcement, Sanctions and Monitoring

A2.17 There are a range of proposals in other documents which describe various sanctions and forms of enforcement in detail. Reference documents include the Sustainable Procurement Action Plan, Transforming Government Procurement and Common Minimum Standards for the Built Environment¹¹².

A2.18 Existing measures contained in these documents are considered adequate to ensure industry compliance.

Climate Change

A2.19 Since the elements in this section are either the subject of Government initiatives which are being developed separately or are industry led measures, an initial RIA has not been undertaken.

Water

A2.20 The Strategy provides the opportunity to build on existing measures for water efficiency and for the entire construction sector to take a lead (on sustainable construction), building on benchmarks and existing good practice. Consequently, the aim is to enhance and reaffirm support for relevant current initiatives being promoted by Defra.

¹¹² http://www.ogc.gov.uk/construction_procurement_common_minimum_standards_for_the_built_environment.asp

A2.21 Defra and CLG are the Departments which have overall responsibility for water and building regulations respectively; hence the measures contained in this section have been drawn up in close consultation with the relevant representatives of these Departments. Furthermore, in January 2007 Defra initiated a consultation on Water Metering in Areas of Serious Water Stress. The measures proposed in this consultation would give water companies greater powers to install water meters. A partial RIA was provided with the consultation document.

Waste

A2.22 Measures included in the consultation document have chiefly been drawn from the following sources:

- Waste Strategy for England 2007 (led by Defra);
- Consultation on Site Waste Management Plans for the Construction Industry (April 2007, Defra);
- Sustainable Development Strategy (ODA);
- Waste and Resources Action Programme (WRAP); and
- The Building Research Establishment (BRE).

A2.23 In common with other parts of the Strategy, the measures in this section are largely existing Government or industry initiatives which the Strategy will seek to support and reinforce. Other measures, such as (2) above are relatively new, long term aims which have been developed by WRAP in conjunction with other interested parties, including Defra. This proposal is still under development. It is hoped that this consultation exercise will contribute to the debate on this issue and hence further support its development.

A2.24 Other measures have been drawn from existing initiatives. These have been the subject of partial RIAs; therefore the formal RIA process has not been repeated here.

People

A2.25 The Strategy will aim to raise awareness of sustainable working practices. The main concern is that existing, and in some cases relatively new (although not yet fully embedded) programmes and initiatives should work effectively. Where actions are proposed, they are consistent with the Skills Strategy 2005 (see partial Regulatory Impact Assessment (15 February 2005) prepared by DfES (available at <http://www.dfes.gov.uk/publications/skillsgettingon/docs/ria.pdf>).

Annex 3: Listing of the main non-government organisations which have contributed to development of this Consultation Document

- Members of the Sustainable Construction Task Group and the Strategic Forum for Construction
 - Sustainable Development Commission
 - Regional Development Agencies
 - Attendees at the consultation workshops held for this exercise during January and February 2007
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- The Association for Consultancy and Engineering (ACE)
 - The British Electrotechnical & Allied Manufacturers Association (BEAMA)
 - Building Research Establishment
 - Commission for Architecture and the Built Environment (CABE)
 - Carbon Trust
 - The Chartered Institution of Building Services Engineers (CIBSE)
 - Civil Engineering Contractors Association
 - Construction Clients Group
 - Construction Confederation
 - Construction Industry Council
 - Construction Industry Research and Information Association (CIRIA)
 - Construction Products Association
 - Construction Skills
 - Defence Estates
 - Electrical Contractors' Association (ECA)
 - Energy Saving Trust
 - Environment Agency
 - Faber Maunsell
 - The Federation of Environmental Trade Associations (FETA)
 - The Federation of Master Builders (FMB)
 - The Health and Safety Executive (HSE)
 - The Home Builders Federation (HBF)
 - The Institution of Civil Engineers
 - Lafarge SA
 - The National Specialist Contractors Council (NSCC)
 - The Royal Institution of Chartered Surveyors (RICS)
 - Skanska UK plc
 - The Specialist Engineering Contractors' (SEC) Group
 - Waste & Resources Action Programme (WRAP)
 - And members of the National Platform and the Modern Built Environment Knowledge Transfer Network

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