Department for Innovation, Universities & Skills

Investing in our future:

Sustainable Development Action Plan 2008-09

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Ministerial foreword from Baroness Morgan

The principles of sustainable development go straight to the heart of this Department's remit - *investing in our future*.

It is our role to ensure that all of our work - on further and higher education, innovation, science and technology, intellectual property, and supporting evidence-based policy making across government – supports our national prosperity and our national wellbeing both for now and for the future.

And we have a particularly strong role to play in confronting the greatest threat to our collective futures - climate change:

- through our funding for world class science and research we will improve our understanding of the impact of climate change and how best to tackle it

- through the support we provide for the development and deployment of competitive low-carbon and alternative energy technologies we will embrace the strategic challenge and opportunity presented by the necessity of transition to a low carbon economy

- by developing our understanding of the skills required to enable the economy to respond effectively to the challenge of climate change, we will ensure that our workforce has the skills to implement our commitments on lowering carbon emissions and that we are at the forefront of growing environmental industries

- through our work with our delivery partners we will identify and implement ways to reduce our own carbon footprint and that of our delivery partners

- and, starting with the Higher Education sector, we will develop a campaign to inspire and motivate students, along with the wider Higher Education community, to take action now to reduce carbon emissions

The new Climate Change Bill will come into force later this year and will place an obligation on Government to reduce the UK's emissions of carbon dioxide and remain within challenging five-yearly limits set in secondary legislation.

In this context, our role in tackling climate change will become ever more pressing.

I would like to take this opportunity to emphasise – to all DIUS staff, delivery partners and stakeholders – the commitment of this department to taking action now to tackle the serious and urgent challenge that we all face from climate change.

Introduction

Welcome to the DIUS Sustainable Development Action Plan for 2008-09. This plan is for DIUS staff, delivery partners and stakeholders and sets out the Department's overall approach to addressing sustainable development through our work programme, our operations, our procurement processes and our people.

This plan is intended to give an overview of the variety of our activities in support of the sustainable development agenda and to highlight some of the key actions we will take over the coming year to strengthen our contribution, it is not intended to be a comprehensive account of everything DIUS will do to promote sustainable development.

Much of what we do is delivered through the 'DIUS family' – the network of delivery partners for whom we are ultimately responsible and whom we fund (annex 1 provides a list of our key delivery partners). This plan therefore features a number of case studies providing details of some of the many and varied activities undertaken by our delivery partners in support of the sustainable development agenda.

Governance and reporting

The Director of Innovation, Dr David Evans, is the DIUS Board level champion for sustainable development and will have overall responsibility for the implementation of this SDAP.

The Director of Innovation will (from August 2008) be supported by a new full-time sustainable development lead who will promote awareness of sustainable development issues and implementation of best practice across the department.

We recognise that as the Innovation, Universities and Skills agenda develops, so will the role we have to play in promoting sustainable development. In order to ensure diverse input into the development of our sustainable development strategy going forward, a steering group will be established (by September 2008), chaired by Dr Evans and including senior representatives from across the department.

And, to reflect the ongoing development of our sustainable development strategy, our SDAP will be published online only and kept under review to ensure it remains relevant and up-to-date. Updates of the plan will be subject to strict version control processes.

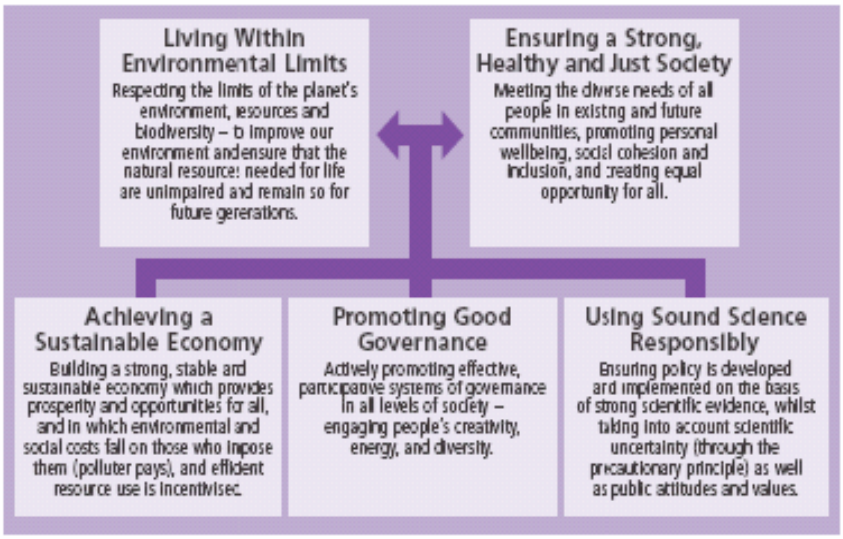
Progress against the plan will be reported to the Board and Ministers on a quarterly basis.

The Government's strategy for sustainable development

The Government's strategy for sustainable development *Securing the Future*[1] was published in 2005 and defined sustainable development as follows:

The goal of sustainable development is to enable all people throughout the world to satisfy their basic needs and enjoy a better quality of life, without compromising the quality of life of future generations…

The report set out five guiding principles for sustainable development:



And identified four areas for priority action:

- sustainable consumption and production
- climate change and energy
- natural resource protection and environmental enhancement
- sustainable communities

What Sustainable Development means for DIUS

There are clear synergies between the remit of DIUS and the guiding principles of the Government's sustainable development strategy set out above.

The achievement of our high level objectives as set out in our Public Service Agreements and Departmental Strategic Objectives[2] - world class skills, science, research and innovation – are critical to the goals of long-term economic prosperity, a healthy and just society and the transition to a low carbon economy.

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[1] www.sustainable-development.gov.uk/publications/uk-strategy/index.htm
[2] See Annex 2

Our contribution to the sustainable development agenda is further strengthened by our commitment to supporting the achievement of Public Service Agreements on which other Departments have the lead – such as PSA 28: *Secure a healthy natural environment for today and the future*; and PSA 21: *Build more cohesive, empowered and active communities*.

And the Government Office for Science, located within DIUS, has responsibility for promoting excellence in the use of science and research in policy making across government, directly supporting the SD principle of using sound science responsibly.

The longer-term success of our work will be dependent on ensuring that we take a truly sustainable approach to addressing all of the challenges we face. The guiding principles of the Government's sustainable development strategy set out above will help us to do that, but we must make sure that these principles are recognised and understood across the department. The Board level champion, the new steering group and the new sustainable development lead will all have a role in making this happen. In addition, we intend to run a programme of activities (see box below) to raise awareness and understanding of sustainable development across the whole department.

Our key objectives for strengthening the DIUS corporate approach on sustainable development over the coming year are summarised on the next page.

Key corporate objectives 2008-09:

- to appoint, by August 2008, a new sustainable development lead for the department who will support the board level Sustainable Development Champion in promoting awareness and understanding of sustainable development and on implementation of best practice across the department

- to ensure diverse input into the development of our sustainable development strategy going forward, a steering group will be established (by September 2008), chaired by Dr Evans and including senior representatives from across the department

- to build on our constructive working relationship with the Sustainable Development Commission to develop and improve our SDAP on an ongoing basis and, by September 2008, to have considered proposals for further strengthening this relationship with expert input from the Commission

- to work closely with colleagues at DEFRA on an ongoing basis to ensure that DIUS is an early adopter of best practice in relation to the consideration of carbon emissions implications within submissions

- to conduct a baseline survey (by end 2008) of the travel profile of our staff in order to identify what steps are needed to support our staff and our visitors to choose sustainable transport options wherever possible, and in the interim to improve the information available to our staff on more sustainable transport options (see section 2 for further information)

- to run a programme of activities (from autumn 2008) to increase understanding of sustainable development issues amongst DIUS staff and raise awareness of how individual actions can make a positive difference (see section 3 for further information)

SECTION 1: OUR WORK PROGRAMME

This section sets out our contribution to promoting sustainable development through the programme of work for which we are responsible.

Many of our delivery partners are already undertaking a great deal of essential work in this area. Over the next year, we will continue to work to forge stronger links between our delivery partners and to identify and exploit the policy synergies that exist between them.

INNOVATION, SCIENCE AND RESEARCH

Public and private sector innovation will play a critical role in helping to create innovative technological and social solutions to promoting sustainable development – and in particular to dealing with the challenges presented by climate change. It can help us to deliver cleaner energy, more efficient homes, buildings and vehicles that produce less carbon. It will be central to helping ensure we meet the demanding targets the Government has set in the Climate Change Bill which is expected to receive Royal Assent this autumn.

The Government's aim is to make the UK the leading place in the world in which to be an innovative business, public service or third sector organisation. We aim to build an Innovation Nation in which innovation thrives at all levels – individuals, communities and regions. It is DIUS's responsibility to make a reality of this aim and we will seek to do so by implementing the proposals set out in our *Innovation Nation* white paper[3].

World class scholarship and research will play an equally vital role in helping us to better understand the science that explains climate change, the technologies that can ameliorate it, and the wider implications for social change and for the protection of our natural resources.

Key areas of activity aimed at ensuring that our understanding of sustainability issues and how to respond to them is supported by world class innovation, science and research include:

> Support for delivery partners

We fund the **Technology Strategy Board** (TSB), which plays a cross-Government role advising on policies which relate to technology, innovation and knowledge transfer and in delivering a national Technology Strategy. Working with the Regional Development Agencies and the Research councils, it will jointly invest over £1 billion to support innovation over the next three years. The case study on the next page provides more detail on how the TSB will contribute to our efforts to tackle climate change.

[3] www.dius.gov.uk/publications/innovation-nation.html

Delivery Partner Case Study:

THE TECHNOLOGY STRATEGY BOARD

A major focus of the Technology Strategy Board's activities are its Innovation Platforms. These create the opportunity to bring together key partners (Government and business) to address a major societal challenge and to open up market opportunities to increase business investment in R&D and innovation.

To date, it has launched five Innovation Platforms including:

'**Low Impact Buildings'** (in partnership with CLG and DEFRA). This will assist business to harness the growing market for environmentally sustainable buildings. It is anticipated that the Innovation Platform will extend activities to non-domestic buildings in line with emerging government procurement and regulation opportunities. A consultation exercise identified five priority areas:

- Design for future climate change
- Design and decision tools
- Management and operation of buildings
- Better materials and components
- Low carbon energy sources

Launched on the 8th of May 2008, it will work with a range of partners to address the problem of delivering design principles to actual outcomes as many developments fail at the build stage; assist in scaling up activity such as developments targeting zero carbon; take advantage of innovative developments targeting zero carbon to help bring new solutions to market; and work with new developments to help capture the critical 'in-use' data that will inform how the new solutions perform.

The Low Carbon Vehicles Innovation Platform (in partnership with DfT) seeks to position the UK's automotive sector to benefit from growing public and private sector demand for lower carbon vehicles. It has a particular focus on technologies that deliver meaningful carbon reduction benefits in domestic and international vehicle markets, that are also appropriate to expanding the range of low carbon road vehicles available to fleet purchasers within a relatively short time frame.

The next step is the launch of a Low Carbon Vehicles Integrated Delivery Programme in autumn 2008, stimulated by a further £70 million investment from government. This programme will co-ordinate low carbon vehicle activity from initial research through to future procurement opportunities, speeding up the time it takes to get low carbon vehicle technologies into the market place.

DIUS also funds the **Energy Technology Institute** – a Limited Liability Partnership involving BERR, TSB and EPSRC and six private sector partners – BP, Caterpillar, EDF Energy, EON.UK, Rolls-Royce and Shell. The Institute's remit is to invest in research and development to accelerate the development of secure, reliable and cost- effective low-carbon energy technologies towards commercial deployment. It will play a major role in technology developments internationally in support of the UK's climate change goals.

> Support for business

We will provide support for business of all sizes through our joint work with HMRC on Research and Development Tax Credits, which provide tax relief to incentivise companies to undertake more technologically-challenging projects - including work on eco-innovation. We will work with HM Treasury and HMRC to promote awareness and take-up of the scheme.

> International collaboration

We are working with EU partners to ensure that the EU's Information and Communications Technology (ICT) work programme for 2009-10, which has a budget of around £1.5bn has sustainable development as a key priority. This programme will help promote the application of advanced ICT in the energy generating industries, as well as boosting energy-efficiency in lighting technologies and electronic devices.

> Promoting excellent use of science and research in policy making across Government

The Government Office for Science (GO Science), located within DIUS, is responsible for promoting excellent use of science and research in policy making across Government, and this is one of our core aims as a department.

Activities include working to develop and assess capability of departments in their use of scientific evidence in support of policy-making, supported by network of Chief Scientific Advisors and through maintaining the *Guidelines on Scientific Analysis in Policy Making*.

GO Science also contributes more directly to assuring the quality of advice in specific project or policy areas. For example, in June 2008 John Beddington, the Government's Chief Scientific Advisor, led a panel of departmental Chief Scientific Advisors plus the Chief Economist to conduct a peer review of the key Gallagher Review of the Indirect Effects of Biofuels Production, commissioned in light of growing sustainability concerns. The peer review helped strengthen the robustness of the published report in terms of the scientific and economic aspects.

The Government's Foresight Programme has, since 2002, carried out a series of in-depth projects which use cutting-edge science combined with futures analysis to address long term cross-cutting opportunities and challenges. Key projects contributing to the sustainable development evidence base include the completed project on *Flood and Coastal Defence*, the on-going project on *Sustainable Energy Management and the Built Environment* and the planned project on *Farming and Food Production.*

> Funding for Research Councils programmes addressing sustainability

The DIUS Science Budget, amounting to £3.68 billion in 2008-9, is administered by the Research Base Directorate within DIUS and provides funds for the Research Councils. High priority is given to addressing sustainability issues, including developing a better understanding of the environment and the impact that we have upon it, and helping to develop technologies and practices essential to tackling the issues of sustainable development.

The Research Councils' 'Living with Environmental Change' (LWEC) initiative is a major new £1 billion 10 year interdisciplinary research and policy partnership programme led by the Natural Environment Research Council.

The research will, among other things, help to improve the prediction of climate and other environmental change and thus to improve our ability to adapt appropriately. The programme stresses the need to take a whole-system approach to mitigation and adaptation, and aims to enable evidence-based decisions consistent with the five shared principles of sustainable development outlined by the UK Government.

We will also continue to support the Research Councils' ongoing Energy Programme led by the Engineering and Physical Sciences Research Council which brings together energy-related research and training across the Councils to address climate change and security of energy supply.

As well as contributions to cross Council programmes, Research Councils individually support a range of research which will help to impact on issues of sustainable development – the case studies box on the next page provides details of some of this research.

Delivery Partner Case Study:

RESEARCH COUNCILS

As well as contributions to cross Council programmes, Research Councils individually support a range of research which will help to impact on issues of sustainable development:

- The Natural Environment Research Council (NERC), with £392m allocation from the Science Budget for 2008-9, strategy identifies seven themes: Climate system; Biodiversity; Sustainable use of natural resources; Natural hazards; Environment, pollution and human health; Earth system science; and Technologies. NERC alone invests over 28% pa of its Science budget in Climate Change research. Most of the research funded by NERC contributes to improving understanding of the environment; and a number of research programmes are particularly focused on identifying approaches to sustainable development, for example "Ecosystems Services for Poverty Alleviation" (ESPA) programme and its new Sustainable Marine Bioresources programme.

- Investments by the Engineering & Physical Sciences Research Council (EPSRC) include "Infrastructure and Environment" (supporting research focusing on the goal of a sustainable future society and including the "Sustainable Urban Environment Programme") and elements of support for "Engineering" and "Innovative Manufacturing".

- Investments by the Biotechnology and Biological Sciences Research Council (BBSRC) include joint funding with DFID, of a £7.5M initiative "Sustainable Agriculture Research for International Development" to support high-quality research in crop science and related areas of relevance to countries of Sub-Saharan Africa and South Asia.

- Investments by the Medical Research Council (MRC) include Health Service and Public Health; Infections & Immunity; and Molecular & Cellular Medicine. The MRC's portfolio of research relevant to "Environment and Health" currently exceeds £10m pa.

- Ageing research is a longstanding priority for the UK Research Councils - the Medical Research Council (MRC) will be leading on the expenditure of over £480M (over the CSR period) into research on ageing designed to improve our understanding of the ageing process and how to keep people healthy as they get older. Under the first phase of the programme, a call for proposals was issued for research centres which would focus on specific research themes drawing on interdisciplinary strengths such as quality of life, physical frailty and the ageing brain.

- The Economic and Social Research Council (ESRC) supports research relevant to the economic, social and environmental dimensions of sustainability.

> Commissioning NMS Science Programmes on climate change

DIUS manages and invests approximately £60m a year in the National Measurement System (NMS) programmes which are responsible for stimulating good measurement practice and enabling business to make accurate and traceable measurements. Good measurement practice results in a better quality of life, through improved trade and consumer protection, a healthier environment and more effective health and safety measures.

The NMS research programmes include themes relating to the protection of the environment, climate change and energy efficiency and supply DIUS is able to commission additional work on these issues through the annual rolling formulation and prioritisation process. Relevant current research includes:

Characterisation and promotion of low carbon energy sources (Photovoltaics, wind, fuel cells) – for example the optimisation of new technologies (efficiency, lifetime performance), and the development and performance testing of wind turbines

Atmospheric and earth surface measurements – for example, the measurement of atmospheric pollutants including greenhouse gases, harmonised data quality for climate change including earth observation

Innovation, Science and Research objectives 2008-09

- to support the full establishment and operation of the Energy Technology Institute, engaging with other public sector partners including BERR, TSB and EPSRC, and with DfT to incorporate additional public sector funding streams. The Institute should be fully operational in 2008. ETI expects to announce first project awards (in offshore wind and marine energy – end 2008) and at least two additional programmes during 2008-9; and to develop its Technology Strategy (by end 2008-9).

- to work with BERR and DEFRA to develop the strategy for the Environmental Transformation Fund (ETF) by summer 2008. The ETF is a new initiative to bring forward the development of new low carbon energy and energy efficiency technologies in the UK. The fund formally began operation in April 2008, and is jointly administered by DEFRA and BERR.

- to implement the Science and Innovation White Paper proposals on fostering private and public sector innovation which will help us to identify technological and social solutions needed for adaptation to and mitigation of climate change, to promote sustainable consumption and reduction and to help build sustainable communities

- to support the Research Councils to develop and launch the new "Living with Environmental Change" LWEC initiative – an interdisciplinary research and policy partnership programme to increase resilience to – and reduce costs of - environmental change, addressing the associated pressures on natural resources, ecosystem services, economic growth and social progress (summer 2008)

- to continue to support the Research Councils' Energy Programme bringing together energy-related research and training across the Councils to address climate change and security of energy supply

- to continue to support the contribution of the National Measurement System to the sustainability agenda

SKILLS AND EDUCATION

Our future as a prosperous nation depends on our higher and further education and training systems. We rely on those systems to prepare young people fully for life, and to develop in both young people and adults the skills and knowledge that are necessary for the productive and competitive economy that underpins our quality of life and many of our wider national ambitions.

And climate change will present new challenges to all sectors of the economy; workforces in all sectors and industries will need new and/or different sets of skills, capabilities and knowledge to deal effectively with them.

Over the coming year we will work towards:

> promoting cohesive communities

FE colleges are typically leaders in their community. Not just in education but as institutions that can drive economic development and regeneration through their presence, participation and leadership.

We will work to ensure that learners are equipped with the necessary skills and knowledge to help them make a positive contribution to the communities they live in. Through our ESOL Strategy (English for Speakers of Other Languages) we will promote the integration of non-English speaking migrants and their children.

We will also work with further and higher education institutions to support the Government in its objectives of stopping people becoming terrorists or supporting violent extremism. We will help to reduce re-offending through our work to improve skills and employment outcomes for offenders.

> realising potential and narrowing attainment gaps

We are working with employers to help young people and adults get the skills and qualifications that employer's value to enable them to find and progress in work, Through our work to expand and improve the Apprenticeships programme and through our Train to Gain programme, we aim to create an economy in which every person has the opportunity to realise their potential, overcome disadvantage and achieve economic well-being.

And we are working to narrow attainment gaps between people from disadvantaged backgrounds and their peers through our Widening Participation activity.

> identifying and delivering the skills needed for the transition to a sustainable, low carbon economy

As set out in our response to the Commission on Environmental Markets and Economic Performance (CEMEP) Report published earlier this year, *Building a Low Carbon Economy – Unlocking Innovation and Skills,* we aim to be at the forefront of growing environmental industries and to develop a competitive advantage in the market for low carbon technology. Working with Sector Skills Councils (SSCs), the Sustainable Development Commission and the UK Commission for Employment and Skills, we aim to ensure that there is a rapid and collective SSC effort to raise the quality and quantity of the skills needed for the transition to a sustainable, low carbon economy.

Science, Technology, Engineering and Maths (STEM) skills will be particularly important in ensuring our workforce is equipped to respond to the transition to a sustainable, low carbon economy. Through our support for initiatives such as STEMNET (enrichment activities for schools) and the UK Resource Centre for Women in Science, Engineering and Technology, we are working to maintain and increase the supply, quality and diversity of the STEM workforce and the general scientific literacy of the population as a whole.

Delivery Partner Case Study:

UK COMMISSION FOR EMPLOYMENT AND SKILLS

The newly created UK Commission for Employment and Skills will play an important role in ensuring that the employment and skills implications of the transition to a sustainable and low-carbon economy are being effectively identified and addressed.

The Commission will oversee a network of Sector Skills Councils (SSC) – which have the vital role of setting out the future skills needs of employers in their sectors. In particular, those SSCs with key interests in environmental markets and issues will be able to influence the future shape of public education and training provision through their Sector Qualification Strategies and Sector Skills Agreements. These Strategies will ensure such provision is fully aligned with the needs of the future economy, including environmental sustainability.

In support, a network of National Skills Academies (NSA) is now being set up in a number of key sectors. By putting employers in the driving seat and building strong specialist provider networks, they are transforming the supply of skills to their sectors. To address the growing need for skilled workers in the environmental sector, DIUS, LSC, DEFRA and BERR are working proactively with employers, SSCs and expert bodies to identify the skills needed for a sustainable future

> supporting universities and colleges to build sustainable development into the wider curriculum

Universities in particular have a central role in developing our understanding of the science of climate change, its implications for society, and the ways in which we can respond to the challenge. Without scientific progress led by universities, we would not understand the science that explains climate change, technologies that can ameliorate it, and the wide implications for social change.

But teaching about climate change and other sustainable development issues is relevant in academic and vocational disciplines and in professional and social science courses as much as the pure sciences. As the ramifications of climate change become more widespread, we can expect to see it become a feature of courses in an increasing range of subjects, and new programmes arising that cross traditional boundaries between disciplines.

We will support the work of the Higher Education Funding Council for England and the Learning and Skills Council to promote inclusion of sustainable development issues within the wider curriculum.

Skills and Education Objectives 2008-09:

- to work with Sector Skills Councils (SSCs), the Sustainable Development Commission and the UK Commission for Employment and Skills, to ensure that there is a rapid and collective SSC effort to raise the quality and quantity of the skills needed for the transition to a low carbon economy.

- work closely with BERR in refreshing the Government's manufacturing strategy, ensuring that UK manufacturing remains at the forefront of the global shift towards sustainable production, and is able to take advantage of the growing international market for low carbon technology

- agree, following consultation led by HEFCE, a new strategy for sustainable development in the HE sector, covering, amongst other things, how sustainable development issues, including climate change, can best be addressed in the HE curriculum (recognising that the curriculum must be for universities to determine)

SECTION 2: SUSTAINABLE OPERATIONS

DIUS OPERATIONS

The Sustainable Operations in the Government Estate[4] (SOGE) targets provide the formal framework for government action on promoting sustainability in relation to its own operations. The targets are designed to measure sustainability on a building by building basis. They cover climate change and energy, sustainable consumption and production, and natural resource protection.

With the exception of the Teddington Estate (see case study on the next page) DIUS is a minority occupier in all of its buildings, and all estate management is provided to DIUS as a fully managed shared service by the department for Business, Enterprise and Regulatory Reform (BERR) in London and by the Department for Children, Schools and Families (DCSF) on our sites outside of London.

For the reporting year 2007-08, BERR and DCSF will report against the SOGE targets in respect of the buildings we occupy. Going forward, we will work with colleagues in BERR, DCSF and the Sustainable Development Commission with the aim of identifying, by September, whether it is possible to separately measure how the office space occupied by DIUS is performing against the SOGE targets. Our objective will be to baseline our performance and identify areas where further action is needed.

We will also seek to influence BERR and DCSF's approach to the sustainable management of the estates we share with them to ensure they are as sustainable as possible, and we are working with DCSF to ensure that sustainability is a key concern in the design of the new building in Sheffield which will be shared between DCSF and DIUS.

Examples of our current activities to embed sustainable development principles into our practice on estates issues include:

> Efficient use of the buildings we occupy

DIUS has adopted a shared services approach to virtually all of its corporate services: rather than developing its own teams following its creation in June 2007, it is procuring services from other government departments. This applies not just to finance, HR and procurement but to facilities management and handling of parliamentary business, for example. By keeping the size of its corporate centre to a minimum, DIUS will not only be able to focus on delivering its core policy areas and to keep itself efficient, but also avoid the enlarged physical and environmental footprint that would result from growing its own supporting functions.

[4] Further information on the targets can be accessed at: http://www.sustainable-development.gov.uk/government/estates/index.htm

Delivery Partner Case Study:

NATIONAL PHYSICAL LABORATORY - TEDDINGTON ESTATE

DIUS owns the National Physical Laboratory facilities at Teddington including 400 environmentally controlled laboratories required to deliver high precision metrology programmes. The need for tight control of the environments in many of these laboratories results in a high energy consumption. A number of energy saving measures have been implemented or are planned.

NPL are trialling reflective film on glazing and a set-back of environmental control during night time hours where this is possible without jeopardising delivery of the science programmes. Initial indications are that this will deliver significant utility cost savings. We are planning to install a closed loop ground energy system which will support the heating and cooling requirements of the main administrative areas of the new facilities. We are also examining the use of an open loop ground energy system to pre-heat or cool, depending on the season, the air to the air handling units supplying the main laboratory areas.

About 35 000 square metres of land is being returned to parkland (grass and trees), following demolition of old buildings. 90% of the arisings from the demolition is recycled, with a large proportion of that figure being used to provide material for new on-site roads.

As a condition of the recent planning approval, NPL were obliged to complete a green travel plan. This is being facilitated through staff completing the i-Trace Transport for London on-line Staff Travel Survey, and a report will be received that also includes other users of the Teddington estate.

Waste monitoring for NPL (via FM contractors) in November 2007 stated that almost 60% of the waste generated at NPL is recycled. Less than 2kg of waste per week per member of staff is produced.

NPL have a "green bin" policy in place for recycling of all types of paper waste. Additional waste that is recycled includes batteries (all types - wet and dry cells), mobile 'phones, and toner cartridges. Compliance with the WEEE Directive is a given, with all equipment appropriately disposed.

> Efficient use of IT

In support of the cross-Government programme to improve the sustainability of the ICT we use, the aims of DIUS's environmental IT policy are:

- to be aware of the environmental impact of the Department's IT assets and services and to actively work towards reducing that impact through a policy of continuously improving environmental performance
- to raise awareness of the contents of the Environmental IT Policy amongst DIUS staff and to provide education, training and guidance, as necessary, to enable every member of staff to understand what they can do to reduce the environmental impact of the IT assets and services which they use
- to monitor and reassess the Department's Environmental IT performance on a regular basis and to implement mitigating actions to that performance, as necessary, where identified in those assessments;

And we will aim to reduce our consumption (and the resultant environmental effects of the manufacturing process) by, for example:

- having virtually a 1:1 ratio of PCs to members of staff
- aiming to share printers on a ratio of 1 printer to 40 members of staff
- providing all staff with laptops that can be taken to meetings rather than printing meeting papers
- standardising on equipment so it can be re-used within the Dept
- sharing IT infrastructure with other government departments
- using less consumable resources such as paper, electricity, postal services and printer toner
- recycling IT assets and materials wherever possible and minimising the amount of IT-related waste products generated
- encouraging staff to consider the environmental implications of their IT service usage

> Developing our green travel plan

In order to develop our strategy for promoting greener travel, we first need to improve our understanding of our current position. Over the next few months we will analyse the available data on travel bookings and conduct an online survey with our staff in order to baseline our position in relation to the points listed below and to inform the development of our strategy:

- level of staff commuting using zero carbon options

- estimate of level of carbon emissions resulting from the commuting of DIUS staff
- the proportion of business travel conducted by air and the associated carbon emissions
- estimate of the carbon emissions resulting from visits to the DIUS estate
- the level of use of video/teleconferencing facilities

In the meantime, we are pioneering, and encouraging staff to make full use of, innovative collaborative working tools such as our Telepresence room – the first in Whitehall - to support new ways of working which will reduce overall business travel and carbon emissions.

We are also reviewing the travel section of the DIUS intranet to provide staff with better information on green travel options.

> Promoting sustainable development through procurement

The Government's Sustainable Procurement Action Plan (March 2007) identified ways of harnessing public sector purchasing power to make innovative and sustainable solutions more widely available and affordable to others and to help deliver a low carbon economy. Government acknowledges that use of the Forward Commitment Procurement (FCP) model can help develop innovative cost-effective technologies to meet environmental needs. DIUS is leading on promoting the wider use of FCP in the public sector, identifying where better, more cost effective solutions are needed to achieve environmental policy objectives.

DIUS will work with the Office for Government Commerce (OGC) and the Centre of Expertise for Sustainable Procurement (CESP) to help develop new and innovative ways for sustainable working, planning and procurement within the Civil Service. This work will contribute to Departments achieving their targets for reducing carbon emissions and waste across the government estate.

The *Innovation Nation* White Paper (March 2008) committed each Government Department to include an Innovation Procurement Plan (IPP) as part of its commercial strategy. DIUS is producing guidance on the structure/content of IPPs to ensure Departments focus on innovative and sustainable solutions. DIUS is also committed to developing its own IPP to use as an exemplar with other Departments. The DIUS IPP and guidance for other Departments will be published in October, in parallel with the Annual Innovation Report

DIUS operations key objectives 2008-09:

- to work with colleagues in BERR, DCSF and the Sustainable Development Commission with the aim of identifying, by September 2008, whether it is possible to separately measure how the office space occupied by DIUS is performing against the SOGE targets
- to successfully implement the DIUS Environmental IT Policy, including raising awareness of its contents amongst DIUS staff and to provide education, training and guidance, as necessary, to enable every member of staff to understand what they can do to reduce the environmental impact of the IT assets and services which they use
- to analyse the available data on travel bookings and conduct an online survey with our staff so that, by end 2008, we have a clear baseline for our strategy for promoting greener travel
- to publish, in October 2008, the DIUS Innovation Procurement Plan and guidance for other Departments, in parallel with the Annual Innovation Report.

OUR DELIVERY PARTNERS' OPERATIONS

Many of our delivery partners are already making great progress in this area. We intend to work with them to learn from their experience and to challenge and support them to go further.

Our delivery partners in the Further and Higher Education sectors – HEFCE and the LSC - have an especially significant role to play in this area.

> promoting a more sustainable Higher Education sector

We have put in place a new key performance target for the Higher Education Funding Council for England which aligns their role with the ambitions enshrined in the current Climate Change Bill by setting realistic targets for carbon reduction in the HE sector by 2020 and 2050.

We aim to agree with HEFCE, by December 2008, following consultation, a new strategy for sustainable development in the HE sector, including an action plan against which progress can be monitored. This will cover specific actions concerning: engaging with stakeholders to bring about policy synergies on sustainable development; building the capacity of people to manage sustainable development; sharing good practice; and rewarding more sustainable behaviour.

We are supporting HEFCE in launching the new revolving green fund (£30m) in partnership with Salix, to fund on an invest-to-save basis projects to reduce emissions from the HE estate.

The priorities we set for HEFCE in our annual grant letter will continue to reflect the high priority of sustainable development issues.

> promoting a more sustainable Further Education sector

Earlier this year, the Department and the LSC published the capital investment strategy '*Building Colleges for the Future'.* Through the strategy, it was announced that all new college buildings will be zero carbon by 2016. We also announced that they will be required to reach the new 'Excellent' Building Research Establishment standard which includes mandatory requirements on energy.

We aim to agree, following consultation by the LSC, a capital action plan for sustainable development, covering issues of building design and estate management – and outlining how the 2016 zero carbon college target will be achieved.

In consultation with the LSC and FE representative stakeholders, we will also work towards agreement of a realistic target for carbon reduction in the FE sector by 2020 and 2050.

And we will support greater take up of the "Green College Declaration" - as promoted by the Association of Colleges and the Environmental Association of Universities and Colleges - committing colleges to decisive year on year action, starting now, to reduce carbon emissions.

With the support of the LSC, the provider base responsible for the delivery of skills training to our learners is also taking steps to address sustainability through their buildings and estates responsibilities as well as the embedding of sustainability within curriculum design.

In recognition of the planned dissolution of the LSC, we commit to putting sustainable development at the heart of the bodies that will succeed the LSC. In support of this, we will work with the FE Single Voice on how the sector, with appropriate support, could take ownership of the FE carbon reduction target

> Bringing our delivery partners together to share knowledge and best practice

We aim to support our delivery partners to improve the sustainability of their operations and reduce their carbon emissions by building a community of practice.

We will facilitate knowledge and best practice sharing between our delivery partners by organising a workshop event in the autumn for those responsible for sustainable development in our delivery partner organisations. The aim of the workshop will be to establish new connections across our delivery partners and help members of the 'DIUS family' – including DIUS itself - to learn from one another.

Following on from this, we plan to establish a time-limited online forum for further exchanges of knowledge and best practice between our delivery partners.

We are also exploring the possibility of holding an event focussing on climate change for the chief executives of our delivery partner organisations towards the end of 2008.

> Exploring the scope for the extension of SOGE targets to our NDPBS

Working through the network of sustainable development contacts described above, we will explore the scope for encouraging some of our larger non-departmental public bodies (where appropriate) to voluntarily sign up to the Sustainable Operations in the Government Estate (SOGE) targets.

Delivery partners' operations - key objectives 2008-09

- to agree with HEFCE, by December 2008, following consultation, a new strategy for sustainable development in the HE sector, including an action plan against which progress can be monitored

- aim to agree, following consultation by the LSC, a capital action plan for sustainable development, covering issues of building design and estate management – and outlining how the 2016 zero carbon college target will be achieved

- in consultation with the LSC and FE representative stakeholders, to work towards agreement of a realistic target for carbon reduction in the FE sector by 2020 and 2050

- to support our delivery partners to reduce their carbon footprint by building a community of practice and facilitating knowledge and best practice sharing – starting with a workshop in September for sustainable development leads

- during the autumn, we will work with our larger non-departmental public bodies to explore the scope for encouraging them to sign up to the Sustainable Operations in the Government Estate targets

SECTION 3: PEOPLE

We recognise that the role of individuals and groups of people will be central to the success of the aims set out in this plan. And we also recognise the importance of motivating the communities in which we operate to take action now to respond to the challenge of climate change in particular.

Our actions to support our staff and some of the wider communities in which we operate to strengthen their contribution to the sustainable development agenda include:

> Inspiring and motivating learners, students and their wider communities to respond to the challenge of climate change

Learners, students and the Higher and Further Education communities have the potential to play a very significant role in responding to the challenge of climate change.

Starting with the HE sector, we will work with our partner organisations to develop a campaign aimed at inspiring and motivating students, learners, and the wider HE community, reduce the carbon footprint of the HE sector.

Ministers will engage early on in this process with students, HEFCE and other key stakeholders to ensure their expertise is fed into the development of this strategy.

> Strengthening the relationship between science and society

We aim to create a society that is excited by science, values its importance to our social and economic wellbeing, feels confident in its use, and supports a representative, well-qualified scientific workforce.

In support of this aim, DIUS sponsors the Universal Ethical Code for Scientists which aims to ensure that all scientists, whatever their affiliation, follow a clear set of guidelines about conducting and communicating their work including minimising and justifying any adverse effect their work may have on people, animals and the natural environment: www.dius.gov.uk/policy/science_society/code.html We are currently reviewing further promotion of this code within and outside Government.

Our public engagement programme, Sciencewise-Expert Resource Centre (www.sciencewise-erc.org.uk), works with science and technology policy areas across Government by supporting public dialogue exercises on issues including the environment, climate change and sustainable development.

And to further develop our strategy for strengthening the relationship between science and society, a public consultation on our Science and Society strategy was launched on 18th July. The aim of the consultation, which will run

until 17th October 2008, is to explore three main areas of the relationship between Science and Society:

- how to improve communication, generate interest, increase participation and convey the relevance of science
- how to build trust and confidence in scientific research in the public and private sectors
- how to inspire young people from diverse backgrounds to become tomorrow's skilled scientists

The consultation document can be accessed here http://interactive.dius.gov.uk/scienceandsociety/site/.

> Supporting DIUS staff to contribute to our sustainable development agenda

We aim to increase the contribution of our staff to the sustainability of our estate by developing (by September 2008) and running a programme of activities to increase understanding of sustainable development issues and to raise awareness of how individual behaviour change can help.

A working group of staff volunteers who are interested in sustainable development has already been formed. This group will input in to the development of the programme of activities, which might include:

- seminars for DIUS staff with experts from DEFRA to help staff understand the pressures that carbon budgets will bring to bear on a wide range of policies
- seminars for DIUS staff with experts on sustainable operations on how individual behaviour/actions such as efficient use of energy equipment and recycling can help
- establishment of a network of individuals from across the department who are interested in sustainable development and who will help promote appropriate behaviour change amongst DIUS staff

People key objectives 2008-09

- to work with our partner organisations to develop a campaign aimed at inspiring and motivating students and the wider HE community, to reduce the carbon footprint of the HE sector

- to develop (by September 2008) and run a programme of activities to increase understanding of sustainable development issues and to raise awareness of how individual behaviour change can help

SUMMARY OF KEY OBJECTIVES 2008-09

Objective	Timeframe
To appoint a new sustainable development lead for the department who will support the board level Sustainable Development Champion in promoting awareness and understanding of sustainable development and on implementation of best practice across the department	By August 2008
To establish a sustainable development steering group chaired by Dr Evans and including senior representatives from across the department	By September 2008
To build on our constructive working relationship with the Sustainable Development Commission to develop and improve our SDAP on an ongoing basis and to have considered proposals for further strengthening this relationship with expert input from the Commission	By end September 2008
To work closely with colleagues at DEFRA on an ongoing basis to ensure that DIUS is an early adopter of best practice in relation to the consideration of carbon emissions implications within submissions	We will report on progress in the September 08 update of this plan
To conduct a baseline survey of the travel profile of our staff in order to identify what steps are needed to support our staff and our visitors to choose sustainable transport options wherever possible, and in the interim to improve the information available to our staff on more sustainable transport options	By end 2008
To develop and run a programme of activities to increase understanding of sustainable development issues amongst DIUS staff and raise awareness of how individual actions can make a positive difference	From autumn 2008
To support the full establishment and operation of the Energy Technology Institute, engaging with other public sector partners including BERR, TSB and EPSRC, and with DfT to incorporate additional public sector funding streams. The Institute should be fully operational in 2008. ETI expects to announce first project awards (in offshore wind and marine energy – end 2008) and at least two additional programmes during 2008-9; and to develop its Technology Strategy (by end 2008-9).	2008-09
To work with BERR and DEFRA to develop the strategy for the Environmental Transformation Fund.	By summer 2008
To implement the Science and Innovation White Paper proposals on fostering private and public sector innovation which will help us to identify technological and social solutions needed for adaptation to and mitigation of climate change, to promote sustainable consumption and reduction and to help build sustainable communities	2008-09
To support the Research Councils to develop and launch the new "Living with Environmental Change" LWEC initiative – an interdisciplinary research and policy partnership programme to increase resilience to – and reduce costs of - environmental change, addressing the associated pressures on natural resources, ecosystem services, economic growth and social progress	Summer 2008
To continue to support the Research Councils' Energy Programme	We will report on

bringing together energy-related research and training across the Councils to address climate change and security of energy supply	progress in the September 08 update of this plan
To continue to support the contribution of the National Measurement System to the sustainability agenda	We will report on progress in the September 08 update of this plan
To work with Sector Skills Councils (SSCs), the Sustainable Development Commission and the UK Commission for Employment and Skills, to ensure that there is a rapid and collective SSC effort to raise the quality and quantity of the skills needed for the transition to a low carbon economy.	We will report on progress in the September update of this plan
Work closely with BERR in refreshing the Government's manufacturing strategy, ensuring that UK manufacturing remains at the forefront of the global shift towards sustainable production, and is able to take advantage of the growing international market for low carbon technology	We will report on progress in the September 08 update of this plan
To work with colleagues in BERR, DCSF and the Sustainable Development Commission with the aim of identifying whether it is possible to separately measure how the office space occupied by DIUS is performing against the SOGE targets	By September 2008
To successfully implement the DIUS Environmental IT Policy, including raising awareness of its contents amongst DIUS staff and to provide education, training and guidance, as necessary, to enable every member of staff to understand what they can do to reduce the environmental impact of the IT assets and services which they use	2008-09
To publish the DIUS Innovation Procurement Plan and guidance for other Departments, in parallel with the Annual Innovation Report.	October 2008
To agree with HEFCE, following consultation, a new strategy for sustainable development in the HE sector, including an action plan against which progress can be monitored	By December 2008
Aim to agree, following consultation by the LSC, a capital action plan for sustainable development, covering issues of building design and estate management – and outlining how the 2016 zero carbon college target will be achieved	2008-09
In consultation with the LSC and FE representative stakeholders, to work towards agreement of a realistic target for carbon reduction in the FE sector by 2020 and 2050	2008-09
To support our delivery partners to reduce their carbon footprint by building a community of practice and facilitating knowledge and best practice sharing – starting with a workshop in September for sustainable development leads	September 2008
To work with our larger non-departmental public bodies to explore the scope for encouraging them to sign up to the Sustainable Operations in the Government Estate targets	Autumn 2008
To work with partner organisations to develop a campaign aimed at inspiring and motivating students and the wider HE community, to reduce the carbon footprint of the HE sector	Autumn 2008

Annex 1

DIUS key delivery partners

Our non-departmental public bodies and agencies are:

- Learning & Skills Council (LSC)
- New FE sector-owned improvement body
- UK Commission for Employment & Skills
- UfI (learndirect) (managed by LSC)
- Higher Education Funding Council for England
- Office for Fair Access
- Research Councils (7)
- Technology Strategy Board
- The Design Council
- National Endowment for Science Technology & the Arts
- National Weights & Measures Laboratory
- Intellectual Property Office UK
- Student loans company
- Construction Industry Training Board (funded by LSC)
- Engineering Construction Industry Training Board (funded by LSC)
- Film Industry Training Board (funded by LSC)
- Investors in people UK
- Council for Science and Technology

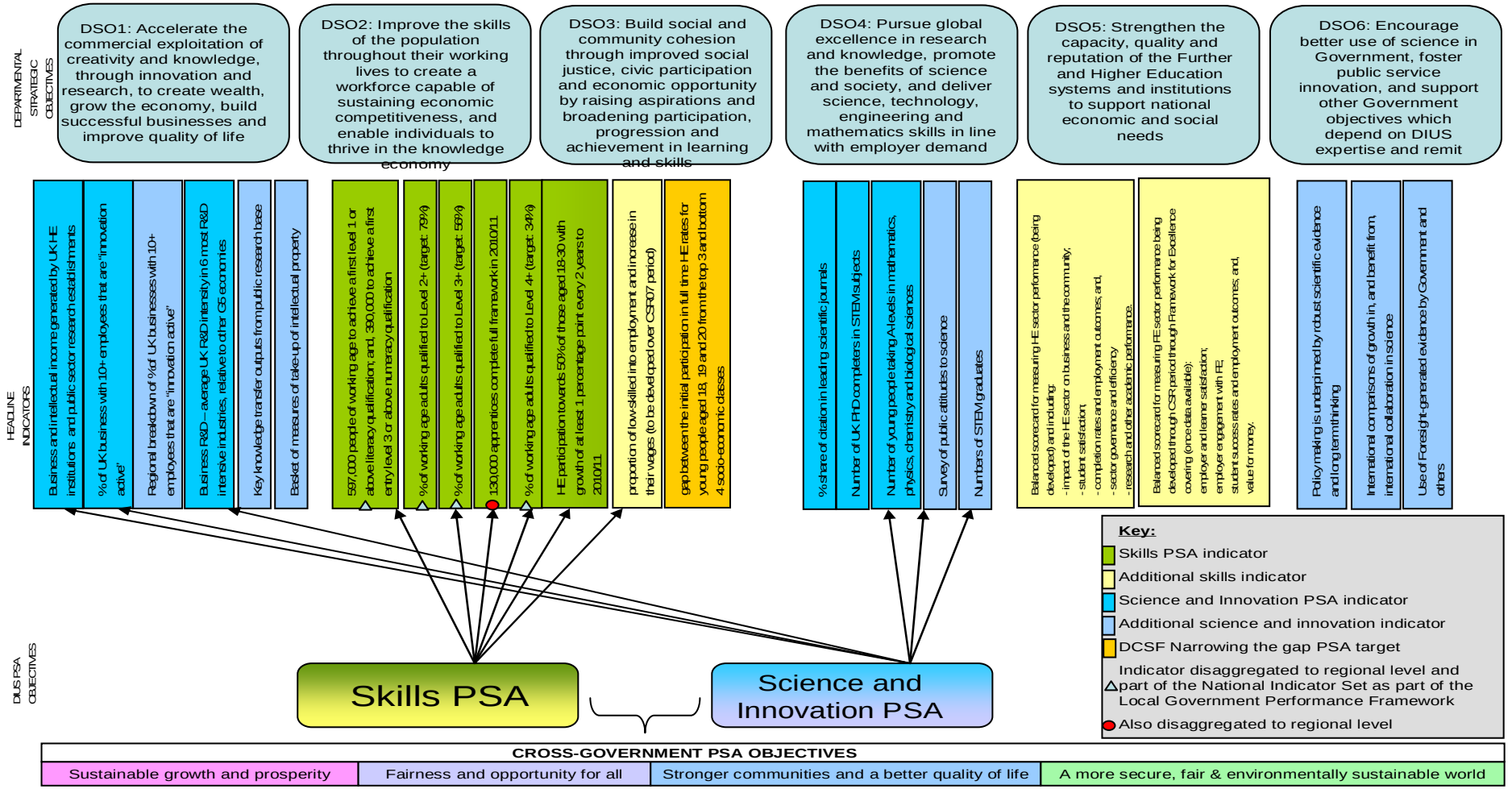
Our intermediary delivery partners are:

- Further Education Institutions
- Public learning providers
- Higher Education Institutions
- University & Colleges Admissions Service
- Public sector research establishments
- National Physical Laboratory (Government owned contractor operated laboratory)
- British Standards Institute
- UK Accreditation Service

The following bodies are co-sponsored by DIUS and the Department for children, schools and families:
- Office for Standards in Education
- Qualifications and Curriculum Authority
- British Educational Communications and Technology Agency

Our customers:
Our customers are learners, businesses and employers, including the public sector. In addtion, we work closely with a wide range of stakeholder organisations.

DIUS PSA and DSO key performance indicators 2008-11



Annex 3

Guide to acronyms used:

BERR	Department for Business, Enterprise and Regulatory Reform
CLG	Department of Communities and Local Government
CES	UK Commission for Employment and Skills
DCSF	Department for Children, Schools and Families
DEFRA	Department for Environment, Food and Rural Affairs
DfT	Department for Transport
DIUS	Department for Innovation, Universities and Skills
DWP	Department for Work and Pensions
DSO	Departmental Strategic Objective
ESOL	English for Speakers of Other Languages
ETF	Environmental Transport Fund
ETI	Energy Technologies Institute
EU	European Union
FE	Further Education
HE	Higher Education
HEFCE	Higher Education Funding Council for England
HMRC	Her Majesty's Revenue and Customs
HMT	Her Majesty's Treasury
ICT	Information and communications technology
LSC	Learning and Skills Council
NDPB	Non-departmental public body
NESTA	National Endowment for Science, technology and the Arts
NMS	National Measurement System
NPL	National Physical Laboratory
NWML	National Weights and Measures Laboratory
OFFA	Office for Fair Access
OGC	Office for Government Commerce
OGDs	Other Government departments
PSA	Public Service Agreement
RDA	Regional Development Agency
SD	Sustainable Development
SDAP	Sustainable Development Action Plan
SDC	Sustainable Development Commission
SLC	Student Loans Company
SOGE	Sustainable Operations on the Government Estate
SSC	Sector Skills Council
STEM	Science, Technology, Engineering and Maths
TSB	Technology Strategy Board
UCAS	Universities and Colleges Admissions Service
UKIPO	United Kingdom Intellectual Property Office