7 PROTECTING THE ENVIRONMENT

The Government is committed to delivering sustainable growth and a better environment and to tackling the global challenge of climate change. It has used a range of economic and other instruments to achieve these aims, while taking into account social and economic factors. The Budget provides an assessment of the key environmental taxes, which indicates the success of these measures, and describes the next steps in the Government's strategy, including:

- in support of the UK's leadership role in tackling climate change, including through its EU and G8 Presidencies, a **package of new measures to support further action on the abatement of greenhouse gas emissions, including new fiscal incentives, an energy services summit, and a new energy efficiency theme as part of the Government's Invest to Save Budget;**
- **the publication of an independent evaluation of the climate change levy**, which concludes that this measure will deliver annual savings of over 3.5 million tonnes of carbon in 2010, well above the originally forecast savings;
- **two new reduced rates of VAT for the installation of low carbon technologies, and an extension of the Landlord's Energy Savings Allowance** to cover solid wall insulation;
- **the deferral to 1 September 2005, of the inflation-only increase of main road fuel duties, reflecting sustained volatility in oil prices, and of a 1.22 pence per litre increase in duty on rebated fuels**, which will support the strategy to tackle oils fraud;
- **a freeze in the threshold for the minimum percentage charge rate of company car tax** at 140g per kilometre for 2007-08, and simplifications to the company car tax system;
- **a freeze of the vehicle excise duty (VED) rates for the lowest four bands of graduated VED for cars, and the standard increase of £5 for the two most polluting bands and for the over 1549cc band for pre-March 2001 vehicles;**
- **progress on work to assess the feasibility of a biofuels obligation as part of a package of measures to support the development of biofuels;**
- **a freeze in the rate of the aggregates levy, and the rates of climate change levy and air passenger duty; and**
- **an increase in line with inflation of the landfill tax credit scheme.**

7.1 If modern economies are to flourish, the Government recognises that they must be built on a platform not only of high and stable levels of growth and employment but also high levels of environmental care. In putting sustainable development at the heart of policy making the Government recognises that economic, social and environmental objectives must be met together. Since 1997, the Government has made significant progress in delivering environmental improvements. Its environmental strategies have made an innovative use of a range of measures, including fiscal instruments, regulatory and voluntary approaches and spending programmes. Consistent with the Government's goal of promoting a productive and flexible economy, a key feature of the Government's approach has been the use of economic and other market-based mechanisms, such as the climate change levy and negotiated agreements, UK and EU Emissions Trading Schemes, the Renewables Obligation, Energy Efficiency Commitment, company car tax reform and fuel duty differentials. These promote cost-effective responses which minimise compliance costs for households and business, and help to stimulate technological innovation.

7.2 The evidence suggests that these instruments are achieving their policy goals. However, as recognised in the recent UK Sustainable Development Strategy there is more to do. The Strategy sets out the UK's sustainable development priorities and proposes a strengthened role for the Sustainable Development Commission. In addition, to ensure the UK continues to make progress in reducing carbon dioxide emissions, the Review of the Climate Change Programme is evaluating the Government's full range of existing policy measures and appraising options for future action.

7.3 In many areas, such as climate change, international co-operation is vital to achieve environmental goals – action only at the domestic level is not enough. This is why the UK is making climate change one of its key priorities as part of its G8 and EU Presidencies. To lead this international debate, the Government recognises that the UK must take action domestically and demonstrate that good environmental policy can promote, rather than stifle, enterprise and innovation, while not damaging UK business competitiveness. The rest of this chapter sets out the key environmental challenges the UK faces, the strategies for tackling these and progress against them. It then describes the developments in the key measures, and assesses the success of some of the most important economic instruments. The impact of the full range of environmental measures introduced by this Government is set out in Tables 7.1 and 7.2 at the end of this chapter.

THE ENVIRONMENTAL CHALLENGE - STRATEGY AND PROGRESS

7.4 The key environmental challenges for the Government are:

- *tackling climate change*, and reducing emissions of greenhouse gases in line with domestic as well as international targets;
- *improving air quality*, to ensure that air pollutants are maintained below levels that could pose a risk to human health;
- *improving waste management*, so that resources are used more efficiently and waste is reused or recycled to deliver economic value; and
- *protecting the UK's countryside and natural resources*, to ensure they are sustainable economically, socially and physically.

A strategy for the use of economic instruments

7.5 To meet these environmental challenges, the Government is committed to using a range of policy measures to ensure that policy-making reflects the integrated goals of sustainable development. This chapter provides an assessment of three of the key economic instruments (climate change levy and agreements, landfill tax and aggregates levy) and their success in delivering environmental improvements. The Government continues to learn from its use of economic instruments and other policy measures and to develop its approach accordingly.[1]

[1] This approach was described in *Tax and the environment: using economic instruments*, HM Treasury, November 2002, which describes the framework by which decisions on economic tools are made.

Tackling the global challenge of climate change

7.6 Climate change is one of the most serious risks facing the world and a major challenge for all countries. Global atmospheric temperatures have risen by about 0.6˚C over the last 100 years, with about 0.4˚C of this warming occurring since the 1970s. Depending on the amount of greenhouse gases emitted and the sensitivity of the climate system, it is predicted that global average temperatures could rise by between 1.4 and 5.8˚C over the next 100 years and that annual average temperatures in the UK may rise by between 2 and 3.5˚C by the 2080s. The Government's 'Avoiding Dangerous Climate Change' conference[2] in February 2005 brought together world experts to advance scientific understanding of the long-term implications of climate change, the relevance of stabilisation goals and options to reach goals. It concluded that there was now greater clarity about the impacts of climate change than at the time of the Intergovernmental Panel on Climate Change Third Assessment Report in 2001. In many cases, the risks are more serious than previously thought and a number of new and significant impacts were identified. For example, recent changes in the acidity of the oceans may reduce their capacity to remove carbon dioxide from the atmosphere and affect the entire marine food chain.

The cost of climate change

7.7 The impact of climate change will be experienced globally, and is of particular concern for fragile ecosystems, low-lying coastal countries and the poorest nations, which have the least capacity to adapt. These changes are likely to have far-reaching effects on environment, economy and society, and in some cases they are already being felt. Claims for storm and flood damages in the UK have doubled to over £6 billion over the period 1998-2003, compared with the previous five years, with a prospect of a further tripling by 2050. Swiss Re, the world's second largest insurer, has said that the economic costs of global warming could double to $150 billion per year in 10 years, hitting insurers with $30-40 billion in claims, annually. Without effective action, climate-related risks and damages will increase – the cost of doing nothing is substantial. One of the most widely used estimates of the cost of climate change is produced by the Intergovernmental Panel on Climate Change. This found that the indicative global economic costs of an increase in average global temperature of 2.5ºC would be between 1.5 and 2 per cent of global GDP per annum, with a wide variation between world regions.

The Government's climate change strategy

7.8 The Government has used a range of fiscal measures, such as the climate change levy, reforms to company car tax, and incentives for energy efficiency, to tackle climate change. They have worked in tandem with other economic instruments, for example the Renewables Obligation and the climate change agreements and also more traditional regulation and spending programmes. The EU Emissions Trading Scheme (EU ETS) is now also in operation and the Government expects it to be influential in delivering substantial carbon reductions. The next steps in the Government's strategy for tackling climate change are described later in this chapter.

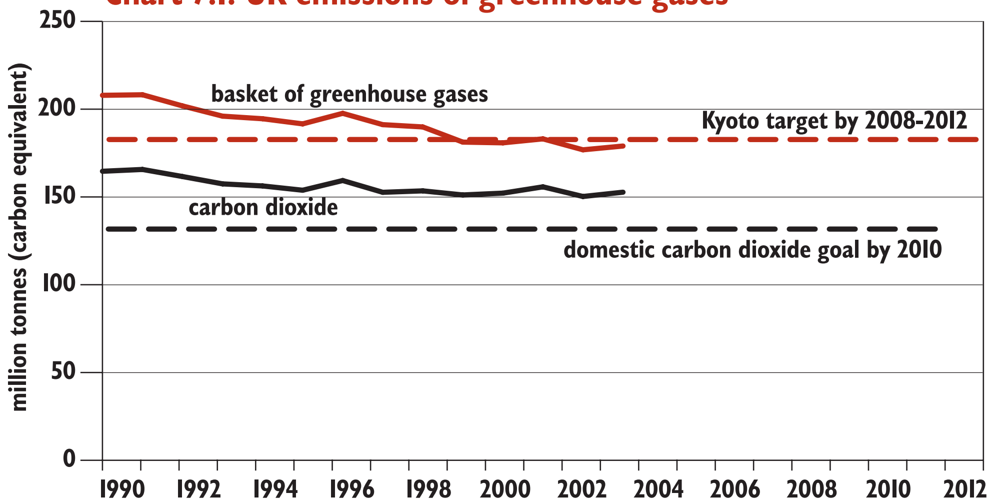
7.9 These measures have been successful in reducing greenhouse gas emissions. UK greenhouse gas emissions are provisionally estimated to have fallen by 14 per cent between 1990 and 2003, and carbon dioxide emissions by 7 per cent, as shown in Chart 7.1. Over the same period, the economy grew by around 35 per cent – showing that reductions in emissions can be achieved alongside economic growth. Emissions increased by a provisional 1.5 per cent between 2002 and 2003, largely due to increased coal burn for electricity generation, but the downward trend is projected to resume in future years.

[2] International 'Avoiding Dangerous Climate Change' conference, Hadley Centre, Exeter, February 2005.

[3] www.dti.gov.uk

7.10 The latest available projections show that with current policies, UK carbon dioxide emissions will be about 14 per cent below the 1990 level, and that emissions of all greenhouse gases will be around 20 per cent below 1990 levels by 2010. The UK is therefore well on track not just to meet but exceed its Kyoto commitment to reduce greenhouse gas emissions by 12.5 per cent between 2008 and 2012. However, the projections show the UK falling short of the domestic goal of moving towards a 20 per cent reduction in carbon dioxide emissions by 2010. The Government has therefore launched a review of the UK Climate Change Programme to examine the success of existing policies and consider the scope for further emission reductions.

Chart 7.1: UK emissions of greenhouse gases



Source: National Environmental Technology Centre.
Note: Estimates for 2003 are provisional.

Improving air quality

The Government's Air Quality Strategy

7.11 The Government's and the Devolved Administrations' policies on improving air quality are set out in the Air Quality Strategy for England, Scotland, Wales and Northern Ireland and its first addendum.[4] These strategies set health-based air quality standards for nine key air pollutants and target dates for their achievement across the UK between 2003 and 2010.

7.12 There have already been significant reductions in the key pollutants, such as emissions of particulates, nitrous oxide and lead, as a result of stringent vehicle emission standards, control of pollution from fixed sources and local air quality management plans. Further significant reductions in all air pollutants are projected. However, on the basis of current policy measures, it is unlikely that targets for nitrogen dioxide and particulates will be met in all parts of the country, particularly in some urban areas. To tackle these pollution hotspots and achieve further public health benefits and air quality improvements, the Government is assessing the need for additional cost-effective measures in the current review of the Air Quality Strategy. Public consultation will take place during the summer and the Review will be published towards the end of 2005.

[4] Available at www.defra.gov.uk/environment/airquality

Improved waste management

7.13 Efficient use of resources and the effective management of waste are essential features of an environmentally sustainable economy. The Government is committed to minimising the amount of waste produced and getting as much value as possible out of what is left, by re-use, recycling or composting and the recovery of energy, while also protecting human health.

7.14 Since the introduction of the landfill tax, waste sent to landfill has fallen by almost 20 per cent. In 2003-04, the volume of active waste from households and industry fell by over 4 per cent and Defra has announced that England exceeded its 2003-04 target to compost or recycle 17 per cent of household waste. This year the Government is conducting the first of three five-year reviews of Waste Strategy 2000 to evaluate progress and inform future policy decisions. Further measures are set out later in this chapter.

Protecting the UK's countryside and natural resources

7.15 The Government is committed to ensuring that the UK's natural resources are managed prudently. It aims to achieve positive trends in its headline indicators of sustainable development, which include indicators of river water quality, biodiversity and land use. The UK also has a number of international objectives for conservation and water quality. The most prominent is the Water Framework Directive, which requires good chemical and ecological status in UK surface waters by 2015.

7.16 The Government is tackling these challenges in a variety of ways, and good progress has been made in most areas. The Government has introduced measures such as the aggregates levy and contaminated land tax credit to encourage efficient use of land and other resources. Since 1990, there has been a significant improvement in the biological and chemical quality of UK waterways. However, recognising that the pace of improvement is slowing, the Government is continuing to work closely with stakeholders to develop policy measures to help achieve the necessary changes. The next steps in the Government's strategy in this area are described later in this chapter.

CLIMATE CHANGE: POLICY MEASURES

7.17 The UK recognises that climate change is a global phenomenon and is using its Presidencies of the G8 and EU to promote a high level global debate in tackling this problem, as set out in Box 7.1. Over the last five years, the Government has pursued a wide range of measures to reduce greenhouse gas emissions.

Review of the Climate Change Programme

7.18 The UK Climate Change Programme (CCP), published in 2000, set out policies to meet the UK's Kyoto target, and the domestic goal of moving towards a 20 per cent reduction in carbon dioxide emissions by 2010. It included a commitment to review the Programme. The Review of the CCP, launched in September 2004, is evaluating and consulting on the efficacy and cost-effectiveness of existing policy measures, and appraising options for future action, to ensure the UK continues to make progress in reducing carbon dioxide emissions. The Government's aim is to introduce a revised CCP in the first half of 2005.

Climate change levy

7.19 The climate change levy (CCL), alongside associated measures such as negotiated agreements and exemptions for new renewables, seeks to encourage businesses to use energy more efficiently and to reduce emissions of carbon dioxide. As part of its continuing review of environmental taxation, the Government is today publishing a report commissioned from

Cambridge Econometrics[5] that evaluates the environmental impact of the levy. Described further in Box 7.2, this shows that the CCL is expected to deliver carbon dioxide savings of over 3.5 million tonnes of carbon (MtC) by 2010, well above the estimates made at the time of the levy's introduction. Given business success in delivering climate change objectives, the advent of the EU ETS and the recent movement in energy prices, **Budget 2005 announces a freeze in the rates of the CCL for 2005-06**.

Climate change agreements

7.20 As described in Box 7.2, climate change agreements (CCAs) allow energy-intensive sectors to obtain 80 per cent relief from the CCL if they agree to increase energy efficiency and reduce emissions. Audited findings from the sectors that signed CCAs suggest absolute savings against baselines of 4.5 MtC in the first target period of 2001-02. Following consultation, Budget 2004 announced new eligibility criteria to widen the entitlement to relief, to be introduced once EU state aid approval is obtained. In the meantime, negotiations are continuing with several sectors of business that have applied for agreements under the new arrangements.

Box 7.1: EU, G8 and climate change

To enable progress at an international level, the Government has made climate change a central theme of its G8 and EU Presidencies in 2005, as set out in Chapter 2. The UK's objective is for G8 partners – who account for over 65 per cent of global GDP and 47 per cent of global carbon dioxide emissions – to work together on international action to address the problem of climate change. The Government believes that all G8 countries, as large emitters of greenhouse gases, must pull their weight in reducing greenhouse gas emissions. The Government aims to build on the science of climate change and reach agreement on a process to speed up the science and technology needed to meet the threat.

Central to these aims is engaging countries outside the G8 that have growing energy needs. On 15-16 March 2005, the Government is hosting an international Round Table for Energy and Environment Ministers from around 20 countries including the G8, China, India, Brazil and South Africa, to consider the scale of energy demand over the next 50 years and how far these needs can be met through investment in lower-carbon energy systems. In addition, the March 2005 G8 Environment and Development Ministerial will focus on the impacts of climate change for Africa, taking into account new research commissioned by the Government and the conclusions of the Commission for Africa, described further in Chapter 5.

The UK will also be focusing on climate change during the EU Presidency in 2005. In addition to meeting its Kyoto targets, now that the Kyoto Protocol has entered into force, the EU should consider establishing longer-term greenhouse gas emission reduction targets. Acknowledging the increasing impact that aviation emissions are making towards total greenhouse gas emissions the UK will also seek the inclusion of EU aviation into the EU Emissions Trading Scheme (EU ETS).

EU Emissions Trading Scheme

7.21 In January 2005, the world's first internationally-traded carbon permit system started in the EU. The EU ETS sets a quota for carbon emissions at around 1200 installations in the UK, and many thousands of sites throughout the 25 EU Member States. Phase One of the EU ETS should help Member States move towards their legally-binding Kyoto targets; it is important that Phase Two, due to start in 2008, helps to ensure that these targets are met. In the first phase, the amended UK emissions cap represents a reduction in business-as-usual emissions projections equivalent to around 5 per cent, and will be a major factor in taking the UK beyond its Kyoto commitment. The Government has now announced it will issue

[5] *Modelling the initial effects of the climate change levy,* Cambridge Economics, available at www.hmce.gov.uk

allowances to operators of UK installations based on the initial totals which the European Commission has approved, so they can participate in the EU ETS at the earliest possible time. Simultaneously, the UK will initiate legal proceedings against the Commission for their failure to consider the UK's amendment to its plan, and to help ensure that the Commission follows a fair, transparent and legally robust process which will be important for Phase Two of the EU ETS. It is envisaged that the final allocation work will be completed in late April or early May this year.

Renewable energy

7.22 In January 2000, the Government announced a target for renewable sources to supply 10 per cent of UK electricity by 2010, subject to the costs being acceptable to the consumer. The key policy mechanism to meet this target is the Renewables Obligation, which requires all licensed electricity suppliers to supply a specific and growing proportion of their electricity from certified renewable sources each year. The Government recently commenced a Review of the Renewables Obligation to ensure that the Obligation continues to stimulate the use of renewable electricity, while maximising value for money for consumers. The Department of Trade and Industry (DTI) will publish a preliminary consultation on the Review in March 2005.

7.23 The Government is committed to supporting research and development (R&D) into sustainable energy technologies, as part of its response to climate change (as described in Chapter 3). Funding for energy R&D from the science budget will rise from a current level of £40 million per year to £70 million per year by 2007-08, with additional support for business via the DTI Technology Programme and the Carbon Trust. **To underpin this investment, the Government will establish a UK Energy Research Partnership, bringing together public and private funders of energy research to enhance opportunities for collaboration.**

7.24 Carbon capture and storage (CCS) is a process by which the carbon in fossil fuels is captured as carbon dioxide and committed to long-term storage in geological formations. It has the potential to significantly reduce carbon emissions from fossil fuel power generation. It is likely to prove a critical technology in global carbon reduction strategies, particularly for countries with fast growing economies and rapidly growing fossil fuel consumption. **The Government is therefore examining how it might support the development of CCS in the Climate Change Programme Review, including the potential for new economic incentives.**

Investment in energy-saving technologies

7.25 In 2001 the Government announced an enhanced capital allowances (ECAs) scheme to reward investments in the most innovative energy-saving technologies. This list currently covers more than 8,000 approved products and is administered by the Carbon Trust, an independent not-for-profit company funded principally from recycled CCL revenues. The Government is committed to the development of the scheme and continues to consider the case for additional technologies. It plans to take forward a formal evaluation of the scheme in 2005 with the aim of reporting next year. As announced in the 2004 Pre-Budget Report, the Government will also help focus the growing public and private investment by investing £20 million from 2005-06 through to 2007-08 in a new partnership to accelerate energy-efficient technology, run by the Carbon Trust.

Energy efficiency

7.26 Improving energy efficiency is the most cost-effective way of reducing greenhouse gas emissions and reducing the costs of fuel bills. Energy efficiency measures can pay for themselves over just a few years. However, upfront costs often prevent more investment in energy efficiency measures across all sectors of the economy. The Government has set up the Carbon Trust and Energy Saving Trust to help business and domestic sectors tackle this.

7.27 The joint HM Treasury-Defra Energy Efficiency Innovation Review announced in the 2004 Pre-Budget Report has identified a significant market failure in the UK in the provision of 'energy services'. An energy services approach shifts the focus away from the sale of units of energy to a focus on the services derived from the use of energy, for example the lowest cost methods of keeping warm and providing lighting. The Government believes that there is clear scope for the development of such a market to domestic, business and public sector customers. **The Treasury will host a summit later this year to explore how Government and the business community can encourage, and remove barriers to, the development of energy services markets in the UK.**

Household energy efficiency

7.28 Households have an important role to play in helping the UK to meet its environmental targets, as they account for nearly 30 per cent of energy consumption and around a quarter of total UK emissions. To encourage investment in domestic energy-efficiency, the Government has introduced a broad range of measures including the use of economic instruments, such as reduced VAT rates for micro-renewable energy and energy saving materials. Building on the progress made to date and recognising the environmental benefits, **Budget 2005 announces a reduced rate for the installation of micro-combined heat and power (micro-CHP) and also extends the reduced rates to air source heat pumps**. In addition, the Government will continue to negotiate with European partners to extend the categories of permitted reduced VAT rates to include energy-saving materials for DIY installations and energy-efficient products.

7.29 The Government is committed to measures to support investment in energy efficiency in the private rented sector. The Landlord's Energy Savings Allowance (LESA) was introduced in 2004 to encourage investment in cavity wall and loft insulation, and **Budget 2005 announces the extension of the LESA scheme to cover solid wall insulation**. As part of its consideration of a Green Landlord Scheme, the Government will explore how other tax deductions and reliefs, including the existing Wear and Tear Allowance, might be developed to encourage and reward landlords who improve the energy efficiency and quality of their property. Discussions with stakeholders will take place over the summer.

7.30 The Energy Efficiency Commitment (EEC) requires energy suppliers to achieve targets for installing energy efficiency measures in the household sector. The Government has set a target for the next phase of the EEC, over 2005-08, roughly to double activity and deliver savings of around 0.7 million tonnes of carbon a year by 2010. This target also includes incentives for energy services and support for the development of innovative products, such as micro-CHP. In October 2004, the Government announced an additional £3 million for the Energy Saving Trust information campaign to support the EEC. The Warm Front Programme also provides for the improvement of energy efficiency of homes as part of the Government's commitment to ending fuel poverty for vulnerable households by 2010.

Public sector energy efficiency

7.31 Improving energy efficiency is a particular challenge for the public sector. The 2002 Framework for Sustainable Development on the Government Estate set targets for central government to reduce its overall carbon emissions, improve energy efficiency and increase energy from renewable sources and good quality combined heat and power (CHP). A best value energy efficiency indicator is in place for local authorities. To help invigorate improved energy performance, the Government will include a theme under the 2005-06 round of the Invest to Save Budget (ISB), which will make money available for good energy efficiency projects across the public sector. The Government, drawing upon the experience of the ISB, will also consider the case for a rolling-fund which could invest in similar projects. Through such a mechanism, savings from reduced energy use would be recouped and reinvested in the fund, so tackling the upfront investment barrier cost-effectively.

Energy Products Directive

7.32 The Energy Products Directive (EPD) came into force on 1 January 2004 and provides an EU framework for taxation on energy products. The minimum rates in the EPD do not affect any of the UK's existing rates or exemptions for hydrocarbon oils duty or CCL, but will require increases to rates in some other Member States, which will provide environmental benefits across the EU. In February 2005, the Government successfully secured a derogation from the Directive to continue the UK's policy of exempting low value solid fuel from CCL on environmental grounds.

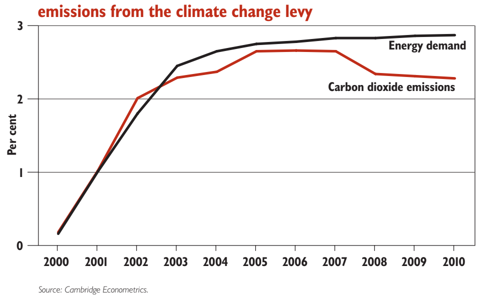
Box 7.2: Assessment of the climate change levy package

The climate change levy (CCL) is part of a package of measures to tackle climate change, including climate change agreements (CCAs), enhanced capital allowances for energy-saving technologies, and support for business energy efficiency and renewable energy technology through the Carbon Trust. An independent evaluation by Cambridge Econometrics has examined the effect of the levy since its announcement in Budget 1999 and introduction in April 2001. The main conclusions are that:

- **CCL should deliver estimated annual carbon dioxide savings of over 3.5 million tonnes of carbon (MtC) in 2010 – well above the 2 MtC figure forecast at the time of its introduction;**
- **the announcement of CCL in Budget 1999 is estimated to have reduced energy demand by 1.2 per cent in 2000 in the commerce and public sector. This reduction in energy demand is estimated to grow to 13.8 per cent in 2003 and 14.6 per cent in 2010 in combination with price effects; and**
- **CCL is estimated to increase good quality combined heat and power capacity by 1.2 gigawatts of electricity by 2010, and to encourage renewable energy sources, because generation from these sources is exempt from the levy.**

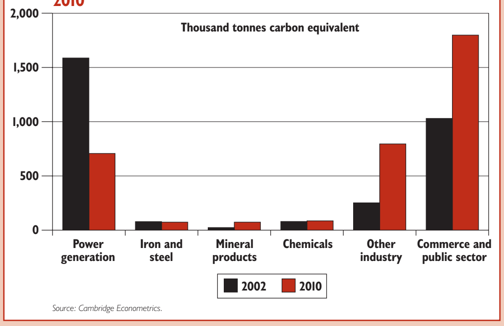
Chart A illustrates how modelled energy demand and carbon dioxide emissions are reduced through to 2010. Chart B shows carbon dioxide savings from the CCL by fuel user. The biggest saving is in the commerce and public sector. Savings from CCL are lower in the industrial sectors, which generally benefit from the discounts from CCAs.

Chart A: Estimated reduction in energy demand and CO_2 emissions from the climate change levy



Source: Cambridge Econometrics.

Chart B: Estimated CO_2 savings by user from CCL in 2002 and 2010



Source: Cambridge Econometrics.

Introduced as part of the CCL package, CCAs allow 80 per cent discounts on the CCL for energy-intensive sectors that agree to make energy saving improvements. Cambridge Econometrics estimates that a further 0.5 MtC per year would be saved in 2010 if the levy were applied at the full rate across all business sectors. In contrast, audited findings from the sectors that signed CCAs suggest that the absolute saving against baselines was 4.5 MtC for the first target period of 2001 to 2002.[a] This shows that CCAs have been effective, yielding greater savings than through simply applying the full rate CCL to all business sectors.

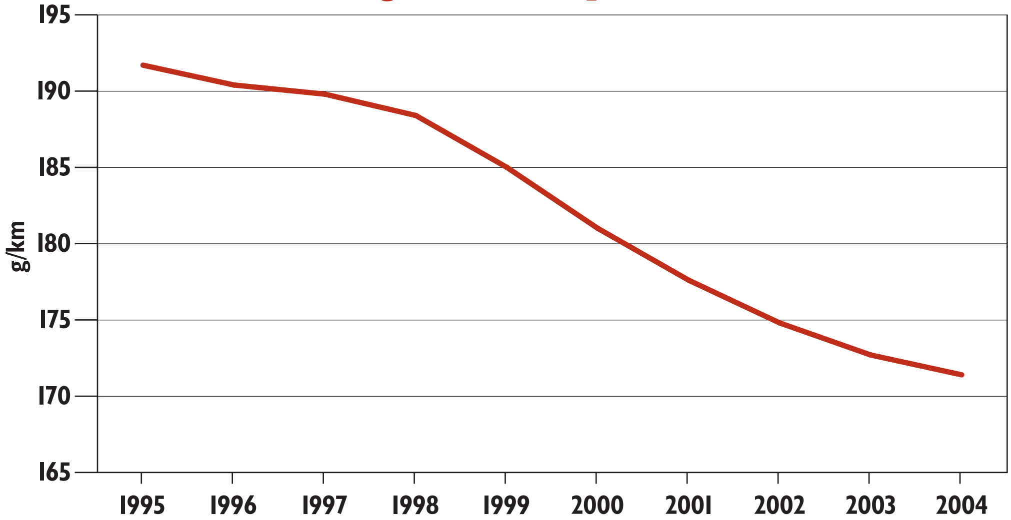
[a] Climate change agreements results of the first period assessment, Future Energy Solutions, April 2003 (revised July 2004). Available at www.defra.gov.uk

A CLEAN AND EFFICIENT TRANSPORT SYSTEM

7.33 A safe, clean and efficient transport system is key to sustainable economic growth. The Government recognises the importance of an efficient transport network in boosting productivity, extending mobility and helping to create a more inclusive society. However, transport is the second largest source of carbon dioxide emissions in the UK, and also contributes towards local air pollution. The challenge is to combine an effective transport network to promote UK economic strength and mobility, with reduced emissions from transport over time, to support climate change, air quality and low-carbon transport objectives.

7.34 As shown in Chart 7.2, average carbon dioxide emissions from new cars are falling year on year. This is supported both by the voluntary agreement between the European Commission and car manufacturers to reduce new car emissions, and by the measures Government has taken (such as reforms to vehicle taxation) to encourage consumers to choose less polluting vehicles.

Chart 7.2: UK average new car CO_2 emissions



Source: DVLA.
Note: 2004 figure is provisional and covers January to September

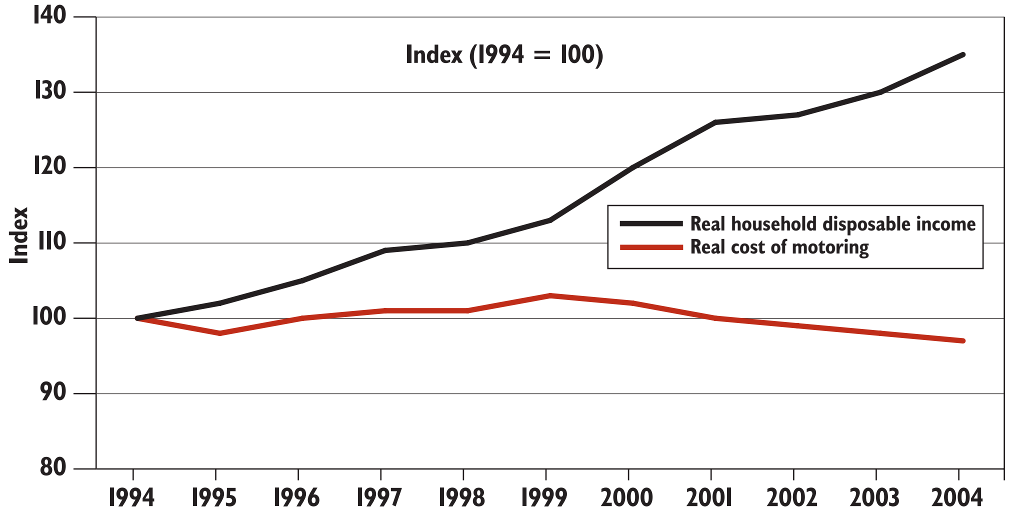
Costs of motoring

7.35 The cost of motoring has remained broadly constant over the past decade as shown in Chart 7.3. Over the same period, household disposable income has steadily increased, with average motoring costs therefore accounting for a smaller share of disposable income.

Fuel duty

7.36 Since 2000, duty on main road fuels used in the UK has fallen in real terms by nearly 12 per cent, a saving equivalent to nearly 6 pence per litre for motorists, while the cost of motoring overall has also fallen to below 1990 levels, in part owing to increasing fuel efficiency. It is the Government's policy that fuel duty should rise at least in line with inflation as the Government seeks to meet its targets of reducing polluting emissions and funding public services. **The Government today announces an inflation-based increase of 1.22 pence per litre for main fuel duties. Owing to the sustained volatility in the oil market, the changes in rates will be deferred to 1 September 2005.**

Chart 7.3: Index of household disposable income and cost of motoring



Source: Office for National Statistics.
Note: Overall cost of motoring includes purchase, maintenance, petrol and oil, and tax and insurance.
Figures for 2004 are provisonal.

7.37 The Government recognises that sulphur-free fuels offer local air quality benefits, as well as helping the latest vehicle engines work more efficiently. It will discuss with industry the most effective way of ensuring these fuels are made available.

Rebated oils

7.38 Oils fraud cost the Exchequer around £850 million in 2003 in Great Britain alone. To support the UK Oils Fraud Strategy, described in Chapter 5, **the Government today announces an increase in duty of 1.22 pence for rebated oils, to take effect from 1 September**, maintaining the duty differential between rebated oils and main fuels. This will also apply to heavy fuel oil, reflecting the polluting nature of the fuel.

7.39 The Government supports the use of lower-sulphur gas oil where this can deliver significant health and local environmental benefits, and continues to keep under review whether any changes to the structure or administration of excise duty are required to ensure the availability of lower-sulphur gas oil for use in off-road machines.

Alternative fuels

7.40 In the 2003 Pre-Budget Report, the Government published its Alternative Fuels Framework. The framework includes a commitment to a three-year rolling guarantee on the fuel duty differentials for all alternative fuels, in recognition of investors' need for long-term certainty in the market. The Government continues to use this structured approach to promote further investment in this growing sector – which it expects to make a significant contribution to future carbon reductions from transport and help provide security of the fuel supply.

Biofuels

7.41 The Government considers that biofuels can offer significant and cost-effective environmental benefits through reduced emissions of greenhouse gases from road transport and local air quality improvements, and in the future potentially contribute to the security of the fuel supply. To encourage development of the biofuels market, the Government introduced a 20 pence per litre duty differential for biodiesel in 2002 and, from 1 January 2005, for bioethanol. In line with the Alternative Fuels Framework, **the Budget confirms that the 20 pence per litre duty differentials for both biodiesel and bioethanol will continue until 2007-08**, providing further certainty and stability for development.

7.42 As announced in the 2004 Pre-Budget Report, the Government is undertaking a feasibility study and consultative process on a possible Renewable Transport Fuels Obligation (RTFO). The RTFO would require a specified proportion of aggregate fuel sales to come from a renewable source and would draw on the experience of the Obligation for renewable electricity. A cross-Government group has been set up and is currently holding a series of stakeholder workshops to discuss specific aspects of how an RTFO could work in practice. Detailed work will continue over the coming months with a view to informing decisions later in the year. The 2004 Pre-Budget Report also announced that the Government will undertake a pilot project to examine the potential for using fuel duty incentives for inputs-based production of road fuel as a means of encouraging the use of biomass in conventional fuel production. **The tendering process will be launched in the coming months, and the Government intends that the project should begin from 2006, subject to Commission approval.** A factsheet on this measure can be found at www.hmce.gov.uk.

7.43 The Government has been holding discussions with the biofuels industry on the merits of an enhanced capital allowance scheme for the cleanest biofuels processing plants. **The Government considers that this would be a useful additional measure of support to the UK biofuels industry, subject to state aid approval and further work on the detail of the scheme**.

Road fuel gases

7.44 Liquefied petroleum gas (LPG) has a significant duty differential and benefited from the wider fuel duty freeze in 2004. The Government intends to reduce the differential towards a level more commensurate with its environmental benefits. Budget 2005 announces that the **duty differential for LPG will narrow against conventional road fuels by the equivalent of one penny per litre each year until 2007-08. The duty increase in 2005-06 will take effect from 1 September**. The current duty differential for natural gas against conventional road fuels will be maintained for the next three years until the end of 2007-08, a continuation of the policy announced at Budget 2004.

Company car tax

7.45 In April 2002, the company car tax system was reformed to reflect vehicle carbon dioxide emissions, to encourage the take-up of more environmentally-friendly cars. In April 2004, the Inland Revenue published an evaluation of the scheme[6], which showed that it has been successful in reducing business mileage and lowering carbon dioxide emissions, as described further in Box 7.3. The Inland Revenue will continue to evaluate the scheme to ensure that it meets the Government's environmental aims. **The Government today announces that the threshold for the minimum percentage charge rate will be frozen at 140g per kilometre for 2007-08**.

7.46 Following the commitment in the 2004 Pre-Budget Report, **the Budget announces simplifications of the company car tax system relating to bi-fuel and hybrid electric cars.** The discount system for these cars will be simplified from April 2006, to replace the existing provisions with a 1 per cent increase in the basic percentage discounts.

Capital allowances for cars

7.47 In the 2004 Pre-Budget Report, the Government announced that it would consider options for modernising the capital allowance rules for business cars, including those that would fit with its wider environmental objectives, by potentially basing car allowances on carbon dioxide emissions. The Government will now assess the responses to that consultation before deciding on the next stage of the process.

[6] *Report on the evaluation of company car tax reform*, Inland Revenue, April 2004, available at www.inlandrevenue.gov.uk

Box 7.3: Assessment of transport taxation against environmental objectives

The Government has set transport and other taxes to encourage the reduction of greenhouse gases and improve air quality. Analysis suggests that the following measures have been successful against these aims:

- **reform of company car tax, which is initially estimated to have reduced business travel in company cars by between 300 and 400 million miles, saving around 0.15 to 0.2 MtC in 2003 and 0.5 to 1 MtC by 2010. Over half of all employers who run company car fleets are encouraging their employees to switch to cars with lower carbon dioxide emissions;**
- **biodiesel can reduce carbon dioxide emissions by up to 54 per cent and the Government has introduced a 20 pence per litre duty differential in its favour. Since 2002, 43 million litres of biodiesel have been sold. A similar duty differential for bioethanol was introduced in January 2005 and early indications suggest sales of around 60 million litres a year;**
- **the shift to ultra-low sulphur petrol (ULSP) from ordinary unleaded petrol as a result of a duty differential introduced by the Government in 2000, which is estimated to have reduced nitrogen oxide emissions by 1 per cent, carbon monoxide emissions by 4 per cent and volatile organic compounds emissions by 1 per cent in each year between 2001 and 2004;**
- **a differential for ultra-low sulphur diesel (ULSD) was first introduced in 1997 and has been widened since then. This incentive encouraged the entire market to switch to ULSD by 2000. This is estimated to have reduced emissions of particulates by 8 per cent and nitrogen oxides by up to 1 per cent in each year between 2001 and 2004; and**
- **liquefied petroleum gas and natural gas are the two types of gas currently used as road fuel in the UK. The growth in road fuel gases encouraged by the Government's duty differential has reduced emissions of particulates and nitrogen oxides, which has helped to improve local air quality, and brought about a cumulative carbon dioxide emissions saving of 0.1MtC.**

Company car fuel

7.48 The company car fuel benefit charge was reformed in 2003 to bring it into line with the carbon emissions basis of the company car tax system. Company car fuel benefit is calculated by multiplying the relevant company car tax percentage band for the vehicle in question to a set figure, which since April 2003 has been set at £14,400. **This Budget announces that the calculation figure will be frozen at £14,400 in 2005-06**. The Government also intends, subject to Commission approval and informal discussions with businesses, to reform the VAT fuel scale charge to a carbon dioxide emissions basis.

Vehicle excise duty

7.49 The Government reformed vehicle excise duty (VED) in 2001 to reflect vehicle carbon dioxide emissions and provide motorists with an incentive to choose more environmentally-friendly vehicles. **The Government announces that the six VED bands will be re-named A-F, from the current lettering of AAA to D,** while retaining their current carbon dioxide emission levels. This will align VED lettering with the new energy efficiency labelling scheme to be introduced by industry into car showrooms later this year, ahead of EU proposals for such labels. This will help consumers to make fully-informed vehicle choices.

7.50 Following the freeze in VED in Budget 2004, and to underline VED's environmental focus, **VED rates will be frozen for the four least polluting carbon dioxide bands and increased by the standard £5 for the two most polluting bands, as well as for cars and light goods vehicles of over 1549cc registered before 1 March 2001. Changes take effect for licences commencing 1 April**.

Vehicle emission standards **7.51** The European Commission is currently considering new Euro V vehicle emission standards for cars and small vans, and a proposal is expected later this year. The Government supports the development and introduction of new vehicle standards, where these can deliver air quality improvements cost-effectively, and will consider its response once the proposal has been issued.

Lorry road-user charge **7.52** Road haulage plays an important role in a productive economy. The Government is committed to ensuring that all lorries using UK roads contribute on a fair and equal basis towards the costs that they impose. The Government is therefore progressing its plans for a Lorry Road-User Charge (LRUC), accompanied by offsetting tax cuts. It is due to be phased in from 2007-08. The LRUC programme is now well into its procurement phase, and HM Customs and Excise have started detailed discussions about their requirements with the bidders who have been short-listed to receive a Final Invitation to Negotiate (FITN). **The Government will publish draft legislation later this year, which will outline a framework for the charge and the fuel duty repayment scheme**.

National road user charging **7.53** Congestion is a serious and growing problem in the UK. Unpredictable and rising journey times raise costs for individuals and businesses, and have an adverse effect on UK productivity and economic growth. Congestion also creates localised air-quality hotspots, often in highly populated urban areas. While there is a case for increased investment and better management of the road network, it will not be possible to build a way out of congestion and the problems that it will cause. The feasibility study into road pricing, published by DfT in July 2004[7], concluded that a carefully-designed national road pricing scheme could reduce congestion by up to a half, as well as delivering environmental benefits. In the Future of Transport White Paper, the Government welcomed the feasibility study and committed to taking a number of actions in response to its recommendations.[8] It also recognised that establishing a number of congestion charging schemes at the local level would be an important part of any trajectory towards a national road pricing system.

Aviation **7.54** The UK Air Transport White Paper[9] recognised that greenhouse gas emissions from aviation make a significant and growing contribution to climate change. Forecasts suggest that the UK's combined domestic and international aviation emissions could account for up to a quarter of the UK's total contributions to climate change emissions by 2030. The Government believes that the challenge of tackling aviation emissions is best met through concerted international action. A well-designed emissions trading scheme is potentially the most cost-effective way of ensuring that aviation contributes to global climate stabilisation. The Government is committed to aviation joining the EU ETS from 2008, or as soon as possible thereafter, and advancing this objective is a priority for the UK Presidency of the EU. The Government will also continue to explore the role of other economic instruments. **The Government today announces a freeze on air passenger duty (APD) rates for the year ahead.**

IMPROVING WASTE MANAGEMENT

7.55 The Government has introduced a number of measures, such as landfill tax, landfill allowance trading scheme and spending programmes designed to improve the efficient use of resources, encourage the effective management of waste and meet the commitment to reduce the volume of household waste sent to landfill.

[7] *Feasibility Study of road pricing* in the UK, DfT, July 2004, available at www.dft.gov.uk
[8] *Future of Transport White Paper*, DfT, July 2004, available at www.dft.gov.uk
[9] *Air Transport White Paper*, DfT, 2003.

Landfill tax **7.56** The total volume of waste disposed to landfill has fallen by almost 20 per cent since the introduction of the tax. As confirmed in Budget 2003, from 1 April 2005 the standard rate (for active waste) will be increased by £3 a tonne to £18 a tonne. The rate will also increase by at least £3 a tonne in the following years to a rate of £35 a tonne in the medium-to longer-term. As described in Box 7.4, these announced increases appear to be having a positive effect, with waste being disposed to landfill falling and greater investment in alternative waste management options.

Recycling landfill tax revenue **7.57** Budget 2003 announced that future increases in the standard rate of landfill tax would be introduced in a way that is revenue neutral to business as a whole and to local government. In line with this commitment, the 2004 Spending Review announced that a new spending programme for England – the Business Resource Efficiency and Waste (BREW) programme – worth £284 million over three years, would be used to support businesses in improving resource efficiency and minimising waste outputs. The programme will be rolled out in April 2005.

7.58 The Government has consulted stakeholders on the potential for a new enhanced capital allowance for waste and associated resource efficiency technologies. It is clear that there is support for a scheme and the Government will therefore continue to consult, focusing on supporting the introduction of new technologies, such as mechanical and biological treatment, and report on its findings at the 2005 Pre-Budget Report.

Landfill tax credit scheme **7.59** The Government recognises the important contribution made by the landfill tax credit scheme to local communities and has received positive representations from stakeholders on the value of projects funded by the scheme. Since the start of the scheme it has spent £566 million delivering over 17,500 projects, including improvements to parks, playing fields, nature reserves, places of worship and improvements to wildlife habitats to support biodiversity. **This Budget announces that it will increase the value of the scheme in line with inflation to £49.7 million.** The Government will carry on working with stakeholders to build on the improvements made and will continue to consider representations on the level of the scheme.

Improving local waste management **7.60** In December 2004, Defra announced the allocation of £45 million to local authorities in 2005-06 from the reform of the Waste Minimisation and Challenge Fund. The funding will be used to support local authorities to introduce more sustainable waste management practices and to help deliver the £299 million of efficiency gains on waste services announced in the 2004 Spending Review. £5 million of the grant will focus specifically on local authority incentives for households to recycle and reduce waste. To help ensure the planning system assists delivery of the required disposal facilities, Defra and the Office of the Deputy Prime Minister issued a joint consultation on revised policy guidance in December 2004 to facilitate strategic and spatial planning for waste management.

PROTECTING THE UK'S COUNTRYSIDE AND NATURAL RESOURCES

7.61 To protect the UK's countryside and natural resources the Government seeks to implement measures that balance economic growth with the need to encourage a sustainable approach, particularly in sectors with a significant direct impact, such as agriculture and aggregate extraction.

Aggregates levy **7.62** Introduced in April 2002, the aggregates levy aims to reduce the amount of primary aggregate being extracted from quarries and to encourage the use of alternatives. Revenue from the aggregates levy is recycled to businesses through a 0.1 percentage point cut in employer national insurance contributions and through the aggregates levy sustainability fund. As set out in Box 7.5, the Government's initial assessment is that the levy is achieving its primary objectives. Sales of primary aggregate in Great Britain fell by 8 per cent and the estimated production of recycled aggregates increased by 3.1 million tonnes between 2001 and 2003. **The Government today announces that in 2005-06 the rate of the levy will be frozen at £1.60 a tonne**. From 1 April 2004, the Government extended the scope and duration of the relief that applied to aggregate used in processed products in Northern Ireland, so that it now covers primary aggregates as well. To benefit from the extended relief, aggregate businesses in Northern Ireland have to agree to implement stringent environmental improvements to their operations.

Diffuse water pollution from agriculture

7.63 Over 75 per cent of land in the UK is used for agricultural purposes and so farming practices have a significant impact on the UK's environment, including water pollution from the use of fertilisers and pesticides. In December 2004, the UK completed the first assessment of the status of all UK water bodies against the environmental requirements of the EU Water Framework Directive. The supportive approaches that the Government is pursuing and the Common Agricultural Policy (CAP) reform will lead to reductions in diffuse water pollution from agriculture, but further action is likely to be needed. The UK has taken a lead role in helping to establish a strategic programme within the EU for addressing the linkages between the Water Framework directive and the CAP, and a new EU strategic steering group is being set up to co-ordinate this work. Defra and the Devolved Administrations are working with stakeholders to develop policy measures to help achieve the necessary changes in farm practice, including supportive and awareness-raising measures on the ground. The Government will consider using other measures to tackle diffuse water pollution.

Pesticides

7.64 An industry voluntary initiative (VI) on measures to reduce the environmental damage caused by the agricultural use of pesticides has been in place since April 2001. The Government continues to believe that, if fully implemented, this will be the most effective way of reducing the environmental pollution associated with pesticides. There has already been good progress made against the current targets, for example, with 777,000 hectares covered by crop protection management plans in 2004 – three times the initial target level. Targets that are related directly to their environmental and biodiversity impact allow the success of the initiative to be demonstrated. The Government is continuing to have discussions with the VI steering group on the strengthening of targets, including proposals for a 50 per cent reduction by 2006 in the frequency of pesticide detection above the 0.1 part per billion threshold. To cover the possibility that the VI might fail to deliver the required environmental benefits within a reasonable time, the Government continues to keep options for a tax or economic instrument under review. Work has also been taken forward in consultation with stakeholders on developing a national plan for pesticides, of which the VI will be a central element.

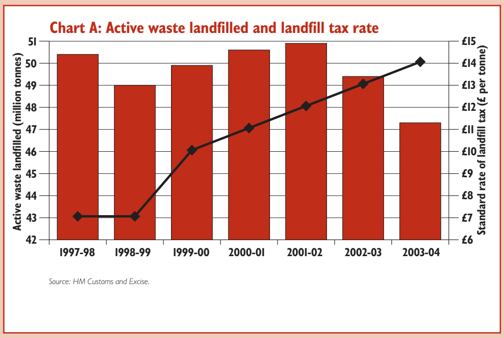
Sustainable land use

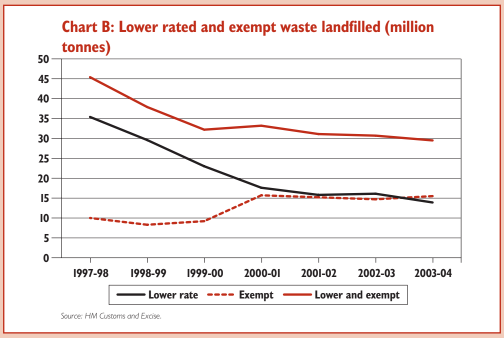
7.65 The Government's strategy for housing places key housing, planning and regeneration policies in the context of wider requirements for sustainable communities. The Barker Review, described further in Chapter 3, also recognised the need for housing policy to balance the environmental implications of housing development against the risks to macroeconomic stability and long-term affordability of not delivering a substantial increase in the housing supply. The Government has already taken a number of steps to improve the energy efficiency of housing, including amending Building Regulations from 2005 onwards so that new homes must be at least 25 per cent more efficient in their use of energy; and incentivising improvements in new and existing social housing – with all existing social homes being brought up to the Decent Homes standard by 2010.

Box 7.4: Assessment of the landfill tax

The landfill tax was introduced in October 1996. In Budget 2003, to reduce reliance on landfill further, the Government announced that landfill tax on active waste would increase annually by at least £3 a tonne from April 2005 on the way to a medium- to long-term rate of £35 a tonne.

The total volume of waste disposed to landfill fell by almost 20 per cent between 1997-98 and 2003-04. As shown in Chart A, since the Government's announcement of increases to the landfill tax on active waste, the volume of such waste has fallen by over 4 per cent. The quantity of inactive or inert waste disposed to landfill fell by 60 per cent between 1997-98 and 2003-04. Even allowing for the fact that some of this material may have been reclassified as exempt, there is still an overall reduction in inert or exempt material of 16 million tonnes (35 per cent) over the period, as shown in Chart B.





It is too early to reach a conclusive view on the changes in waste management investment since April 2003. However, initial analysis of waste management planning decisions suggests that there has been a shift away from landfill towards investment in alternative waste management options, although landfill remains an important means of waste disposal. In England, approved planning decisions (i.e. where planning permission has been granted) for landfill sites fell by 14 per cent between 2002-03 and 2003-04. Over the same period, approved decisions for waste treatment sites rose by 52 per cent and for composting facilities increased by 55 per cent. The greatest number of decisions in 2003-04 was for treatment (28 per cent of all approved decisions) followed by landfill (22 per cent of all approved decisions). However the Government recognises that further investment in alternatives to landfill is still required.

The landfill tax has been effective in diverting waste from landfill. Increasing the rate on active waste is one of a number of measures to help put the UK on course to achieve the target of reducing biodegradable municipal waste landfilled in 2010 to 75 per cent of that landfilled in 1995.

Sustainable housing

7.66 The Government is developing, in consultation with the building industry, a voluntary Code for Sustainable Buildings, which will set new standards for resource efficiency in the built environment, focusing initially on new housing. Demonstrations of the Code will be in place by the end of 2005, followed by national rollout in 2006.

Contaminated land tax credit

7.67 The Government continues to examine options to extend the contaminated land tax credit (CLTC) to long-term derelict land in an efficient way. Research into the effectiveness of the CLTC is under way and, depending on the outcome of that research, the Government will consult later this year on extension.

Box 7.5: Assessment of the aggregates levy

The aggregates levy aims to reduce the amount of primary aggregate being extracted from quarries and to encourage the use of alternatives. Early indications suggest the aggregates levy has been effective in achieving its objectives:

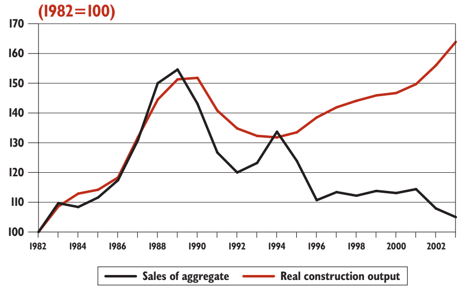
- **sales of primary aggregate in Great Britain fell by 8 per cent between 2001 and 2003, to their lowest level since 1982. The falls are against a backdrop of buoyant construction activity, including higher levels of road building since 2000, and GDP growth;**
- **in England, the estimated production of recycled aggregates increased by 3.1 million tonnes between 2001 and 2003;**
- **when surveyed, expanding recycled aggregate businesses gave the levy as the most frequent reason for growth since 2001; and**
- **there was a marked increase in the volume of china clay waste and slate waste sold as aggregate as a result of the economic incentive presented by the aggregates levy exemptions granted to these products. Between 2001 and 2004 china clay waste sold as aggregate in the UK increased by 14 per cent to 2.5 million tonnes.[a] National sales of slate for 'fill and other' uses increased by 65 per cent in 2003, compared with the pre-levy year 2001.**

Chart A shows aggregate sales and construction output over time. The series are closely matched throughout the 1980s and early 1990s. However, in the mid 1990s aggregate sales fell while construction output continued to rise. There are reasons for this in addition to the introduction of the landfill tax, including changes in construction processes, and a decrease in road building between 1994 and 2000. Over the period 1997 to 2001, sales of aggregates remained flat before falling sharply after 2001 with the introduction of the aggregates levy. This is against a background of a sharp increase in construction output from 2001, including higher levels of road building from 2000 (which is aggregate intensive).

Chart B indicates that aggregates levy declarations show a seasonal effect, attributed to lower demand from the building sector in the winter months. Declarations of relieved aggregate have increased by around 3 million tonnes per quarter since the quarter beginning April 2004. The most likely explanation is the extension of the Northern Ireland relief scheme from 1 April 2004.

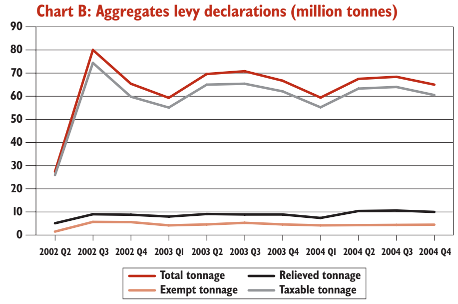
The Government will continue to evaluate the levy, and in particular consider evidence from industry about its impact.

Chart A: aggregate sales and real construction output (1982=100)



Source: British Geological Survey, Department for Trade and Industry.

Chart B: Aggregates levy declarations (million tonnes)



Source: HM Customs and Excise.

[a] Kaolin and Bael Clay Association

ENVIRONMENTAL APPRAISAL OF POLICY MEASURES

7.68 This chapter includes assessments of the Government's experience to date of using environmental taxes, which show that they are meeting their objectives, for example:

- the climate change levy should deliver savings of 3.7 million tonnes of carbon (MtC) by 2010;
- sales of primary aggregate in Great Britain fell by 8 per cent between 2001 and 2003;
- the amount of waste going to landfill is falling; and
- evidence suggests that reform of company car tax has reduced carbon dioxide emissions with savings of 0.5 to 1 MtC in 2010 and led to a reduction of 300-400 million business miles.

7.69 Table 7.1 shows how Budget measures sit alongside other policies as part of the Government's approach to the environmental elements of sustainable development. Table 7.2 sets out the environmental impact of the measures the Government has taken since the Statement of Intent in 1997 that have had a significant effect on the environment or which serve an environmental purpose. To increase transparency and public reporting of key performance indicators, the environmental appraisal tables are also available on the Treasury website.[10] The tables will be updated to reflect continuing monitoring of environmental indicators and further evaluation of specific schemes.

[10] www.hm-treasury.gov.uk

Table 7.1: The Government's policy objectives and measures

Sustainable Development Indicator[1] and recent trend data	Recent Government Measures
Tackling Climate Change	
Targets Joint Defra/DTI/DfT PSA target – reduce greenhouse gas emissions to 12.5 per cent below 1990 levels in line with Kyoto commitment and move towards a 20 per cent reduction in carbon dioxide emissions below 1990 levels by 2010. *Progress* UK greenhouse gas emissions were 13.9 per cent below 1990 levels in 2003.[2] Carbon dioxide emissions fell by 7.2 per cent during this period.	• Climate Change Programme, DETR, November 2000. • UK Emissions Trading Scheme, Defra, August 2001. • Energy Efficiency Commitment, Defra, April 2002 and April 2004. • Renewables Obligation, Defra, April 2002 and December 2003. • Energy White Paper, DTI 2003. • Energy Efficiency – the Government's plan for Action, Defra, April 2004. • EU ETS 2005. • Package of fiscal measures, including climate change levy (see Table 7.2).
Air Quality	
Targets Air Quality Strategy for England, Scotland, Wales and Northern Ireland set health-based air quality standards for nine key air pollutants and target dates for their achievement across the UK between 2003 and 2010. *Progress* The number of days with moderate or higher air pollution decreased from 50 to 22 in urban areas and from 61 to 41 in rural areas between 2003 and 2004.[3]	• Air Quality Strategy DETR January 2000 and Addendum, Defra February 2003, and Review, Defra 2004-05. • Implementation of Integrated Pollution, Prevention Control regime, Defra 2002-2007. • Continued support for local air quality management system. • Negotiation and implementation of EU air quality directives and international agreements 2004-05. • Ten Year Plan for Transport, DETR July 2000, and Future of Transport White Paper, July 2004. • Review of the Transport Energy Grant Programmes, DFT 2004. • Air Transport White Paper, DfT, December 2003. • Fiscal measures including fuel differentials for less polluting fuels (see Table 7.2).
Improving Waste Management	
Targets Defra PSA target – enable at least 25 per cent of household waste to be composted or recycled in 2005-06. Landfill Directive target to reduce the volumes of biodegradable municipal waste disposed of at landfill to 75 per cent of 1995 levels by 2010, 50 per cent by 2013, and 35 per cent by 2020. *Progress* Composting / recycling rate of 17.7 per cent for England in 2003-04. Active waste disposed to landfill has fallen from 50.4 million tones in 1997-98 to 47.3 million tones in 2003-04.	• Waste Strategy 2000, DETR, May 2000. • Waste Implementation Programme, Defra, 2002. • Reform of the Waste Minimisation and recycling challenge fund. • Landfill allowance (trading) schemes enacted by the Waste and Emissions Trading (WET) Act 2003. • Defra are reviewing their Waste Strategy in 2005. • Waste Implementation Programme Defra 2002. • Business resource and efficiency waste programme (BREW) 2004. • Landfill tax and related measures (see Table 7.2).
Regenerating the UK's towns and cities	
Targets ODPM PSA 5: 60 per cent of housing development to be on previously developed land. ODPM PSA 1: Promote better policy integration and work with departments to help meet PSA floor targets for neighbourhood renewal and social inclusion. *Progress* In 2003, 67 per cent of new housing was on previously developed land, increasing from around 54 per cent in 1990. 2004 data shows the gap between the most deprived areas and the rest of the country on several key indicators, including education at GCSE, burglary and unemployment has narrowed. Salford and Blackpool Urban Regeneration Companies launched in February 2005, bringing total to 18.	• Sustainable Communities: "building for the future" launched in February 2003. • National Nuisance Vehicle Strategy launched in November 2004. • Feb 2005, Planning Policy Statement 1 launched, placing sustainability for the first time as a core principle of the planning system. • Feb 2005 English Partnerships launch pilot programme with 12 local authorities to tackle England's legacy of derelict and brownfield land, to bring 66,000 hectares of brownfield land into beneficial use. • SR04 rolled forward £525 million Neighbourhood Renewal Fund for neighbourhood renewal in 88 most deprived areas and maintained commitment to New Deal For Communities programmes. • Package of fiscal measures including contaminated land tax credit (see Table 7.2).
Protecting the UK's countryside and natural resources	
Targets Defra PSA target – positive trends in the Government's headline indicators of sustainable development (includes wildlife, river water quality, land use). Water Framework Directive – requires achievement of good chemical and ecological status in surface water by 2015. *Progress* • Farmland birds almost halved between 1977 and 1993. However, declines have reduced in recent years and 2003 populations were virtually unchanged from 1993. • Woodland birds fell by about 30 per cent between 1975 and 1992. Since then, however, populations have remained broadly constant. • In 2003 about 95 per cent of rivers in the UK were rated as having good or fair chemical quality and approximately 96 per cent of UK rivers were of good or fair biological quality.	• Regulations transposing the Water Framework Directive came into force 2 January 2004. • Rural White Paper, DETR, November 2000. • Strategy for Sustainable Farming and Food, Defra, December 2002. • Developing measures to promote catchment-sensitive farming (Defra-HMT consultation), June 2004. • Defra consulting on pesticides strategy. • Aggregates levy and aggregates levy sustainability fund (see table 7.2).

[1] *Achieving a better quality of life - Review of progress towards sustainable development*, Defra, March 2004 - latest data from www.sustainable-development.gov.uk
[2] The six main greenhouse gases are: carbon dioxide, methane, nitrous oxide, hydroflurocarbons, perflourocarbons and sulphur hexafluoride (provisional figure).
[3] *Air quality headline indicator for sustainable development:* Defra, 2004 (provisional figures).

Table 7.2: The environmental impacts of Budget measures

Budget measure	Environmental impact[1]
Climate Change and Air Quality	
Climate change levy package: • Climate change levy; • Climate change agreements; • Green Technology Challenge (GTC); • Exemptions for new renewables and combined heat and power (CHP); • UK Emissions Trading Scheme.	CCL is estimated to deliver annual CO_2 savings of over 3.5 million tonnes of carbon (MtC) in 2010 – well above the 2 MtC figure forecast at the time of the levy's introduction.[2] CCAS are estimated to have saved 4.5MtC in the first target period 2001-03. GTC is expected to save up to 0.5MtC by 2010. The UK ETS is estimated to have saved 1.4MtC in 2004.
Landlord's Energy Saving Allowance (LESA);	Small reduction of CO_2 emissions.
VAT reduction. Budget 2005 extended reduced rates of VAT to air source heat pumps and micro CHP. VAT reduction for energy saving materials and domestic installation of renewable energy technologies.	Small reduction of CO_2 emissions.
Reduced rate of VAT on domestic fuel and power.	Estimated to increase CO_2 by 0.2 million tonnes by 2010.
Road fuel duty escalator. In 1997 the level increased from 5 per cent to 6 per cent and remained at that level until 1999.	Between 1997 and 1999, the fuel duty escalator is forecast to have reduced emissions between 0.1 MtC and 0.2 MtC per year by 2010.
Road fuel duty and differentials[3] Budget announces, from 1 September, an inflation-based increase in main road fuel duties. Since 1997, the Government has used a series of duty differentials to promote the manufacture and take-up of less polluting road fuels. Key changes include: –Introduction of duty differentials to facilitate a market switch: • From leaded to unleaded; • From low sulphur to ultra-low sulphur diesel (ULSD); • From low sulphur to ultra-low sulphur petrol (ULSP). –Introduction of duty differentials to encourage growth in the use of more environmentally-friendly fuels: • For liquefied petroleum gas and natural gas; • 20 pence per litre (ppl) differential for biodiesel in 2002; • 20 ppl differential for bioethanol in 2005.	Not increasing fuel duties in line with inflation from Budget day is expected to result in higher carbon emissions than would otherwise have been the case, although this is expected to be partially offset by higher oil prices. The shift to ULSP from ordinary unleaded is estimated to have reduced emissions of nitrogen oxide by 1 per cent, carbon monoxide by 4 per cent and volatile organic compounds by 1 per cent per year between 2001 and 2004. The shift to ULSD from ordinary diesel is estimated to have reduced emissions of particulates by 8 per cent and nitrogen oxides by up to 1 per cent per year between 2001 and 2004. The increased use of biodiesel and bioethanol will reduce CO_2 emissions overall by up to 54 per cent per litre of biofuel used. It is estimated that the biodiesel differential could save up to 0.2 MtC per year by 2010[4]. The road fuel gas differential has reduced emissions of particulates and nitrogen oxides, which has helped to improve local air quality, and brought about a cumulative carbon saving of 0.1 MTC.
Rebated fuels Budget 2005 announces from 1 September, a 1.22ppl increase in duty rates for rebated oils. As part of the Oil Fraud Strategy, the gap between duty on rebated oils and main road duty rates was narrowed in 2004.	Maintaining the differential with main road fuels will reduce levels of fraud, which will deliver small CO_2 and local air pollution benefits through increased use of less polluting fuels and less use of rebated fuels which are more polluting.

[1] Estimates of the environmental impacts of measures are difficult as they depend on the behavioural impact and savings from new technologies so are often subject to a wide margin of error.
[2] *Modelling the initial effects of the climate change levy,* Cambridge Econometrics, available at www.hmce.gov.uk
[3] Using NETCEN emissions models - further detail on the methodology used is provided in NETCEN's January 2000 report, *UK Road Transport Emissions Projections.*
[4] DfT modelling.

Table 7.2: The environmental impacts of Budget measures (continued)

Budget measure	Environmental impact[1]
Reforms to vehicle excise duty (VED) Budget 2005 announces VED rates will be frozen for the four least polluting CO_2 bands and increased by £5 for the two most polluting bands and for cars and light goods vehicles and for vehicles with engines bigger than 1549 cc registered before 1 March 2001. Bands are relettered from A-F VED has been reformed over the years to more closely reflect environmental impacts: VED for cars and light goods vehicles registered on or after 1 March 2001based on CO_2 emissions.	Currently small reductions in CO_2 emissions and local air pollutants. Numbers of vehicles in 3 lowest CO_2 emission graduated VED bands forecasted to grow significantly by 2006-07, in part due to reforms to VED bands.
Enhanced capital allowances (ECAs) Since 2002, businesses of all sizes can claim 100 per cent first-year allowances on capital expenditure on electric cars or cars with CO_2 emissions of 120g per km fewer.	Small reductions in emissions of CO_2 and local air pollutants.
ECAs for hydrogen and compressed natural gas refuelling equipment.	Reduction in emissions of CO_2 and local air pollutants.
Green travel plans. In Budget 2001, Government announced a series of measures to promote environmentally friendly travel including a reduced rate of VAT for cycle helmets, increasing the income tax and NICs free mileage rate employers can pay, and a passenger rate of 5 pence per mile to encourage car sharing on business trips.	Very small CO_2 reductions and reductions in road traffic and congestion.
Company car tax system (CCT). Budget 2005 announces a freeze of CCT bands and simplification of the discounts relating to bi-fuel and hybrid electric cars. A graduated scheme was introduced in 2002 to provide a lower charge to cars that emit less CO_2 and a higher charge to those with large CO_2 emissions.	Freezing CCT bands leads to a small increase in CO_2 and local air pollutants, compared with the position had the lowest band been reduced by 5g/km. Estimated CO_2 emissions savings of 0.15 to 0.2 MtC in 2004. In the long run it is forecast that CO_2 savings will be between 0.5 and 1 MtC in 2010.[6]
Company car fuel benefit charge. Budget 2005 announces a freeze of the charge at £14,400. Budget 1998 announced a five-year programme of annual increases to discourage the giving/receiving of free fuel for private use in a company car. In 2003 the Charge was restructured to relate it to CO_2 emissions and to include the same discounts and premiums as in the company car tax system.	The programme of increases over five years in the fuel scale charge between 1997-98 and 2002-03 is estimated to have reduced the number of drivers in receipt of free fuel by around 300,000.[7] It is expected that the programme has reduced CO_2 and local air pollutant emissions due to fewer private miles travelled. Restructure of the fuel scale charge in 2003 will have produced further reductions in carbon emissions.
VAT fuel scale charge reform. The VAT fuel scale charge is planned to be aligned with the Inland Revenue fuel charge system, based on the CO_2 emissions of the vehicle.	Expected to deliver small reduction CO_2 and local air pollutant emissions.
Employer-provided van benefit. The reform of the employer provided vans rules, to take effect from April 2005, will remove the incentive to drive older, more polluting vans.	Small reduction in CO_2 and local air pollutants.
Haulage modernisation fund.	1 per cent reduction in particulate emissions per year by 2004, reductions in carbon emissions of around 0.1 MtC per year by 2004, and reductions in nitrogen oxides.
Air passenger duty (APD). Budget announces a freeze on the rate of APD. APD was introduced in 1994, and reformed in 2001.	Freezing the APD rates will lead to a small increase in emissions of CO_2 and local air pollutants compared with, for example, increase in line with inflation. Levying APD has meant a reduction in emissions of CO_2 and local air pollutants from aviation.

[6] Inland Revenue modelling.
[7] Inland Revenue modelling.

Table 7.2: The environmental impacts of Budget measures (continued)

Budget measure	Environmental impact[1]
Improving Waste Management	
Landfill tax. In 1999 the standard rate increased by £3 a tonne and annually by £1. Budget 2003 announced that standard rate of landfill tax would increase by £3 a tonne in 2005-06 and by at least £3 a tonne in following years to reach a medium-long term rate of £35 a tonne.	Encourages waste producers and the waste management industry to switch away from landfill disposal towards waste minimisation, re-use, and other waste management options. Planning applications for alternatives to landfill have risen significantly.
Landfill tax credit scheme (LTCS). Budget 2005 has increased the value of the scheme in line with inflation to £49.7 million. In 2003 the scheme was amended and sustainable waste management projects were removed.	A scheme supporting local community and environmental projects in the vicinity of landfill sites. The LTCS has provided £566 million for projects since its introduction.
Regenerating the UK's towns and cities	
Contaminated land tax credit.	Bringing forward remediation of contaminated land.
Capital allowances for flats over shops.	Bringing empty space over shops back into the residential market, while reducing the pressure for new greenfield development.
Reforms to VAT on conversion and renovation.	Reduced pressure on greenfield site development.
Protecting the UK's countryside and natural resources	
Aggregates levy and aggregates levy sustainability fund. Budget 2005 freezes the aggregates levy at £1.60 a tonne. In Northern Ireland a relief scheme was introduced in April 2002 and was extended in scope and duration in April 2004.	Reductions in noise and vibration, dust and other emissions to air, visual intrusion, loss of amenity and damage to wildlife habitats. An 8 per cent reduction in aggregates between 2001 and 2003.
Enhanced capital allowances for water efficiency technologies.	Reductions in energy and water use by business.